

**INFLUENCE OF MALE CIRCUMCISION ON SEXUAL
BEHAVIOUR OF LUO MEN IN RELATION TO THE
SPREAD OF HIV/AIDS: A CASE OF MARANDA SUB-
COUNTY, KENYA**

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**A Research Project Report Submitted in partial fulfilment for the Requirements for
the award of the Degree of Master of Arts in Project Planning and Management of
the University of Nairobi.**

2015

DECLARATION

I hereby declare that this research project report is my original work and has not been presented for academic purposes in any institution.

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L50/64934/2010

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DATE

This research project report has been submitted for examination with my approval as the University supervisor.

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PROF. STEPHEN I. AKARANGA

.....

DATE

DEDICATION

This research project report is dedicated to my mum Esther Opicho and dad Paul Opicho for making me realize that education is the foundation of life and to my dear husband Samuel Otieno Nyanya for his financial support.

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ABBREVIATIONS AND ACRONYMS

AIDS	- Acquired immune deficiency syndrome
ANRS	_ National Agency for AIDS Research
CDC	- Centre for Disease Control
HIV	- Human immunodeficiency virus
MC	- Male Circumcision
MD	- Managing Director
NGOs	- Non-Governmental Organizations
RCT	– Randomised Controlled Trial
SPSS	- Statistical Package for Social Sciences
STD	- Sexually Transmitted Disease
UNAIDS	- United Nations Programme on HIV/AIDS
UNP	- United Nations Programme
VMC	- Voluntary Medical Male Circumcision
WHO	- World Health Organization

ABSTRACT

This study investigates the influence of male circumcision on sexual behaviour of Luo men, in relation to sexual behavior in relation to the spread of HIV/ AIDS. The study examined the use of contraceptives among circumcised and uncircumcised Luo men, the number of sexual partners among circumcised and uncircumcised men, whether male circumcision had an influence on widow inheritance, and compared the level of involvement of the circumcised and uncircumcised Luo men in HIV/AIDS sensitization process in relation to the spread of HIV/AIDS. The researcher was guided by the activity theory which provides for a dynamic and dialectical perspective on the relationship between the individual and society. It highlights the fact that human mind develops within human social activity and human practices such as sexual practices which are considered in the HIV/AIDS literature as ‘individual’, could be analyzed in relation to the activity (community) of which they are a part. The study was carried out in Maranda sub-county in four sampled locations- North Sakwa, South Sakwa, West Sakwa and Central Sakwa. Simple random sampling was applied in each of the four locations to ensure that each respondent had an equal chance of being included in the study. A pre-test of the data collection instruments was conducted to ensure validity and reliability. Study findings indicated that although circumcision has caused some changes in the sexual lives of Luo men, HIV prevalence is still highest in the region. Culture still plays a bigger role in the sexual activities among Luo men and any intervention geared towards HIV/AIDS prevention must first address the underlying cultural practices. This study adopted a descriptive survey design approach. The study targeted a population of 63,030 men aged between 15 and 49 years old. Respondents were picked from each of the four wards using simple random sampling, translating to 397 men. Structured questionnaires and interview guides were used to collect data. The collected data was edited and errors and omissions corrected. The schedules were prepared for tabulation while the tabulated data was analyzed using the statistical SPSS software. From the study, it was noted that respondents had more than one sexual partner which prompted them to use condoms.. It was found that they used condoms often because of the influence from their peers who opined that circumcision made them better sex performers and that, the use of condoms was less pleasurable. Respondents engaged in polygamous relationships due to the traditional polygamous practices and the high number of single women in the area compared to men. This behavior of polygamy has increased the spread of HIV/AIDS that has increased deaths. The practice of wife inheritance was found to promote the spread of HIV/AIDS leading to increased deaths. The study also found that respondents were involved in sensitization through awareness talks; because most people went to churches and also attended workshops and seminars.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Male circumcision (MC) according to World Health Organization (WHO, 2007) is one of the oldest and most common surgical procedures undertaken worldwide for many reasons: religious, cultural, social and medical reasons. The estimates by (WHO) suggest that, thirty percent of males worldwide are circumcised of which sixty percent are Muslims. Over the decades, observational studies have suggested an association between male circumcision and HIV/AIDS infection in males (Weiss, 2000). Various studies have shown correlations of circumcision and HIV/AIDS reduction. For example, (Siegfried et.al, 2009) indicated that male circumcision reduced the risk of HIV infection in heterosexual men by 38-66%. Bailey (2007), Gray (2007) and the National Agency for AIDS Research ANRS (2005) in South Africa indicated that male circumcision reduced the risk of heterosexually acquired HIV infection in men by approximately 60%.

Following these findings, the World Health Organization (WHO) and the United Nations Program on HIV/AIDS (UNAIDS) Secretariat in an international expert consultation held in *Geneva, 28 March 2007* recommended that male circumcision be recognized as an additional important intervention in reducing the risk of heterosexually acquired HIV infection in men. These recommendations were also emphasized by Catherine Hankins (2011) who stated that male circumcision is an important step in the management of HIV and AIDS epidemic.

Counter-studies on the other hand document that circumcised adult male exhibit a greater tendency to engage in risky sexual behavior. Hooykaas et al., (1991) reported that circumcised men in the Netherlands engage in more risky sexual behavior and have markedly higher rates of infection of STDs. Laumann *et al.*, (1997) also reported cases of more risky sexual behavior amongst circumcised men in the United States. Michael *et al.*, (1998) reported more variability in sexual behavior, less condom usage, and more STD amongst the predominantly circumcised population of the United States as compared with the predominantly non-circumcised intact males of the United Kingdom.

In India, where young people represent a large proportion of the country's population, an estimated 2.27 million people are living with HIV (UNAIDS 2010). In phase II of the country's National AIDS Control Programme, the Adolescent Education Programme (AEP) was launched. The programme aimed to train teachers and peer educators to educate the student community both in and out of school about life skills, HIV prevention and HIV related stigma and discrimination. Under the initiative 112,000 schools were covered and 288,000 teachers were trained (National AIDS Control Organization 2007).

In Brazil, an integrated response to the epidemic which funds health care systems; promotes male circumcision, gender, ethnic, and sexual orientation equality in access to information and treatment; and includes public education campaigns and condom promotion, has led to increased safer sex practices among young people and has stabilized the country's epidemic (Brazilian Ministry of Health, 2008). Circumcised boys and adult men viewed other males who were not circumcised as 'boys'. This meant that the uncircumcised boys were not able to parent or hold a position of authority as they were culturally not adults.

In Nicaragua, a communications for social change strategy to promote HIV stigma reduction, male circumcision, and HIV prevention among youth called *Somos Diferentes, Somos Iguales*, resulted in a significant reduction of stigmatizing and gender-inequitable attitudes, an increase in knowledge and use of HIV-related services, and a significant increase in interpersonal communication about HIV prevention and sexual behavior.

In Senegal, an impact assessment showed that, although 91 percent of surveyed health workers recognize that uncircumcised men who indulge in unprotected sexual behaviour is risky for HIV or hepatitis transmission, only 25 percent take necessary precautions (Hooykaas, 1991). The additional risk of HIV/AIDS encountered by health personnel may therefore depend on their adherence to proper protocols and procedures as well as on the availability of sterilization equipment, surgical power tools, and supplies.

In Namibia, a national campaign was launched on the benefits of male circumcision and HIV risk, more than 25 million male condoms are distributed free of charge every year. Other infectivity studies have generally had homogeneous circumcision patterns among study participants. The foreskin was found to contain high densities of HIV-1 target cells, which suggests that a heightened HIV-1 risk in uncircumcised men is biologically plausible (Fleming, 1999). Levels of knowledge about HIV and condom use have increased; rates of sex before the age of 15 and sex with more than one partner in the last 12 months have decreased; and HIV prevalence in young women attending antenatal clinics declined from 18 percent in 2003 to 14 percent in 2007 (UNAIDS, 2008).

Changedia et.al (2002) in a paper “Role of male circumcision in HIV transmission insignificant in conjugal relationship” revealed that though circumcision offered protection in HIV infection, it did not reduce transmission of HIV in conjugal settings. Howe et.al (2009) and Lancet 2009 opposed the use of circumcision to control HIV infection because they opined that ‘behavior factors’ are the most important risk factors in acquisition of HIV. Kahn et. al.(2005) adjusted the 60% effectiveness estimate obtained in the South African RCT downward to 50% to reflect a 25% increase in sexual risk behaviors among circumcised men after Circumcised men in the ANRS 1265 trial reported 18% more sexual contacts at follow-up than did uncircumcised men.

The 2007 Kenya AIDS Indicator Survey reported that, out of the 21.5% of Luo men who were circumcised, 17.1% tested positive for HIV. The percentage represented just but a few number of people of this community since their culture and social life did support the idea of teeth removing to circumcision. Although evidence for the efficacy of male circumcision as an HIV prevention measure is increasing, there is serious concern that men who are circumcised may subsequently engage in risky sexual behaviors leading to infection or re-infection. Male circumcision provides only partial protection according to the World Health Organization, and therefore should be only one element of a HIV prevention package which includes Treatment for sexually transmitted infections; The promotion of safer sex practices and the provision of male and female condoms and promotion of their correct and consistent use. The study targeted Luo Nyanza, a traditionally non-circumcising community where HIV and AIDS infection rates and deaths still remained high despite the introduction of male circumcision.

1.2 Statement of the Problem

HIV/AIDS is a major public health concern and cause of death globally. The effect of these deaths is felt in Kenya more where medical facilities and the cultures majorly promote deaths. HIV/AIDS has other devastating effects in the social, economic and political sectors in Kenya. In an article titled "Death Stalks A Continent", Johanna McGeary (1997) described the severity of the disease. There are other methods of HIV/AIDS prevention that have been proven and accepted by the medical fraternity which include; the use of contraceptives like condoms and abstinence or even much better sticking to one sexual partner.

This study, while acknowledging the fact that Randomized Controlled Trials (RCTs) in South Africa, Tanzania and Kenya have confirmed the protective effect of male circumcision for HIV prevention, also acknowledge the high infection rates among Luo men in Kenya. HIV still remains a disastrous pandemic in the Luo community targeted by the roll out of the circumcision program (Pickerton, 2001). In the Luo community, deaths related to HIV/AIDS have been on the increase. It was reported that in almost every eight home-steads there is a grave of an AIDS related death (Bailey, 2007). This situation has increased the number of orphans and widows in the Luo community. To prevent the spread of the scourge, various mitigation measures have been adopted among them the male circumcision strategy which has been scientifically proven to reduce spread of the HIV/AIDS pandemic.

