

**INTERPERSONAL COMMUNICATION AND UPTAKE OF
VOLUNTARY MEDICAL MALE CIRCUMCISION AMONG
MARRIED MEN IN BUSIA COUNTY, KENYA**

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**Interpersonal Communication and Uptake of Voluntary Medical Male
Circumcision among Married Men in Kenya**

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DECLARATION

This thesis is my original work and that has not been presented for a degree in any another University.

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DEDICATION

...to all my family and friends, living and deceased

... to Abby and Deity - God's protection as you grow up

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LIST OF ABBREVIATIONS AND ACRONYMS

BCC	Behavior Change Communication
FGD	Focused Group Discussion
HIV	Human Immunodeficiency Virus
IPC	Interpersonal Communication
JSAF	Joint Strategic Action Framework
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya demographic Health Survey
KEPH	Kenya Essential Package for Health
KNASP	Kenya National AIDS Strategic Plan
KNBS	Kenya National Bureau of Statistics
MC	Male Circumcision
MOVE	Models for Optimizing the Volume and Efficiency of MC services
NACC	National AIDS Control Council
NGOs	Non-Governmental Organizations
PEPFAR	United States President's Emergency Plan for AIDS Relief

DEFINITION OF TERMS

Married Men:	In this study, the term is used to describe those men between ages 20 and 49 years and living with a woman as husband and wife.
Voluntary Medical Male Circumcision:	This term denotes the surgical removal of the foreskin of the penis by a trained health professional for medical reasons as opposed to cultural or religious reasons.
HIV Vulnerability:	In this context refers to the underlying social, economic and structural issues that reduce the ability of individuals and communities to avoid HIV infection.
HIV-Risk Behavior:	This phrase refers to the sexual behaviors and any related practices that promote susceptibility to HIV infection.
Household:	This is defined as a person or group of persons staying together under the same roof and sharing food from the same kitchen.
Interpersonal Communication:	This is an exchange of information between two or more people. It is an area of study that seeks to understand how humans employ verbal and nonverbal cues to accomplish a number of personal or relational goals.

ABSTRACT

Voluntary Medical Male circumcision (VMMC) has been identified as one of the methods of reducing the risk of heterosexually acquired HIV and AIDS. Kenya adopted VMMC as an HIV/AIDS intervention in 2008 and has been making remarkable progress towards achieving its male circumcision target. However, uptake of VMMC is lowest among older and married men. The purpose of this study therefore was to find out the influence of interpersonal communication on uptake of VMMC among married men in Teso South Sub County, Kenya. Teso Sub County is among the sub counties with high HIV/AIDS prevalence and low male circumcision prevalence thus a target of the VMMC programme. Four objectives that guided this study were: to establish the influence of interpersonally communicated messages on uptake of VMMC among married men; to examine the influence of interpersonal communication source attribute on uptake of VMMC among married men; to establish the influence of interpersonal communication context on uptake of VMMC among married men; and to determine the intervening influence of demographic factors on interpersonal communication and uptake of VMMC among married men. The study employed a mixed methods sequential cross sectional research design. This combination of both quantitative and qualitative research targeted 377 married men for quantitative approach, whose ages ranged from 20 to 49 years. Quantitative data were collected using household questionnaires. Thirty in-depth interviews were also conducted targeting 15 men who had undergone VMMC after marriage and another 15 uncircumcised men. Descriptive and inferential statistics were used to analyze quantitative data. The findings were presented using tables, text and graphs. Qualitative data were analyzed based on the iterative process of description, analysis and interpretation particularly in driving at extracting and understanding emerging themes informed by research objectives and presented narrative using selected quotes that are poignant and/or most representative of the study findings. The findings indicated that trustworthiness was the most considered interpersonal source attribute of VMMC. However, older men preferred expertise of the source while health providers were perceived as experts. Talking about male circumcision is no longer perceived as a taboo topic. However, older men in their 40s hardly disclose information or openly talk about circumcision because they regard it as inglorious. Norms and age are the outstanding impediments to men discussing about male circumcision while age and social norms impeded uptake of VMMC. As a result, interpersonally communicated messages that position VMMC as HIV/AIDS intervention are ineffective in influencing married men seek circumcision. The messages elicit low response efficacy but instead other interpersonal messages are relatively effective in influencing them seek circumcision for other reasons such as peer pressure, penile hygiene and improved sexual performance. Privacy and confidentiality of information shared are critical contextual issues that determine the effectiveness of interpersonal communication about male circumcision. The study recommends integration of interpersonal communication in the design, planning and implementation of VMMC campaigns that uses health workers and circumcised men from the local community as models to educate married men on the benefits of circumcision that should go beyond HIV prevention in addition to addressing the misinformation, fear, shame and stigma older and married men face in seeking and openly talking about male circumcision. Finally, women as spouses and sexual partners to the men need to be incorporated in the VMMC campaign so that they can be catalyst to their partners' decision to seek circumcision. In sum, VMMC programmes to check HIV/AIDS prevalence should aim to harness interpersonal communication to create demand and sustain uptake of circumcision among married men.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

1.1.1 Prevalence and Determinants of Male Circumcision

The addition of male circumcision to the HIV prevention ‘toolbox’ is an important and relatively recent advance however, it is the oldest known surgical procedure and practiced across the world for various reasons. According to Keller (1956 as cited by Doyle, 2005) circumcision started around the 4th Millennium BC among the Sumerians and Semites who are the descendants of the Hebrews. For a very long time ritual circumcision has been practiced by the Australian Aborigines, South Sea Islanders, Sumatrans, Incas, Aztecs, Mayans and ancient Egyptians (Doyle, 2005).

There is a belief that Jews and Muslims adopted the practice through Abraham and the prophet Mohammed the founding fathers of their faiths. They adopted the practice from the tradition of the groups of people, the Sumerians and the Semites. Jordan (1952 as cited in Doyle, 2005) reveals that the Jews adopted the practice as a rite of passage into adulthood. This marked the rite of passage into manhood and additionally as a symbol of a covenant, a solemn connection with God. The procedure is majorly performed at the eighth day of a boy’s life (The Bible Leviticus 12:3) and when non-Jewish male adults convert to Judaism.

Egyptians started practicing circumcision around 1200 BC from the people of the South, what is referred to today as Sudan and Ethiopia. The Southerners were of Sumerian and Semite origin and were in regular contact with Egyptians trading (Doyle, 2005). Among the Aborigines and Polynesians circumcision was an initiation rite, a test of bravery and suitability to assume the responsibilities of manhood (Ponder, 1983; Brendt, 1987 as cited by Doyle, 2005).

According to WHO (2009), approximately 30% of the global male’s population aged 15 years and above are circumcised. This figure was arrived at after considering various factors. First was that all Jewish and Muslim males aged above 15 years were circumcised. The second found out

the prevalence of male circumcision among traditionally non-circumcising communities by way of Demographic and Health survey data (WHO, 2009). The findings revealed that 69% of circumcised men were Muslims living majorly in the Middle East, Asia and North Africa, 0.8% were Jewish and 13% were non-Muslims and non-Jewish men residing in the USA (WHO, 2009).

In Africa, especially within North and West Africa male circumcision is almost universal. However, in Southern Africa the prevalence is around 15% in Botswana, Namibia, Swaziland, Zambia and Zimbabwe (Drain, 2006; Langeni, 2005 as cited by Doyle 2005; Connolly, 2004 as cited by WHO, 2009). These writers provide a prevalence of 21% in Malawi, 35% in South Africa, 48% in Lesotho, 20% in Mozambique and more than 80% in Angola and Madagascar. They also revealed that the prevalence in East and Central Africa varied from almost 15% in Burundi and Rwanda to 70% in Tanzania and 84% in Kenya and 93% in Ethiopia.

The global spread of Islam from the 7th century AD facilitated the adoption of male circumcision in non-circumcising communities. In East and Southern Africa circumcision is conducted majorly as a traditional rite of passage often associated with toughening, training and initiation of male adolescents (Doyle, 2005). In East Africa, the original inhabitants of Sudan, Somalia and Ethiopia were of the Sumerian and Semitic origin and came from Arabia (Parfitt, 2002). People from North-East Africa migrated down South and inhabited the coastal belt meeting with the Arabs who settled in Zambezi on the Mozambique Coast. This migration led to what is today referred to as the Bantu, who comprise several tribes practicing ritual circumcision (Doyle, 2005). The Bantus broke into many tribes each with well-defined territories.

The variation in male circumcision prevalence in Africa is attributed to differences in ethnic groups, such as Nilotic or Sudanic speakers who are traditionally non-circumcising. Also within the Bantu speakers there ethnic groups who abandoned male circumcision centuries ago for various reasons. For example, in Botswana, southern Zimbabwe, Malawi and parts of South Africa circumcision was stopped by the European missionaries and colonial administrators. Swazi King Mswati II abandoned male circumcision arguing then that it incapacitated men during war times (Marck, 1997 as cited by WHO, 2009).

