# COMMUNITY PERCEPTION OF MALE CIRCUMCISION WITH REFERENCE TO HIV/AIDS PREVENTION IN NYANDO SUB-LOCATION, KISUMU COUNTY, KENYA

BY

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**A Thesis submitted in Partial Fulfillment of the Requirements for the Degree of Master of Philosophy of the Department of Geography, School of Arts and Social Sciences, Moi University, Eldoret, Kenya.**

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# DECLARATION

## Declaration by the Candidate

This thesis is my original work and has not been presented for a degree in any other University. No part of this thesis may be reproduced without the prior written permission of the author and/or Moi University.

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# DEDICATION

To my father, for his continued motivation for me to complete the course.

## ABSTRACT

From the time HIV was discovered, efforts have been made and are still being made to control it. Prevention methods are the focus of many studies as the cure is being sought. Three randomized control trials in South Africa, Kenya and Uganda revealed that male circumcision can provide partial protection from HIV infection of up to sixty percent in males. Efforts have been made to educate the entire population on the importance of Voluntary and Informed Medical Male Circumcision (VIMMC) aimed at reducing infection by HIV in men. VIMMC services are also being provided free of charge at selected health facilities. The Luo have not been practicing circumcision. Now that circumcision has been included in the package of HIV prevention measures, is the community willing to change their culture and start circumcising their males? The present study aimed to find out the views of a non-circumcising community in western Kenya – the Luo, about circumcision for prevention of HIV infection. The overall objective of the study was to assess the response of the community in Nyando Sub location to voluntary circumcision in relation to HIV/AIDS prevention. The specific objectives of the study were: 1.To find out if the residents of Nyando sub-location were aware of the importance of Voluntary and Informed Male Circumcision for HIV prevention. 2. To find out if residents of Nyando sub-location have accepted male circumcision as a method of HIV prevention. 3. To find out if the Luo culture of not practicing circumcision is hindering the community members from accepting circumcision for HIV prevention. Sampling was done based on the results of the 2009 Population and Housing Census where Nyando sub location had a population of 2495 people, with 1277 males and 1218 females, and 480 households. The 480 households were used as the sampling frame. By use of questionnaires, data was collected from one adult male from each household in a simple random sample of 55 households. Data was also collected from one adult female per household in a simple random sample of 55 households. In total, data were collected from 110 respondents comprising 55 adult males and 55 adult females. Nyando sub location does not have a VIMMC Centre. The key informants were sampled purposively from the neighbouring health facility since Nyando Sub location does not have a health facility. analyzed for the most important responses that were in line with the hypothesis and objectives. Data from the questionnaires were coded and entered in the SPSS computer programme for analysis. Quantitative data were tabulated and presented in percentages and charts. Similar responses of qualitative data were given same numerical codes then tables of frequencies were generated. The frequencies were then presented as percentages. The study found out that the community is aware of VIMMC and its importance in the prevention of HIV and AIDS. Members of the community fully support and appreciate VIMMC can reduce the spread of HIV and AIDS. Eighty nine percent of married women would like their spouses to be circumcised for reduction of HIV infection. Ninety four percent of men with sons wanted their sons to undergo VIMMC while ninety three percent of women with sons wanted their sons to be circumcised. Ninety five percent of men interviewed supported VIMMC. At the same time fifty three percent of the men interviewed said they had been circumcised through VIMMC. However elders felt that circumcision was meant for young men who are still very active sexually. As a result, The VIMMC centres experience a number of challenges including shortage of personnel and inadequate funds. The Luo culture of not circumcising their males has not deterred them from embracing VIMMC for HIV and AIDS prevention. This study therefore recommends that more VIMMC centres should be increased and more trained personnel hired to provide the services to the high number of men seeking this service.

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## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ABC | Abstain, Be faithful, use a Condom |
| AIDS | Acquired Immunodeficiency Syndrome |
| ART | Antiretroviral therapy |
| ARV | Antiretroviral |
| BC | Before Christ |
| CDC | Centers for Disease Control and Prevention |
| CHAL | Christian Health Association of Lesotho |
| CHAZ | Christian Health Association of Zambia |
| DHS | Demographic and Health Survey |
| eMTCT | Elimination of mother-to-child transmission of HIV |
| FBO | Faith based organization |
| FGD | Focus Group Discussion |
| FGDs | Focus Group Discussions |
| FGM | Female Genital Mutilation |
| GOK | Government of Kenya |
| HIV | Human Immunodeficiency Virus |
| KAIS | Kenya AIDS Indicator Survey |

KDHS Kenya Demographic and Health Survey

KEMRI Kenya Medical Research Institute

MC Male Circumcision

MMC Medical Male Circumcision

M.O.H. Ministry of Health

MTCT Mother-to-child Transmission

NACC Kenya National AIDS Control Council

NASCOP National AIDS and STI Control Programme

NCAPD National Coordinating Agency for Population and Development

NGO Nongovernmental Organization

OVC Orphans and Vulnerable Children

PCEA Presbyterian Church of East Africa

PEP Post-exposure prophylaxis

PEPFAR United States President's Emergency Plan for AIDS Relief

PLHA People Living with HIV/AIDS

PRB Population Reference Bureau

PrEP Pre-exposure prophylaxis

RCT Randomized Controlled Trial

RCTs Randomized Controlled Trials

RRI Rapid Results Initiative

SRH Sexual and Reproductive Health

STD Sexually Transmitted Diseases

STI Sexually Transmitted Infection

TB Tuberculosis

TMC Traditional Male Circumcision

UNAIDS Joint United Nations Programme on HIV and AIDS

UNDP United Nations Development Programme

UNFPA United Nations Population Fund

UNICEF United Nations Children's Fund

USAID United States Agency for International Development

VMMC Voluntary Medical Male Circumcision

VIMMC Voluntary and Informed Medical Male Circumcision

WHO World Health Organization

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background

Male circumcision is generally understood as the operation to remove the foreskin covering the glans of the penis. Although its origins are unknown, earliest evidence of the practice dates back from ancient Egypt (2300 BC) where it is thought to have been used originally to mark male slaves. By the time of Roman takeover of Egypt (30BC), the practice had a ritual significance and only circumcised priests could perform certain religious offices. It is performed by the Jews on the eighth day after the birth of male child unless postponed for reasons of health. It is also practiced among Muslims and by other peoples in many parts of the world including Sub-Saharan Africa. Explanations of the origin of circumcision are entirely conjectural. It is related to rites of initiation. Among Jews and Muslims, it is considered to involve membership in the community and to be a sign of the covenant between God and humans (Egesah, 2008).

Global estimates in 2006 suggest that about 30% of males – representing a total of approximately 665 million men – are circumcised. Common determinants of male circumcision are ethnicity, perceived health and sexual benefits, and the desire to conform to socio-cultural norms (WHO/UNAIDS/UNICEF/UNFPA/World Bank, 2007a).

There is an entire catalogue of meanings attached to the removal of the foreskin for religious and or cultural reasons. Although religion is the major determinant of male circumcision worldwide, male circumcision among adolescents is much more likely

to be performed as a coming-of-age ritual. This is encountered in many African societies and in other ethnic groups, including Aboriginal tribes in Australia, the Aztecs and Mayans in the Americas, and the inhabitants of eastern Indonesia, the Philippines, and various Pacific Islands (WHO, 2009).

Male circumcision is almost universal in the Middle East and Central Asia and in Bangladesh, Indonesia and Pakistan (Hull, Budiharsana, 2001, and, Drain et al, 2006). In addition there are an estimated 120 million circumcised men in India. In all these countries, male circumcision is undertaken primarily for religious and cultural reasons. There is little non-religious circumcision in Asia, with the exception of the Republic of Korea and the Philippines where circumcision is routine and widespread (WHO/UNAIDS/UNICEF/UNFPA/World Bank, 2007a).

Male circumcision is common in many African countries and is almost universal in North Africa and most of West Africa. In contrast it is less common in southern Africa; country to country and within country variation is greatest in this region. Self-reported prevalence in several countries is around 15% (Botswana, Namibia, Swaziland, Zambia, Zimbabwe); but substantially higher in others (Malawi 21%, South Africa 35%, Lesotho 48%, Mozambique 60%, and Angola and Madagascar more than 80%). Prevalence in central and eastern Africa varies from 15% in Burundi and Rwanda, to over 70% in Ethiopia, Kenya and the United Republic of Tanzania. In sub-Saharan Africa age at circumcision varies from infancy to the late teens or early twenties. Male circumcision in Africa is undertaken for mainly religious and cultural reasons (WHO/UNAIDS/UNICEF/UNFPA/World Bank, 2007a).

In sub-Saharan Africa tradition and cultural identity play as important a role as religion during male circumcision practices. Historically, in various parts of the world there have been increases and decreases in the popularity of non-religious male circumcision. These trends often result from changes in perceptions of the health benefits or cultural beliefs associated with the practice, indicating that the cultural determinants of male circumcision can evolve (WHO/UNAIDS/UNICEF/UNFPA/World Bank, 2007a).

Social status accorded to male circumcision is of crucial significance in traditionally circumcising communities, because being circumcised is the only possible way of attaining manhood. In Xhosa culture, male development starts during the first six to seven years of life, when a boy is not yet able to distinguish right from wrong, and is thus not held responsible for any wrong that he might commit. Older boys are considered more capable of making informed judgements, although they are still not held fully responsible for their actions. It is only once they are circumcised that they are entitled to businesses, property or marriage, or to participate in other features of community life, such as feasts and beer-drinking ceremonies. Uncircumcised boys can have sexual relations with women, but are often rejected for being uncircumcised. The social pressure to undergo circumcision puts uncircumcised boys at risk of ostracism. They are discriminated against in various ways, for example being given menial tasks, serving as "punching bags" for crimes committed in the community, and being called names (WHO, 2009).

Similar societal structures are reported from Masai groups and the Bukusu in Kenya, where males become warriors ("moran" in Masai culture) once they are circumcised,

and men are referred to as elders when their children have been circumcised. Male circumcision is considered essential for becoming a full member of society among the Meru in Kenya, in Bendel State, Nigeria, and in rural Guinea-Bissau and Senegal (WHO, 2009)

Eighty-four percent of Kenyan men circumcise (NASCOP, 2008) Almost all ethnic groups traditionally practice male circumcision. Those that do not practice include some peoples spilling over the Ugandan border (e.g., Teso and Chapadola), and the Turkana and Luo (Dodge and Kaviti 1965, Bailey personal observation). The Turkana are a relatively small pastoral group in northern Kenya; the Luo are Nilotic speaking people numbering approximately 3.2 million, inhabiting Nyanza Province along the eastern shore of Lake Victoria. HIV prevalence in Nyanza was the highest of any area of Kenya. Kisumu is the provincial capital of Nyanza and one of the three sites where RCTs of male circumcision were underway (Bailey and Egesah, 2006).

Among those who do practice male circumcision, there is a great deal of cross-cultural and inter-individual variation in the techniques used, the instruments employed, and the amount of foreskin removed (Brown et al, 2001). For many, circumcision is part of a prolonged ritual involving many others in the family and community, and the procedure is performed in public by a traditional surgeon who has no formal training. Under these conditions, the procedure is often painful – indeed it is an essential part of the ceremony that the boy experience pain in order to become a man. For others, circumcision is done privately by a medical doctor in a clinical setting with minimal recognition by others and pain is minimized. Still others undergo the procedure in a clinic, but participate in all other ceremonial rites (Mayatula and

Mavundla 1997). Since circumcision involves the permanent removal of living tissue, it is a procedure that, in any setting performed by any practitioner, involves some risk of temporary or permanent complication (Bailey and Egesah, 2006).

During the 20th century, male circumcision gained popularity for perceived health benefits and social reasons in North America, New Zealand and Europe (Hutchinson, 1855), (Clifford, 1893). Neonatal and childhood male circumcision rates in the United States of America rose to about 80% in the 1960s with prevalence remaining high (between 76%-92%) today (Nelson C.P, Dunn R, Wan J, Wei J. T, 2005). In contrast, Australia (Richters, 2006), Canada (Wirth, 1980), and the United Kingdom (Gairdner, 1949) have seen a decline in male circumcision. In Central and South America male circumcision is uncommon (less than 20%) (Brinton, Reeves, Brenes et al (1989), and, Nelson C.P, Dunn R, Wan J, Wei J. T, 2005).

Circumcision has been found to have health benefits apart from cultural or religious purposes. It is known to greatly reduce a man's risk of penile cancer and it also apparently reduces risks of some sexualy transmitted diseases (STDs), including chancroid, herpes and syphilis. Circumcision eliminates problems such as phimosis (narrow foreskin opening) and also appears to reduce the risk of cervical cancer among female partners of circumcised men (USAID, 2003).

In the recent years, researchers have studied the possibility of circumcision having relationship with HIV prevalence. Throughout the world, HIV prevalence has been found to be generally lower in populations that practice male circumcision than in populations where most men are uncircumcised. This has been observed over the

years of the HIV epidemic and has now been confirmed through three randomized controlled trials concluded in 2005–2006. The trials showed that male circumcision reduces by 60% the transmission of HIV from women to circumcised men. The results have led to the conclusion that male circumcision is an effective risk-reduction measure for men, and should be used in addition to other known strategies for the prevention of heterosexually acquired HIV infection in men. The randomized controlled trials conducted in South Africa, Kenya, and Uganda examined the impact of male circumcision on the transmission of HIV from women to men (UNAIDS, 2008). These studies confirm the evidence from earlier ecological studies in sub-Saharan Africa which established that there is a geographical association between areas of higher prevalence of HIV and of lower prevalence of male circumcision. (Cheikh, 2007)

The highest HIV transmission mode in Sub Saharan Africa is sexual contact with a person having HIV. Male circumcision therefore reduces the spread of HIV through sexual intercourse.

HIV/AIDS has caused many problems to the people. No cure has been found. A person diagnosed to be HIV positive suffers from stigma and discrimination. A person living with HIV/AIDS may also suffer from shock and disbelief when informed of his or her status. Ones resources may be depleted as a result of expenditure on treatment of opportunistic infections. The person also becomes a burden to his or her relatives when the disease progresses to AIDS, as the relatives have to take care of the sick person who in most cases cannot take care of himself or herself.

There is increased burden and stress for those caring for people with HIV/AIDS. A lot of labour and financial resources are diverted to buying drugs and special meals for the sickly AIDS patients.

The education system which produces individuals who fit into the labour force is not spared. Teachers are decreasing due to sickness and deaths related to HIV/AIDS. There is low enrolment and high dropout rates due to high number of orphans. Getting money to pay school and college fees is not easy for some families due to the demand for taking care of the sick. There is frequent absenteeism of both teachers and learners as a result of impact of HIV/AIDS (Nyando District Development Plan 2002-2008).

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AIDS causes a reduction in the size of experienced labour force in the economic sector. The sector experiences increased healthcare expenditure, raised cost of labour and reduced savings and investments.

Costs in healthcare have also gone up due to HIV/AIDS. Anti-retroviral drugs are very expensive. Treatment of opportunistic infections is also very expensive. The Kenya government supplements the cost of treatment in public health facilities. Revenue is therefore diverted to healthcare at the expense of development projects and other service provision in the society.

**1.2 The Research Problem**

HIV/AIDS continues to be a problem to the entire human population in the world. It has no known cure. Prevention of its spread is the best control method as at the time of this study. Following the research findings that male circumcision reduces HIV

infection by up to 60% in men, the World Health Organization (WHO) and UNAIDS issued recommendations on male circumcision and HIV prevention in March 2007 that male circumcision should.be considered as part of a comprehensive HIV prevention package.