Male circumcision according to the World Health Organization (WHO, 2007), reduces the spread of HIV and AIDS by 60%. Despite the roll out of the exercise in Luo Nyanza in 2007, the 2012 Kenya AIDS Indicator Survey reported that out of the 21.5% of the circumcised Luo men, as high as 17.1% (representing 80%) of people tested positive (WHO, 2010) raising doubts of its success.

1.3 Purpose of the Study

The purpose of this study was to assess the influence of male circumcision on sexual behaviour of Luo men in relation to the spread of HIV/AIDS; A case of Maranda Sub-County, Kenya.

1.4 Objectives of the Study

1. To examine the influence of contraceptives use among circumcised men on sexual behavior of Luo men in relation to the spread of HIV/ AIDS in Maranda sub-county.
2. To determine the influence of sexual partner of circumcised men on sexual behavior of Luo men in relation to the spread of HIV/ AIDS in Maranda sub-county.
3. To establish the influence of widow inheritance on sexual behavior of Luo men in relation to the spread of HIV/ AIDS in Maranda sub-county.
4. To establish the influence of involvement of circumcised Luo in sensitization process on sexual behavior men in relation to the spread of HIV/ AIDS in Maranda sub-county.

1.5 Research Questions

1. What is the influence of contraceptives use among Luo circumcised men on sexual behavior in relation to the spread of HIV/ AIDS in Maranda sub-county?
2. What is the influence of sexual partner circumcised men have on sexual behavior of Luo men in relation to the spread of HIV/ AIDS in Maranda sub-county?
3. What is the influence widow inheritance on sexual behavior of Luo men in relation to the spread of HIV/ AIDS in Maranda sub-county?
4. What is the influence of involvement of circumcised Luo in sensitization process on sexual behavior men in relation to Sexual Behavior In Relation to the Spread of HIV/ AIDS?

1.6 Significance of the study

This study is important to the health practitioners because, it hopes to identify behaviors practiced after circumcision that lead to the spread of HIV/AIDS. This will enable them to educate others on the need to avoid such behavior which otherwise could increase the pandemic. The study may help the family to change some of the practices that are responsible for the increased spread of HIV/AIDS. The findings enables the Government of Kenya evaluate the circumcision strategy as a HIV/AIDS prevention measure and ultimately decide on whether to increase funding for the project or divert resources to relevant mitigation measures.

Peer educators also hope to find the study helpful in educating the Luo community members so that they can avoid retrogressive traditions and cultural values such as widow inheritance that could lead to HIV/AIDS infection. The study will also assist the

government to convince international donors and non-governmental organizations (NGO's) to invest in the fight against HIV/AIDS.

Ultimately, the study hopes to provide the necessary information that will enable the government, the Luo community and all stakeholders in the fight against HIV/AIDS to avoid the consequent effects such as lose of manpower, orphans and street children.

1.7 Limitations of the Study

The study was hindered by the following constraints; First, the study used primary data which range from semi-structure to open-ended questionnaire as mode of data collection; this method has limitation since it give room for irrelevant responses, thereby making analysis of the data very difficult. This was overcome by researcher administering questionnaires herself and helped the participants internalized the whole process.

Second, respondent failing to complete part or the whole questionnaire, such as the questions dealing with sexual life and reproductive health thereby, ending up with incomplete questionnaires. Because of the sensitive nature of the information being gathered, the researcher followed strict confidentiality and anonymity protocols for interviews and questionnaires. Protection of confidentiality and anonymity was explained to the respondents before the interview and they consent to be part of the study.

The other shortcoming of the questionnaires was the challenge of the respondents misunderstanding the question put forward and failing to provide the required answer. This lowers the validity of the measuring instrument and in effect the findings of the research are not a true reflection of the reality the researcher seeks to study. The

researcher mitigated this by devoting a great deal of time in designing the questionnaire, trying as much as possible to use simple language. The researcher also piloted the questionnaire to a group of program officers in order to identify any ambiguities.

1.8 Delimitations

The study focused on the effects of male circumcision in HIV/AIDS prevention on sexual behavior change in Maranda sub-county. The research was conducted within Bondo county Maranda sub - county and specifically examined at how sexual behavior may have changed among circumcised Luo men. The researcher identified the key respondents and got their contacts. They were then given questionnaires directly or send to their destination after communicating to them through telephone conversation. The researcher also travelled to the relevant sites and conducted interviews where she obtained requisite information.

1.9 Definition of Significant terms

Condom - This is a barrier method of contraception.

HIV prevalence - The number of people living with HIV infection in a given year.

Human immunodeficiency virus (HIV) - is a member of the retroviral family that causes acquired immunodeficiency syndrome (AIDS), a condition in humans in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive.

Male circumcision -	The surgical removal of the foreskin of the penis.
Polygamy -	a practice of having more than one wife at one time.
Risk compensation:	in HIV-prevention research, is defined as partially offsetting the adoption of risk-reduction strategies by compensatory behaviors that may increase the risk of HIV acquisition (e.g., number of partners or frequency of sex without condoms).
Sensitization:	is a non-associative learning process in which repeated administrations of a stimulus results in the progressive amplification of a response. Sensitization often is characterized by an enhancement of response to a whole class of stimuli in addition to the one that is repeated.
Wife inheritance –	A type of marriage in which a widow marries a kinsman of her late husband, often his brother.

1.10 Assumptions of the Study

The respondents were honest and truthful when answering the questions. It was also assumed that the respondents were objective and competent in answering questions.

1.11 Organization of the Study

This research project report contains five chapters. Chapter One, which is the Introduction of the study: includes the background to the problem, statement of the problem, objectives, research questions and hypotheses. The chapter also discusses the

significance, limitations of the study, delimitations of the study and basic assumption of the study. Finally, the definition of significance term discussed.

The literature review is the chapter works of other scholars in reference to changes in sexual behavior among circumcised Luo men in relation to the spread of HIV/AIDS with the aim of identifying the gap responsible for the high prevalence rates of HIV in Maranda Sub County. Several theoretical frameworks and prevention models is also discussed in this chapter. Finally, conceptual framework of the study discussed.

Research methodology discusses the research design, the study employed descriptive survey to examine works of changes in sexual behavior among circumcised Luo men in relation to the spread of HIV/AIDS in Maranda Sub County. Target population, sample and sampling techniques and research instruments discussed in the chapter. Finally pilot study and data analysis techniques discussed.

The presentation and interpretation of the findings arising from data analysis using the techniques is described in chapter three. The findings are presented in form of tables accompanied by explanations of the findings.

Finally, chapter five contains summary of the findings, discussions of the findings, conclusion and research recommendations. The chapter also outlines suggested areas for further studies arising from the study findings and is concluded with a section on the study's contribution to the body of knowledge.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed related works of other scholars in reference to HIV/AIDS prevalence with the aim of identifying the gap responsible for the high prevalence rates of HIV in Luo Nyanza. The chapter examined the effect of male circumcision on sexual behavior of Luo men in relation to the spread of HIV/AIDS in Maranda Sub - county. Literature in this chapter was therefore reviewed with reference to contraceptive use, wife inheritance, involvement in HIV/AIDS sensitization work and number of sexual partners.

2.2 Sexual Behaviour of men in relation to the Spread of HIV/Aids

Male circumcision is the surgical removal of some or the entire foreskin (prepuce) from the penis (WHO, 1997). The term circumcision is coined from a Latin word *Circumcidere* meaning “to cut round”. In a typical procedure, the foreskin is opened, severed and separated from the glans after inspection. For adults, general anesthesia is an option, and the procedure may be performed without a specialized circumcision device.(WHO, 2007) in “Male circumcision: Global trends and determinants of prevalence, safety and acceptability” indicates that male circumcision is performed on children and adults for religious and cultural reasons, but may also be indicated for therapeutic and prophylactic reasons as well as treatment of urinary tract infections (UTIs) among other options.

The evidence from Africa indicates that circumcision reduces the risk of HIV infection in heterosexual men by 38-66% (Siegfried, 2009). Krieger (2011) supports the same view. The theory that male circumcision may be protective against HIV infection was invented and developed in North America. In an article "AIDS in third world countries", Valiere Alcena originated the theory that, removing the foreskin could prevent HIV infection. Gerald Weiss, a strong proponent of circumcision, contributed to the development of the theory through a paper "The distribution and density of Langerhans cells in the human prepuce: site of a diminished immune response" The two scholars identified the prepuce as a possible entry point for HIV and therefore recommended its removal. (Halperin, 2004) said that the foreskin provides a portal of entry to HIV and other pathogens and that the prepuce contains primary target cells called Langerhans cells for sexual transmission of HIV infection. Keratinization of circumcised penis would therefore reduce chances of HIV penetration. Robert C. Bailey and other proponents of male circumcision have made their contributions in medical journals. Following findings from Randomised Controlled Trial (RCT) centres in Kenya, South Africa and Uganda currently recommends that circumcision be part of a comprehensive program for prevention of HIV transmission in areas with high endemic rates of HIV (WHO, 2007).

2.3 Influence of Contraceptives Use among Circumcised Men on Sexual Behavior in Relation to the Spread of HIV/ AIDS.

Contraceptives are a barrier method of contraception which include; male and female condoms. The male condom which is the most commonly is sometimes called a "rubber" or "prophylactic," thin sheath (usually made of latex, a type of rubber) which is worn on the penis. A female condom on the other hand is a polyurethane sheath with a flexible

ring at either end. One end is closed and inserted into the vagina; the other end is open and the ring sits outside the opening of the vagina. The male condom is far. These devices are preventive measures to reduce the rate of HIV infections. Condoms are however viewed as “unmasculine and sex without them is perceived to add to the sense of danger that traditional concepts of masculinity encourage. Women are already more exposed than men to contract HIV. Many circumcised men from traditionally non-circumcising communities like the Luo may however get the false impression that circumcision offers a compensatory measure to the use of condoms.

The medical aspect behind circumcision may also make many men to be reluctant towards the use of condoms. Taylor (1996) says that male circumcision removes nerves from the penis and causes significant loss of sexual sensitivity and function. In fact, many circumcised men are reluctant to use condoms and a program of mass circumcision may therefore reduce condom usage and have an adverse effect on the overall HIV infection incidence. Prior to Voluntary Medical Male Circumcision (VMMC) in Kisumu, Bailey et.al (2010) established that male preference for being or becoming circumcised was associated with inconsistent condom use and increased lifetime number of sexual partners.

Adams (1994) compared condoms to safety belts and commented that risk compensation occurs when people believe they have been provided additional protection (wearing safety belts). This is why they will engage in higher risk behavior (driving faster) and as a consequence lead to the increase in higher risk behavior, the number of targeted events (traffic fatalities) either remains unchanged or increases. Circumcised men sometimes

think they are safer without condom use as compared to the non-circumcised hence increase the risk of infection by engaging in unprotected sex.