According to the Kenya AIDS Indicator Survey (KAIS) of 2007, 85 percent of men reported that they were circumcised. But male circumcision rates vary by former provinces, ranging from 48 percent in Nyanza to 97 percent in Coast and North Eastern. Muslims are the dominant religious group that practice male circumcision. However, it is important to note that in the years 2016 and 2017 the VMMC program surpassed its target by 110% and 126% respectively (KAIS, 2018). Like in most ethnic groups, male circumcision is an important part in the transition to manhood. It is believed to be associated with masculinity, social cohesion and social desirability, self-identity and spirituality (WHO, 2007). However, Some Kenyan ethnic groups have no tradition of male circumcision, and some are strongly opposed to it. The Kenyan communities that culturally do not practice male circumcision include Luo in the former Nyanza Province, Turkana, and part of the Pokot of the former Rift Valley Province, and Teso and some segments of the Luhya in the former Western Province (KAIS, 2007).

In addition to religion and ethnicity, male circumcision is carried out for various reasons including for social, health and hygienic purposes. For example, in Denver United States of America, circumcision is done after birth with parents citing social reasons (not to look different). In the Philippines, majority of the adolescent boys participating in a study decided to be circumcised so as to avoid being perceived as uncircumcised while 41% stated that it was part of tradition (WHO, 2009). In North Korea, circumcision was preferred by 61% of the boys and the reason for this choice was to avoid being ridiculed by peers. In Ghana, the Aka ethnic group cited social, hygiene, disease prevention, female preference and enhanced sexual performance as determinants of male circumcision (Mensch, 1999 as cited by WHO, 2009).

Male circumcision rates in Kenya vary by region, ranging from 48 percent in Nyanza to 97 percent in Coast and North Eastern. However, many African cultures have no tradition of male circumcision, and some are strongly opposed to it. According to the Kenya Demographic and Health Survey (KDHS, 2008-09), there is a strong correlation between HIV prevalence and male circumcision status with HIV prevalence being four times higher among uncircumcised men than among circumcised men aged 15-49 years that is 13 percent and 3 percent respectively. KAIS (2007) found that HIV prevalence was 13.2 percent among uncircumcised men and 3.9 percent among circumcised men. The magnitude of benefit of male circumcision does not match the

levels of condom use in prevention of HIV infection, but it requires little ongoing adherence (Holmes, Levine & Weaver, 2004).

1.1.2 Male Circumcision and HIV/ and AIDS

HIV/AIDS is a global epidemic, unprecedented in its scope and impact, has mobilized outrageous outpouring action worldwide. It is now more than three decades since the first case of AIDS were diagnosed. According to a joint report by AVAC, National Empowerment Network of People Living with HIV/AIDS in Kenya, Sonke gender Justice Network and Uganda Network of AIDS Service Organizations (2012) there has been a growing array of proven strategies and promising research on HIV prevention. However, some of these interventions have not realized their goals since HIV prevalence rates have remained high.

Data from a range of observational epidemiological studies, conducted since the mid-1980s indicated that circumcised men have a lower prevalence of HIV infection than uncircumcised men. Research has adduced evidence that male circumcision has an HIV prevention impact (Weiss, Qugley & Hayes, 2000). In support of this are three randomized controlled trials that suggested that male circumcision reduces HIV acquisition from female partners by approximately 60 percent (Bailey et al., 2007; Gray et al., 2007, Auvert et al., 2005). Informed by these findings, World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) recommended medical male circumcision as part of HIV prevention interventions. WHO and UNAIDS identified and prioritized fourteen countries in southern and Eastern Africa with low male circumcision and high HIV prevalence rates for scale-up of voluntary medical male circumcision (VMMC) (WHO and UNAIDS, 2007).

According to Kenya National Strategy for Voluntary Medical Male Circumcision (2009) there are a couple of potential biological explanations for the associations between male circumcision status and HIV prevalence. It asserts that studies of human foreskin tissue have demonstrated that the foreskin is highly susceptible to the uptake of HIV. Other possible explanations as to why circumcision may reduce HIV acquisition are a reduction in the prevalence of STIs — particularly those that cause genital ulcers — and a reduction in the likelihood of micro-tears and trauma to the foreskin.

Male circumcision is a one-time procedure with lifelong protective advantages and therefore potentially cost effective in the long run. Once a man has undergone the procedure, he will benefit from the preventive effect for the rest of his life (Njeuhmeli et al., 2011). This intervention targets only HIV uninfected men (Hallett et al, 2011). Baeten et al (2010:738) assert that in order to “avoid stigmatizing HIV infected men, WHO and UNAIDS guidelines (on VMMC) recommend that circumcision be provided to healthy men who request the procedure, regardless of HIV serostatus, including for those declining HIV testing.” This therefore means that HIV infected men will undoubtedly undergo circumcision as the VMMC programme is being implemented. Similarly, although providing VMMC services to young males or teenagers will benefit the next generation as they become sexually active, most new HIV infections occur in males between ages 25 and 44 years, and consequently they are a priority group for the VMMC programme to provide more immediate impact on the HIV epidemic (Kenya National Strategy for Voluntary Medical Male Circumcision, 2009). The Kenya’s VMMC report loudly recommends that strategies that attract older males for VMMC urgently need to be incorporated and evaluated (Progress Report on Kenya’s Voluntary Medical Male Circumcision 2008-2010, 2011), hence the resounding need for empirical dissection of such programmes.

Evidence from research shows that averagely one out of ten married couples in Kenya; at least one partner is living with HIV. Among married people who are living with HIV, 45 percent have a partner who is uninfected (Kenya AIDS Indicator Survey, 2007). This is not unique to Kenya—in a study of five African countries, two thirds of HIV-infected couples are serodiscordant (one partner is HIV-negative, while the other is HIV-positive). In Rwanda and Zambia, for example, it is estimated that over half of new infections occur within marriage or in cohabitating relationships, and just under half in Uganda (Dunkle et al., 2008; UNAIDS, World Bank 2008). While risk of transmission in discordant couples can be drastically reduced, this can only happen when partners are tested, disclose their results, adopt male circumcision and use condoms. However, statistics show that the numbers of discordant partners, who test for HIV, reveal their results, seek male circumcision or use condoms in many affected countries remains low, contributing to infection within marriage. Condom use is infrequent among married couples for multiple reasons, including the desire for children and the widespread association of condoms with infidelity and lack of trust (International Council of AIDS Service Organizations, 2007). In

Kenya, 97 percent of people in marriage or cohabitating relationships reported that they did not use a condom the last time they had sex (De Walque, 2007) hence the need to promote circumcision among married men.

Male circumcision is just one of the measures that can be taken to reduce the vulnerability of married men and also women to HIV infection. This is because as many men are circumcised, women are less likely to encounter sexual partners who are living with HIV (Njeuhmeli, Forsythe, Reed, et al., 2011; Hallett, Alsallaq, Baeten, et al, 2011). Hankins et al. (2011) add their voice to this argument by stating that “early on, most HIV infections averted occur among men, but the proportion among women would steadily increase over time until almost half of all HIV infections averted in year 2025 are those that would have occurred among women.” Mathematical modeling from Tanzania found out that in the absence of male circumcision, the annual number of new HIV infections was expected to rise from 84,000 in 2010 to 86,000 in 2025. However, with VMMC, a commendable decline of 64,000 additional HIV infection will be expected (Ally et al. 2012).

Despite the overwhelming scientific evidence and formal recommendation by WHO/UNAIDS, efforts to scale up medical male circumcision in the targeted priority countries in sub Saharan Africa have yielded mixed results (Hankins, Forsythe & Njeuhmeli, 2011) which can partially be attributed to inadequate supply of health care resources required for VMMC (Justman et al., 2013). In view of this noted shortage, new male circumcision devices such as the Shang Ring and PrePex which need minimal or no surgery have been invented. With these inventions however, the demand for circumcision by sexually active men in the priority countries has been low, and it appears the devices alone will unlikely solve all demand creation challenges. A joint report of AVAC, National Empowerment Network of People Living with HIV/AIDS in Kenya, Sonke Gender Justice Network and Uganda Network of AIDS Service Organization on VMMC recommends the need to investigate reasons why men do or do not access VMMC services, optimal messages and communication channels, and key message carriers to motivate VMMC services.

The WHO/UNAIDS (2007) recommended specifically that countries with high prevalence of HIV, low prevalence of male circumcision and heterosexual epidemics should consider the scaling up of male circumcision as part of the comprehensive HIV prevention package. In the Eastern and Southern Africa Region, 14 focus countries have been identified by the UN Interagency Task Team (IATT) for technical support to scale up male circumcision programmes. Kenya is one of the countries in sub-Saharan Africa prioritized by WHO and UNAIDS to implement VMMC. In Kenya more than 80 percent of men are circumcised (KDHS, 2008-09), with the figure unevenly distributed culturally and geographically across the country. Teso South and North sub counties in western Kenya are predominantly occupied by the Iteso ethnic group that does not practice traditional male circumcision. The Kenyan government through the ministry of health in partnership with nongovernmental organizations have rolled out a national strategy that is aimed at circumcising 80 percent of uncircumcised HIV-negative men between ages 15 and 49 (approximately 860,000 men across the entire country) between 2008 and 2013 (Progress Report on Kenya's VMMC Programme, 2011).