Male circumcision is practiced by many communities in Kenya. More than 90% of men are circumcised in North Eastern, Eastern, Coast, and Central Provinces; more than 80% in Nairobi, Rift Valley and Western Provinces. In Nyanza the prevalence of male circumcision overall was 46% by 2008, although there was wide variation within districts ranging from 17% to 99%.

NASCOP, (2008) states that Nyanza province had the highest HIV prevalence rate at 18% compared to other regions in Kenya. The high HIV prevalence rate in Nyanza province where Nyando Sub location is found attracted the providers of male circumcision for HIV prevention.

In the Nyando District Development Plan 2002-2008, which covers up to Nyando Sub-location in the current Muhoroni Sub County, HIV/AIDS prevalence which was slightly above 25% at the start of the 1997-2001 plan period had risen to over 30% by the end of the 1997-2001 plan period.

In the 2007 Kenya Aids Indicator Survey, Nyanza Province where the area under study falls had had a leading HIV/AIDS prevalence of 14.9% in the 15-64 years age group, compared to 7.1% nationally in the same age group. Nairobi Province had the second highest prevalence at 8.8% in the same age group. The data shows that

measures should be put in place to reduce the high prevalence rate in the study area and the medical male circumcision is one of such measures.

The 2008-2012 Nyando District Development Plan states that the impact of HIV/AIDS is a major cause of poverty in the District. Although the HIV/AIDS prevalence dropped, the district was still facing a number of challenges as a result of HIV and AIDS. Key among them was the issue of Orphans and Vulnerable Children (OVCs), (Nyando District Development Plan 2008-2012).

Nyando Sub location of Muhoroni Sub County in Kisumu County in the then Nyanza Province is dominated by members of the Luo community who culturally do not circumcise their males. It is not clear if the Luo who do not traditionally circumcise have fully accepted circumcision as a strategy/method of reducing HIV infection in the community.

At the 4$^{th}$ Stakeholders' Workshop on Voluntary Medical Male Circumcision held in Kisumu in October, 2011, it was stated that the VIMMC has been well received and especially after the Prime Minister presided over a stakeholders' meeting on 22$^{nd}$ September, 2008 (Nyanza Provincial MC Taskforce, October, 2011). The current study assesses the acceptability of medical male circumcision for HIV prevention in Nyando Sub location of Muhoroni Sub County in Kisumu County given that there may be different perceptions and acceptability of VIMMC in different geographical regions within the county.

There is need therefore for collection of data on the acceptance of male circumcision as a method of reducing HIV infection among the communities that do not practice male circumcision like the Luo. The finding that male circumcision reduces chances of males being infected by HIV by infected female partners during heterosexual sex will not be of help to the community if the community does not embrace it.

### 1.3 Justification of the Study

The acceptance of male circumcision for HIV prevention among the communities that traditionally do not circumcise their males can be a boost to the fight against the spread of HIV in the population. The study will reveal whether or not, the community in Nyando Sub-location, mainly occupied by the Luo who are a non-circumcising community, has accepted circumcision as a new method that partially prevents infection by HIV in heterosexual men. Since research has shown that male circumcision can reduce HIV infection in men by upto 60%, the acceptance of the community to circumcise their males will reduce the rate of new HIV infections.

The results of this study can help planners in the health sector to understand the way the community perceives VIMMC and therefore plan using the results to provide services that meet the needs of the community members. Once published, the global community will get to know the feelings of the people of Nyando Sub location about circumcision for HIV prevention. Scholars and researchers may use the results of this study to do further research in the areas that are of interest to them. The study can also be a source of new knowledge to the people who may not have been aware of VIMMC and may convince those who had not undergone VIMMC to undergo it.

### 1.4 Overall Objective of the Study

To assess the perception of the community in Nyando Sub-location of Kisumu County in Kenya to male circumcision with reference to HIV/AIDS prevention.

#### 1.4.1 Specific Objectives of the Study

1. To establish if the residents of Nyando sub-location are aware of the importance of Voluntary and Informed Medical Male Circumcision for HIV prevention.
2. To establish if residents of Nyando sub-location who are largely Luo, and culturally do not circumcise their males, have accepted medical male circumcision for HIV prevention.

#### 1.4.2 Research Questions

1. Are the residents of Nyando sub-location aware of the importance of Voluntary and Informed Male Circumcision for HIV prevention?
2. Is the Luo culture of not circumcising their males hindering members of the community in Nyando sub-location from accepting circumcision for HIV prevention?

### 1.5 The Scope of the Study

The study is limited to the perception of the community to circumcision for HIV/AIDS prevention in Nyando Sub-location of Muhoroni Division. It assesses if the Luo culture of not practicing male circumcision is hindering members of the community from being circumcised. Data was collected from informants aged eighteen years and above.

## 1.6 The Study Area

The study was conducted in Nyando Sub-location of Koru Location in Muhoroni Division, Muhoroni Sub County, Kisumu County in the Republic of Kenya.

## 1.7 Position, Shape and Size of the Study Area

Nyando Sub-Location is one of the three sub-locations of Koru Location in Muhoroni Division, Muhoroni District, Kisumu County. The area lies on the Eastern side of Kano Plains between latitudes 0°13'49" South and 0°11'6" South, and, Longitudes 35°14'6" East and 35°16'54" East (Google Earth, 2012). The altitude ranges from 1320m to 1537m above sea level (Google earth, 2012). Fort Ternan - Muhoroni road marks the boundary of the sub location to the North. To the south, the sub location boarders Kericho County where River Nyando marks the boundary. On the Eastern side it borders Fort Ternan Location while on the western side it borders Homalime Sub location of Koru location (Nyando District Development Plan, 2002 – 2008). Nyando sub location has an area of 14.6 square kilometres (Kenya Open Data, 2012)

## 1.8 Topography

The area is within Muhoroni valley. However, it is not a plain but has some hills. It is generally undulating, with shallow valleys where seasonal streams pass, apart from River Nyando and its tributaries.

### 1.9 Water and drainage system

Two tributaries of River Nyando pass through the Sub-Location, and the residents use the water from the rivers for their domestic needs. A number of seasonal streams are also found within the sub location.

### 1.10 Agriculture

It has deep black cotton soil, resulting from quaternary sediments which were eroded from the surrounding highlands. The residents practice sugar cane farming as the main cash crop. Maize is grown as a subsistence crop. Other short term crops like beans, tomatoes and vegetables are also grown in small scale. The residents also keep cattle, goats, sheep and chicken in small scale.

### 1.11 Population and Settlement Pattern

The 2009 population and housing census gives the population of Nyando sub location as 2495 people, with 1277 males and 1218 females with 480 households (Kenya Open Data, 2012).

The population is sparsely distributed mainly in hilly areas, and dense in flat lowlands. Settlement patterns are varied in the region. This area is within Koru Settlement Scheme that was established in 1967 to settle the landless after independence. The area was initially occupied by the white settlers during colonial times. When they left after independence, the government of Kenya settled the landless people in the area. Nearly all those who settled in Nyando Sub location are of Luo origin. People settled on land that had already been demarcated and various land uses established. Most plots are of ten-acre size. The ten acres were partitioned such

that six acres was set aside for sugar cane growing (also known as sugar plots), and the remaining four acres was left for subsistence (food crops) farming and homestead.

### 1.12 Road Network

The roads within the Sub-Location are of gravel and in pathetic condition. The marrum applied over twenty years ago has since disappeared. Most parts of the roads have been eroded exposing big stones that hinder movement of vehicles. There is only one tarmac road (Fort Ternan -Muhoroni Road) which marks the Northern boundary of the sub location.

### 1.13 Trade

The only nearby trading centre is Koru which is about ten kilometers from where majority of the people live. The trading centre is in the neighbouring sub location – Koru. The roads leading to the centre are in very poor state.

### 1.14 Schools and colleges

The area, at the time of the study, had three primary schools: Bishop Okoth Primary School, Nyando Primary School and Oyani Primary School. It had two secondary schools: Archbishop Okoth Ochoria Secondary School and Nyando Secondary School, both are mixed day secondary schools. Koru Bible College is the only tertiary institution in the study area.

### 1.15 Health Facilities

There is no health facility in Nyando Sub Location. The residents depend on Koru Dispensary and Koru Mission Hospital, both in the neighbouring Koru Sub location. It is Koru Mission Hospital that is of interest to this study since VIMMC services are provided there.

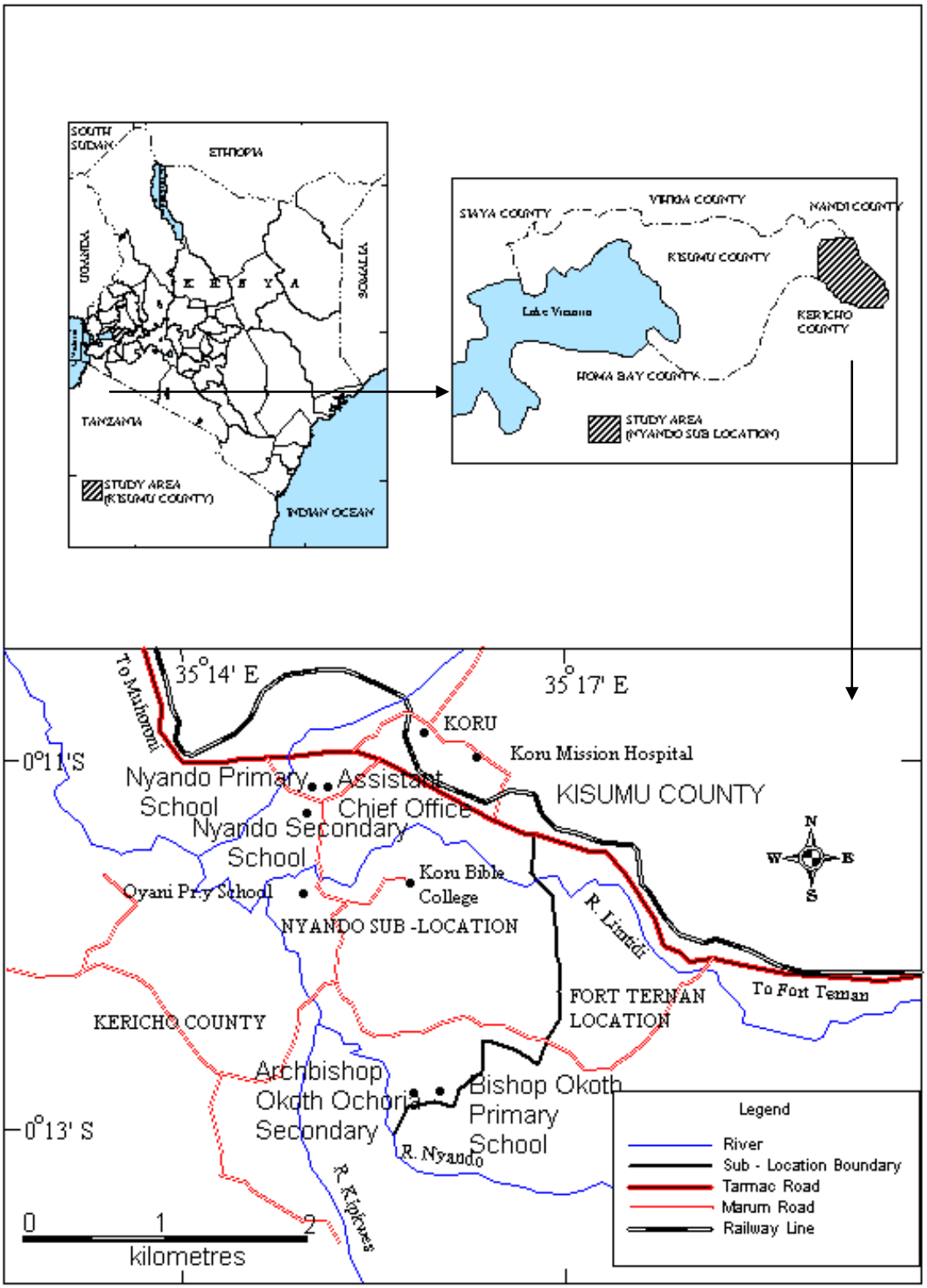



**Figure 1.1: Map of Nyando Sub location as the Study Area**

# CHAPTER TWO

# LITERATURE REVIEW AND CONCEPTUAL MODEL

## 2.1 HIV/AIDS

Acquired immunodeficiency syndrome (AIDS) was first described in 1981, when previously healthy young adults – mainly men living in urban areas of the United States – began falling ill with opportunistic infections previously unknown among this age group. Similar infections were soon described in Africa, the Caribbean and Europe; AIDS was clearly an epidemic disease. Most of these young people died (WHO, 2003). Since then, the disease has spread to various parts of the world and to date there have been efforts to control the disease. Figure 2.1 below summarizes the history of HIV/AIDS and the efforts made to control it upto the year 2002.

AIDS is the leading infectious cause of adult death in the world. Untreated, the disease caused by the human immunodeficiency virus (HIV) has a case fatality rate that approaches 100%. AIDS has torn apart families and caused untold suffering in the most heavily burdened regions. In hard-hit areas, including some of the poorest parts of the world, HIV reversed gains in life expectancy registered in the last three decades of the 20th century. HIV/AIDS is a major global health emergency (WHO, 2003).

### 2.1.1 Global Prevalence of HIV/AIDS

At the end of 2010, an estimated 34 million people [31.6 million–35.2 million] were living with HIV worldwide, up 17% from 2001. This reflects the continued large number of new HIV infections and a significant expansion of access to antiretroviral

therapy, which has helped reduce AIDS-related deaths, especially in more recent years. The number of people dying of AIDS-related causes fell to 1.8 million (1.6 million–1.9 million) in 2010, down from a peak of 2.2 million (2.1 million–2.5 million) in the mid-2000s. A total of 2.5 million deaths have been averted in low- and middle-income countries since 1995 due to antiretroviral therapy being introduced, according to new calculations by UNAIDS. Much of that success has come in the past two years when rapid scale-up of access to treatment occurred; in 2010 alone, 700 000 AIDS related deaths were averted. The proportion of women living with HIV has remained stable at 50% globally (UNAIDS, 2011). UNAIDS (2012) states that 34.0 million people were living with HIV globally at the end of 2011 and that an estimated 0.8% of adults aged 15-49 years worldwide were living with HIV, although the burden of the epidemic continued to vary considerably between countries and regions.

### 2.1.2 HIV/AIDS prevalence in Africa

The most heavily burdened continent is Africa, where the spread of the pandemic has been accelerated by a variety of factors, including widespread poverty, gender inequality, and health systems weakened by pressures such as the large external debt loads of states. Africa is home to more than 70% of those infected with HIV, (WHO, 2003), and is a region with only 12% of the global population (UNAIDS, 2011). Of all AIDS deaths worldwide – 28 million at the end of 2002 – the majority also occurred in Africa (WHO/UNAIDS, 2002). The number of people dying from AIDS-related causes in sub-Saharan Africa, according to UNAIDS (2012), declined by 32% from 2005 to 2011, although the region still accounted for 70% of all the people dying from AIDS in 2011. Nearly 1 in every 20 adults (4.9%) was living with HIV. The vast majority of people newly infected with HIV in sub-Saharan Africa are infected during

unprotected heterosexual intercourse (including paid sex) and onward transmission of HIV to newborns and breastfed babies. Having unprotected sex with multiple partners remains the greatest risk factor for HIV in this region (UNAIDS, 2010).

Figure 2.3 below shows HIV prevalence in various parts of the world in 2009. From the figure, some countries in sub-Saharan Africa have the highest HIV prevalence in the world, 15-28%.