Kalichman, Eaton, Pinkerton (2007) argue that any protective effects offered by circumcision would be partially offset by increased HIV risk behavior, or “risk compensation” including reduction in condom use or increased numbers of sex partners. In their view, risk compensation could be important for male circumcision because avoiding the sexual dissatisfactions of condom use and the desire to have multiple sexual partners are likely to be significant motivations for men to seek circumcision. Williams BG, Lloyd-Smith JO, Gouws E, Hankins C, Getz WM, et al. (2006) argue that, some male circumcision models have failed to take into account risk compensation especially in the form of less condom use and this could reduce the potential benefits of male circumcision. Risk compensation by HIV-infected circumcised men will substantially increase the risk of transmission to their sex partners translating to increased prevalence among women, which in turn translates into greater risk to men.

When modeling HIV infections in Francisco and McLean (2008) found that if an HIV-vaccine offered 50% protection, but reduced condom usage, or increased other risky behaviors, it would likely result in higher HIV infection rates. In their view risk compensation will accompany the circumcision solution in Africa. They state that circumcision has been promoted as a “natural condom”, and African men have reported having undergone circumcision in order not to continually use condom.

Bollinger et.al. (2011) warn that the long-term consequences of promoting circumcision could actually worsen the HIV epidemic by promoting a false sense of security and undermining safe-sex practices and condom usage. The report indicates that a 2009 “South African National Communication Survey” on HIV and AIDS found that 15% of men and women held the mistaken belief that circumcision makes sex without condoms safe. In their continued criticism against circumcision, they say it places women at greater risk of unsafe sex practices if they or their circumcised male partners wrongly believe they are immune to HIV. They point to a South African report which indicated that condom use significantly increased from 2002 to 2008, and the HIV rates finally began to level off.

The New Times’ (Kigali) February 12, 2008, Gusongoirye reported that African men were lining up to be circumcised believing that they would no longer need condoms. In the context where circumcision is viewed as a natural condom (Bonner 2001) against HIV transmission, there is a possibility of behavior risk compensation (Hedlund 2000; Adams and Hillman 2001; Riess et al. 2010) among circumcised men, leading them to engage in risky sexual behavior, including higher-risk sex with high-risk partners, non-condom use, and multiple sexual partners (Cassell et al. 2006; Eaton and Kalichman 2009). These findings suggest that although circumcision is an HIV/AIDS prevention strategy, misconceptions are bound to lead to negative impacts on condom use.

2.4 Influence Sexual Partner of circumcised men have on sexual behavior in relation to the spread of HIV/ AIDS

Chances of HIV prevalence are higher where polygamy is practiced. It increases the number of sexual partners thereby increasing exposure of the people involved to risk of HIV transmission, unless condom use is consistent. Unmarried men or women may also opt to have multiple sexual partners hence increasing their predisposal to HIV unless they use protection. The Southern Africa Development Community Parliamentary Forum (SADC-PF) Committee on HIV/AIDS says the traditional and cultural practices of polygamy have been identified as major contributing factors to the spread of HIV/AIDS in the region and therefore recommended that there is need to harmonize such traditional and cultural practices as a way of preventing further spread of the disease.

In most polygamous relationships, women are the most affected. Caldwell et al. (1993), says that there is adequate evidence to show that a large proportion of women are infected by their male partners. This may be worse in a program of mass circumcision where men engage in unprotected sex in the pretext of circumcision (Bollinger, 2011). Kelly et.al. (1999), in studying the association between male circumcision and HIV infection in rural Uganda found that among Muslim polygamous men, HIV prevalence increased with the number of sexual partners. He concluded that circumcision provides no significant protective effect for polygamous men.

In a demographic survey on Male circumcision, sexual behavior and HIV status in Uganda, the USAID findings show that circumcised men have higher chances of having four or more lifetime partners, engaging in sex before attaining the age of 18 higher-risk

sex, and non-condom use compared with uncircumcised men in Uganda. Amornkulet.al. (2009), noted that HIV infection was significantly associated with higher numbers of lifetime sexual partners. In a paper “Luo Adolescent Sexual Behavior in Nairobi: Practice and Ideology, Wawire (2004), noted that many circumcised Luo men gain popularity with women, and the opportunity to extend their sexual network. She said that many men indicated that they had more sexual partners than they did before they were circumcised. Furthermore circumcision enabled them to extend their sexual network beyond their border. She also noted that some participants said that because of the perception that their sexual performance was better after circumcision, they felt the pressure to perform exceptionally well on their first sexual encounter with new partners. As such, some men opted not to use the condom; because they believed it inhibits the 'total' experience. The study was carried out among the urban Luo youth in Nairobi’s Korogocho slums who were struggling to fit in the sexual network, hence the need to investigate circumcised sexually active Luo men Maranda Sub- County of Bondo County. This will hopefully enable us understand how to fight against HIV/AIDS pandemic.

2.5 Influence Widow Inheritance on Sexual Behavior of Men in Relation to the Spread of HIV/AIDS

HIV prevention behavior programmes can target individuals, families, communities, entire societies or (ideally) a combination of all these. Well-designed programmes seek to achieve results on multiple levels. They promote accurate individual knowledge and perception of risk and increase individual motivation to avoid risky behavior (the Global HIV Prevention and Working Group, 2008). Prevention programmes also build individual skills needed to use to effectively negotiate risky situations. Within

households, HIV prevention programmes aim to decrease the stigma associated with both HIV and sexuality, to promote open discussions about sexuality and drug use and to influence gender roles and norms. At a community level, effective HIV programmes seek to increase the value associated with safer behaviors to support community members reduce their risk, to build solidarity and reciprocity and to reinforce new norms (The Global HIV Prevention and Working Group, 2008).

In Kisumu, Kenya and in Ndola, (2003: 532). Zambia, Glynn et al. found that 'despite the age gap at marriage and the young age at marriage for women, almost twice as many women as men were estimated to be HIV-infected at the time of their first marriage. This may be because of earlier sexual debut among women and the higher prevalence of male-to-female transmission of HIV than female-to-male transmission (Hugonnet et al. 2002). Over time, however, Glynn et al. found that 'at least one quarter of HIV-positive men [were] infected from extramarital partnerships. In other words, women as well as men can bring HIV infection home. The self-reported rate of extramarital sex for women in Africa, relative to that for men, is low but may be underreported. According to the Global Program on AIDS, about 6% of women in Africa reported extramarital sex in 1995 compared to about 16% of men (Kirby 2008). In a study of five African countries, De Walque (2007) found that women alone were infected in 30 to 40% of infected couples. This points either to premarital infection by women or to extramarital sex by women as the unreported source of HIV transmission.

2.6 Influence of Involvement of Circumcised Luo men in sensitization process on sexual behavior men in relation to the spread of HIV/AIDS

The topic of male circumcision carries an enormous amount of ethical baggage. Male infants, worldwide, are circumcised for various reasons. They could be classified as medical, social and/or religious reasons. This is why, it is not sufficient that circumcision is a cultural act and a surgical procedure; with medical reasons. It has been suggested that men undergo this ritual as a prevention measure against HIV/AIDS infections. Upon circumcision, many Luo men are involved in the sensitization process on the prevention of the virus that spreads HIV/AIDS through the process of circumcision. They are also engaged in other activities such as sensitization talks, participating in awareness walks and campaigns. They are also involved in the care of the infected persons by providing necessary requirements to them.

Male circumcision is a common practice in many societies across Africa, though certainly not all. Among societies in the ASRP study, the Luo, a major ethnic group in Kenya, do not practise circumcision and traditionally initiated young men through the ritual removal of six lower teeth. Even where circumcision is the norm, the ideology that underlies this practice differs from culture to culture. In some cultures of Cameroon, for example, circumcision is performed without great ceremony, usually when a boy is between eight and ten years old or even younger. The operation is simply an exercise to remove the foreskin and enhance the sensitivity of the glans penis. Among the Samburu and Luhya in Kenya, by contrast, circumcision is part of an elaborate rite of passage from childhood to adulthood. It allows men to own and control property and prepares them for

marriage. Among the Samburu, the circumcision ritual appears to take place every fifteen years.

2.7 Theoretical Framework

HIV/AIDS awareness is widespread globally and regionally. And, among the Luo in Nyanza, it is no exception. It was imperative to conduct this study to curb the spread of this epidemic. Behavior change has become the focus of many interventions, hence there exists various theories to curb the menace. These theories, have however been criticized for being individually-centered focusing on rational cognitive decision-making processes as the impetus for action. While focusing on male circumcision as the latest intervention, the researcher is guided by the “Activity Theory”, a social mobilization intervention.

The Activity theory which is sometimes referred to as "Cultural-Historical Activity Theory is an umbrella term for a line of eclectic social sciences theories and research with its roots in the Soviet psychological activity theory pioneered by Lev Vygotsky, Alexei Leontev and Sergei Rubinstein. It bridges the gap between the individual subject and the social reality. In this theory, these scholars sought to understand human activities as complex, socially situated phenomena. This theory considers an entire work/activity system beyond just one actor or user and accounts for environment, history of the person, culture, role of the artifact, motivations, and complexity of real life activity and it is particularly useful in qualitative research. The activity theory was adopted to analyze behavior change among circumcised Luo men in Maranda sub-county.

The use of context-centered behavior change theories does not necessarily address the problem of behavior change. The activity theory provides for a dynamic and dialectical perspective on the relationship between the individual and society. In so doing it creates a way of conceptualizing the interrelationship between ‘individual’ and ‘society’ so problematic in the HIV/AIDS field. This theory highlights the fact that the human mind develops within human social activity and human practices such as sexual practices which are considered in the HIV/AIDS literature as ‘individual’, are analyzable only in relation to the activity of which they are a part. Activity is a collective systemic formation with a particular mediational structure (Daniels, 2001), hence activity systems are argued to have specific characteristics which guide the analysis of human behavior (Engeström, 1996a). “Characteristics of activity systems” Engeström (1996a; 2001) highlights particular characteristics of the activity system

The theory highlights three interconnected concepts inherent in the notion of an activity system: heterogeneity, historicity and contradictions. Heterogeneity as argued by Engeström (1996a) is that activity systems are heterogeneous, encompassing disparate elements, multiple viewpoints and divergent perspectives, each with its own history and potential. An analysis of the system involves a scrutiny of all the disparate elements and viewpoints of the various levels in the system; the relations between the components of the system; and the contradictions which emerge from the different voices/viewpoints (Engeström, 1987). The multi-voiced nature of the system is a source of tension and potential innovation (Engeström, 2001) which make them unique as a ‘unit of analysis’.

Historicity: is a central theoretical instrument which seeks to achieve explanation suggested by Engeström (1987) as that of analyzing data from the viewpoint of historicity. This is necessarily for two reasons. First, the mediated nature of behaviour means that activity contains, within it, the historical past. Any activity has to ‘resort to’, and is dependent on “some historically formed mediating artifacts, cultural resources that are common to the society at large” (Engeström & Miettinen, 1999, p. 8).