However, there has been little progress in bringing this prevention intervention to scale. As of March 2012, the world was only about 8 percent of the way to reaching the target of circumcising at least 80 percent of adult males between ages 15 and 49 in these priority countries by 2015 (AVAC, National Empowerment Network of People Living with HIV/AIDS in Kenya, Sonke Gender Justice Network and Uganda Network of AIDS Service Organizations Joint Report). It is imperative to recognize the challenges associated with scaling up VMMC. Unlike other prevention strategies, such as delaying sex or using condoms, VMMC is a relatively new prevention tool and as it is at present entails a surgical procedure that many men may understandably be uncomfortable with as well as a departure from cultural norms in some communities in Kenya.

The government of Kenya developed VMMC strategy that provided a framework and guiding principles to make male circumcision services safe, accessible and sustainable. It aimed at meeting 80 percent of the estimated need for male circumcision within five years. This was expected to increase the proportion of Kenyan men between ages 15 and 49 who will be circumcised from 84 percent to 94 percent as captured by the Kenya's VMMC progress report (2011). These goals were based on mathematical modeling studies that revealed that the impact

of male circumcision on Kenya's epidemic would be greatest if most of the eligible men could be reached within the five years (Nagelkerke, et al., 2007; UNAIDS/WHO/SAGEMA, 2009; White et al., 2008).

It is imperative to note that there exist discovered barriers to achieving higher levels of VMMC uptake. In 2010, UNAIDS stressed the need to reach older men to achieve the set coverage target and to maximize the population-wide prevention benefits of VMMC (UNAIDS, 2011). Plotkin et al. (2013) have noted low uptake of VMMC among men aged above 25 and recommended programmes that prioritize sub-populations (such as by age, geography, marital status and forms of marriage) to be designed and implemented in order to maximize impact and efficiency. Similarly, recent studies such as Mwandu et al (2011) have shown that men in the age bracket of 20 to 49 record lowest uptake of VMMC though they remain sexually active with high HIV prevalence hence a target generation for the "cut."

In addition, Plotkin et al. (2013) have suggested that VMMC programme implementers should address barriers to VMMC services especially among adult men for example shame linked with being circumcised at an older age by providing selected service delivery sites segregated by age to render services that are "friendly" to adult men. They add that these services ought to be complemented with behavior change communication initiatives to address concerns of older men, encourage women's support for circumcision and adherence to post-surgical abstinence period and change social norms that impede older men aged more than 24 years from seeking circumcision.

Furthermore, there are divergent views about male circumcision as an acceptable means of preventing HIV infection, its cultural connotations and how best to implement it as a public health policy (Dowsett & Couch, 2007). Armed with the knowledge of cultural sensitivity of male circumcision, the government of Kenya took deliberate steps to engage the Luo Council of Elders (Luo is Kenya's largest ethnic group that does not practice circumcision as a rite of passage) who are cultural custodians of that ethnic group before rolling out the male circumcision as HIV prevention strategy (KDHS, 2003). The government needed to explain why the medical cut would be embraced for HIV prevention and clarify to the elders that the surgery was biologically protective against HIV virus. These consultative approach resulted a remarkable success of the male circumcision programme as elders approved it to be conducted and promoted

for medical and not cultural reasons in addition to making it voluntary hence the term voluntary medical male circumcision was officially adopted in Kenya (Progress Report on Kenya's Voluntary Medical Male Circumcision Programme 2008-2010, 2011; National Guidance for Voluntary Medical Male Circumcision in Kenya, 2008). It is imperative to note these consultations with Luo elders excluded other elders drawn from other non-circumcising communities in Kenya who are also targeted by the VMMC programme.

1.1.3 Interpersonal Communication and Health Interventions

Interpersonal communication today is a *sine qua non* of everyday life and the oldest of all communication types. It is the process of exchanging information between two or more people, usually via a common protocol. This form of communication can be interactive, transactive, intentional, or unintentional; it can also be verbal or non-verbal. It is central to prevention strategies aimed at influencing individual and social behavior. It is communication via mass media, community activities and interpersonal discussions that introduces individuals and communities to new ideas and opportunities. Consequently, what was previously unknown becomes familiar while what was previously regarded as a taboo becomes a community norm. Communication can spread knowledge and social norms. Such knowledge includes the idea of VMMC in HIV prevention among other benefits. Interpersonal communication makes it possible to learn about the position of others – for example, which and how many of one's relatives; friends and neighbors have sought male circumcision. The perception of what everyone else is doing influences what people accept as normative, acceptable behavior. Communication is the crucial process underlying changes in knowledge of health and in openness of local cultures to new ideas and new health behavior. This communication can occur both spontaneously, within and between social groups of a society, and deliberately, by means of planned interventions. This planned communication can initiate change, accelerate changes already underway, or even reinforce change that has already taken place (Pietrow et al., 1997).

A large body of evidence suggests that health communication campaigns relying exclusively on media appeals are not a sufficient means of changing attitudes and behavior. Recent review of 24 published evaluations of health promotion programs revealed that media alone interventions had little impact on behavior (Redman, Spencer & Sanson- Fisher, 1990). Decisions around adopting

a healthy behavior such as seeking male circumcision to prevent HIV/AIDS can be dynamic and situation specific, and that the roles of wives, health service providers, and other varies according to the situation. In view of this, Puri et al (2007) observe that health communications campaigns are increasingly implementing interpersonal communication approaches.

Individual behaviors are deeply embedded in social and institutional contexts. Human beings do not act in isolation, and the people around them and the environment in which they live in influence most people to a great extent. An individual is guided as much by what others around him or her say and do, and by the “rules of the game” as he or she is by personal choice. Different interventions have been applied in health behavior change strategies that focus on interpersonal context, including family relationships and social support networks as entry points for social change. The significance of these kinds of processes for health promotion knowledge development has also been documented by a number of researchers (Duggan, 2006; Figueroa et al., 2002; Labonte, Feather, & Hills, 1999). In particular, the use of these techniques has been applied to interventions around highly stigmatized, potentially sensitive, or exposing topics such as HIV/AIDS and tuberculosis (Morrill & Noland, 2006; Valente & Fosados, 2006).

Unlike other areas of public health, in seeking VMMC individual decision-making prevails. Since being circumcised entails deep-seated values, beliefs and motivational factors that vary with ethnic, religious and cultural identities therefore sensitive approaches are required to ethically and responsibly aid men in their consideration of circumcision (Sgaier et al., 2014). Communication is the key process underlying changes in knowledge of VMMC and in openness of local cultures in embracing new ideas and new health behavior. This communication can occur both spontaneously, within and between social groups of a society, and deliberately, by ways of planned intervention by government or non-governmental organizations. These planned communications initiate change, accelerate changes already under way or simply reinforce change that has already occurred (Pietrow et al, 1997). Interpersonal communication channels are especially important when trying to influence attitudes and encourage wider adoption of health behavior.

Bingham et al. (2010) posit that certain knowledge, attitudes, and behaviors can be changed through a dialogue-based IPC intervention even with short intervention duration, and their

process evaluation suggests that community-based trainers are able to effectively implement such an intervention. IPC process can help to fill the void that exists in current efforts to upscale VMMC especially among married adults at the community level in two important ways. Interventions that emphasize IPC are particularly suited for promoting openness and discussion about sensitive, stigmatizing, or exposing topics among families, couples, and peer networks in order to ensure good health outcomes (Duggan, 2006; Valente & Fosados, 2006).

Kumar, Hessini & Mitchell (2009) aver that shame and lack of social support are obstacles to men seeking MC. They observe that in families and among married couples, many sexual and reproductive health topics are highly stigmatized and charged with emotion and fear. The authors support their observation by an example that women are traditionally unable to discuss sexual and reproductive health issues openly with their husbands. To Duggan (2006) silence or avoidance of health issues reduces the ability of the people to receive the necessary social support that would enable them cope with health problems, access health care, and make health related decisions.

Therefore the need to promote MC initiatives that continue to challenge the status quo and patriarchal traditions that keep sexual issues restricted and stigmatized are critical. Similarly, Joram (2010) asserts that applying a listening, dialogical, communitarian, open discussion form of communication, where meaning is constructed by all those participating coupled with giving priority to local leaders who have the respect of the people to communicate HIV prevention and management message is paramount to any successful intervention. Duggan (2006) adds that IPC interventions help participants break through the silence and improve their ability to discuss these sensitive health issues with others through dilemma-based role playing, dialogue, and communication skills building. From Puri et al (2007) perspective, decisions around seeking MC can be dynamic and situation specific, and that the roles of wives, health service providers and others varies depending on situation hence the need for VMMC campaigns to increasingly adopt and implement IPC approaches. Another benefit of IPC interventions is that many people are made change agents who diffuse accurate information and VMMC stories throughout their communities (Figuerola et al., 2002).

1.2 Statement of the Problem

New HIV infections remain unacceptably high despite the many interventions to arrest the spread of the virus. One of the strategies to address this epidemic is adoption of VMMC targeting males in communities that do not traditionally practice male circumcision. Kenya rolled out the VMMC programme in 2008 and by 2012 notable progress had been recorded where 52.2% out of a target of 80% of uncircumcised males in the targeted regions were circumcised. However, this percentage revealed alarming variation in coverage by age as observed by Sgaier et al. (2015) and Westcamp et al, (2012). In some targeted districts the coverage had hit 70% by 2011 among males aged 15-19 years. The overall median age was 17 years, suggesting older males (aged 25-49 years) are largely still not accessing VMMC. Mwandi et al (2011) opine that men in the age bracket of 20 to 49 record the lowest uptake of VMMC though they remain sexually active. This has resulted in the high HIV/AIDS prevalence and therefore making this generation a special target for the “cut.”