### 2.1.3 HIV/AIDS Prevalence in Kenya

Kenya is one of the six HIV 'high burden' countries in Africa – about 1.6 million people were living with HIV infection at the end of 2011. Women in Kenya are more vulnerable to HIV infection compared to Kenyan men, with the national HIV prevalence at 8 per cent for women and 4.3 % for men (NASCOP, 2013). The epidemic is geographically diverse, ranging from a high prevalence of 27.1% in Homa Bay County in Nyanza region to a low of approximately 0.2 % in Wajir County in North Eastern region. The high burden of HIV and AIDS in Kenya accounts for an estimated 29 % of annual adult deaths, 20 % of maternal mortality, and 15 % of deaths of children under the age of five (UNAIDS, 2013). The epidemic has also negatively affected the country's economy by lowering per capita output by 4.1 % (National AIDS Control Council, 2011).

### 2.1.4 HIV/AIDS Prevalence in Kisumu County

By the end of 2011, there were 113,055 people living with HIV in Kisumu County. Children constitute 15% of those living with HIV in the county. The proportion of women living with HIV in Kisumu County is significantly higher than that of men.

Over the years, the women living in the county have been more vulnerable to HIV infection than the men. In 2012, there were 4,041 female sex workers, 1,630 men who have sex with men, and 424 injecting drug users in the county6. In Kisumu County, approximately 48 % of individuals had their first experience of sexual intercourse

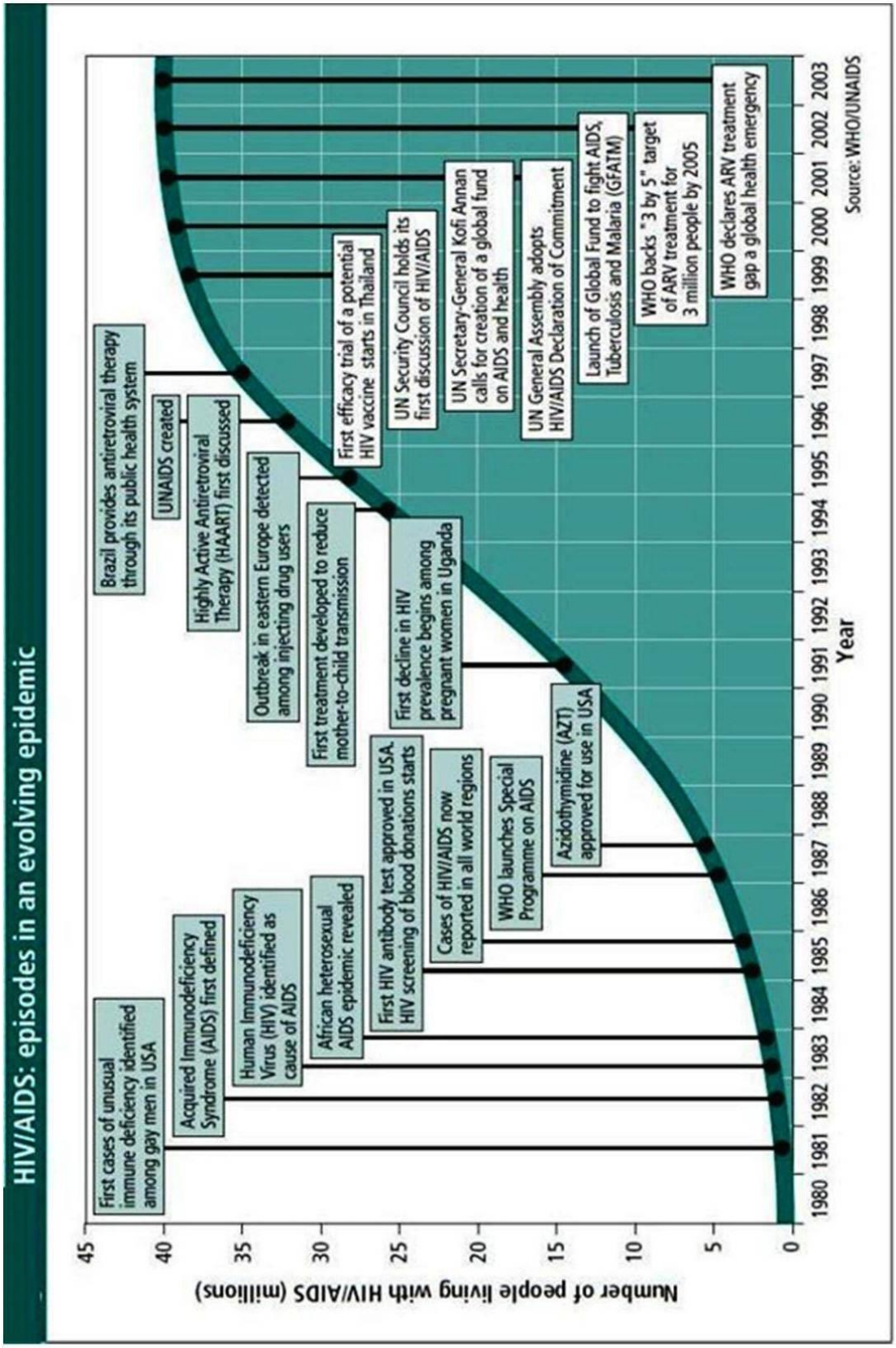



**Figure 2.1: Development of knowledge of HIV and ways of trying to control it. Source: WHO, 2003**

before the age of 15, an indication of early sexual debut. 40% of men in Kisumu County had been circumcised as at 2009 (National AIDS Control Council, 2014). The study area, Nyando Sub-location. is within Kisumu County and therefore this information applies to the area as well.

## 2.2 HIV Transmission

HIV can be transmitted via unprotected and close contact with a variety of body fluids of infected individuals, such as blood, breast milk, semen and vaginal secretions. Individuals cannot become infected through ordinary day-to-day contact such as kissing, hugging, shaking hands, or sharing personal objects, food or water. The following examples of HIV transmission routes are specifically highlighted: unprotected anal or vaginal sex with an HIV- infected partner; mother-to-child transmission during pregnancy, childbirth, or breastfeeding; transfusion with HIV-infected blood products; and, sharing of contaminated injection equipment, tattooing, skin-piercing tools and surgical equipment (WHO,2012).

### 2.2.1 HIV Treatment

HIV has no known cure. It can be suppressed by combination antiretroviral therapy (ART) consisting of three or more antiretroviral (ARV) drugs. ART does not cure HIV infection but controls viral replication within a person's body and allows an individual's immune system to strengthen and regain the power to fight off infections. With ART, people living with HIV can live healthy and productive lives (PRB, 2007) and (WHO, 2012).

### 2.2.2 HIV Prevention

Although HIV has no known cure, it can be prevented using the following eight methods recommended by WHO, (2012).

First, use of condoms has been found to reduce one's chances of getting HIV infection from an infected partner during sexual intercourse. When correctly and consistently used during vaginal or anal penetration, male and female condoms can protect against the spread of sexually transmitted infections, including HIV. Male latex condoms have an 85% or greater protective effect against the sexual transmission of HIV and other sexually transmitted infections (CDC, 2014).

Secondly, testing and counselling for HIV and STIs can help prevent infection. Learning of one's own HIV status is important for HIV prevention as one may learn to avoid infecting others if found to be HIV positive or avoid being infected if HIV negative. Testing for HIV and other STIs is strongly advised for all people exposed to any of the risk factors so that they can learn of their own infection status and access necessary prevention and treatment services without delay (Commonwealth Regional Health Community Secretariat, 2002).

Thirdly, for serodiscordant couples, pre-exposure prophylaxis (PrEP) for HIV-negative partner can help reduce chances of infection. Trials among serodiscordant couples have demonstrated that antiretroviral drugs taken by the HIV-negative partner can be effective in preventing acquisition from the HIV-positive partner. This is known as pre-exposure prophylaxis. WHO now recommends that countries

implement demonstration projects on PrEP for serodiscordant couples and men and transgender women who have sex with men (WHO, 2012).

Fourth, is post-exposure prophylaxis for HIV (PEP), which is the use of ARV drugs within 72 hours of exposure to HIV in order to prevent infection. PEP is often recommended for health care workers following needle stick injuries in the workplace. PEP includes counselling, first aid care, HIV testing, and depending on risk level, administering of a 28-day course of antiretroviral drugs with follow-up care (Fisher, et al, 2006).

The fifth method is: people who inject drugs can take precautions against becoming infected with HIV by ensuring they use sterile injecting equipment which includes needles and syringes, for every injection (WHO, 2012).

The sixth method applies to an HIV-positive mother. She can transmit HIV to her child during pregnancy, labour, delivery or breastfeeding at a rate of 15-45%. This is called vertical or mother-to-child transmission (MTCT). However, MTCT can be fully prevented if both the mother and the child are provided with ARV drugs throughout the stages when infection could occur WHO, (2012), WHO, (2010).

Seventh is that if an HIV-positive person adheres to an effective antiretroviral therapy regimen, the risk of transmitting the virus to their uninfected sexual partner can be reduced by 96%. A new trial has confirmed. WHO therefore recommends ART for the HIV-positive partner regardless of her/his immune status for couples in which one partner is HIV-positive and the other HIV-negative (WHO, 2012).

Finally, male circumcision which is a key intervention in generalized epidemics with high HIV prevalence and low male circumcision rates. When safely provided by well-trained health professionals male circumcision reduces the risk of heterosexually acquired HIV infection in men by approximately 60%. Community's response to male circumcision for HIV prevention is the main purpose of this study (Bailey et al, 2007), Gray et al, 2007).

### 2.3 Circumcision as a Method of HIV/AIDS Control

One of the ways through which HIV is transmitted is sexual contact with a person having HIV. Since HIV has no cure, the best way of stopping its spread is prevention of infection. Research has shown that circumcision reduces heterosexual HIV infection from women to men by up to 60%, and WHO recommends promotion of male circumcision as an additional, important strategy for the prevention of heterosexually acquired HIV infection in men (WHO and UNAIDS, 2007). The recommendation arises from the results of RCTs of male circumcision conducted by 2006 in Kisumu, Kenya and Rakai in Uganda, which confirmed the results of a similar study done in Orange Farm, South Africa in 2005 (WHO and UNAIDS, 2007).

#### 2.3.1 How Male Circumcision prevents HIV infection

The inner surface of the foreskin of the penis is thinly keratinized, unlike the penile shaft and the outer surface of the foreskin, and may be more susceptible to minor trauma and abrasions that facilitate entry of pathogens (Szabo R, Short RV, 2000). The abrasions may increase genital ulcer diseases in uncircumcised men (Weiss HA et

al, 2006), which, in turn, increases risk of HIV, as the disrupted mucosal surface of the ulcer increases risk of HIV acquisition (Fleming DT, Wasserheit JN, 1999). The inner surface of the foreskin mucosa contains accessible HIV-1 target cells (CD4+ T cells, macrophages and Langerhans cells) (Patterson BK et al, 2002). This may increase the risk of HIV infection. Although the density of these HIV- 1 target cells in the inner foreskin is similar to that in the glans of the penis and outer foreskin, those in the inner foreskin are closer to the epithelial surface than those situated elsewhere in the penis, due to the lack of keratin (McCoombe SG, Short RV, 2006). Langerhans cells are also more likely to be found near the epithelial surface than other cells, and are likely to be the first to be infected by HIV-1 (Donoval BA et al, 2006). Patterson B.K. et al, (2002), found more direct evidence that infectivity of the inner mucosal surface (assessed by quantity of HIV-1 DNA one day after ex vivo infection with explant culture) was greater than that of cervical tissue, which is a known primary site of HIV-1 acquisition in women.

The cells in the inner foreskin and frenulum are directly exposed to vaginal secretions during intercourse, and this superficial location of the HIV-1 target cells presumably increases risk of infection in an uncircumcised man. In contrast, in a circumcised man the penile shaft is covered with a thickly keratinized epithelium, providing some protection from infection (McCoombe SG, Short RV, 2006).

### 2.4 Global Prevalence of Male Circumcision

Male circumcision is one of the oldest and most widespread surgical procedures in the world. There have been references to male circumcision across diverse cultures and religions. Male circumcision, which is frequently carried out by traditional providers,

consists of the surgical removal of some part of the foreskin of the penis. The amount removed varies between ethnic groups (WHO, 2009).

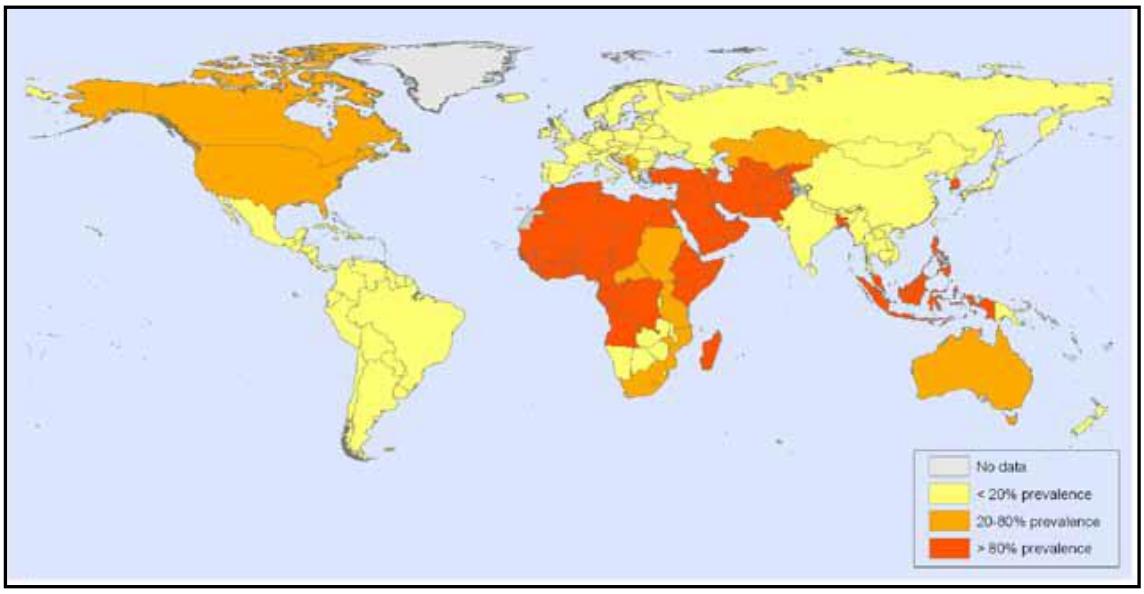
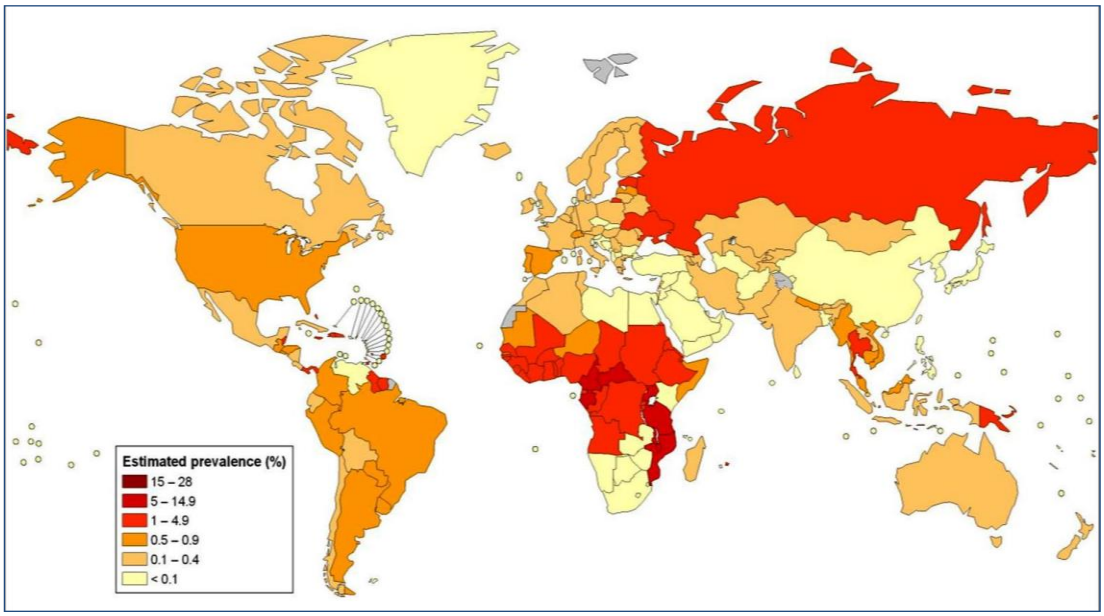



**Figure 2.2: Global map of male circumcision prevalence at country level, as of December 2006.Source: WHO, 2009**




**fFFigure 2.3: Global map of estimated HIV Prevalence among population aged 15-49 years in %, 2007. Source: WHO, 2009**

Globally, it is estimated that 30% of all males above the age of 15 years are circumcised. Male circumcision for religious and cultural reasons is a relatively

common practice in sub-Saharan African countries, where 28 of 45 countries have a male circumcision prevalence exceeding 80%. (Drain P.K.et al, 2006).