History is thus “present in current practices... manifestations of basic historical types of thinking and practice...coexist as layers within one and the same current activity system” (Engeström, 1996a, p. 92). in the activity system, it is present within individual participants, artefacts, rules and conventions (Engeström, 2001). Second, humans are not stable and unchanging, but are characterized by qualitative transformations. This is why an understanding of human behaviour requires an historical perspective (Engeström, 1987). The nature of an activity system as a unit of analysis allows for this perspective because, problems and potentials of activity systems “can only be understood against their own history” Engeström (2001). This notion of ‘historicity’ frames and facilitates an analysis of “change, resistance to change, transformation and stagnation” (Engeström & Miettinen, 1999) and can be applied to examining behaviour change in relation to HIV/AIDS.

Contradictions, discontinuity and change In the historical development of human activity over time, activity systems become increasingly penetrated and saturated by the basic socio-economic laws, and are subsequently characterized by the contradictions which correspond to these basic socioeconomic processes (Engeström, 1987; 1996a). They are

also characterized by turbulence, change and transformation in society. The components of the system are themselves constantly being constructed, renewed, and transformed as outcome and cause of human life. Engeström (1996) argues that “human beings not only use instruments, they also continuously renew and develop them, whether consciously or not. They not only obey rules, they also mould and reformulate them”.

In addition, continuous construction occurs between the components of an activity system. The life of an activity system is therefore characterized by discontinuity, crises, upheavals and qualitative transformations (Engeström, 1987). Engeström (2001) argued that contradictions are “historically accumulating structural tensions within and between activity systems”. Contradictions exist within each component of the activity system (primary contradictions), between the disparate elements of the system (secondary contradictions), and between one activity system and another activity system (tertiary contradictions).

The inherent contradictions of the activity system can be analyzed as the source of development of that system, including its individual participants. Such contradictions generate disturbances and conflicts hence the need for innovative attempts to change the activity. In this process the concept of ‘contradictions’ is harnessed to proactively bring about change. In exploring and revealing these different perspectives, the tensions and conflicts which might exist are exposed, which in turn might lead to an understanding of why the activity takes place in the way it does. This also highlights the possibility (or lack of possibility) for change. The study on male circumcision and sexual behavior of

Luo men in relation to the spread of HIV/ AIDS in Maranda sub-county is greatly guided by these three concepts.

Historicity is particularly emphasized. The Luo community has cultural practices and traditions that are thought to greatly influence members in their sexual activities and subsequently influence the fight against HIV/AIDS. One's choice to inherit a widow is for instance decided by the existing belief that has been practiced over ages. He may be picked upon to inherit a late kin's widow and if the HIV/AIDS test is not undertaken, he may be at risk of infection. Polygamy is also a practice as old as the origin of the Luo people. This is a practice that is considered normal but which may compromise one's fight against HIV/AIDS as it is hard to ensure faithfulness among the partners involved. While basing on these traditional practices, the researcher underscores that HIV/AIDS still remains high in the region despite the many interventions amongst them the latest circumcision which only targeted Luo men. The researcher focused on the Luo man not as an individual actor in his sexual practices but on his behavior as a product of the social cultural upbringing within the Luo community and how he affects HIV/AIDS prevalence that has seen Luo Nyanza leading in all major surveys.

2.8 Conceptual Framework

The conceptual framework depicts the relationship between the independent variables

Independent Variable

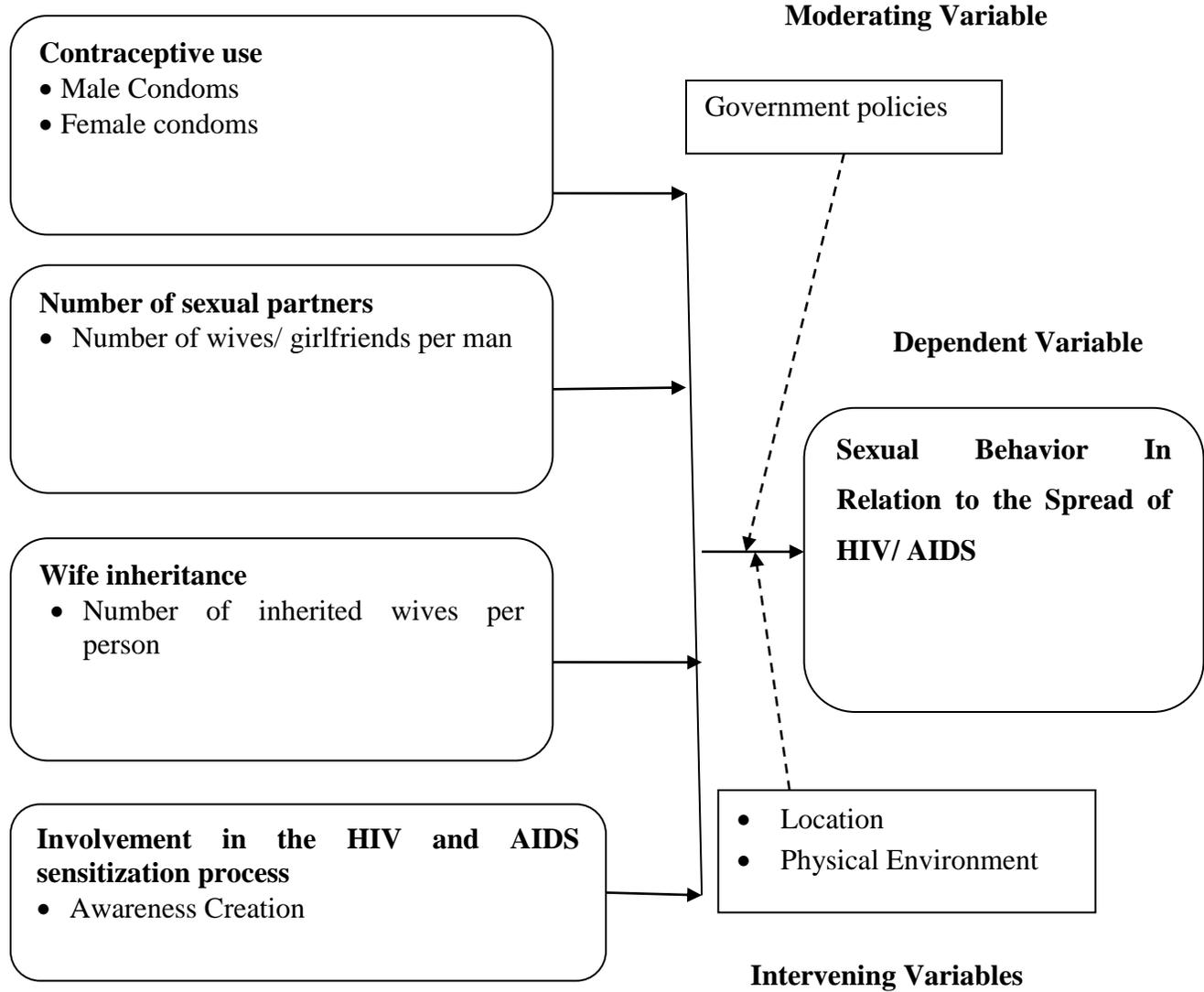


Figure 1: Conceptual framework

2.9 Knowledge Gap

There was little data on reasons for slow uptake of VMMC among adults especially those of 25 years and beyond, particularly among tribes that do not practice circumcision as part of their culture and religion (NACC and NASCOP 2012). The whole exercise which involved pre-counselling of participants, HIV testing and circumcision failed to consider and address the pre-existing sexual and social cultural factors as no documentation on the same exists; from the reviewed literature. The Rapid Result Initiative (RRI) undertaken by the government of Kenya between 9th November and 20th December 2009 revealed that 45% of the clients were below 15 years old and the adult men were mainly under 25 years old (NACC and NASCOP 2012). Current data for VMMC in Nyanza has continued to show the same trend. This study sought to establish some of the reasons for this trend.

Male circumcision is practiced in different countries in different styles and for different reasons. In some countries especially those of the west, infant male circumcision was practiced for many years as part of their culture. Thus, a high percentage of their men were circumcised. The researcher sought to fill this research gap by examining the sexual and social cultural behaviors such as contraceptive use, widow inheritance, and number of sexual partners per man with an aim of understanding their role in the fight against HIV/AIDS in Maranda Sub-county of Bondo County.

2.10 Summary of the Reviewed Literature

The chapter reviewed works by national and international scholars on the effect of male circumcision in HIV/AIDS prevention and the resultant change in sexual and cultural behavior. It sought the contribution of various scholars on why HIV/AIDS infection rates are still high in the Luo community, Maranda sub - county despite the successful roll -

out and acceptability of male circumcision as one of the HIV/AIDS prevention strategies. However, no such work has been done among the Luo who inhabit Nyanza. The researcher sought to fill this research gap by examining the sexual and social cultural behaviors such as contraceptive use, widow inheritance, and number of sexual partners per man with an aim of understanding their role in the fight against HIV/AIDS in Maranda Sub-county of Bondo County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology used in carrying out the study. This referred to research design, target population, sample and sampling procedure; research Instruments, reliability and validity of the instruments, methods of data collection and data analysis.

3.3 Research Design

Research design according to Orodho (2005) is the plan, structure and strategy of investigation proposed for obtaining answers to research questions. This study adopted a descriptive survey design approach on the effect of male circumcision on sexual behavior of Luo men in relation to the spread of HIV and AIDS: A case study of Maranda sub-County of Bondo County. Frankel and Wallen (2003) define survey as a method that involves asking a large group of questions about a particular issue. Descriptive survey research collects data in order to test hypotheses or to answer questions covering the current status of the subject in the study. It also allows for quick collection at comparatively cheap cost Grinnel (1993).The survey also intended to produce statistical information about aspects of change of sexual behavior of circumcised Luo men in Bondo County for quick analysis.

3.4 Target Population

This study targeted circumcised and uncircumcised men aged between fifteen (15) and forty nine (49) years old. The study targeted a population of 63,030 men (the total number of men aged between 15 and 49 years old according to the 2007 population

census). This age group was also the main target of the 2008 VMMC project. The questionnaires were self-administered by the researcher with the help of research assistants to respondents who were requested to fill and avail them for collection. The uncircumcised participants were randomly picked from the different wards.

3.5 Sample and Sample Size

Respondents were picked from each of the four wards using simple random sampling. Circumcised male participants were pre-selected using purposive sampling from medical practitioner's reports-Nyanza Reproductive Health Society (VMMC section). This was a key partner department in the implementation of VMMC based at Bondo County Hospital from which participants' contacts and physical addresses were obtained. The sample size for this study was obtained from the population using Slovin's formula for determination of sample size as shown below.

$$n = \frac{N}{1 + N(e)^2}$$

Where **n** = sample size, **N** = estimate of the population. And **e** = significance level.