In spite of the many interventions to promote adoption of VMMC for HIV/AIDS prevention, there has been low uptake especially among older and married men resulting in high prevalence of HIV/AIDS (Sgaier et al. 2015; Westcamp et al. 2012). Mass media channels popularly used in health communication interventions including VMMC campaigns are relatively more important at knowledge function whereas interpersonal channels have been found to be more important at the persuasion function in the innovation-decision process as observed by Rogers (1973). To Freimuth & Quinn (2004); Simon-Morton, Donohew & Crump (1997); and Bingham et al. (2011) there is massive empirical evidence to support the conclusion that interpersonal communication is critical in behavior change. Because men face social, cultural and medical barriers to accessing VMMC services (Sgaier, et al. 2014), interpersonal communication intervention can play pertinent role in overcoming these obstacles, including as part of broad educational and behavioral change efforts. Duggan (2006) argues that silence or avoidance reduces the ability of people to receive the necessary social support that would enable them cope with health problems, access appropriate care, and make health related decisions. In day-to-day life people get involved in discussions about health topics or even the specific content of health campaigns with one another, and such discussions remarkably determine the success levels of

any health campaign (Real & Rimal, 2007; Southwell & Yzer, 2007; Van den Putte et al, 2011; Korhonen, et al., 1998).

While there is a great deal of evidence about how harnessing interpersonal communication has successfully been used in many different areas of public health intervention with varied population especially with sensitive health issues, it remains an area to be investigated in the uptake of voluntary medical male circumcision – a culturally and sexually sensitive area (Progress Report on Kenya’s Voluntary Medical Male Circumcision 2008-2010, 2011; Plotkins et al. 2013). Therefore, a greater understanding of the influence of interpersonal communication on uptake of VMMC is necessary so as to create demand for the “cut” especially among targeted married men that would result in reduced HIV/AIDS prevalence in Kenya.

1.3 General Objective

The overall objective of this study is to examine the influence of interpersonal communication on uptake of voluntary medical circumcision among married men in Kenya.

1.4 Specific Objectives

The specific objectives of the study are:

- 1) To analyze the influence of interpersonally communicated messages on uptake of voluntary medical male circumcision among married men in Busia County.
- 2) To examine the influence of interpersonal communication source attributes on uptake of voluntary medical male circumcision among married men in Busia County.
- 3) To establish the influence of interpersonal communication context on uptake of voluntary medical male circumcision among married men in Busia County.
- 4) To determine the intervening influence of demographic factors on interpersonal communication and uptake of voluntary medical male circumcision among married men in Busia County.

1.5 Hypotheses

The sought to test the following hypotheses from the objectives:

Ho1: There is no significant relationship between interpersonal communication messages and uptake of voluntary medical male circumcision among married men in Kenya.

Ho2: There is no significant relationship between interpersonal communication source attribute and uptake of voluntary medical male circumcision among married men in Kenya.

Ho3: There is no significant relationship between interpersonal communication context and uptake of voluntary medical male circumcision among married men in Kenya.

Ho4: There is no significant intervening relationship of demographic factors on interpersonal communication and on uptake of voluntary medical male circumcision among married men in Kenya.

1.6 Significance of the Study

This study investigated the influence of interpersonal communication intervention on uptake of male circumcision among married male adults <49 years old in Teso South Sub County, Kenya, an area with near universal coverage of VMMC services and high HIV/AIDS prevalence. The study also lends insight into whether interpersonal communication based interventions can contribute to HIV/AIDS reduction efforts and what additional steps may be necessary to further achieve sustainable increases in uptake of male circumcision especially among adult men.

The findings of this study are important to public service campaigns advocating a variety health behavior but especially on sexuality. Such campaigns can greatly benefit from designing their persuasive messages in ways that take into consideration the characteristics of the desired behavior and the role of personal influence on behavior change. This simple strategy can readily lead to crafting more persuasive VMMC messages, which in turn, increase adoption of healthy behaviors that can reduce HIV risk, enhance public health, and ultimately, save lives.

HIV/AIDS remains a top public health issue in Sub Saharan Africa. Therefore, any research that offers insight into successful prevention strategies would be useful to health communicators and policy makers to see HIV campaigns as successfully reaching adult and married men. This

research will also help them to structure future campaigns targeting men and creating awareness messages that are appealing and with greater impact to adult and married men and as a result, more likely to bring about the desired change in behavior among that age group that will lead to safer habits and practices.

Lesson learnt from this study can apply and inform other field of public health as well. This study is very useful to public health or any other campaign that target to influence individual choice and changes in personal behavior employing interpersonal communication especially in men between ages 20 and 49 years.

Finally, another pedestal in the rationale for this study is critical to scholarship as it aims at contributing to the building of communication research efforts that have Africa and specifically Kenya as their primary area of focus or investigation.

1.7 Scope of the Study

The study was carried out in Teso South Sub County in Busia County in Western Kenya. The Iteso who predominantly occupy this sub county, culturally do not practice circumcision. Teso South is heavily dominated by Christians thus males do not circumcise for religious reasons.

The study also limited itself to married men between ages 20 and 49 years. This is because previous studies such as Mwandi et al., 2011; Sgaier et al, 2015; Westcamp et al, 2012 indicated a scaled up uptake of VMMC among adolescent men as opposed to older men. On the other hand, HIV/AIDS prevalence rate is highest between ages 20 and 49 years. Additionally, the VMMC programme targets men not above 49 years.

From the standpoint of research procedure, this study sampled 377 respondents to represent married men in Teso South Sub County. There are several random and non-random techniques of picking samples in research. However, this study employed systematic random sampling and purposive non random sampling techniques for quantitative and qualitative approaches respectively.

Uptake of male circumcision is ultimately the behavior change and a variable for this study and it is influenced by many factors. There are several levels and channels of communication including

mass media that can be used to influence behavior change. However, this study did only consider interpersonal communication as the variable influencing uptake of male circumcision.

There are many communication theories that explain how behavior change takes place however, this study considered Health Belief Model and Extended Parallel Process Model and Communication Privacy Management Theory only to inform the influence of interpersonal communication on uptake of circumcision for HIV prevention.

1.8 Limitation of the Study

In methodology, this study used non-probability sampling technique to select its sample; it is possible some men picked from the households could already be living with HIV, a condition which makes them not the actual target of VMMC programme as it is meant to prevent and control acquisition HIV. This study's sampling procedures and instruments did not consider one's HIV status as a basis to inform the research sample and responses.

Availability of information could have been a hindrance because respondents might not have disclosed all the needed information given sensitive nature of male circumcision. However, deliberate measures were put in place by the researcher to establish rapport and gain confidence of the respondents and participants so as to extract as much information as possible. Similarly, self-reporting nature of this study was also a major limitation that cannot be overlooked given the fact that the study relied on the data given by the respondents themselves.

This study is a 'point in time' one, that is, cross sectional in nature. Consequently, the researcher could not authoritatively draw cause-effect relationships from the findings. This is a limitation of most cross sectional studies and this study was not any exceptional.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter acknowledges that male circumcised involves deep-seated values, beliefs, and motivational factors that vary with ethnic, religious, and cultural identities, sensitive approaches are required to ethically and responsibly aid men and entire communities in their consideration of VMMC (Sgaier et al, 2014). Uptake of VMMC is based on health behavior change that refers to a replacement of health compromising behaviours (being uncircumcised) by health enhancing behaviours (being circumcised). To describe, predict and explain such processes, an interpersonal communication theory and two behavioral models have been proposed to assess a bunch of psychological constructs that jointly drive at explaining what motivates people to change and how they embrace preventive actions. This chapter also outlines and discusses a number of studies on interpersonal communication messages, source attributes and contexts in influencing behavior change specifically in seeking male circumcision as an HIV intervention with deliberate attempt to identify the gaps that could help explain the objectives of this study.

2.2 Theoretical Framework

Theory provides intellectual gyroscope for the conduct of research. Many theories and models of health behavior change are based on individual psychology. In fact, the assumptions (such as individualism as opposed to collectivism) on which these theories and models are based are foreign to many African cultures. In the majority of African contexts, the family, group, and community play a critical role in decision making. And yet, theories and models based on individualism continue to dominate communications strategies for HIV/AIDS prevention and care in such settings. While the effectiveness of these theories and models has been questioned in light of the growth of the HIV/AIDS epidemic in Africa, their value as important theories and models remains unchanged (UNAIDS & PennState, 1999). Consequently, the communication privacy management theory which is an interpersonal communication theory and Health Belief Model and Extended Parallel Process Model are used in this study to explain the influence of interpersonal communication's messages, sources, and context on uptake of VMMC in addition to describing the intervening influence of demographic factors on interpersonal communication and uptake of VMMC among married men.