Traditional male circumcision as a rite of passage is performed in pre-pubertal boys, adolescents or adults. Because it is a strong cultural practice among traditionally circumcising groups, traditional male circumcision is usually not an optional procedure to be decided about on an individual basis. The timing of traditional male circumcision, on the other hand, is a matter for individual decision (whether or not the initiate feels ready to undergo male circumcision) or a family decision (e.g. certain family customs exist whereby sons are always circumcised at a certain age) (Wilcken, 2008).

Historically, in various parts of the world there have been increases and decreases in the popularity of non-religious male circumcision. These trends often result from changes in perceptions of the health benefits or cultural beliefs associated with the practice, indicating that the cultural determinants of male circumcision can evolve WHO/UNAIDS/UNICEF/UNFPA/World Bank, (2007a).

Figure 2.2 above shows global prevalence of male circumcision and figure 2.3 shows global prevalence of HIV. From the figures, areas with high prevalence of male circumcision have low prevalence of HIV while areas with low prevalence of circumcision have high HIV prevalence.

## 2.5 Prevalence of Male Circumcision and HIV Prevalence in Sub Saharan Africa

Examination of the prevalence of male circumcision shows that the major determinant of circumcision globally is religion, but that significant numbers of males are circumcised for cultural reasons. In sub-Saharan Africa tradition and cultural identity play as important a role as religion during male circumcision practices WHO/UNAIDS/UNICEF/UNFPA/World Bank, (2007b). In traditionally circumcising communities, being circumcised is the only possible way of attaining manhood. In

Xhosa culture once boys are circumcised they are entitled to businesses, property or marriage, or to participate in other features of community life, such as feasts and beer-drinking ceremonies, unlike those who are not circumcised. Among the Masai and the Bukusu in Kenya, males become warriors (“moran” in Masai culture) once they are circumcised, and men are referred to as elders when their children have been circumcised. Male circumcision is considered essential for becoming a full member of society among the Meru in Kenya (WHO, 2009)

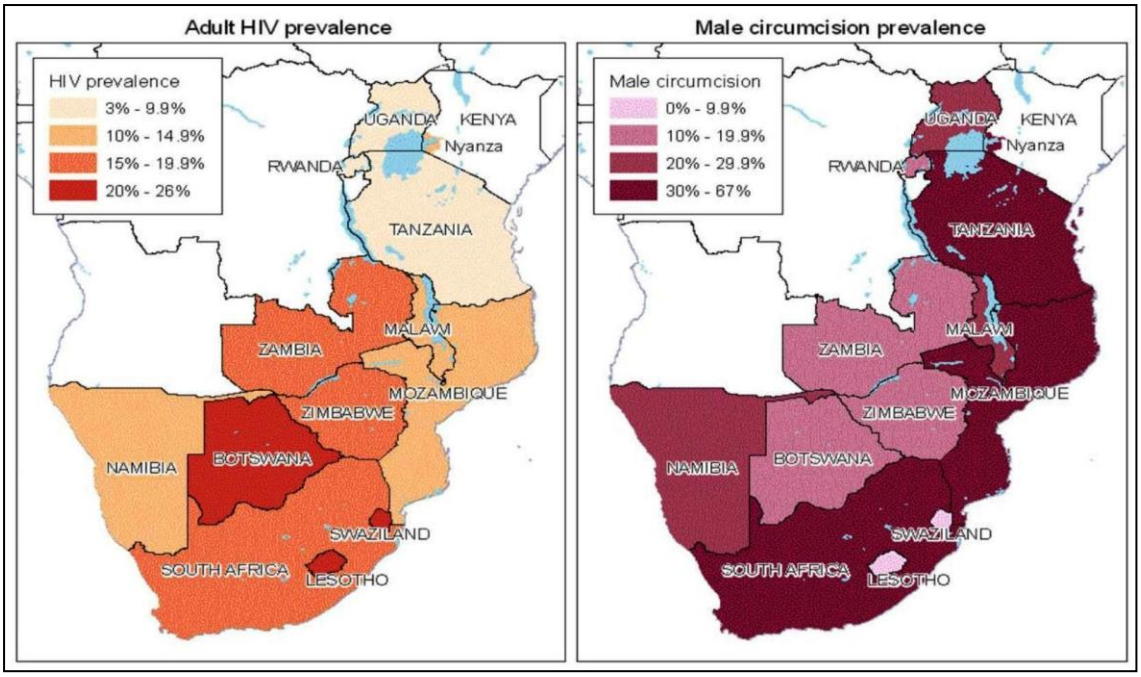



**Figure 2.4: Prevalence of HIV and MC in Sub Sahara Africa. Source: Njeuhmeli E, et al. (2011)**

Figure 2.4 relates HIV prevalence to prevalence of male circumcision in sub Saharan Africa. Areas with high prevalence of circumcision have low prevalence of HIV, and, areas with low prevalence of circumcision have high prevalence of HIV.

## 2.6 Limitations of Traditional Male Circumcision with Regard to HIV Prevention

Traditional male circumcision is mainly a rite of passage into manhood and has not been designed for the purpose of HIV prevention. Certain aspects of the practice can undermine the potential benefits of male circumcision for HIV prevention, or even put people at increased risk of contracting HIV. Traditional male circumcision is not a standardized procedure. There are many traditional circumcision techniques. The amount of foreskin removed varies from community to community. This has implications for HIV prevention, as only the complete removal of the foreskin is likely to provide effective partial protection (WHO, 2009), (Cheikh et al, 2007).

The instruments used by traditional circumcisers, differ even within specific ethnic groups. In some cases traditional circumcisers use a single blade to circumcise all the boys and in others they use one knife per child. There is concern about the potential for HIV transmission in the context of mass circumcisions when one blade is used for several boys, some of whom may have had sexual intercourse before the procedure and may already be HIV-positive (WHO, 2009).

**2.7 Medical Benefits of Circumcision**

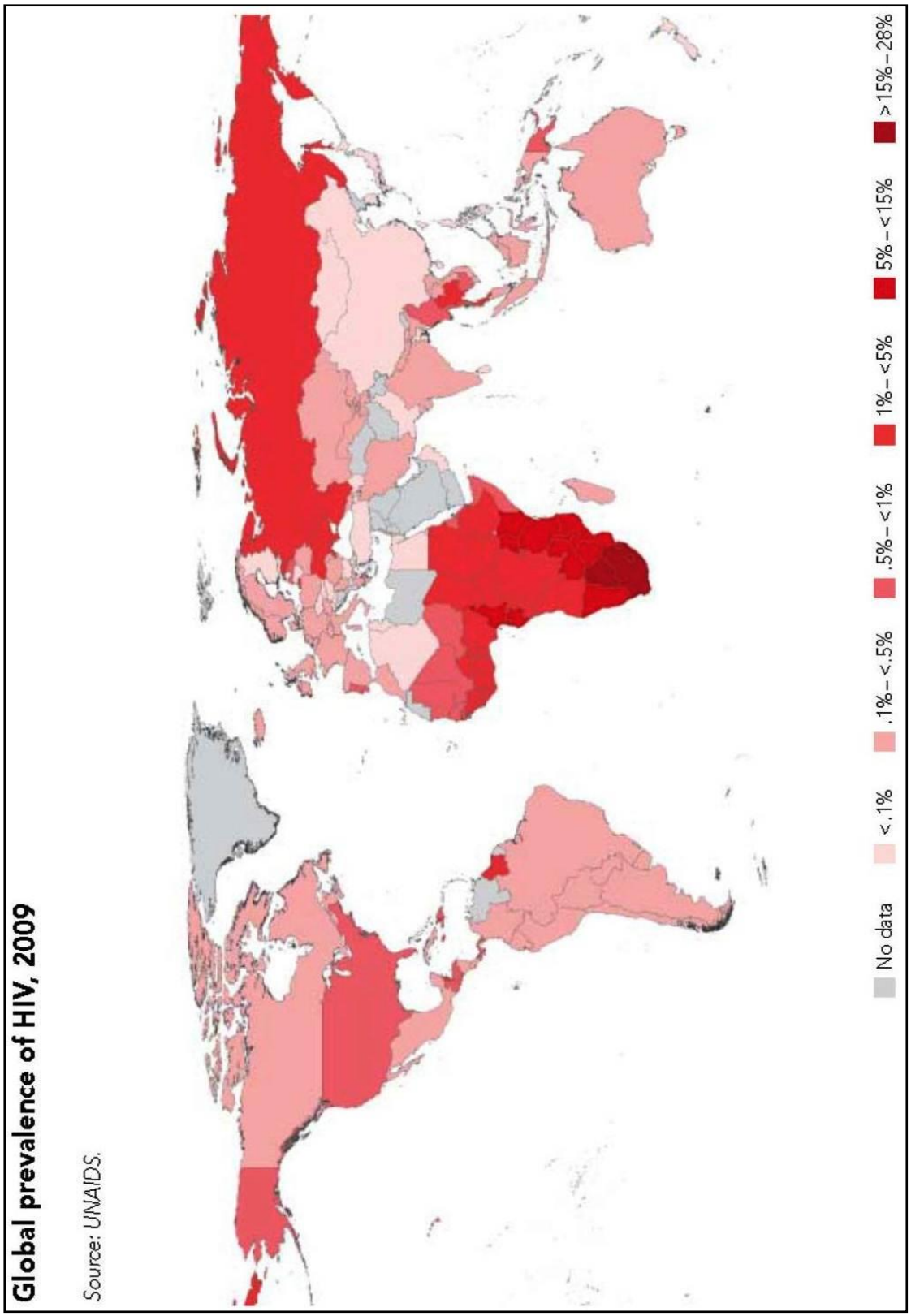
Research shows that circumcision (surgical removal of the foreskin of the penis) is associated with a variety of other health benefits apart from partial prevention of infection by HIV. Circumcision prevents inflammation of the glans (*balanitis*) and the foreskin (*posthitis*). Men who are circumcised do not suffer health problems associated with the foreskin such as *phimosis* (an inability to retract the foreskin) or *paraphimosis* (swelling of the retracted foreskin causing inability to return it to its normal position). Circumcised men find it easier to maintain penile hygiene. Secretions can easily accumulate in the space between the foreskin and glans making it necessary for an uncircumcised man to retract and clean the foreskin regularly(Weiss H.A. et al, (2006), Singh-Grewal D, Macdessi J., Craig J. (2005), Moses S, Bailey R.C., Ronald A.R., (1998).

Studies have found lower rates of urinary tract infections in male infants who are circumcised. Female partners of circumcised men have a lower risk of cancer of the cervix, which is caused by persistent infection with high-risk oncogenic (cancer-

inducing) types of human papillomavirus WHO/UNAIDS/UNICEF/UNFPA/World Bank, (2007b).

Circumcised men have a lower prevalence of some sexually transmitted infections, especially ulcerative diseases like chancroid and syphilis (Nasio J.M, Nagelkerke N.J., Mwatha, (1996), Cook L.S., Koutsky L.A., Holmes K.K., (1994).

USAID, (2003) also agrees with the benefits of circumcision above. In particular, it states that circumcision is known to greatly reduce a man's risk of penile cancer and it also apparently reduces risks of some sexually transmitted diseases (STDs), including chancroid, herpes and syphilis. It eliminates problems such as phimosis (narrow foreskin opening) and also appears to reduce the risk of cervical cancer among female partners of circumcised men.




F **Figure 2.5: Global Prevalence of HIV in 2009. Source: UNAIDS, (2010).**

In numerous observational studies lower levels (prevalence) of HIV infection have been found in circumcised men compared to uncircumcised men and three

randomized controlled trials in South Africa Kenya and Uganda have demonstrated a lower risk of acquiring HIV infection in circumcised men compared to those who remain uncircumcised (Auvert B, Taljaard D, Lagarde E, et al, (2005), Bailey C. et al, (2007), and, Gray H. et al, (2007).

### 2.8 The Luo of Kenya

The luo tribe is the third largest community in Kenya and makes up close to 13% of the entire population. History suggests that the Luo travelled along the River Nile from Sudan. They made entry into Kenya around 500 years ago and established settlements in the lands surrounding Lake Victoria (The Kenya Information Guide, 2014).

#### 2.8.1 Cultural Practices

Luo people are among the few Kenyan tribes that do not traditionally circumcise their males as an initiation to manhood. Instead, in Luo traditions, initiation involves the removal of six teeth from the lower jaw (The Kenya Information Guide, 2014).

Luo cultural tradition prohibits children who have reached puberty from sleeping in the same house as their parents. Adolescents slept at their grandparents' house, in the household kitchen (usually a separate structure), at a brother's house within or outside the homestead, or at a neighbour's house.o Funeral ceremonies are often held over several days. During funeral ceremonies large numbers of community members congregate for long periods at the home of the deceased where there are overnight prayers, music and dancing ("funeral discos"). The Luo, culturally practice

replacement of a deceased married daughter with a younger sister. The practice of sister replacement forces girls to marry at a young age as a cultural obligation, sometimes to a man whose age is more than double her age, and in some cases against their will. Two cultural values of sister replacement are that it ensures continuity of the relationship between in-laws and care of the deceased woman's children (Juma et al., (2014). On the other hand, Luo cultural practice requires that a widow be inherited. The inheritor (*jater*) is normally a brother or a close male relative of the deceased, and the decision of the survivor (widow) in this regard, is culturally compelled rather than self-willed, a situation that creates problems in adjusting to the new scenario within the community (Gunga S.O., 2009). In the absence of such a relative, male adolescents from one study site reported that some families prevail upon their male adolescent sons to inherit their widowed in-laws to keep off men from outside the family (Juma et al., (2014)). Whereas widows are subjected to very strenuous widowhood rites among the Luo, widowers are not. Bereaved Luo men may interact freely in the community and are therefore more likely to remarry out of choice, because their movements are not unduly restricted by widowhood rites (Gunga S.O., 2009).