At 95% level of confidence and P=5

$$n = 63,030 / 1 + 63,030 (0.05)^2$$

$$n = 397$$

Slovin's formula allows a researcher to sample the population with a desired degree of accuracy and it gives the researcher an idea of how large the sample size needs to be so as to ensure a reasonable accuracy of results. It takes into consideration that it is not possible

to study an entire population hence a smaller sample was taken using a random sampling technique. It is used when nothing about the behavior of a population is known or where it is not known how a population is going to behave

This translated to 397 men of whom, 198 comprised the circumcised and a similar number were uncircumcised to avoid biasness in the research. This represented 50% of the circumcised and 50% of the uncircumcised men. The sample size in each location was proportionately obtained according to each location's population.

3.6 Data Collection

The researcher, with the help of two research assistants visited respondents in the sampled areas in Maranda sub-county. She introduced her topic and explained the assistance needed from them. The questionnaires were distributed and filled after a brief explanation by the researcher. The researcher provided consistent explanation to all respondents while assuring them confidentiality because the topic was considered sensitive by most of them. She sought permission to carry out the study in Maranda sub – county. A research permit and a cover letter were issued personally to the respondents in addition to the research questions.

The respondents were guided on how to answer the questions and were assured of confidentiality and anonymity of elicited information. Personal appeal and probing was used to get more information from respondents since questionnaires were self-administered. Information from illiterate and semi-illiterate respondents was sought and recorded on the spot, while literate civil servants and literate respondents were given time to answer the questionnaires which were collected after a fortnight. A total of 230 questionnaires were retrieved out of a total 296 that were sent.

3.6.1 Instruments of Data Collection

Structured questionnaires was used to collect data. The questionnaires contained both closed and open ended questions for randomly selected members of the groups. The questionnaires as the main instrument, were administered to the respondents. Closed questions were easier to answer as respondents were only required to tick the appropriate response while the open ended questions were aimed at giving respondents freedom of thought and expression. Observation was used to corroborate elicited information while interviews, were conducted, on a group members who were uncomfortable with writing.

3.7 Validity and Reliability of data instruments

The researcher established the validity and reliability of research instruments before setting out for data collection.

3.7.1 Pilot testing

Pilot testing is a small-scale trial, where a few examinees take the test and comment on the mechanics of the test (Trochim, 2006). In test development projects of all kinds, the trialing of new items is typically taken into Pilot Testing. Pre-testing Mugenda and Mugenda, (2003) allows errors to be discovered before the actual collection of data begins and 10% of the sample size is considered adequate pilot study that is one respondents equating to ten purposively selected respondent perceived to be knowledgeable in male circumcision on sexual behavior in relation to the spread of HIV/AIDS.

3.7.2 Validity

Validity refers to the appropriateness, meaningfulness and usefulness of the inference a researcher makes (Kothari, 2004). This is the extent to which differences found with a measuring instrument reflect true differences among those being tested. Validity estimates how accurate the data obtained in the study represents a given variable or construct in the study (Mugenda, 2008). To ensure validity of research instruments, the researcher carried out a pilot study targeting 1% of the sample size, who were excluded from the main study. Piloting was intended to measure whether the content was relevant and comprehensive enough to collect the targeted information.

The feedback from the pilot study guided the researcher to adjust the research instruments before administration to the respondents in the field for data collection. Collected information was verified through probing, triangulation using cross check questions versus other records to ensure validity.

3.7.3 Reliability

Reliability refers to the consistency of scores or answers from one administration of an instrument to another, and from one set of items to another. Reliability according to Mugenda (2008), refers to a measure of degree to which a research instrument would yield the same results or data after repeated trials. In order to ensure reliability of the instruments, pretesting of the instruments was conducted by administering similar questionnaires to selected SHGs before rolling it out to the other targeted groups. The analysis of the pre-tested results was done to determine the suitability of the instruments

while the outcome provided the platform on which improvement of the instrument was to be done. Researcher conducted a pilot test to ensure that there is validity and reliability of instrument using Cronbach's alpha while conducting the research in order to obtain data that is consistent with the main objective. An alpha score of 0.70 or more was indicated by the instrument. Besides this, pre-testing will aid the researcher in clearing any ambiguities and ensuring that the questions posed measure what it is intended.

Alpha was established for every objective which formed a scale as shown in Table 3.1.

Table 3.1: Summary of Reliability Coefficients for Variables of the Study

Variable	Number of Statements	Cronbach Alpha	Comment
Contraceptive use	4	0.891	Reliable
Involvement in the HIV and AIDS sensitization process	6	0.831	Reliable
Wife inheritance	4	0.765	Reliable
Number of sexual partners	3	0.761	Reliable
Contraceptive use	5	0.835	Reliable

The influence of male circumcision on sexual behaviour of Luo men in relation to the spread of HIV/AIDS; A case of Maranda Sub-County, Kenya showed the highest levels of reliability at 0.891 and 0.835 respectively. An alpha score of 0.70 or more indicate that the instrument is reliable. Data reliability played an important role towards enhancing generalization of gathered data to represent the true characteristics on influence of male circumcision on sexual behaviour of Luo men in relation to the spread of HIV/AIDS; A case of Maranda Sub-County, Kenya since it aided the researcher in clearing any ambiguities and ensuring that the questions posed measured what was intended. If the Cronbach's alpha is high, the instrument is said to yield data that have high test reliability.

3.8 Methods of Data Analysis

First, the collected data was edited, errors and omissions were corrected. The schedules were prepared for tabulation while the tabulated data was analyzed using the statistical SPSS software as shown in the operationalization table. After all the responses were tallied, frequency and percentage distribution tables were prepared, then measures of Central Tendencies were used to calculate percentages for combined responses.

A simple regression model was used in determining the level of influence the independent variables have on dependent variable as shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where;

Y = Sexual Behavior In Relation to the Spread of HIV/ AIDS
(Dependent Variable)

β_0 = Constant Term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Beta coefficients

X_1 = Influence of contraceptives among circumcised and uncircumcised men

X_2 = Numbers of sexual partners

X_3 = Wife inheritance

X_4 = Involvements in the HIV/AIDS sensitization process

e = Error Term

3.9 Ethical Considerations

The researcher ensured that all the respondents were handled with respect and that the process of eliciting information from them did not interrupt their social activities. The researcher also ensured that the collected information was kept with the highest degree of

confidentiality while informed consent was sought before eliciting information from them.

3.10 Operationalization of Variables

This section analyses the operational definition of variables on the effect of male circumcision on sexual behavior of Luo men to sexual behavior in relation to the spread of HIV/ AIDS. This is explained in Table 1.

Table 3.2: Operationalization table

Objective	Type of Variables	Indicators	Measurements	Measurement scale	Research instrument	Tools of Analysis	Specific tools
To examine the influence of contraceptives use among circumcised men on sexual behavior of Luo men in relation to the spread of HIV/AIDS in Maranda sub-county.	Independent Variable	Medical records on contraceptives Use Number of STI's reported	Number of Contraceptives use	Nominal	Questionnaire	SPSS Ms Word	SPSS
To determine the influence sexual partner of circumcised men have on sexual behavior of Luo men in relation to the spread of HIV/AIDS in Maranda sub-county.	Independent variable	Number wives or girl friends to a man	Numerical	Nominal	Questionnaire Interviews	Ms Word SPSS	SPSS
To establish the influence widow inheritance on sexual behavior of Luo men in relation to the spread of HIV/AIDS in Maranda sub-county.	Independent variable	Number of wives per person Case of death of close relatives	Numerical	Nominal	Questionnaire Interviews	SPSS Ms Word	SPSS
To establish the influence of involvement of circumcised Luo in sensitization process on sexual behavior men in relation to the spread of HIV/AIDS in Maranda sub-county.	Independent variable	Community work office's records	Numerical	Nominal	Questionnaire Interviews	SPSS Ms Word	SPSS

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1. Introduction

This chapter is divided into two main sections. The first section deals with a description of the demographic characteristics of the respondents. The second section describes and analyzes data obtained from the study so as to explain the effect of male circumcision on the sexual and cultural behavior of Luo men in relation to the spread of HIV/AIDS in Maranda sub - county. Data was analyzed according to research hypotheses formulated. The researcher adopted regression analysis for this study.

4.2 Response rate

The questionnaires were distributed to the respondents with the assistance of two research assistants while some were distributed by heads of selected health facilities. Two hundred and thirty (230) respondents returned their questionnaires out of 397 which were sent, representing a response rate of 57.9%. This response rate according to (Mugenda and Mugenda, 2003) is very good because a response rate of 55% is adequate for analysis and reporting, 60% is good and above 70% is very good.

The people working in offices and schools were the first respondents since they were readily available, unlike the fishermen who responded much later: although they comprised the largest number of participants. The researcher targeted men aged between 15 and 59 years under the voluntary circumcision program. It was observed that some respondents were not able to answer the questionnaires effectively, due to their low level

of education. This was evident among some fishermen and motor-cycle operators. Teachers and students responded effectively and took less time to answer the questions compared to the rest of the population.

4.3 Demographic characteristics of the respondents

The study sought to determine the average age of the respondents in order to determine at what age men are circumcised and when they are involved in the risky sexual behavior.

Table 4.1 shows the research findings.

4.3.1 Age of respondents

Table 4.1: Distribution of respondents by Age

Age Bracket	Frequency	Valid Percent	Cumulative
15-18	70	31.5	31.5
19-30	91	40	71.5
31-50	41	18.5	90
51 and above	28	10	100
Total	230	100	

The study found out of 31.5% of the respondents were teenagers between 15 to 18 years; 40% were middle aged men between 19 to 30 years; those of ages between 31 to 50 were 18.5% and 10 to those aged 51 years and above. Their frequency was 28, this imply than majority of the respondents were of ages between 19 to 30 years, this is the most active age bracket and high likelihood that they are involved with sexual escapades.

4.3.2 Highest Academic Level of the Respondents

Table 4.2: Distribution of respondents by Academic Level

	Frequency	Valid Percent	Cumulative
Primary certificate	115	50	31.5
Diploma	87	37.8	71.5
Degree	25	10.9	90
Others	3	2.3	100
Total	230	100	

Table 4.2 indicates that, of the 280 respondents who completed the questionnaire citing their academic qualifications, 115 (50%) had attained certificate level, 87 (37.8%) had attained diploma level, while 25 (10.9%) were degree holders. A small number, 3 (2.3%) had other levels such as master's degree. The implication of these statistics is that most of respondents were well educated and therefore able to make informed choices on uptake of male circumcision.