2.2.1 Health Belief Model

As a theory, Health Belief Model (HBM) has a scholarly pedigree that is traceable to the early work of Hochbaum (1958) and continues to be a major organizing framework for explaining and predicting acceptance of health and medical care recommendations. It stipulates that a person's health-related behavior depends on the person's perception of four critical areas: the severity of a potential illness, the person's susceptibility to that illness, benefits of taking a preventive action, and the barriers to taking that action (Hochbaum 1958; Rosenstock 1960, 1966, 1974). The model also incorporates cues to action which are external influences promoting the desired behavior (e.g., approaching and talking to a health worker about VMMC) as important elements in eliciting or maintaining patterns of behavior (Becker, 1974). The so-called "cue to action" might be internal (i.e., symptoms) or external (e.g., interpersonal interactions). Most recently, the construct of self-efficacy, or a person's confidence in his or her ability to successfully perform an action, was added to the model (Rosenstock, 1990), perhaps allowing it to better account for habitual behaviors. Bandura (1997) argues that the stronger one's feeling of self-efficacy, the greater the probability that one will persist in attempts to perform a behavior, even after an initial failure.

The HBM is based on value expectancy theory, that assumes that individuals usually take preventive actions (risk-reduction behaviors) when they are personally susceptible to a disease (self-perception of risk) and acknowledge the repercussions as severe; they believe that taking preventive actions will be beneficial in reducing the risk of contracting the disease (e.g., male circumcision is effective against HIV infection), and that its perceived benefits will be sufficient to overcome perceived barriers such as pain or inconvenience of undertaking the actions (Melkote & Steeves 2001: 132).

Perhaps the most critical determinant of whether a person does or does not perform a given behavior is the person's beliefs about performing that behavior. HBM theory is critical in this study as it identifies two factors that influence health protective behaviour: (i) the feeling of being personally *threatened* by disease which in this study is HIV/AIDS, and (ii) the belief that the *benefits* of adopting the protective health behavior (medical male circumcision) will outweigh the perceived costs of it (circumcision procedure being painful, shame and abstaining

from sex till complete healing). According to Edberg (2010) few HBM studies have attempted to assess contribution of “cue” such as interpersonal interaction to predicting health actions.

In this study, therefore, the theory is crucial in informing the influence of interpersonally communicated messages, uptake of male circumcision to avert HIV/AIDS, and the intervening influence of demographic factors on messages and uptake of VMMC. HBM is critical in addressing the individual’s perceptions of the threat posed by a health danger (HIV/AIDS), the benefits of avoiding the danger, the factors influencing the decision to act. It posits that general perceptions about health values, specific health beliefs related with the health danger and recommended health actions influence likelihood of taking recommended health action (VMMC) (Muela, 2003; Irwin et al., 2009).

2.2.2 Extended Parallel Process Model

Extended Parallel Process Model (EPPM) is a behavioral model that restores the concept of fear a critical variable in evaluating fear appeal. According to the EPPM, when an individual is exposed to a fear appeal, two cognitive appraisals of the message will take place: 1) the “appraisal of the threat” and 2) the “appraisal of the efficacy” of the messages of recommended response as a danger (threat) and solution (efficacy information). EPPM posits that if the perceived threat is perceived to be higher (for example, AIDS kills) and the level of efficacy appraised, individuals will be appraised to follow one of two separate pathways: the intended response process or the unintended response (Witte et al., 2001; Witte, 1998)

According to EPPM threat motivates action while efficacy determines nature of action. When the threat is low, there will be no response to the message where it will not even be processed in the first place as a result efficacy cannot be considered. When the threat is high, and efficacy high, then men will control the danger and protect themselves thus seek male circumcision. On the other hand, when the threat is high and efficacy is low, then men no longer think that they can do something to effectively avert the threat then they begin to control their fear instead of the danger and simply ignore the message (Witte, Meyer & Martell, 2001).

HBM when used together with EPPM can explain when and why interpersonally communicated messages work or fail. The two models are fundamentally designed for campaign message

evaluation and perception health seeking behavior to establish category of individuals whether they are taking the recommended action or not. This matches with this study which is partly aimed at examining the influence of interpersonally communicated male circumcision messages in the uptake of VMMC for HIV/AIDS prevention. Most importantly, EPPM asserts that threats motivates action while efficacy, that is self-efficacy and response efficacy determines the nature of action which in this study informs and determines high, low or no uptake of VMMC.

In this study, this model reinforces the HBM introducing self-efficacy tenet (belief that one can take the recommended action) that is critical in behavior change. Therefore, the two models are used to examine the influence of interpersonally communicated messages on uptake of VMMC.

2.2.3 Communication Privacy Management Theory

Founded on a socio-cultural tradition, Communication Privacy Management Theory (CPM) explains how people negotiate openness and privacy in respect to communicated information. It focuses on how people in relationships manage boundaries which separates the public from the private (Petronio, 1991). Petronio developed CPM theory to provide evidence based understanding of how individuals manage their private information. It suggests that individuals maintain and coordinate privacy boundaries (the limits of what they are willing to share) with various communication partners depending on the perceived benefits and costs of information disclosure. The motives behind sharing are many, including but not limited to sharing a burden, righting a wrong, and influencing others (Petronia, 1991). Since private information can be about yourself or others, the decision as to what is private and whom to share it with plays a part when taking the idea of boundaries into consideration (Mathews, Derlega & Morrow, 2006). The decision to share is ultimately left up to the process of the privacy rule management system which combines rules for coordination of information, characteristics of disclosure, and attributes of the nature of boundaries.

Egan (1973) posits that the “sharing of the human condition – in its sublimity, sanality, and deformity – pulls people together” (p.41). He observes that deception and concealment is the cause of the many emotional problems people suffer. Concealment in itself results in emotional disturbances and that self-revelation, even when accompanied by relevant behavioural change effects a cure. In most groups, the prospect of revealing oneself is unsettling and is always approached gradually. It is widely believed that self-revelation, if engaged in responsibly is a

value in human living, however individuals require time to muster courage needed to talk about oneself.

The CPM theory employs a boundary metaphor to explain the privacy management process. **Privacy boundaries** draw divisions between private information and public information. Petronio argues that when people disclose private information, they depend on a rule-based management system to regulate the level of accessibility. An individual's privacy boundary governs his or her self-disclosures. An individual's private information is protected by their boundaries. When private information is shared, there will be a **collective boundary**. When private information remains with an individual and is not disclosed, the boundary is called a **personal boundary**. The permeability of these boundaries are ever changing, and allow certain parts of the public, access to certain pieces of information belonging to the individual. However, this sharing occurs only when the individual has weighed their need to share the information against their need to protect themselves. This risk assessment is used by couples when evaluating their relationship boundaries. The disclosure of private information to a partner may result in greater intimacy, but it may also result in the discloser becoming more vulnerable (Petronio, 1991).

When someone chooses to share private information such as his personal male circumcision information with another person, he is making that person a co-owner of the information. Co-ownership comes with rules, responsibilities, and rights which the discloser of the information and receiver of it negotiate. Examples of such rules would be: Can the information be disclosed? When can the information be disclosed? To whom can the information be disclosed? And how much of the information can be disclosed? Where can the information be disclosed? The negotiation of these rules can be complex, the rules can be explicit as well as implicit, and they can be violated.

The characteristics of privacy rules are divided into two sections, attributes and development. Privacy rule attributes refer to how people obtain rules of privacy and understand the properties of those rules (Petronia, 1991). This is normally done through social interactions where the boundaries for rules are put to the test. Rules are set in different social situations which dictate the type of disclosure that should be made, for example, the difference between disclosure at a family member's birthday party versus an office event at work. Petronio asserts that each

situation will come with its own set of rules for managing privacy that are learned over time. The development of privacy rule characteristics has to do with the criteria implemented to decide if and how information will be shared (Petronio, 2007). People develop *privacy rules* based on a set of criteria; for instance, they are motivated to conceal or reveal information based on cultural norms, gender, context, the risk-benefit ratio, and others (Durham, 2008; Petronio, 2002). Research has indicated that perceived risk is critical to individuals' disclosure decisions. Individuals consider the risk to the discloser, the receiver, the relationship between them, and/or third parties such as one's family when making disclosure decisions (Afifi, Olson & Armstrong, 2005; Afifi & Steuber, 2009).

With these criteria, personal and group privacy rules are developed, but disclosure of private information necessitates the inclusion of others within the boundary of knowledge, which demands an understanding between parties for how to coordinate ownership of knowledge. Once a disclosure is made, the negotiation of privacy rules between the two parties is required. A distressing sense of "boundary turbulence" can arise when clashing expectations for privacy management are identified. What Petronio refers to as "boundary turbulence" occurs when rules are not mutually understood by co-owners, and when a co-owner of information deliberately violates the rules. This usually results in some kind of conflict, is not uncommon, and often results in one party becoming more apprehensive about future revelation of information to the violator.

In short, CPM theory is predicated on five components (Petronio, 2002; Thompson, 2011). The first component posts that individuals define their personal and private information as a sense of ownership, belonging to them (Petronio, 2002; Thompson, 2011). The private information of an individual is contained within his/her privacy boundary. The second component builds on the initial component suggesting that because people believe they own their private information, they have a right to regulate their information (Petronio, 2002; Thompson, 2011). The third element posits that people control their own private information through privacy rules (Petronio, 2002; Thompson, 2011). Each individual has a right to control and own his/her own information as he/she deems appropriate. Component four introduces shared privacy boundaries between individuals that are co-owned and mutually managed (Petronio, 2002; Thompson, 2011). The last component explains that when shared boundaries are present, information and

communication is managed through the use of boundary coordination (Thompson, 2011; Petronio, 2002).