### 2.9 Voluntary Medical Male Circumcision in Kenya

Following the recommendation by WHO to include circumcision as one of the HIV prevention methods, there have been efforts to have males volunteer to be circumcised through Voluntary and Informed Medical Male Circumcision (VIMMC) with the aim of reducing the spread of HIV in the population.

Kenya responded positively and swiftly to WHO's recommendation on circumcision by putting the necessary structures in place for the implementation of male circumcision.

Kenya's response was motivated by the fact that HIV prevalence nationally stood at 7.1% (PRB and NCAPD, 2009), and that HIV prevalence in Nyanza, which has a very low MC prevalence, 48% (Mwandi et al., 2011), was the highest nationally, 14.9% (PRB and NCAPD, 2009). In December 2006, when these studies (RCTs) were stopped early because of MC's overwhelming efficacy in reducing HIV transmission risk, Kenya's Director of Medical Services issued a statement calling for the establishment of a national male circumcision task force to advise the government on how to proceed.

The ''National Guidance for Voluntary Male Circumcision in Kenya''—the first national male circumcision policy in sub-Saharan Africa—was drafted by this task force, approved in December 2007, and published in January 2008 (Mwandi et al, 2011).

To complement the work of the Kenya national male circumcision task force, Nyanza Provincial Task Force on Male Circumcision was formed in early 2007. Assessment of health facilities in Nyanza Province was conducted to determine the province's preparedness to provide VMMC services. Gaps were identified and remedied with support from international donors. While work on the national policy document was proceeding, the Kenyan government took steps to engage the Luo Council of Elders in Nyanza Province in the scale-up of medical male circumcision. To gain the support of these protectors of Luo culture for medical male circumcision scale-up, the

government needed to explain to them why medical male circumcision would be recommended for HIV prevention and how medical male circumcision was biologically protective against the HIV virus. In addition, the government needed to improve its understanding of the council's potential concerns. Repeated discussions satisfied the Luo Council of Elders

**Table 2.1: Countries and male population targeted by WHO for VIMMC.**

**(Source: Mwandi et al, 2011)**

Target number of HIV-negative males needed to be medically circumcised by 2015 to reach 80% coverage, and approximate proportion of those reached with medical MC services through late 2011.

| Country | Target Number of 15- to 49-Year-Old, HIV-Negative, Uncircumcised Males (Approximate) | Approximate Percentage Circumcised since 2007 WHO Recommendations (Rounded) |
|---|---|---|
| Botswana | 345,000 | 5 |
| Ethiopa: Gambella National Regional State | 40,000 | 15 |
| Kenya: Nyanza Province | 380,000[a]/426,000[b] | 55[a]/50[b] |
| Lesotho | 377,000 | <5 |
| Malawi | 2,102,000 | <5 |
| Moazmbique | 1,059,000 | <5 |
| Namibia | 330,000 | <5 |
| Rwanda | 1,746,000 | <5 |
| South Africa | 4,333,000 | <5 |
| Swaziland | 183,000 | 15 |
| Tanzania | 1,373,000 | <5 |
| Uganda | 4,250,000 | <5 |
| Zambia | 1,949,000 | <5 |
| Zimbabwe | 1,913,000 | <5 |

[a]Estimate and calculation based upon Decision Makers' Program Planning Tool [9].
[b]Estimate and calculation based upon the Kenya national strategy for VMMC [19].
doi:10.1371/journal.pmed.1001130.t001

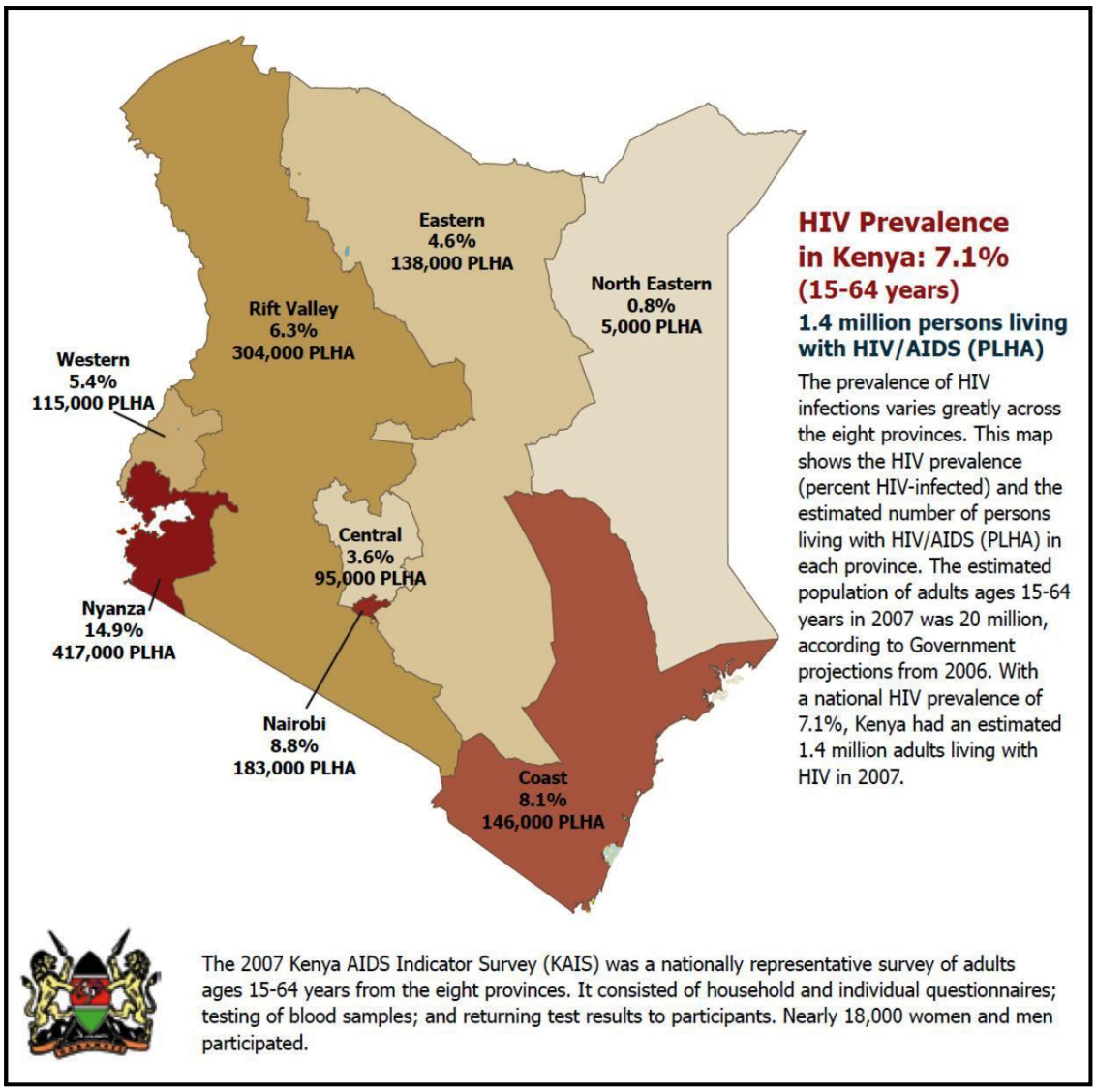



**Figure 2.6: HIV Prevalence and People living with HIV/AIDS in Kenya, 2007. Source: (PRB and NCAPD, 2009).**

that male circumcision for HIV prevention would be voluntary and provided for medical and not cultural reasons. As a result, the term ‘‘voluntary medical male circumcision’’ (VMMC) was officially adopted in Kenya, instead of just ‘‘male circumcision.’’ The day before the official launch of VMMC services in October 2008, three community-based stakeholders’ meetings were held with cultural leaders, government ministers (including the prime minister of Kenya, and the minister of

health), local politicians, youth, religious and women's groups, and health professionals. In addition, several members of parliament and cabinet ministers publicly disclosed that they were circumcised, as a show of support for Kenya's VMMC programs for HIV prevention (Mwandi et al, 2011).

The following extract from Nyanza Update, December 2009, a publication of Nyanza Provincial Task Force on Male Circumcision indicates how well the government of Kenya responded to WHO's recommendation that male circumcision be included in the package for HIV prevention.

> Just a year after its launch in November 2008, Kenya's voluntary medical male circumcision (VMMC) programme has become a model for other African countries that are beginning to roll out the provision of male circumcision for HIV prevention.
>
> Health officials and programme managers from Botswana, Swaziland, Tanzania and Mozambique, who toured various VMMC sites in Nyanza Province in mid-October, remarked on how innovative Kenya's programme was and said they were impressed by the strong community support it enjoys.
>
> The tours were part of a learning visit to Kenya sponsored by the World Health Organization (WHO) and other donors. It was the first in a series of planned visits to encourage health officials from various African countries to share experiences in the implementation of male circumcision for HIV prevention.
>
> *Nyanza Provincial Task Force on Male Circumcision,* ***Nyanza Update,*** *December, 2009,*

Nyanza Province in Kenya (where Kisumu County is found) is one of the regions in sub-Saharan Africa prioritized by WHO and UNAIDS for implementation of medical male circumcision (see table 2.1). Although more than 80% of men in Kenya are circumcised, male circumcision coverage varies culturally and geographically.

Nyanza Province, which is largely Luo, has the lowest male circumcision coverage (48%) and the highest prevalence of HIV (14.9%) in Kenya (see figure 2.6).

## 2.10 Perception of Voluntary and Informed Medical Male Circumcision

Some research has been done on the acceptability and perception of male circumcision for HIV prevention among the communities that traditionally do not circumcise their males. The following are some of the related work done by researchers.

Herman-Roloff et al, (2011) state that they conducted their research in three out of the eight Luo districts within Nyanza Province to assess the revealed, non-hypothetical, facilitators and barriers to the uptake of male circumcision. The three districts were chosen because they had an active VMMC program, were contiguous, and represented typical urban (Kisumu East) and rural (Nyando and Kisumu West) populations in Nyanza Province. FGDs were conducted between November-December, 2009, exactly one year after the launch of the VMMC program.

Their aim was to explore the complete range of community opinions about male circumcision among males most at risk for HIV acquisition. Participants were recruited from urban and rural areas and from a variety of employment cadres common to the study area. They had to be males aged 18-40 years, uncircumcised (based on self-report), and had no plans to become circumcised.

In their findings, they state that the primary barriers to male circumcision uptake included time away from work during post circumcision healing; culture and religion;

possible adverse events; and the post-surgical abstinence period. The facilitators of male circumcision uptake that were expressed in every discussion included the beliefs that male circumcision improves hygiene, is influenced by social pressure, improves HIV and STI protection, and improves sexual performance and satisfaction, in order of salience.

Herman-Roloff et al, (2011), say their results are consistent with findings from studies conducted prior to the scale-up of male circumcision; Bailey et al., (2002), Westercamp N, Bailey RC (2007), and Mattson et al., (2005). Herman-Roloff et al., (2011) also said previous studies explored the impact of cost on male circumcision uptake, but male circumcision services at the time of their research, were being provided at no cost in Kenya.

Additionally, one study in Malawi reported that free services were viewed as poor quality (Ngalande et al., (2006) but no participant in their study mentioned this; conversely, some believed that males might be more likely to adopt male circumcision because the service had become free.

Obure et al., (2009) explored psychosocial factors that influence male circumcision among the Luo people. According to their findings, the most frequently mentioned obstacles to promoting male circumcision were culture, pain and healing complications, costs, behavioural disinhibition, stigma and discrimination, and sexual satisfaction factors.

They say non-circumcision was mentioned by most participants as a significant cultural characteristic that distinguished the Luo from other communities, and some expressed fear that introducing circumcision could cause loss of this cultural identity. Most participants mentioned that fear of excessive pain during circumcision and healing complications could be a major obstacle to seeking the procedure. In their findings, most discussants observed that apart from the actual cost of the procedure, there are a myriad of additional associated costs that could obstruct circumcision-seeking behavior in the community. These included expenses for wound dressing, medications, and transport costs to visit the health facility. Moreover, circumcision was least among household priorities and its effects long-term. Their findings also revealed that there was an expressed perception among most participants that promoting male circumcision would lead to a misconception that male circumcision was some "magic bullet" against HIV, which could have an adverse effect on other preventive methods. Some discussants mentioned that male youth may engage in higher HIV risk behaviors like disuse of condoms and increase in multiple sexual partners if they believed that circumcision offers protection from HIV infection. Another fear, as found out by Obure et al., (2009) was that if male circumcision is promoted to reduce HIV, men who decide to remain uncircumcised would be discriminated against. The common argument was that the uncircumcised men would be labeled as risky or assumed as HIV infected. Some discussants supported the theory that non-circumcision enhanced sexual pleasure. The perception was that male circumcision leads to loss of penile sensitivity, which affects a man's sexual pleasure. Few discussants observed that male circumcision could lead to loss of penis size and consequently the loss of male's ability to satisfy women. Inability to satisfy the woman was perceived as a significant failure in the masculinity test. Supporters of

non-circumcision observed that the foreskin caused more friction, warmth, and sensation, increased penile size and filled the woman's vagina. This was perceived to enhance pleasure for women and men.

Obure et al., (2009) had the following results for those who supported circumcision; the participants further revealed that reasons for circumcision expressed in the FGDs were hygiene, reduced risk of STD/HIV infection, ease in condom use, cultural integration, and sexual satisfaction.

It is evident that Obure et al., (2009) make no mention of having visited health facilities to find out the number of males who turn up for male circumcision. They used qualitative method of data collection; mainly the FGDs. Participants were limited to age 15 – 34 years, leaving out the elderly who are advisors to the youth. According to them, Those in this age bracket are a sexually active high risk group for HIV infection, and males in this age set are target for projects promoting male circumcision in Kenya.

Kenya's national HIV prevalence is 7.8%. Nyanza region in which Nyando Sub-location is found, and mostly inhabited by the Luo, leads other regions with a 14.9% HIV prevalence (PRB and NCAPD, 2009).

Obure et al., (2009) further state that, "There are around 40 indigenous ethnic groups in Kenya; the five most populous ones are the Luo, Kikuyu, Kalenjin, Luhya, and Akamba. Unlike the great majority of other ethnic groups in Kenya, the Luo do not traditionally circumcise their males; approximately 90% of Luo men are uncircumcised (Agot, et al., 2004; Caldwell & Caldwell, 1994). From new evidence, lack of circumcision is one factor that explains high HIV prevalence among Luos, as

compared to other ethnic groups in Kenya. Since preventing HIV infection among men equally protects their sex partners (Agot et al., 2004), high HIV prevalence and low male circumcision levels make the Luo an ideal community in Kenya for promoting and providing medicalised male circumcision interventions."

By the time of their study, there was a global public health debate on how to scale-up male circumcision services in western Kenya, predominantly inhabited by the Luo as well as debate in their community about male circumcision and socio-cultural implications of promoting it as an HIV preventive measure.

### 2.11 The Information Gap

Herman-Roloff et al (2011) did not cover some areas in their research. First, they conducted their research in 2009 only one year after the launch of VIMC. The situation may have changed three years since then. The perception of the community may have changed with time; since there is continuing campaign to have males volunteer to undergo voluntary medical circumcision. Secondly, they targeted only uncircumcised men. This study aims at getting the perception of both circumcised and uncircumcised men. Thirdly, they left out the views of women. In this study, however, information about VIMMC was sought from both males and females in the community. The fourth point is that they categorized the participants into two groups based on age, that is; those aged 18-27 years and those aged 28-40 years. The views of those over 40 years of age were left out and yet they are advisors to the youth as far as societal norms are concerned. The age factor is also an area left out by Obure et al., (2009), who purposively sampled 126 males and 107 females aged 15-34 years, leaving out those over 34 years.