4.3.3 Occupation of respondents

Table 4.3 tabulates the daily activities of the residents of Maranda area in terms of their occupation and duties.

Table 4.3: Distribution of respondents by Occupation

	Frequency	Valid Percent	Cumulative
Teachers/Civil Servants	40	17.4	17.4
Students	58	25.2	42.6
Fishermen	82	35.7	78.3
Any Other	50	21.7	100
Total	230	100	

The highest number of respondents who participated in the study were fishermen working at the shores of Lake Victoria and at fish markets in their villages with a frequency of 82 followed by students at 58. Others included motorcycle operators ‘*bodaboda*’, who work in the village centers, famers and small business traders with a frequency 50. Lastly, the researcher established that forty percent (40%) of the respondents consisted of teachers from the local public primary and secondary schools and civil servants who worked at the local administration offices. The implication of these statistics is that most of respondents were individuals within the society who run day-to-day activities within the community, also commercial motorcycle riders could spread HIV/AIDs through exposure and multiple partners.

4.4 Influence of Contraceptives Use among Circumcised Luo Men on Sexual Behavior in Relation to the Spread of HIV/ AIDS.

Table 4.4: Influence of Contraceptives among Circumcised and Uncircumcised Men

Statements	Mean	Std. Dvn
I use condoms all the time with a new partner	3.7500	.41966
Unprotected sex is common with wives	3.9000	.53972
Testing and counseling services	3.5750	.67178
Protection for high-risk men is due to induction of a mucosal immune response in the presence of repeated exposure	3.4800	.65974
Behavior change campaigns influence use of contraceptives	3.4000	.61147

The results of descriptive statistical analysis for following factors that influence of contraceptives among circumcised and uncircumcised Luo men in table 4.6 above. From the table mean and standard deviation were used to test respondent ideas where Standard deviation is the square root of the variance. It measures the spread of a set of observations. The larger the standard deviation is, the more spread out the observations are while mean is the arithmetic mean across the observations, it is the most widely used measure of central tendency. The mean is sensitive to extremely large or small values. From the table unprotected sex is common with wives has the (mean=3.9 and standard deviation= 0.53972), this means that it's the most significant factor, while the least

indicated was behavior change campaigns influence use of contraceptives has the (mean=3.4 and standard deviation = 0.61147).

They adopted circumcision and use of condoms through the information they got from the media and the non-governmental organizations who sensitized them and advised them to observe safe sex. From the study, it was noted that this group had more than one sexual partner which prompts them to use condoms more. It was found that they used condoms often because of the influence from their peers who opined that circumcision made them better sex performers and that, the use of condoms was less pleasurable. Majority of elderly men aged above 51 years, were not circumcised and did not use condoms more often because they were unwilling to change their traditional cultural practices. Some of them had embraced Christianity and were committed to their families.

4.5 Influence of Circumcised Luo Men on the Spread of HIV/AIDS

Respondents were asked to rate the connection between circumcised Luo men and Sexual Behavior In Relation to the Spread of HIV/ AIDS using a Likert Scale of Strongly agree (SA)... 5: Agree (A)... 4 Neutral (N)...3 Disagree (D)... 2 strongly disagree (SD)...1

Table 4.5: Influence of Circumcised Luo Men on the Spread of HIV/AIDS

Statements	Mean	Std. Dvn
Voluntary circumcision is very important in the control of HIV/AIDS	3.8500	.51966
Uncircumcised men have higher infectivity than circumcised men	3.8000	.63972
The main reason for circumcision is for sexual satisfaction	3.4750	.97178
Sexual satisfaction when the male is uncircumcised	3.3000	.65974
Circumcised men indulge in somewhat riskier sexual behavior	3.1000	.41147

From the findings, Standard deviation measures the spread of a set of observations and it is the square root of the variance. The larger the standard deviation is, the more spread out the observations are therefore the main reason for circumcision is for sexual satisfaction has the highest standard deviation 0.97178 meaning that most of the respondent didn't agree to one notion there was spread of ideas. Voluntary circumcision is very important in the control of HIV/AIDS was rated the most significant factor with a mean of 3.8500, while the least significant factor was the statement that circumcised men indulge in somewhat riskier sexual behavior which was supported with a mean of 3.1000.

The researcher noted that, in Maranda sub-county most people maintained one sexual partner due to the rise of HIV/AIDS related deaths as well as the sensitization about circumcision done by the non-governmental organizations and the religious teachings encouraged them to maintain one partner. Some of them wanted to help the widows who

had lost their husbands and were close relatives. However, did not believe that circumcision played a role in their choices to marry many wives.

4.6 Influence Widow Inheritance on Sexual Behavior of Men in Relation to the Spread of HIV/AIDS

Table 4.6: Influence of Circumcision on Widow Inheritance and the Spread of HIV/AIDS

Variables	Mean	Std. Dvn
Widow inheritance increases the prevalence of HIV	3.4898	.37796
A man who married many wives had higher chances of being chosen a leader within the community	3.3905	.99611
It easier to marry a woman who had problems of feeding and educating her children	3.2245	.37796
In inheritance a man could accumulate wealth and wield more power from all the widowed women	3.1952	.99611
Inheritance by a non-relative for sexual ritual was associated with an elevated HIV prevalence	3.0357	.03126
Wife inheritance increases incidence of post-widowhood infection	2.9652	.54388

On the descriptive statistics on table above shows that respondent were interviewed on how wife inheritance influence Circumcision and the Spread of HIV/AIDS. From the table, the means ranges from 3.4898 to 2.9652 meaning that most of the agree that Widow inheritance increases the prevalence of HIV, A man who married many wives had higher chances of being chosen a leader within the community; It easier to marry a

woman who had problems of feeding and educating her children; In inheritance a man could accumulate wealth and wield more power from all the widowed women; Inheritance by a non-relative for sexual ritual was associated with an elevated HIV prevalence and Wife inheritance increases incidence of post-widowhood infection.

It was evident that most men who were involved in wife inheritance decided to inherit just one wife so as to balance between his first wife and the inherited wife. Some men also inherited a widow so as to tame his first wife who was expected to respect her husband. The respondents agreed that it was through teachings and sensitization from the non-governmental organizations on male circumcision and HIV/ AIDS eradication that encouraged them to maintain one wife and avoid polygamy

4.7 Influence of Involvement of Circumcised Luo Men on Sensitization Process

Respondents at this part of the study were provided with statements on the factors influencing involvement of circumcised Luo men on sensitization process in Maranda sub-county. Respondents were asked to rate using a Likert scale of: Strongly agree (SA)... 5: Agree (A)... 4 Neutral (N)...3 Disagree (D)... 2 strongly disagree (SD)...1

Table 4.7: Influence of Involvement of Circumcised Luo Men on Sensitization

Process

Variables	Mean	Std. Dvn
Knowing ones HIV status would lead to behavior change	4.1100	.6875
Circumcision lower rates of HIV infection	3.7650	.63722
I have more than one sexual partner	3.5708	.62081
I am aware of the NGOs campaign on changed behaviour from casual sex	3.4786	.33903
The community has seen changed behaviour as a result of the HIV/AIDS control strategies	3.2667	.88581
I have been tested for HIV/AIDS	3.2100	.84462

From the descriptive statistics presented in table above show that the mean are above 2.5 for all the variables in involvement of circumcised Luo men on sensitization process, (4.1100, 3.7650, 3.5708, 3.4786 and 3.2667) from the lowest to highest respectively in this order. Knowing ones HIV status would lead to behavior change was found to have the highest mean of 4.1100.

Circumcision is a cultural act and a surgical procedure with medical reasons. It has been suggested that all men undergo this ritual as a prevention measure against HIV/AIDS infections. But, most respondents in this exercise were students who had been already circumcised. However, even non students who were circumcised were also involved. Sensitization walk least participated exercise that was involved by the residents of

Maranda sub-county. This category of respondents were expected to walk within the sub - county to sensitize the locals on circumcision and HIV/ AIDS.

4.8 Regression Analysis

A multivariate regression model was applied to determine the relative importance of each of the four variables with respect to Sexual Behavior In Relation to the Spread of HIV/ AIDS. The regression model was as follows:

$$Y = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + \varepsilon$$

Where:

Y= Sexual Behavior In Relation to the Spread of HIV/ AIDS

X₁= Influence of contraceptives among circumcised and uncircumcised men

X₂= Numbers of sexual partners

X₃= Wife inheritance

X₄= Involvements in the HIV/AIDS sensitization process

β₀ = constant (y intercept)

β = coefficient

ε = error term

Table 4.8: Model Summary for Goodness of fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.918(a)	.843	.805	.51038	.843	1.242	4	176	.000

Predictors: (Constant), Influence of contraceptives among circumcised and uncircumcised men, Numbers of sexual partners, Wife inheritance, Involvements in the HIV/AIDS sensitization process

Dependent Variable: Sexual Behavior In Relation to the Spread of HIV/ AIDS

Analysis in table 4.12 above shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.843, that is, Influence of contraceptives among circumcised and uncircumcised men, Numbers of sexual partners, Wife inheritance and Involvements in the HIV/AIDS sensitization process leaving only 15.7 percent unexplained. The P- value of 0.000 (Less than 0.05) implies that the model of the spread of HIV/AIDs is significant at the 5 percent significance.

Table 4.9: Results of ANOVA of Regression Analysis

	Sum of				
	Squares	Df	Mean Square	F	Sig.
Regression	.852	4	.213	1.242	.000
Residual	20.35	226	.171		
Total	22.64	230			

Predictors: (Constant) Influence of contraceptives among circumcised and uncircumcised men, Numbers of sexual partners, Wife inheritance, Involvements in the HIV/AIDS sensitization process

Dependent Variable: Sexual Behavior In Relation to the Spread of HIV/ AIDS

ANOVA findings (P- value of 0.00) in table 4.9 shows that there is relationship between the predictors variables (Influence of contraceptives among circumcised and uncircumcised men, Numbers of sexual partners, Wife inheritance, Involvements in the HIV/AIDS sensitization process) and response variable (Sexual Behavior In Relation to the Spread of HIV/ AIDS)

Table 4.10: Coefficients of regression equation

	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.260	.460		0.565	.231
Influence of contraceptives X ₁ among circumcised and uncircumcised men	.512	.048	.254	2.729	.001
Numbers of sexual partners X ₂	.170	.045	-.300	3.778	.000
Wife inheritance X ₃	.051	.023	.113	2.217	.002
Involvements in the X ₄ HIV/AIDS sensitization process	.048	.022	.093	2.182	.000

Dependent Variable: Sexual Behavior In Relation to the Spread of HIV/ AIDS

Multiple regression analysis was conducted as to determine the relationship between the spread of HIV/AIDS and the four variables. As per the SPSS generated table 4.10, the equation the established multiple linear regression equation becomes:

$$Y = 0.260 + 0.512X_1 + 0.170X_2 + 0.051X_3 + 0.048X_4$$

Where

Constant = 0.260, shows that if the influence of contraceptives among circumcised and uncircumcised men, Numbers of sexual partners, Wife inheritance, Involvements in the HIV/AIDS sensitization process all rated as zero, the spread of HIV/AIDS would be 0.260

$X_1 = 0.512$, shows that one unit change in the influence of contraceptives among circumcised and uncircumcised men results in 0.512 units increase in the spread of HIV/AIDS

$X_2 = 0.170$, shows that one unit change in the numbers of sexual partners results in 0.170 units increase in the spread of HIV/AIDS

$X_3 = 0.051$, shows that one unit change in wife inheritance results in 0.051 units increase in the spread of HIV/AIDS

$X_4 = 0.048$, shows that one unit change in involvements in the HIV/AIDS sensitization process results in 0.048 units increase in the spread of HIV/AIDS

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND
RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary of findings in relation to the objectives of the study. It is followed by a brief discussion of the findings which show that most of the findings were in arrangement with the literature review. This chapter also gives the conclusion, recommendations of the study and the areas of further research.