The society tends to ban intimate self-disclosure for some reasons – culture bias against self-disclosure. Self-disclosure is perceived as a weakness. There is little cultural support for self-disclosure. However, Egan (1973) argues that even a society that is somewhat afraid of honesty cannot do away with self-disclosure completely. There comes a time where one person's communicating himself intimately to another, especially in desperate times such as a killer disease like AIDS, is such a basic need that even a relatively closed society must discover strategies of channeling such disclosure, must discover some cultural justification for it. Individual behaviours are deeply embedded in social and institutional contexts. People do not act in isolation, and the people around them and the environment in which they live influence most people to a great extent. An individual is guided as much by what others around him or her say and do, and by the “rules of the game” as he or she is by personal choice.

In recent years CPM theory has been critical in health communication research using CPM to explore health privacy issues. There have been a number of studies focused on ways that privacy issues influence patient care, confidentiality and control over ownership, choices about disclosure, for instance, with highly stigmatized, potentially sensitive, or exposing topics such as HIV/AIDS and tuberculosis (Morrill & Noland, 2006; Valente & Fosados, 2006). From a medical point of view, effective interpersonal communication is necessary in order to perform an accurate diagnosis which is founded on full disclosure of information by client, resulting in appropriate recommended action that the patient can agree on (Negri et al, 2009). Male circumcision that is being examined in this study is not only a private issue but a culturally and sexually sensitive matter especially in communities in Africa that do not traditionally practice it as a rite of passage. Individuals in such communities may experience some challenges in openly talking about this subject or disclosing personal information about it. Therefore, based on the tenets of CPM theory, this study investigated the interpersonal communication contexts, nature of sources or communication partner, messages about male circumcision and their influence on uptake of VMMC coupled with establishing the intervening influence of demographic factors on interpersonal communication about male circumcision (a sensitive and private topic) and uptake of circumcision for HIV/AIDS prevention.

2.3 Conceptual Framework

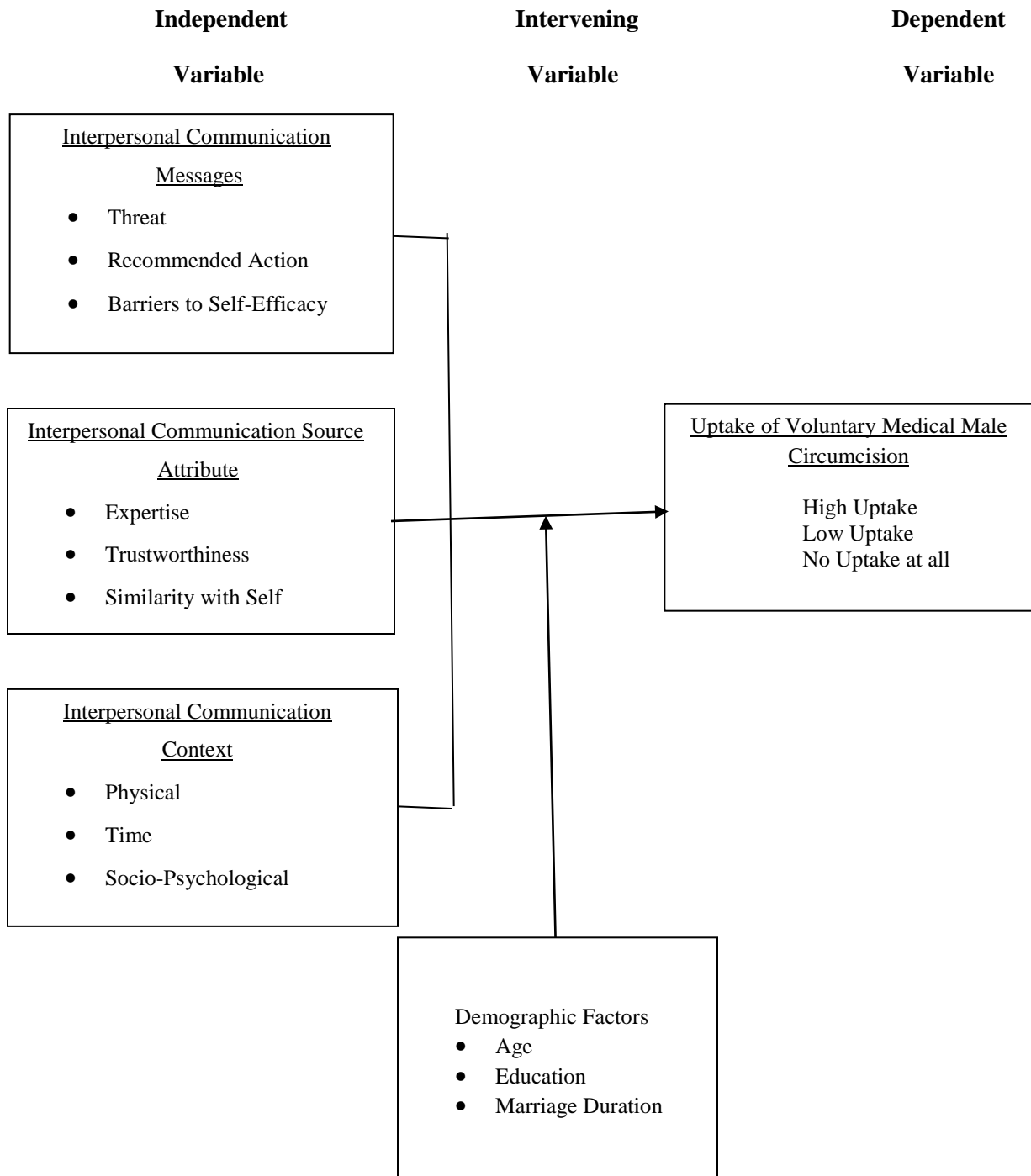


Figure 2.1: Schematic representation of conceptual framework

This conceptualization of communication distinguishes four core components of interpersonal communication: the communication itself that is the messages, the communication sources, the context in which the communication occurs, and the barriers to such communication. Each of these components of interpersonal communication has subcomponents. For example, sources differ in their expertise, similarity with self and trustworthiness. Messages differ in their degree of eliciting perceived threat measured by severity and susceptibility, perceived benefits of the recommended action, and perceived barriers to recommended action. The surrounding environment or communication context varies in terms of time, physical, social and psychological features. Interpersonal communication barriers may take the form of demographic characteristics which may also act as barriers to seeking VMMC. Variations in the four factors affect how married men respond to interpersonal communications and the rate of uptake of VMMC.

Message content is what is widely studied in a message variable in interpersonal communication. Characterization of such discussions tends to differ based on efficacy of the messages exchanged. According to Witte, Meyer & Martell (2001) message perceived threat component should be analyzed based on the severity of the danger/disease (is HIV/AIDS threat serious or severe?) and susceptibility to threat (can it happen to me or can I contract HIV?). Perceived benefits of the recommended action (what will I benefit from doing the action?) do motivate action while perceived barriers to action (what blocks me from doing the action?) need to be addressed. In other words, it is expected that a balanced perceived threat (severity and susceptibility) and perceived benefits of male circumcision coupled with addressing the perceived barriers to seeking VMMC would result in uptake of VMMC as championed by the HBM and EPPM.

People are exposed to communication from different sources, but are most likely to accept communication from a person that they consider credible who is a good source of reliable information. Communication research suggests that two source dimensions are of prime importance, the perceived expertise of the source and perceived trustworthiness of the source. Expertise means the knowledge, expertise status, and familiarity with the topic. Trustworthiness refers to sincerity, honesty and good intentions (Eagley & Chain, 1993). In some cases, however,

the similarity of the source with the recipient is critical. For example, the more one can “identify” with the other (or “model”), the more one is likely to view the model’s attainments as diagnostic of one’s own capabilities (Bandura, 1997). A person from a similar background to the members of a given community is more likely to share the same language, ideas and motivations and thus be a more effective communicator. Consequently, a dialogue about VMMC with a source of a balanced perceived expertise, trustworthiness and perceived similarity with recipient will result in high uptake of VMMC and vice versa. Perceptions of source credibility significantly determines how an individual process health and risk messages, and may also influence relevant behaviors.

Interpersonal communication takes place within a context which influences its form and content. Context can restrict or stimulate communication and it involves establishment and control of formal and informal relationships between participants. In order to understand meaning of what is being communicated (such as VMMC), context must be considered (Knapp et al., 2002). Context determines the effectiveness of interpersonal communication therefore in this study if context of discussing VMMC in relation to the physical location, time and socio-psychological factors are considered, then high uptake of VMMC is expected and the reverse is true.

Demographic factors intervene in the relationship between interpersonal communication messages, source attribute and context, and uptake of VMMC. They determine the nature and effectiveness of interpersonal communication about male circumcision and also the rate of uptake of VMMC. Once demographic have been given the deserving attention, the expected result is effective interpersonal communication and high uptake of VMMC as advocated by a number of researchers (Real & Rimal, 2007; Southwell & Yzer, 2007; Van den Putte et al, 2011; Korhonen, et al., 1998).

Uptake of VMMC is the dependent variable of this study. EPPM posits that threat motivates action but efficacy determines nature of action. This means that the rate of seeking VMMC will be determined by perceived efficacy concerns of the recommended response (male circumcision). Efficacy issues or recommended response address response efficacy (does response work?) and self-efficacy (can I do response?). The higher the efficacy, the higher the uptake of VMMC.