## 2.12 Summary

For the VIMMC to succeed as a method of HIV/AIDS prevention, it is important that all males are circumcised. The communities that do not circumcise their males should accept their males to be circumcised. The studies by Herman-Roloff et al., (2011) and Obure et al., (2009) both found that the Luo who traditionally do not circumcise their males, have not fully accepted circumcision as a method of HIV prevention. This study therefore aims at finding out if the obstacles in the uptake of male circumcision still exist given that there have been continuous campaigns to improve the male circumcision uptake among the communities that do not practice male circumcision. It requires the support of the whole community to change the perception of the community to fully accept the VIMC. The study collected information from both males and females aged 18 years and above.

The information generated by this study will help health planners and health providers to come up with ways of serving the community better in terms of HIV prevention. As stated in the Nyando District Development Plan 2008-2012, which covers upto Muhoroni District, one of the ongoing health projects/programmes aims at reducing transmission of STI/HIV and mitigating the consequences of infection at all levels in the district. The programmes target is to reduce HIV prevalence rate from the current 15% by 10 % and STI prevalence by 50 per cent, and, increase TB cure rate to 100%.

## 2.13 Conceptual Framework

Thomas, (1961) says human wishes have a great variety of concrete forms but are capable of four general classifications which are; the desire for new experience, the

desire for security, the desire for response and the desire for recognition. Of interest to this study is the desire for security which Thomas, (1961) says is based on fear, which tends to avoid death and expresses itself in timidity, avoidance, and flight.

The wish can be related to the demographic transition in population geography where scholars explained that population growth in today's developed countries consisted of three distinct stages; the first stage had low population because both the crude birth rate and the crude death rate were high due to periodic epidemics. In the second stage, people avoided the epidemics by finding out ways of controlling them, which included development of vaccines against killer diseases, improved hygiene and improved food production through Agrarian Revolution. Birth rates in the second stage remained high and death rates dropped due to improved hygiene and improved food supply. Population began to rise. Economic growth, urbanization, rising standards of living and education came with their costs. Many children came to be seen as economic burdens and people avoided the situation by producing few children whom they could provide a higher standard of living. The third stage saw the developed countries demonstrate low crude birth rate and low crude death rate (Bergman and Renwick, 1999).

Just like in the demographic transition, people are seeking ways of controlling HIV/AIDS which has continued to kill people like the diseases that killed people during the demographic transition. HIV/AIDS has no cure. Medical Male Circumcision has been approved by WHO as one of the ways of reducing the spread of HIV through heterosexual intercourse. Some communities practice traditional male circumcision while some do not. Thomas, (1961) says one of the most important powers gained during the evolution of animal life is the ability to make decisions from

within instead of having them imposed from without. Thomas, (1961) also says a child is always born into a group of people among whom all the general types of situation which may arise have already been defined and corresponding rules of conduct developed, and where he has not the slightest chance of making his definitions and following his wishes without interference. In the case of introduction of circumcision to the communities that do not practice traditional circumcision of their males, for example the Luo, the community may find it difficult to accept medical circumcision of their males because it goes against their established tradition. An individual may find it difficult to accept to undergo medical circumcision since his community has not been practicing male circumcision.

On the other hand, Thomas, (1961) says the higher animals, and above all man, have the power of refusing to obey a stimulation which they followed at an earlier time. Response to the earlier stimulation may have had painful consequences and so the rule or habit in this situation is changed. Thomas, (1961) says this is called the power of inhibition, and it is dependent on the fact that the nervous system carries memories or records of past experiences. At this point the determination of action no longer comes exclusively from outside sources but is located within the organism itself. HIV/AIDS has caused a lot of suffering to the people and according to what Thomas, (1961) says, individuals who have the memories of the effects of HIV/AIDS may accept circumcision with an aim of reducing infections by the deadly disease, without having to stick to their culture of not circumcising their males.

So, are the Luo people sticking to the traditionally defined way of life which includes non-circumcision of males or they are responding positively to the new knowledge that male circumcision reduces infection by HIV in males?

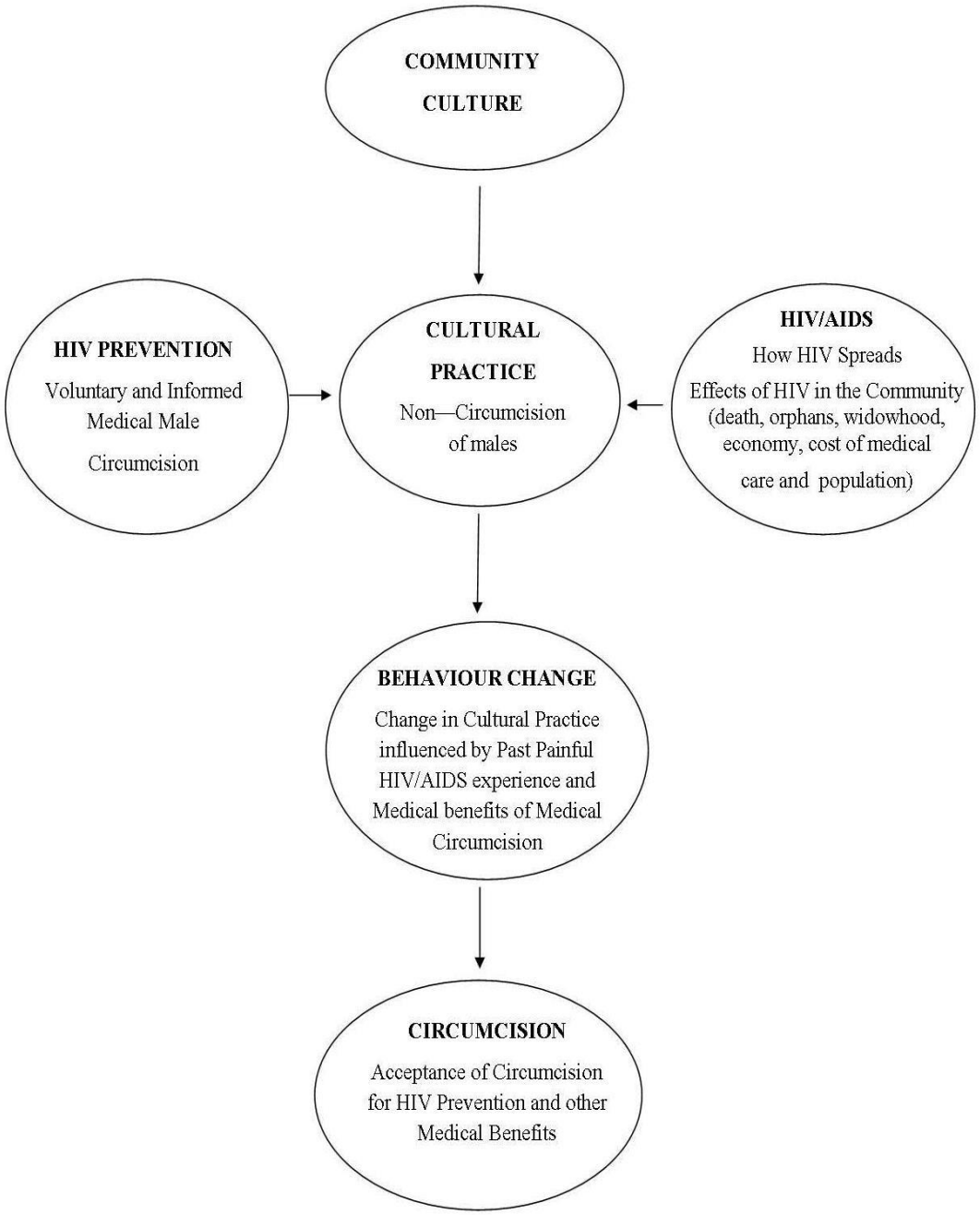



**Figure 2.7: Conceptual Framework for Acceptance of Voluntary and Informed Medical Male Circumcision against Cultural Practice of Non-circumcision**

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Study Design

The study took qualitative approach. The data collected were mainly qualitative in nature since the main questions asked were open ended so that the respondents could speak their minds without being restricted to predefined choices of answers. Perception of the community about VIMMC required open ended questions for the respondents to answer as freely as possible without restrictions. Interview questionnaires were used to collect the data; one for members of the community (Appendix A) and another for the health facility providing VIMMC (Appendix B). The study was designed to explore the feelings and perceptions of the people of Nyando Sub-location about circumcision for HIV prevention. Nyando sub-location is dominated by members of Luo community who, traditionally do not circumcise their males. The study focused on the following areas; first, knowledge of HIV/AIDS in terms of its spread and prevention, secondly, awareness of voluntary medical male circumcision for HIV/AIDS prevention, and thirdly, whether they supported the voluntary and informed medical male circumcision for HIV/AIDS prevention or not.

This study also investigated whether the culture of the Luo community of not circumcising their males bars their males from getting circumcised for HIV prevention. To confirm that the Luo did not practice male circumcision as a culture, each respondent was asked whether their community practiced traditional male circumcision or not. As to whether their culture of not circumcising their males as a tradition hindered the community's uptake of voluntary and informed medical male

circumcision for HIV/AIDS prevention, each respondent was asked if he or she supported VIMMC, and if not, he or she was asked to state the reasons. Cultural factors were expected to be mentioned within the reasons. Married female respondents were asked if they supported their spouses to undergo VIMMC and also state the reasons for their answer.

It also highlighted the factors that might influence the members of the community to have their males circumcised against their tradition. These include advantages of circumcision.

Male respondents were asked whether they had been circumcised through VIMMC program or not and were consequently asked to state the reasons for doing so. Respondents with sons were also asked to state and give reasons whether they would like their sons to undergo VIMMC. The aim was to confirm if the community has actually accepted VIMMC as a method of HIV prevention.

Information about VIMMC was sought at the VIMMC centres neighbouring the Nyando Sub location as the sub location does not have any VIMMC centre or health facility. Personnel at the VIMMC centres were requested to provide the following information about VIMMC in the area; when VIMMC started in the area, benefits of VIMMC, how the community is educated about VIMMC in the area, VIMMC services to all the people in their catchment, number of males who have volunteered to be circumcised by age brackets, negative effects of culture of the community on the uptake of VIMMC, and, the challenges they face in implementing VIMMC.

The study targeted a population of 2495 people comprising of 1277 males and 1218 females, all living in 480 households. Not all residents could be interviewed due to cost. Adults are decision makers when it comes to matters affecting the community such as introduction of male circumcision to the community. This study therefore targeted adults where 110 households were sampled out of the 480 households to get 110 respondents comprising of 55 males and 55 females.

### 3.2 Sampling

A sample, according to Kothari (2009) should be truly representative of population characteristics so that it may result in valid and reliable conclusions. Two categories of respondents were selected for interview. The members of the community in the sub location who are the main focus of the study, and the personnel administering the VIMMC services at the VIMMC centres serving the sub location. Due to the large number of community members and the cost involved in data collection, sampling was inevitable in the study.

According to the 2009 Population and Housing Census, Nyando sub location has a population of 2495 people, with 1277 males and 1218 females. These people live in 480 households. The sub location has an area of 14.6 square kilometres and a population density of 170.86 people per square kilometre (Kenya Open Data, 2012).

The sample was selected based on households. The 480 households were used as the sampling frame. Every household had at least one adult member who was either male or female. The aim was to pick a sample of 110 respondents comprising of 55 males and 55 females. In order to get the respondents, a simple random sample of 55

households out of the 480 households was done to get the source of 55 males, and 55 households out of the 480 households to get 55 females. A list of the households was prepared, where each household was given a serial number and a name. Each serial number and name was written on a slip of paper. The slips of paper were put in a container and mixed. Without looking into the container, 55 slips were picked to identify the households where males were to be interviewed. The 55 slips were returned to the container and mixed with the rest. 55 slips were again picked, without looking, to identify households where the 55 females were going to be interviewed. One adult male (18 years and above) was interviewed from each household based on the required gender. Some households had more than one adult member of the required gender. Preference was given to the couple heading the household, either husband or wife depending on the required gender in the household. Where these were not available, any adult member of the gender needed in the household was interviewed.

Nyando sub location does not have a VIMMC Centre. There is no health facility within the sub location. To find out if males actually went for VIMMC services, data was collected from Koru Mission Hospital which is in Koru Sub location and is the only nearby health facility that provides VIMMC services. It is believed majority of the residents go for circumcision and ordinary treatment at the health facility. In addition to finding out if they go for the services, the study sought to know the challenges faced by the centre as they provide the VIMMC services. Initially, it was planned that the officers at the health facility were to be interviewed and in the process would provide names of other institutions that provide similar services in the area and are not known to the researcher. This would have led to the interview being

extended to the officers in those institutions. However, the study found that it is only Koru Mission Hospital in the entire Koru location where Nyando sub location is found, that provides the VIMMC services. At Koru Mission Hospital, it was the head of the hospital who provided all the information needed during the interview, as the junior officers referred the researcher to the head of the facility. As a result, data was collected from one health facility from only one key informant – the head of the institution.

### 3.3 Data collection

The interview questionnaires were written in English. Some members of the community did not understand English. So the questions were translated to the language they understood best, which is *Dholuo* (language of the Luo community) before they answered. Consent was sought from the respondents before they gave their answers.

As indicated earlier, data was collected using interview questionnaires. There were two types of questionnaires; one for members of the community, named "Appendix A" and another for officers working at the facility providing VIMMC services, named "Appendix B". In both interview questionnaires, there were open ended questions and questions with fixed answers. The open ended questions were used to collect qualitative data as the respondents were free to answer them based on the answers they had. The questions with fixed answers were used to collect quantitative data.

During data collection, data was recorded on the questionnaires directly in the field. From then, the data remained confidential and accessed only by authorized persons.

### 3.4 Data analysis

The data from the interview questionnaires from members of the community were carefully checked for similar responses per question. Each response was read and analyzed.

The responses were then coded. Similar responses per question were assigned similar codes and entered in the SPSS computer programme for analysis and generation of the frequencies and percentages of various responses. These included frequencies of descriptive statistics and sociodemographic data. Some of the data were transferred to Ms Excel for generation of graphs.

Data from the health facility were of two types: frequencies of those volunteering to be circumcised grouped according to ages, and challenges as stated at the facility. The challenges were stated as mentioned by the personnel while the numbers volunteering to be circumcised were presented in form of a graph.

### 3.5 Consent, Ethics and Confidentiality

Before carrying out the research, approval for the research was sought at The National Council for Science and Technology (NCST) through Moi University. At every stage of collecting primary data, the person providing information was informed of the purpose of the research, confidentiality of information collected and privacy. The person had to consent to assist in providing data before the data was collected from him or her. No participant was forced or coerced to answer any question. Each respondent answered the questions willingly.

# CHAPTER FOUR

# RESEARCH FINDINGS

## 4.1 Socio-demographic Characteristics of the Sample from Community Members

All the sampled respondents were from the Luo community. They all responded that they were Christians. Nearly all of them are farmers. Some are professionals in various fields. They are of various education levels.

### 4.1.1 Age and Gender

Although the sample was random, it captured adults aged between 18 and 70 years of age. The distribution of the respondents in the sample per age and gender in frequencies is as shown on Table 4.1 below. The aim of the study was to collect data from the respondents of all ages from 18 years and above. Therefore the sample is a good representation of the adult population in the community of concern. The views of the sampled respondents about VIMC for HIV/AIDS prevention will be relied upon as the views of the community under study.