5.2 Summary of the study Findings

This study was carried out on the effects of male circumcision on the sexual behavior of Luo men in relation to the spread of HIV/AIDS. This is because, over the years, observational studies have suggested an association between male circumcision and HIV/AIDS in males. Various studies have shown correlations of circumcision and HIV/AIDS reduction. The result revealed that most respondents who were involved in this study felt that all the highlighted effect of male circumcision on sexual behavior of Luo men in relation to the spread of HIV/ AIDS contributed to most deaths in Luo Nyanza.

The researcher based her study in Maranda sub-county and the people directly involved with circumcision and HIV/AIDS were considered. These people included teachers, students, fishermen, farmers, traders, and people who lived around. It is from these

people that all information provided in this research was drawn from. It was found that most respondents were in agreement with all the causes that were enlisted.

5.2.1 Influence of Contraceptives Use Among Circumcised Luo Men On Sexual Behavior in Relation to the Spread of HIV/ AIDS.

From the findings, unprotected sex is common with wives. They adopted circumcision and use of condoms through the information they got from the media and the non-governmental organizations who sensitized them and advised them to observe safe sex. It was also noted respondents had more than one sexual partner which prompts them to use condoms more. Condoms often because of the influence from their peers who opined that circumcision made them better sex performers and that, the use of condoms was less pleasurable. Majority of elderly men aged above 51 years, were not circumcised and did not use condoms more often because they were unwilling to change their traditional cultural practices. But of them had embraced Christianity and were committed to their families.

5.2.2 Influence Sexual Partner of Circumcised Men have on Sexual Behavior in Relation to the Spread of HIV/ AIDS

Most men in Maranda County were found to have one sexual partner due to the sensitization about circumcision and HIV/AIDS done by the non-organization and the religious teachings that encouraged them to stick to one partner. They also feared the increasing spread of HIV/AIDS. Although this practice was adopted some few years ago

after many people had died of HIV/AIDS pandemic and the sensitization by some NGOs, the government and churches. The researcher also found out that respondents engaged in polygamous relationships due to the traditional polygamous practices and the high number of single women in the area compared to men. This behavior of polygamy has increased the spread of HIV/AIDS that has increased deaths. These facts were given by respondents in relation to increased rate of deaths in the area in the recent years.

5.2.3 Influence Widow Inheritance on Sexual Behavior of Men in Relation to the Spread of HIV/AIDS

The practice was intended to help the woman take care of her children that were left behind by the late husband. This was previously done after the family agreed on whom to take care of the family. However, this situation had changed and wife inheritance, which takes place regardless of one's HIV status, has been viewed as a way of encouraging the spread of HIV/AIDS. This is why, churches and the NGOs are struggling against the spread of HIV/AIDS. The teachings have not changed this behavior but rather helped to reduce the number of wives inherited as well as encouraging those involved to be tested so as to take necessary precautions. However, respondents agreed that they could only inherit more than one wife due to the tradition and lack of information on the danger of wife inheritance. The practice of wife inheritance promotes the spread of HIV/AIDS leading to increased deaths. The rate has however reduced significantly in this area in the recent past due to religious teaching and sensitization by the NGOs, on the danger of wife inheritance.

5.2.4 Involvements in the HIV/AIDS Sensitization Process

The process of sensitization involved attending seminars, direct talks to individuals, workshops and church gatherings where respondents were involved in educating people on the danger and spreading of HIV/AIDS and counseling the affected people. From the research, it was established were respondents are involved in sensitization through awareness talks; because most people went to churches and also attended workshops and seminars. Counseling was done by teachers and parents to their children who were at the danger of contracting the pandemic and also the affected ones.

5.3 Discussion of Findings

In this study, most of the objectives agree with the literature review but there were small deviations from the expected results. From the study, it was noted that there was drastic change in sexual behavior of Luo men in relation to the spread of HIV/AIDS as a result of circumcision. Most circumcised men were involved in more than one relationship. This is in line with a study by Kelly et.al. (1999), in studying the association between male circumcision and HIV infection in rural Uganda found that among Muslim polygamous men, HIV prevalence increased with the number of sexual partners. He concluded that circumcision provided no significant protective effect for polygamous men. In most polygamous relationships, women were the most affected.

5.3.1 Influence of Contraceptives Use Among Circumcised Luo Men On Sexual Behavior in Relation to the Spread of HIV/ AIDS.

From the findings unprotected sex is common with wives. They adopted circumcision and use of condoms through the information they got from the media and the non-governmental organizations who sensitized them and advised them to observe safe sex. It was noted that this group had more than one sexual partner which prompts them to use condoms more. Caldwell et al. (1993), says that there is adequate evidence to show that a large proportion of women are infected by their male partners. Also, Bollinger (2011) suggested that this may be worse in a program of mass circumcision where men engage in unprotected sex in the pretext of circumcision.

5.3.2 Influence Sexual Partner of Circumcised Men have on Sexual Behavior in Relation to the Spread of HIV/ AIDS

Most men in Maranda County were found to have more than one sexual partner due to the sensitization about circumcision and HIV/AIDS done by the non-organization and the religious teachings that encouraged them to stick to one partner. They also feared the increasing spread of HIV/AIDS. Although this practice was adopted a few years ago after many people had died of HIV/AIDS pandemic and the sensitization by some NGOs, the government and churches. The teachings have not changed this behavior but rather helped to reduce the number of wives inherited as well as encouraging those involved to be tested so as to take necessary precautions. In most polygamous relationships, women

are the most affected. Caldwell et al. (1993), says that there is adequate evidence to show that a large proportion of women are infected by their male partners.

5.3.3 Influence Widow Inheritance on Sexual Behavior of Men in Relation to the Spread of HIV/AIDS

Wife inheritance was found to promote the spread of HIV/AIDS leading to increased deaths. The practice was intended to help the woman take care of the children that were left behind by the late husband. This was previously done after the family agrees on whom to take care of the family. However, this situation had changed and wife inheritance, which takes place regardless of one's HIV status, has been viewed as a way of encouraging the spread of HIV/AIDS. This is why churches and the NGOs are struggling against the spread of HIV/AIDS. However, respondents agreed that they could only inherit more than one wife due to the tradition and lack of information on the danger of wife inheritance. This practice of wife inheritance promotes the spread of HIV/AIDS leading to increased deaths. The rate has however reduced significantly in this area in the recent past due to religious teaching and sensitization by the NGOs, on the danger of wife inheritance.

5.3.4 Involvements in the HIV/AIDS Sensitization Process

The process of sensitization involved attending seminars, direct talks to individuals, workshops and church gatherings where respondents were involved in educating people on the danger and spreading of HIV/AIDS and counseling the affected people. From the

research, it was found that respondents are involved in sensitization through awareness talks; because most people went to churches and also attended workshops and seminars. Counseling was done by teachers and parents to their children who were at the danger of contracting the pandemic and also the affected ones.

Studies by Wawire, 2004; Muteti, 2007 and Mwaengo, 2009 theorized that upon circumcision, many Luo men are involved in the sensitization process on the prevention of the virus that spread HIV/AIDS through the process of circumcision. They are also engaged in other activities such as sensitization talks, participating in awareness walks and campaigns. They are also involved in the care of the infected persons by providing necessary requirements to them.

5.4 Conclusions

The effect of male circumcision on sexual behavior in relation to the spread of HIV and AIDS among Luo men is a multi-faceted topic that intertwines a number of factors. Circumcision alone is insufficient in fighting the HIV/AIDS menace. Culture also plays a great role in the fight against this epidemic in Luo Nyanza. Any effort to help the community fight this menace must first address the cultural practices such as widow inheritance, polygamy among others. If the VMMC project is to attain any breakthrough then it has to invest in sensitization on retrogressive cultural practices among the Luo.

It can thus be concluded that, respondents had more than one sexual partner which prompted them to use condoms more. It was found that they used condoms often because

of the influence from their peers who opined that circumcision made them better sex performers and that, the use of condoms was less pleasurable. Majority of elderly men aged above 51 years, were not circumcised and did not use condoms more often because they were unwilling to change their traditional cultural practices. Some of them had embraced Christianity and were committed to their families.

It can be concluded that, respondents engaged in polygamous relationships due to the traditional polygamous practices and the high number of single women in the area compared to men. This behavior of polygamy has increased the spread of HIV/AIDS that has increased deaths. These facts were given by respondents in relation to increased rate of deaths in the area in the recent years.

The study also conclude that the practice of wife inheritance promotes the spread of HIV/AIDS leading to increased deaths. The rate has however reduced significantly in this area in the recent past due to religious teaching and sensitization by the NGOs, on the danger of wife inheritance. The practice was intended to help the woman take care of the children that were left behind by the late husband. This was previously done after the family agrees on whom to take care of the family.

From the research, it can also be concluded that respondents are involved in sensitization through awareness talks; because most people went to churches and also attended workshops and seminars. Counseling was done by teachers and parents to their children who were at the danger of contracting the pandemic and also the affected ones.