In this study, therefore, having a well thought out and balanced interpersonal communication messages, sources and context coupled with addressing the intervening influence of demographic factors will result in effective interpersonal communication and consequently enhanced uptake of voluntary medical male circumcision.

2.4 Review of Variables

Uptake of voluntary medical male circumcision for HIV/AIDS prevention is dependent on interpersonal communication messages, source characteristic and context in addition to demographic characteristics of the targeted males.

2.4.1 Interpersonal Communication Messages

The most important elements of a successful behavior change communication campaign are well-designed messages that are administered frequently enough to be remembered (Abroms & Maibach, 2008). Studies in multiple sites have noted evidence of a dose-response relationship between exposure to behavior change communication messages and changes in knowledge, attitudes and practices (Babalola, Ouedraogo, & Vondrasek, 2007). A study in Tanzania found that women who reported exposure to six media sources of family planning messages had odds of using family planning that were 11 times those of women who were not exposed, while women who were exposed to one source only were twice as likely to use family planning as women who were not exposed (Jato et al., 1999). A similar study in Zimbabwe found that youth who had been exposed to 5–8 components of an HIV and AIDS campaign were more likely to discuss AIDS with others or to seek care at a health center than youth who had been exposed to only 1–2 or 3–4 components of the campaign, after social and demographic factors and access to media were accounted for (Kim et al. 2001 cited by Banerjee et al, 2013).

In view of this study, Peltzer & Mlambo (2012) have noted that despite a high level of exposure to VMMC messaging, this does not necessarily translate into acceptability or uptake of VMMC. Recent studies in Zimbabwe have explained the drivers that influence men to seek VMMC once they are interested in the procedure and understand its benefits (Montaño et al 2014; Hatzold et al. 2014). These studies have highlighted a dominant pattern in which behavior change takes place along a continuum of 3 fluid stages—pre-intention, intention, and action. This idea is strongly fortified by the Institute of Medicine Committee on Communication for Behavior

Change in the 21st Century (2002) that the more an individual believes that performing a given behavior will offer positive consequences (e.g., “the performing this behavior will make me feel better”; “will show my partner that I care”; “is a responsible thing to do”) and/or prevent negative consequences (e.g., “will protect me from HIV/AIDS”), the more favorable the individual's attitude is toward performing that behavior. Likewise, the more an individual believes that performing the behavior will offer negative consequences (e.g., “performing this behavior will be painful”; “will make my partner angry”) or prevent positive consequences (e.g., “will not make me feel better”; “will not make me toil for my family”), the more unfavorable the attitude. It is assumed that an individual person will not form an intention (or perform a behavior) if the costs of performing that behavior outweigh the benefits.

In yet another study (Price et al, 2014) conducted in Zimbabwe examining adoption of VMMC several interventions were identified that are likely to move men more quickly through this process of change. It emphasized the value of tailoring messages to the men's stage-specific needs and concerns. For instance, while at the pre-intention stage, the aim of behavior change interventions should be to increase men's exposure to VMMC messages through targeted messaging. Social pressure and encouragement to ascribe positive values to VMMC help move men further toward the decision to act, and addressing men's fears about the procedure may remove the final barrier.

On their part Nieuwoudt (2012) and Wouabe (2013) have pointed out two common problems inherent in HIV/AIDS health campaigns as inadequate messaging tailored to specific contexts and a lack of systematic integration of VMMC into HIV prevention messages. Sgaier et al (2015) acknowledge these issues when they asserted that given heterogeneity of VMMC's target population and the people that may influence these populations, generalized studies on acceptability of male circumcision have fallen short of facilitating the crafting of messages designed to reach a specific sub – population “where they are.” They observe that it is this failure to acknowledge the precise needs and concerns of segmented sub-populations of men and to design messages accordingly, that likely accounts for the significant gap between interest in VMMC and actual uptake of the procedure. In short, they recommend the finding of the most appropriate message for the demographic—and for the individual's place on the continuum of pre-intention, intention, and action male circumcision behavior change stages. According to

Family Health International (2002) fear campaigns and campaigns blaming particular groups are ineffective. To Mattson (1999) most experts agree that fear tends to focus an audience's attention on what not to do, or what to avoid. Similarly, abstract health messages are often perceived as less personally relevant, allowing for the minimizing of personal risk. This is often why campaign efforts bring about awareness instead of behavioral changes. Approaches are more effective when they promote positive messages that state clearly what audiences can and should do.

According to Sgier et al. (2014) messaging often emphasizes HIV prevention as the primary benefit of VMMC, while at the same time communicating that the procedure provides only partial protection against HIV. Successful advertising positions the product or service in a way that resonates with the prospective customer rather than communicating only the most obvious features. For example, research found that anti-smoking campaigns targeting youth were most effective if the messages did not emphasize the negative long-term effects of smoking, but rather the deceptive promotional practices of cigarette manufacturers and the effects of secondhand smoke on others (Pechmann & Reibling, 2000 cited by Sgaier et al. 2014). Given that HIV prevention—the public health goal of VMMC—may not be the highest priority or most attractive benefit of the procedure for most males. They suggest the positioning and messaging VMMC in ways that move beyond HIV.

To Witte, Meyer and Martell (2001), threat and recommended response are the two components in health risk messages. They suggest that under threat, the severity and susceptibility of an individual to threat are factors in driving behavior change. In the recommended response they propose that it should address efficacy issues. Bandura (1994:79) argues that the “development of self-efficacy related to a single task is cyclical; as one masters a particular skill, this reinforces or increases the belief one can perform that skill and believing that one can perform the skill improves the actual performance of the skill.”

One of the theoretical approaches which largely rely on efficacy messages in order to have desired effects is fear appeal. Several scholars have argued that fear appeal messages must possess efficacy components, including both self-efficacy (the belief that one can do an action) and response efficacy/outcome expectancy (the belief that a recommended action will have a desired outcome) (Perloff, 2008; Stephenson & Witte, 2001; Witte, Meyer, & Martell, 2001). To

change a health behavior after exposure to a fear appeal, people must believe there is a corresponding action they are capable of doing and that the action will successfully alleviate the threat (Beck & Lund, 1981; Stephenson & Witte, 2001; Witte, Meyer, & Martell, 2001).

Borrowing from the Extended Parallel Process Model (EPPM), threat motivates action while efficacy determines nature of action. When the threat is low, there will be no response to the message where it will not even be processed in the first place as a result efficacy cannot be considered. When the threat is high, and efficacy high, then men will control the danger and protect themselves thus seek male circumcision. On the other hand, when the threat is high and efficacy is low, then men no longer think that they can do something to effectively avert the threat then they begin to control their fear instead of the danger and simply ignore the message (Witte, Meyer & Martell, 2001).

IAS (2013) conference heard that in Zambia, men going for circumcision or not was associated with traditional HIV risk factors such as men with two or more sexual partners in the last year were 40 percent more likely to get circumcised than monogamous men and community norms about being circumcised are changing markedly. It was also reported that the so-regarded as secondary benefits of social conformity, sexual attractiveness and feelings of being in control as a man were considerably more critical in making the decision to undergo the surgery than the expected perceived direct health benefits (International AIDS Society, 2013). Conversely, VMMC campaign message emphasize that male circumcision is an additional prevention method for men, but that it does not replace measures such as delay in the onset of sexual relations, avoidance of penetrative sex, reduction in the number of sexual partners, and correct and consistent use of male or female condoms (Doyle et al., 2010). This is enough evidence that communicating partial protection remains challenging (Dickson et al., 2011).

While many men seeking VMMC may understand the protective benefits of circumcision, they are more likely to consider VMMC for other reasons, including hygiene, pleasing a sexual partner, and conforming to peer norms (Lissouba et al, 2011). The Rakai Health Sciences Program in Uganda has been conducting safe male circumcision in since 2003 but experienced a demand plateau in 2013. Research that followed noted that the protective benefits were well understood by men and suggested that future campaigns could overcome that plateau by

presenting VMMC as an aspirational procedure (Clearinghouse on Male Circumcision for HIV Prevention Website).

The key VMMC messages in all Sub Saharan countries include the fact that male circumcision provides only partial protection. This message is consistent across all VMMC communication strategies. Moreover, identified barriers to VMMC include fear of HIV testing that precedes circumcision, concerns about adverse effects (e.g. lack of sexual pleasure), (Lagarde et al., 2003; Ngalande et al, 2006) transport costs (Nieuwoudt et al., 2012), time off from work (Nieuwoudt et al. 2012; Rain-Taljaard et al, 2003), temporary sexual abstinence and unsupportive cultural norms (Nnko et al., 2001). Herman-Ruloff et al. (2011) noted some of the barriers to male circumcision among older men as being hesitations about taking time off work after surgery and particular concerns regarding abstinence from sex for the recommended six weeks post-surgery especially among married men. To others it is the fear that it would be painful (International AIDS Society, 2013).