**Table 4.1: Distribution of Respondents by Age and Gender**

| AGE IN YEARS | MALES | FEMALES | TOTAL |
|---|---|---|---|
| **18 – 22** | 10 | 12 | 22 |
| **23 – 27** | 6 | 10 | 16 |
| **28 – 32** | 14 | 9 | 23 |
| **33 – 37** | 4 | 5 | 9 |
| **38 – 42** | 8 | 5 | 13 |
| **43 – 47** | 1 | 0 | 1 |
| **48 – 52** | 5 | 5 | 10 |
| **53 – 57** | 1 | 4 | 5 |
| **58 – 62** | 2 | 5 | 7 |
| **63 – 67** | 3 | 0 | 3 |
| **68 - 72** | 1 | 0 | 1 |
| **TOTAL** | 55 | 55 | 110 |

### 4.1.2 Marital Status

The sample captured men and women who are single, married, widowed and separated. The responses therefore came from a cross section of the community at large. Those single have their views about VIMMC. The married also gave their views about VIMMC. Those with sons talked about their sons' circumcision in relation to health. Table 4.2 below shows the distribution of marital status of the respondents.

**Table 4.2: Marital Status of the Respondents per Gender**

| GENDER | SINGLE | MARRIED | WIDOWED | SEPARATED | TOTAL |
|---|---|---|---|---|---|
| **MALE** | 15 | 36 | 2 | 2 | **55** |
| **FEMALE** | 8 | 37 | 10 | 0 | **55** |
| **TOTAL** | **23** | **73** | **12** | **2** | **110** |

### 4.1.3 Education Level

The respondents were of various educational levels, ranging from those who never attended school to those who completed university education. Majority of the respondents are those who completed primary and secondary education. These are summarized by gender in Table 4.3

**Table 4.3: Level of Education of Respondents by Gender**

| EDUCATION LEVEL | MALES | FEMALES | TOTAL |
|---|---|---|---|
| NEVER ATTENDED SCHOOL | 3 | 5 | **8** |
| NEVER COMPLETED PRIMARY | 3 | 9 | **12** |
| COMPLETED PRIMARY | 18 | 27 | **45** |
| COMPLETED SECONDARY | 29 | 13 | **42** |
| COMPLETED UNIVERSITY | 2 | 1 | **3** |
| **TOTAL** | **55** | **55** | **110** |

### 4.2 HIV/AIDS Awareness

All the respondents said they were aware of HIV/AIDS, an indication that the community was aware of HIV/AIDS. They said it had no known cure at the time of the study. They also said that HIV infection leads to AIDS and that HIV spreads mainly through careless and unprotected sex. According to the members of the community who were interviewed, avoiding careless and unprotected sexual intercourse is one of the ways of avoiding HIV infection. Their knowledge of HIV/AIDS is a good step towards the elimination of the HIV pandemic.

### 4.3 Circumcision as a Cultural Practice

It came out clearly that the Luo community did not practice traditional male circumcision. All the respondents said the Luos do not practice traditional male circumcision. According to the respondents, traditional circumcision was a way of initiating boys to become adults in the communities that practiced it, but members of the Luo community, practiced removal of six lower teeth instead of circumcising their boys. So circumcision was not part of their culture.

Male Circumcision is new to the community. The discovery that male circumcision reduces HIV infection has made members of the community to think about accepting male circumcision. Both males and females say they cannot resist the VIMMC because of its benefits to both males and females.

### 4.4 Awareness of VIMMC

All the respondents said they knew that medical male circumcision reduces HIV infection partially. The community under study was therefore aware of the existence of VIMMC. They supported the campaign to have males volunteer to be circumcised for one main reason – reduction of HIV infection in the community. They also appreciate the fact that circumcision has other health benefits like prevention of STIs, cervical cancer and general hygiene of the male organ. The campaign to have males volunteer for medical circumcision for HIV prevention has succeeded in informing members of the community about the benefits of the circumcision. According to the personnel at the circumcision centre, the awareness is created through the mass media, road shows, learning materials, community meetings like the chief's *baraza*s (public meetings), house to house campaigns and one-on-one interactions. The main areas the community is educated on are meaning of HIV/AIDS, the way HIV/AIDS spreads, effects of HIV on an individual, family and community, effects of HIV/AIDS on the economy, and all the methods of HIV prevention including circumcision which partially reduces infection by HIV.

### 4.5 Acceptance of VIMMC in the Community

The community has welcomed medical circumcision for reduction of HIV infection. It is seen in their responses to various questions posed to them. All the respondents appreciate that VIMMC reduces the spread of HIV in the human population and therefore see no need of rejecting it. They see it as an irresistible practice that has come not to change the culture of the people but to improve the people's health. The community sees VIMMC as a health practice but not a cultural practice.

Out of the 55 males interviewed, 29 of them (52.7 %) had volunteered to be circumcised since the introduction of VIMMC. Women also support VIMMC for health reasons. Almost all the members of the community (92.7 %) are united in accepting VIMMC because of the medical benefits associated with it.

The health personnel interviewed also said the members of the community support VIMMC. Majority of the male respondents (52.7 %) as already stated above said they had undergone medical male circumcision arising from the VIMMC campaign. Those who had not undergone the circumcision included elders over fifty years of age. The elders said the VIMMC is for young men who are still very active sexually. Ninety five percent of the men interviewed supported VIMMC because of its health benefits.

Despite the acceptance of the VIMMC by the respondents, only 52.7 %) of the men interviewed said they had been circumcised as a result of the introduction of VIMMC. Almost half of them, 47.3 %, have not been circumcised. This is an indication that those not circumcised are supporting circumcision of male members of their community but are themselves not ready to be circumcised.

While some men claimed that only young males were to be circumcised because they were very active sexually, this study found that fifty four percent of the uncircumcised men in the sample were below forty years of age, a group considered to be very active sexually. It means that this group has not volunteered to be circumcised despite being aware that male circumcision reduces chances of being infected by HIV. The group may be a threat to the community because if they do not use other methods of HIV prevention like ABC, they may acquire HIV and spread it to their female partners

who may in turn spread it to other males. The community may therefore suffer from HIV infections that may have been prevented.

The men who had not volunteered to be circumcised gave their reasons. Some said they were too old to be circumcised. They accounted for 23.1 % of the uncircumcised male respondents. They are among those who are over forty years of age. They say their sexual desire has reduced with age and therefore see no need of preventing HIV infection through circumcision. Instead they want teenagers and young men who are still active sexually to be circumcised.

Another 23.1 % say they are yet to decide to be circumcised. They not opposed to the VIMMC. They know and appreciate the benefits of VIMMC, and are still thinking of when to go for circumcision.

Those who said they will undergo circumcision later were 11.5 %. The group is also aware of the importance of male circumcision in HIV prevention. It is only that they opted to undergo circumcision at a later time.

There is a group that fears pain associated with circumcision. This group accounts for 7.7% of the uncircumcised men. To them, circumcision is very painful and they would rather not undergo it.

Another group says VIMMV services are not available in the areas they live in. they say the services are sought over ten kilometres away, where health facilities are located. They say if VIMMC services are brought closer to them, they will undergo circumcision. This group also accounts for 7.7 % of the cases of uncircumcised men.

Some said they use other methods of HIV prevention like ABC. They were 3.8 % of the uncircumcised men. To them, circumcision may mislead men that they cannot be infected by HIV even if they don't use other HIV prevention methods like ABC.

Some uncircumcised men said they were aware of the importance of VIMMC. But could not volunteer to be circumcised because it was too much involving before, during and after circumcision. They cited cases of having to wait for too long to heal before engaging in sexual activities and work. They account for 3.8 % of the uncircumcised men.

There is a group that said they needed more information about VIMMC. They have heard about VIMMC but they have not got all the information they needed to make their decision whether to get circumcised or not. The group accounted for 3.8 % of the uncircumcised men.

Those who have not got the opportunity to get circumcised are 3.8 % of the uncircumcised men. They have a lot of work and time to get circumcised is not available.

A further 3.8 % said they are not ready for it meaning that they have reserved their reasons for not getting circumcised.

There are those who do not like being circumcised despite being aware of the importance of VIMMC. These are 3.8 % of the uncircumcised men.

Among the men who had not been circumcised, 3.8 % simply said they had no reason of not being circumcised. They knew the importance of VIMMC and yet they had not volunteered to be circumcised. Figure 4.1 below summarizes the reasons.

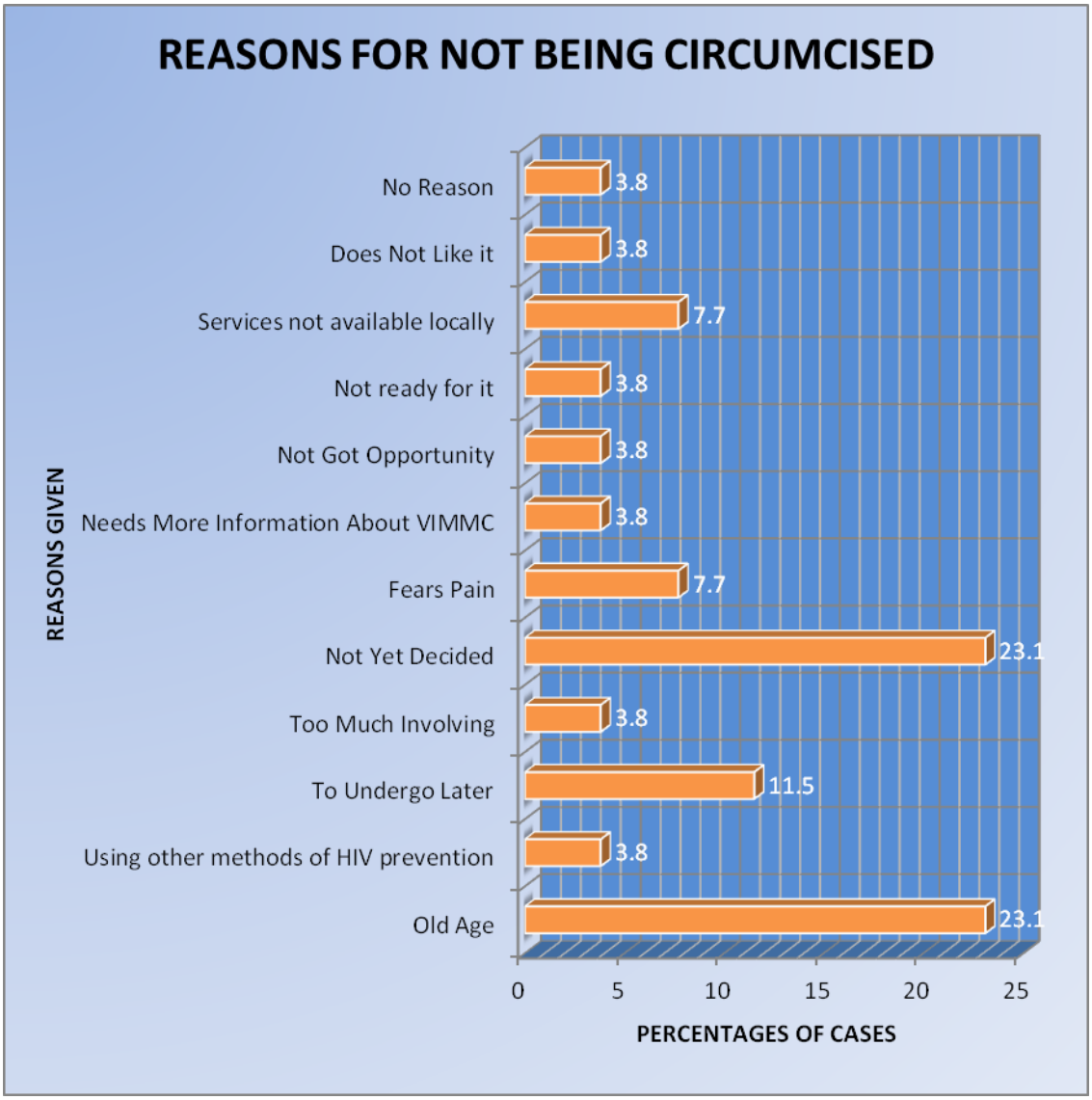



**Figure 4.1: Reasons given by men for not being circumcised**

Women also gave their views about VIMMC. They supported VIMMC because of the health benefits associated with it. 89 % of the women said they would like their

husbands or partners to undergo circumcision for HIV prevention. Other health benefits of male circumcision mentioned by the women included reduction of STIs, penile hygiene, reduction of the cancer of the cervix in women and penile cancer in men. Only 11 % were opposed to their husbands being circumcised.

Parents with male children prefer their sons getting circumcised because of all the advantages of male circumcision. Ninety four per cent of male parents would like their sons to be circumcised while ninety three per cent of female parents would like their sons to be circumcised. The high number of parents who want their sons to be circumcised indicate that they are not opposed to VIMMC. In fact some parents said their sons had been circumcised through the VIMMC programme.

Nearly all the respondents were in agreement that all males should be circumcised so as to reduce both HIV and STIs infections. Out of all the 110 respondents, 95.5 % of them said all males should undergo circumcision to reduce the spread of HIV. Women led those who want all males to be circumcised with 96.4 % against 94.5 % of men.

Statistical data at a nearby health facility which also offers VIMMC show that the majority (90.9 %) of those who had volunteered to be circumcised are below 41 years of age with the bulk falling between 11 and 30 years. Figure 4.2 below shows the summarized data.

**4.6 Benefits of Male Circumcision**

The following are some of the benefits of medical male circumcision as stated by the VIMMC personnel at the health facility where data was collected: Male circumcision

when properly done in hygienic conditions for example in hospitals, has several health benefits apart from HIV prevention. It boosts personal hygiene in an individual. Circumcision reduces exposure to cancer of the cervix in women, and in men, it reduces exposure to penile cancer. Circumcision hardens the texture of the glans of the penis. It reduces one's exposure to STIs. Urinal tract infections is reduced in males who are circumcised. It reduces ulcerations of the glans of the penis brought about by friction between the foreskin and the glans during sexual intercourse. Circumcision is done as a corrective procedure to conditions like phaemosis and paraphaemosis in males.