5.5 Recommendations

The study recommends on the following areas;

- i. HIV/AIDS is a major world pandemic whose effects are devastating because it leads to the loss of loved ones, brings suffering to the orphaned, the loss of manpower and the overall resultant socio-economic effects cannot be ignored. Various interventions have been suggested and implemented to ameliorate the menace and low prevalence has been recorded in some regions. Luo Nyanza in Kenya has not noted major progress in the fight against the menace and high prevalence rates have been recorded in national indicator surveys. The research findings show that culture plays a major role in the sexual activities in this community and recommends that any intervention geared towards HIV/AIDS prevention in the region must address underlying cultural practices. The researcher recommends that:
 - ii. It was found that they used condoms often because of the influence from their peers who opined that circumcision made them better sex performers and that, the use of condoms was less pleasurable. It's recommended that male circumcision services be integrated with HIV/AIDS prevention services, including VCT, STIs diagnosis and treatment, behavioral counseling, condom promotion and anti-retroviral therapies. This will help change some mistaken believes as well as raise

awareness on the fact that circumcision per se is cannot prevent one from contracting and spreading the disease.

- iii. The study recommended that polygamous relationships should be discouraged as it was found to increase the spread of HIV/AIDS that has increased deaths. These facts were given by respondents in relation to increased rate of deaths in the area in the recent years.
- iv. The study also concluded that the practice of wife inheritance promotes the spread of HIV/AIDS leading to increased deaths. The practice should be intended to help the woman take care of the children that were left behind by the late husband.
- v. From the research, respondents were involved in sensitization through awareness talks; because most people went to churches and also attended workshops and seminars. Counseling should be done by teachers and parents to their children who were at the danger of contracting the pandemic and also the affected ones. Male circumcision for HIV prevention be introduced as part of the school curriculum to educate traditionally non-circumcising communities on its importance in HIV prevention.

5.6 Recommendation for further Research

The study recommends the following areas to be considered for further research:

- i. A similar study should be done on the influence of contraceptive uptake of male circumcision by adult men in the Luo community.

- ii. A similar study should be done on other areas in Kenya on male circumcision is in the context of proper equipment's, why are there still complications arising.
- iii. The influence of other factors influencing sexual behaviour of Luo men in relation to the spread of HIV/AIDS.

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APPENDICES

Appendix I: Introduction Letter

IRENE NEKESA OPICHO

P.O Box 41126-80100,
Mombasa.

The District Health Coordinator,
P.O Box 164,
Bondo.

Dear Sir/Madam,

I am Mrs. Irene Nekesa Opicho, a student pursuing a Master of Arts course in Project Planning And Management at the University of Nairobi. As a requirement of the same and in partial fulfillment of the requirements for the course I am to submit a research report. I therefore intend to carry out a study on effect of male circumcision on social behavior of Luo men: A case study of averting the spread of HIV and AIDS in Maranda division of Bondo Sub County. The purpose of the study is to enable the government and other relevant stakeholders to identify more elaborate methods of preventing the spread of HIV and AIDS.

The findings of the study will be essential in ensuring that HIV and AIDS spread measures are adhered to and all policies are put in place.

For this purpose I am kindly requesting for permission to conduct this research in Maranda Sub County.

Yours faithfully,

Irene Nekesa Opicho

Appendix II: Introduction Letter from the University



UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF CONTINUING AND DISTANCE EDUCATION
DEPARTMENT OF EXTRA-MURAL STUDIES
NAIROBI EXTRA-MURAL CENTRE

Your Ref:

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 30197
NAIROBI

Our Ref:

Telephone: 318262 Ext. 120

13th November, 2015

REF: UON/CEES/NEMC/22/463

TO WHOM IT MAY CONCERN

RE: IRENE NEKESA OPICHO - REG NO-L50/64934/2010

This is to confirm that the above named is a student at the University of Nairobi, College of Education and External Studies, School of Continuing and Distance Education, Department of Extra- Mural Studies pursuing Master of Arts in Project Planning and Management.

TO WHOM IT MAY CONCERN

She is proceeding for research entitled "influence of male circumcision on sexual behavior of Luo men in relations to the spread of HIV/AIDS". A case of Maranda Sub County, Kenya.

Any assistance given to her will be appreciated.

CAREN AWILLY
CENTRE ORGANIZER
NAIROBI EXTRA MURAL CENTRE



Appendix III: Questionnaire

Topic: Effect of male circumcision on sexual behavior of Luo men in relation to the spread of HIV/AIDS: A case study of Maranda sub – county.

Section A: Administrative Details

Instructions: Please tick (√) where applicable and give brief comments, explanations, and opinions for open ended questions.

Questionnaire ID NO _____

Name of location _____

Date of Interview _____

Questionnaire checked by _____

Section B: Participant responses

1. How old are you? Please (√) on appropriate responses
 - a. 15- 18 years
 - b. 19 – 30 years
 - c. 31 – 50 years
 - d. 51 years and above.

2. What do you do for a living?
 - a. Teaching
 - b. Farming
 - c. Student

- d. Civil servant
- e. Any other (specify).

3. If you are a student, please state your level of education.

- a. Primary
- b. Secondary
- c. Tertiary institution
- d. University

4. Are you circumcised?

INFLUENCE OF CONTRACEPTIVES AMONG CIRCUMCISED AND UNCIRCUMCISED LUO MEN

	1	2	3	4	5
I use condoms all the time with a new partner					
Unprotected sex is common with wives					
Testing and counseling services					
Protection for high-risk men is due to induction of a mucosal immune response in the presence of repeated exposure					
Influence of behaviour change campaigns					

INFLUENCE OF CIRCUMCISED LUO MEN ON THE SPREAD OF HIV/AIDS

	1	2	3	4	5
Voluntary circumcision is very important in the control of HIV/AIDSs					
Uncircumcised men have higher infectivity than circumcised men					
The main reason for circumcision is for sexual satisfaction					
Sexual satisfaction when the male is uncircumcised					
Circumcised men indulge in somewhat riskier sexual behavior					

INFLUENCE OF CIRCUMCISION ON WIDOW INHERITANCE AND THE SPREAD OF HIV/AIDS

	1	2	3	4	5
Widow inheritance increases the prevalence of HIV					
A man who married many wives had higher chances of being chosen a leader within the community					
It easier to marry a woman who had problems of feeding and educating her children					
In inheritance a man could accumulate wealth and wield more power from all the widowed women					
Inheritance by a non-relative for sexual ritual was associated with an					

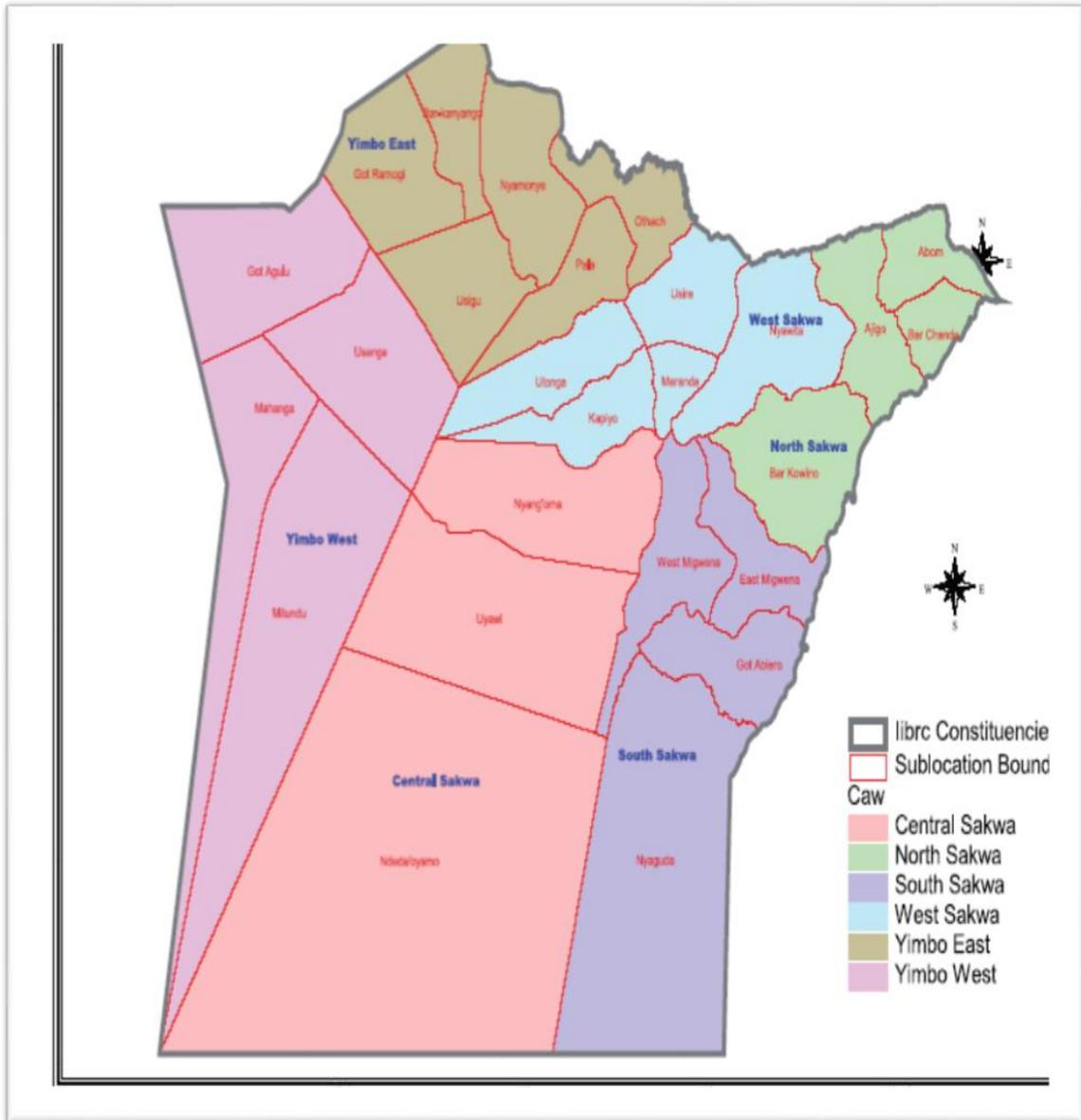
elevated HIV prevalence					
Wife inheritance increases incidence of post-widowhood infection					
Widow inheritance increases the prevalence of HIV					

INFLUENCE OF INVOLVEMENT OF CIRCUMCISED LUO MEN ON SENSITIZATION PROCESS

You have been provided with statements on the factors influencing of involvement of circumcised Luo men on sensitization process in Maranda sub-county. Please indicate whether you strongly agree, agree, moderately agree, 67 disagree, or strongly disagree with the given statements: Strongly agree (SA)... 5: Agree (A)... 4 Neutral (N)...3 Disagree (D)... 2 strongly disagree (SD)...1

	1	2	3	4	5
Knowing ones HIV status would lead to behavior change					
Circumcision lower rates of HIV infection					
I have more than one sexual partner					
I am aware of the NGOs campaign on changed behaviour from casual sex					
The community has seen changed behaviour as a result of the HIV/AIDS control strategies					
I have been tested for HIV/AIDS					

Appendix IV: Map of Maranda Sub-County



Appendix V: Map of Kenya