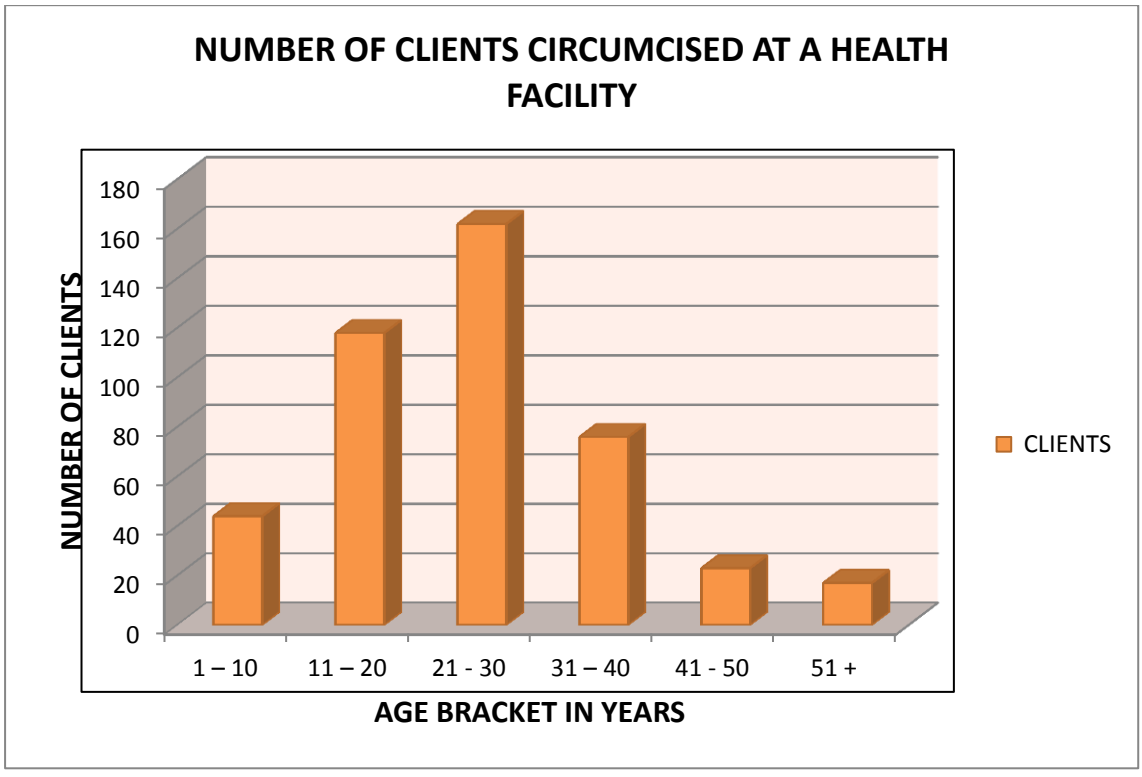



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**Figure 4.2: Males circumcised at a centre since the VIMMC started in 2011 at the centre**

# CHAPTER FIVE

# DISCUSSION OF THE RESULTS

## 5.1 Introduction

The aim of the study was to: establish if the residents of Nyando sub-location are aware of the importance of Voluntary and Informed Medical Male Circumcision for HIV prevention; to establish if residents of Nyando sub-location have accepted male circumcision as a method of HIV prevention; and to establish if the Luo culture of not practicing circumcision is hindering the community members from accepting circumcision for HIV prevention.

## 5.2 VIMMC Awareness and Support

For one to decide whether to accept or reject VIMMC, he or she must be aware of HIV/AIDS. The study found that all the respondents were aware of HIV/AIDS, in terms of how HIV spreads, its prevention, and its effects. The people are aware that HIV/AIDS exists. They are also aware that HIV spreads mainly through careless heterosexual intercourse. In the study, prevention of the spread of HIV through heterosexual intercourse is of interest. So the community's awareness of the way HIV spreads is very important to this study because the community should know how to reduce it through circumcision. Heterosexual sex is the main way through which HIV spreads. They also mentioned blood transfusion, mother to child during birth or breastfeeding, sharing objects that can cause blood of infected person and a healthy person to come into contact for example razor blades and injection needles. The

respondents are aware that HIV has no cure and they know that HIV infection leads to AIDS. Avoiding careless sex was featuring as the main way of avoiding HIV infection.

The respondents are aware of VIMMC and its benefits. The awareness, according those providing VIMMC, is created through mass media, public *barazas* and one - on – one contact. VIMMC has gained support from members of the community since it was started. As already mentioned, males have volunteered to be circumcised. Both males and females are not against the circumcision for HIV prevention. The findings are similar to what is stated by Nyanza Provincial MC Taskforce, (2011) that VIMMC has been well received in Nyanza where Nyando Sub location is found.

### 5.3 Luo Culture and VIMMC

Luo culture has not barred the members from accepting circumcision for HIV prevention. An elder said, "Circumcision has come as a method of reducing HIV infection and we have to accept it the way it is." From the results, it is evident that the community's acceptance of VIMMC is purely on health grounds and not cultural. They support it because of the benefits associated with it. The community is aware that circumcision only provides partial protection from HIV infection. The findings are similar to those of Westercamp N, Bailey R.C., (2007). Herman-Roloff A., (2011) also said young participants viewed MC as a medical intervention that exists outside of culture, but older men often talked about MC as a cultural practice that is meant for other ethnic groups.

Obure et al., (2009) said some of the respondents in their study expressed fear that introducing circumcision could cause loss of their cultural identity since non-

circumcision distinguished the Luo from other communities. However, in this study, it was found that culture was not an obstacle to male circumcision for HIV prevention. The publicity of VIMMC may have changed the perception of the community who now accept circumcision as a medical operation but not a cultural activity. Some of the findings of Obure et al., (2009) are consistent with those in this study. Fear of pain associated with male circumcision featured among some of the male respondents who had not been circumcised in this study just like Obure et al., (2009) found out. Some respondents in this study said that male circumcision could mislead those circumcised that they were now permanently protected against HIV and would engage in careless sex that could be dangerous to them. Obure et al., (2009) also found that some of their participants expressed perception that promoting male circumcision would lead to a misconception that male circumcision was some "magic bullet" against HIV, which could have an adverse effect on other preventive methods. Herman-Roloff A. et al., (2011) mentioned this in their findings.

In this study, some respondents said the services were not available locally in their neighbourhood, a view that Herman-Roloff A., (2011) also support. They said a long distance to the health facility is a barrier to the uptake male circumcision.

### 5.4 Challenges Facing VIMMC

Culture of the people is still a challenge to the uptake of VIMMC. At the VIMMC Centre where data were collected, the personnel said the communities that practice traditional male circumcision see VIMMC as an intruding practice. VIMMC is done by qualified medical practitioners under very accurate and stable conditions ranging from hygiene to clients health and with knowledge about HIV prevention strategy unlike the traditional male circumcision which is done by non-professionals under poor hygienic conditions without knowledge about HIV prevention.

The health practitioners are overwhelmed by the number of clients who turn up for circumcision. There is therefore need to hire more circumcision experts to cope with the demand.

The VIMMC experiences financial constraints as a result of serving too many clients. The centres depend on funds from ministry of health and donor organizations.

### 5.5 Applications of the Findings

The results of this study can be used by health planners in various ways. Since the results show that very few men of over forty years of age turn up for VIMMC, they can come up with ways of convincing the older men to undergo circumcision. Researchers can also use the results to find out more about why the older men do not turn up in large numbers for circumcision.

The education planners can also use these results to include campaign for male circumcision to reduce HIV transmission in the curriculum so that young men or even boys can be circumcised.

# CHAPTER SIX

# CONCLUSION AND RECOMMENDATIONS

## 6.1 Conclusion

VIMMC is a health activity but not a cultural activity. The community accepted it for various health reasons which include partial prevention of HIV infection, STIs and general hygiene of the male organ.

The campaign to have men volunteer to be circumcised under the VIMMC programme has succeeded in informing the people of the importance of male circumcision. However, a lot needs to be done to have all males in the non-circumcising community volunteer to be circumcised. Although they are aware of the health benefits of male circumcision, almost half of the adult males have not been circumcised. Some of those over forty years of age believe that circumcision is for young males who are still very active sexually. But still some of those below forty years of age have not volunteered to be circumcised.

## 6.2 Recommendations

Based on the results, this study makes a number of recommendations as indicated below. The recommendations can improve service provision and uptake of VIMMC in the area as well as improving other related services.

### 6.2.1 VIMMC Centres

The study recommends that more VIMMC centres should be established especially within the villages where people come from so as to reduce the distance for clients.

Currently there are few VIMMC centres serving the community. Secondly, to address the shortage of staff who perform the circumcision, more qualified personnel should be hired at the VIMMC centres so as to improve service delivery to the large numbers of clients who turn up for circumcision.

### 6.2.2 Funding

Funding is another problem that stakeholders should address. The study found that funds to mobilize and circumcise the men are not enough. The study recommends that a reliable funding system for the exercise should be put in place.

### 6.2.3 Infrastructure

Roads are an important infrastructure that boosts any kind of development in an area. In the context of VIMMC roads which are currently in poor state in the sub location and its environs, should be improved to enable the residents and VIMMC personnel to travel with ease any time they are carrying out activities related to VIMMC. Most of the sub location has black cotton soil which becomes impassable by vehicles during the rainy season. Some of the roads have lost the murram to erosion and therefore remain muddy throughout the rainy season.

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**APPENDICES**

COMMUNITY PERCEPTION OF MALE CIRCUMCISION WITH REFERENCE

TO

HIV/AIDS PREVENTION IN NYANDO SUB-LOCATION, MUHORONI

DISTRICT

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**APPENDIX A: INTERVIEW QUESTIONNAIRE FOR COMMUNITY MEMBERS**

***Important information to the respondent***

The purpose of this discussion is to learn about your feelings towards Voluntary Medical Male Circumcision for HIV prevention. The information you provide will be kept confidential. Some of the questions I am going to ask you are sensitive. Please feel free not to answer any question and ask me to move to the next. You are also free to stop the interview at any time. If you have any question to ask you may ask before we proceed.

A. DEMOGRAPHIC INFORMATION

1. Name (*optional*) _____
2. Age _____
3. Gender: Male/Female _____
4. Ethnic group _____
5. Marital status _____
6. Religion _____
7. Profession _____
8. Occupation _____

9. Highest level of education completed: Primary ☐ Secondary ☐ University ☐

Never attended school ☐ Never completed primary ☐

B. HIV/AIDS AWARENESS

10. Have you heard that there is a disease known as Acquired Immune Deficiency Syndrome (AIDS)? Yes ☐ No ☐

11. If "Yes" in 10 above, does it have a cure? Yes ☐ No ☐

12. If "Yes" in 11 above, what is the cure?

☐ Anti-retroviral drugs (ARVs)

☐ Circumcision

☐ Herbal medicine

☐ Others *(State)*

(i)_____

(ii)_____

(iii)_____

12. Have you heard about Human Immunodeficiency Virus (HIV)? Yes ☐

No ☐

13. Which disease does HIV cause? (*State*)

_____

14. Are you aware of how HIV spreads in human beings? Yes ☐ No ☐

15. If "Yes" in 14 above, state how it spreads:

i. _____

_

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

vii. _____

viii. _____

ix. _____

x. _____

xi. _____

xii. _____

xiii. _____

xiv. _____

16. Are you aware of HIV prevention methods? Yes ☐ No ☐

17. If "Yes" in 16 above, state the methods:

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

vii. _____

viii. _____

ix. _____

x. _____

xi. _____

xii. _____

xiii. _____

xiv. _____

C. CIRCUMCISION AS A CULTURAL PRACTICE

18. Do people of your community practice traditional male circumcision? Yes ☐

☐ No

19. Give reasons for your answer in 18 above:

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

D. AWARENESS OF VOLUNTARY AND INFORMED MEDICAL MALE CIRCUMCISION

20. Have you heard about voluntary and informed medical male circumcision?

Yes ☐ No ☐

21. If "Yes" in 20 above, do you support it? Yes ☐ No ☐

22. Please state the reasons for your answer in 21 above:

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

(vii) _____

(viii) _____

(ix)_____

23. (*If male*), Have you undergone voluntary medical male circumcision Yes ☐

☐ No

24. Give reasons for your answer in 23 above:

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

25. Do you know of men who have undergone medical male circumcision?

☐ Yes ☐ No

26. What are their reasons for undergoing voluntary medical male circumcision?

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

27. (*If female*) Do you support your spouse going for voluntary medical male circumcision? Yes ☐ No ☐

28. Support your answer in 27 above:

_____

_____

_____

_____

_____

_____

29. Do you have male children? Yes ☐ No ☐

30. If Yes in 29 above, would you like them to undergo voluntary medical male circumcision? ☐ Yes ☐ No

31. Give reasons for your answer in 30 above:

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi) _____

(vii) _____

E. CIRCUMCISION FOR HIV PREVENTION

32. Do you know that male circumcision is now one of the HIV prevention methods in males? Yes ☐ No ☐

33. If Yes in 32 above, what is the degree of protection?

Complete protection ☐

Partial protection ☐

34. Should all males in your community be circumcised so as to reduce HIV infection?

Yes ☐ No ☐

35. If No in 34 above, what are your reasons?

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

(vii) _____

(viii) _____

THANK YOU

COMMUNITY PERCEPTION OF MALE CIRCUMCISION WITH REFERENCE TO HIV/AIDS PREVENTION IN NYANDO SUB-LOCATION, MUHORONI DISTRICT

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## APPENDIX B: INTERVIEW QUESTIONNAIRE FOR PERSONNEL AT THE VOLUNTARY AND INFORMED MEDICAL MALE CIRCUMCISION CENTRES

***Important information to the respondent***

The purpose of this discussion is to learn about your experience with Voluntary Medical Male Circumcision for HIV prevention. The information you provide will be kept confidential. Some of the questions I am going to ask you are sensitive. Please feel free not to answer any question and ask me to move to the next. You are also free to stop the interview at any time. If you have any question to ask you may ask before we proceed.

1. Name _____

2.Profession_____

3. Name of health facility _____ 4.

Designation_____

5. When was the Voluntary and Informed Medical Male Circumcision campaign introduced in this area? _____-

_____

6. Who introduced it?

_____

_____

_____

7. Please state all the benefits of medical male circumcision.

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

(vii) _____

(viii) _____

(ix)_____

(x) _____

(xi)_____

(xii) _____

(xiii) _____

(xiv) _____

(xv) _____

8. How do you educate members of the community on the importance of male circumcision in relation to HIV/AIDS prevention?

☐ Mass media ☐ Community meetings ☐ House to house campaign

☐ Others (*specify*):

(i) _____

(ii) _____

(iii)_____

(iv)_____

9. Which of the following areas do you educate them on, concerning HIV/AIDS?

(*Tick in the appropriate box)*

- ☐ Meaning of HIV/AIDS
- ☐ How HIV spreads
- ☐ Effects of HIV on an individual
- ☐ Effects of HIV on a family
- ☐ Effects of HIV on the community
- ☐ Effects of HIV on the economy
- ☐ All the methods of HIV prevention
- ☐ Circumcision as a method of HIV prevention
- ☐ Limitations of circumcision as a method of HIV prevention

10. How is their response to Voluntary and Informed Male circumcision?

☐ Positive ☐ Negative ☐ Undecided

Other (*specify*)

_____

_____

_____

_____

11. Where do you perform the circumcision?

_____

_____

_____

_____

12. Do your services reach all the people within your expected catchment area?

Yes ☐ No ☐

13. If *No* in 12 above, what are the challenges?

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

11. Who qualifies to perform the surgery?

☐ Doctors ☐ Clinical Officers ☐Nurses ☐ Other (*specify*)

12. Does traditional method of circumcision reduce HIV infection in men at the same rate as the medical circumcision? ☐ Yes ☐ No

13. If "No" in 6 above, what is the difference in the methods?

_____

_____

_____

_____

_____

_____

14. Please state in the table below, the number of males who have volunteered to be circumcised since the VIMC campaign started.

| AGE BRACKET(*In years*) | 1 – 10 | 11 – 20 | 21 - 30 | 31 – 40 | 41 - 50 | 51 + |
|---|---|---|---|---|---|---|
| NUMBER OF CLIENTS | | | | | | |

15. Who finances the medical circumcision aimed at HIV/AIDS prevention?

(i) _____

(ii) _____

(iii)_____

(iv)_____

16. Is the culture of the people affecting the response of the community to voluntary and informed medical male circumcision? ☐ Yes ☐ No

17. If Yes in 10 above, how does it affect?

(i) Those who traditionally circumcise their males:

_____

_____

_____

_____

_____

_____

_____

_____

(ii)Those who do not traditionally circumcise their males:

_____

_____

_____

_____

_____

_____

_____

_____

18. What are the challenges that you face in voluntary and informed medical male circumcision?

(i) _____

(ii) _____

(iii)_____

(iv)_____

(v) _____

(vi)_____

(vii) _____

(viii) _____

(ix) _____

(x) _____

(xi)_____

(xii) _____

THANK YOU