These barriers need to be adequately addressed in any communication strategy. However, it seems that most communication strategies do not address one of the main barriers for seeking male circumcision—fear. However, Kenya’s communication strategy does suggest that issues on how to reduce men’s fears about getting the procedure should be included in the design of key messages. Except for the lack messaging around pain during the procedure, the key messages of most communication strategies answer most of questions that uncircumcised men raise in acceptability studies of male circumcision (Wouabe, 2013). Some of the fear is caused by awareness of traditional male circumcision where pain is thought to be a pre-requisite for the procedure. Interventions to promote VMMC need to center on the fact that VMMC is a minor operation, which is not painful as it is performed under local anesthesia (Hatzold et al., 2014).

Hatzold et al. (2014) have suggest the need to position VMMC as a lifestyle choice rather than an HIV prevention method so as to increase acceptance of the service by both men and women, in addition to countering perceptions that the procedure only benefits “promiscuous” men. Thus, the VMMC campaign should portray male circumcision as a lifestyle choice for the “smart” man, one who is clean and elegant. The campaign should seek to portray circumcised men as confident, outgoing, sexually appealing, and set to succeed in life. However, Wouabe (2013)

analyzed various VMMC communication strategies in Africa, noted the strategies and observed that although the emphasis and focus of each message changed depending on the audience and intended communication outcome, the following key messages were common throughout:

First, male circumcision works: Scientific evidence clearly shows that male circumcision reduces the risk for HIV infection, providing partial protection against HIV for men. Studies show that male circumcision reduces the risk for HIV acquisition in men by about 60 per cent. Second, male circumcision does not replace other HIV prevention methods: Whether circumcised or not, men are at risk for HIV infection during sexual intercourse. It is important that they limit their number of sexual partners, use condoms consistently and correctly and seek prompt treatment for STIs to further reduce their risk for infection. Third, circumcised men can be infected with HIV and can infect others: Not all men who are circumcised are HIV negative. Some circumcised men are HIV positive. Circumcised men who are HIV positive may still transmit HIV to their sex partners. Using a condom reduces this risk. Fourth, the healing period is important: Newly circumcised males should abstain from sex for about 6 weeks to ensure that the penis is fully healed, as they could be at increased risk for infection during this time. Fifth, safety is paramount: Circumcision should be done at health facilities with appropriately trained providers and proper equipment, under aseptic conditions. However, whether the procedure takes place in a clinical or traditional setting safety is of paramount importance. Finally, male circumcision is a matter of informed choice: Evidence-based information on male circumcision should be made available so that males and their parents can make an informed decision on whether or not to go ahead with the procedure.

In a health care encounter, the choice of words clients and providers use greatly influences how well they understand each other (de Negri, et al., n.d). Hendriks (n.d) asserts that studies show very little about the influence of message characteristics on conversational valence. Valence deals with how a message is conveyed in positive, negative or neutral terms. Though he is quick to add that some studies have focused on which types of messages predict whether people talk about the topic of a message. These studies reveal that emotions play a critical role herein. Messages that elicit feelings of fear, amusement, or disgust have been evidenced to prompt discussions, whereas message-induced feelings of sadness, guilt, or contentment reduce conversations (Berger, 2011; Brennan et al., 2010). Whether emotions of fear, disgust, and

humor, which are often used in health campaigns (Cohen et al., 2007), also influence the valence of discussions is not yet known. However, it is possible that, for example, fear increases the accessibility of fear-related concepts in working memory (Goldstein et al., 2013), and these accessible concepts can subsequently serve as a relevant conversational anchor (Strack & Mussweiler, 1997) resulting in a more negative conversational valence.

Therefore, it is very important to consider the emotional characteristics of health messages and the role of conversational valence when investigating health campaign effects. According to Hendriks (n.d) conversational valence influences determinants of health behaviors. For instance, studies have shown that better parent-adolescent communication has been associated with fewer incidences of risky sexual behavior, while negative communication has been related to risky adolescent sexual behavior (Boone & Lefkowitz 2007). Hendriks, however, acknowledges the dearth of studies on the predictors and consequences of conversational valence hence little is known about the process through which conversational valence influences health determinants. He adds that self-perception plays a role in the process through which conversational valence influences the predictors of health behaviors. Conversational valence has a substantial influence on health-related attitudes, subjective norms, perceived behavioral control, intentions, and behaviors, suggesting that conversational valence, in addition to conversational occurrence, should be considered more often (Hendriks, n.d).

Additionally, health campaign exposure may influence conversational valence. However, given the limited research on the potential predictors of conversational valence, this possibility has not yet been tested. The consequences of conversational valence, however, have been addressed by a few studies. These studies have shown that conversational valence influences predictors of health behaviors (Hendriks et al., 2014). Discussions that is positive toward healthy behaviors or negative toward unhealthy behaviors result in desirable and healthy attitudes, intentions, and behaviors. However, when people speak negatively about healthy behaviors (being circumcised) or positively about unhealthy conduct (being uncircumcised), this results in unhealthier determinants of health behaviors. Despite these studies demonstrating the important consequences of conversational valence, it is not yet known whether conversational valence can be predicted by health campaign exposure. However, health campaigns can prompt a more

negative conversational valence about unhealthy behaviors because many health messages aim to reduce unhealthy conduct by stressing the negative consequences of unhealthy behavior (Hendriks, n.d). Therefore, exposure to a health message versus no health message elicits a more negative conversational valence toward unhealthy behavior. This result raises the question of which types of health messages are especially likely to elicit a desired conversational valence because health messages may differ in the persuasive strategy employed.

However, Sgaier et al. (2015) recommend innovative solutions to create demand for male circumcision that do not only focus simply on the public health benefits of VMMC but crafting coordinated messages that address the cognitive, emotional, cultural, and structural barriers that can hinder a man's decision to be cut – and the corresponding drivers that can ably enable that decision. Coordination minimizes confusion by ensuring that messaging is accurate, culturally appropriate, and not in contradiction with other VMMC messages likely to be encountered by the target population. The message targeting men for VMMC need to consider that man's motivations to get circumcised may be other than protection for HIV; more near-term benefits such as protection from STIs might be more relevant, and VMMC may be seen as “modern” or inspirational. The appeal of belonging to a group can also be persuasive message. PATH (2008) adds that as more is learned about effective responses to the HIV epidemic, behavior change interventions have moved from giving messages that focus on individual sexual behavior to processes involving dialogue and discussion about local contexts and barriers to risk reduction, care, and treatment.

Kaler (2003) and Kaler (2004) observe that in Malawi many Malawians obtain sexual health information, including information on HIV/AIDS, through interpersonal communication with members of their communities however Conroy (2006) cautioned that sexual health information obtained from these discussions may not be accurate. As a way forward Gostin & Hankins (2008) have suggested that health professionals should be responsible for providing full and accurate information necessary to secure informed consent for male circumcision, including risks, benefits, and the right to refuse the procedure without risk of reprisal or other adverse consequence. Clinical information should be communicated in a culturally appropriate manner, with due regard for the person's literacy, linguistic, and educational level. Boys and men,

moreover, should have the right to make decisions about circumcision without undue influence from peers, sexual partners, or health professionals.

Given the influence of interpersonal communication in propagating norms, the accuracy of information disseminated in a community must be of particular concern to public health professionals. Inaccurate information, in this case, discouraging uptake of VMMC, can be perpetuated in a community and this can take on a life of its own. This social amplification of risk through communication networks, for example, is a subject that scholars have long recognized (Pidgeon, Kasperson & Slovic, 2003). This is a call to public health professionals to be cognizant about dominant narratives that exist in a community that may facilitate or hinder male circumcision intervention goals.

While many health communicators have spent both money and time crafting messages to encourage adoption of male circumcision to curb the spread of HIV, very few campaigns have been effective to encourage adult men seek the “cut” (Sgaier et al, 2015; Westcamp et al, 2012). What can be gleaned from the discussion so far is that a greater understanding of the influence of interpersonal communication messages in the uptake of VMMC is necessary in order to create demand for adopting circumcision for HIV/AIDS prevention especially among older and married men. As seen above the messages can be more persuasive if message self-efficacy, responsive efficacy, severity and susceptibility are considered given that the decision to undergo circumcision involves a change in one’s beliefs and the procedure is seen as painful. Also, interpersonal communication messages may be reinforcing instead of addressing the already existing fears men have towards adopting circumcision as was observed by Hendriks (n.d) and Hendriks et al. (2014).

2.4.2 Interpersonal Communication Source Attribute

More often, people heavily rely on mass media channels when they are first learning about an idea, but use interpersonal channels as they move toward decision making (Rogers, 1995). Studies have revealed that social relationships play an essential role in individual health behavior (Kang & Bloom, 1993; Suarez et al., 2000). Rural residents, for example, have been found to place special importance on neighbors and family members as sources of health information and support more often than health care providers (Weinert & Burman, 1994).

Sociologists and psychologists alike study how men interact with one another. The key to the understanding society and its problems lies in the unit of human interaction referred to as the “small group.” According to Phillips (1966) groups be better identified by their function than by their size. Group members go about their lives by speaking and listening to each other. The pattern of interaction is partially determined by the individual personalities of the group membership. In turn, the pattern of interaction exerts an influence on the behavior of members.

Interpersonal relationships, according to Katz & Lazarsfeld (1955), are the anchored points for individual opinions, attitudes, habits and values. As individuals interact they collectively and continuously generate and maintain common ideas and behavior patterns that are they are reluctant to surrender or change unilaterally. Uniformity of opinion is realized through communication. They opine that whenever conflict or discord arises in a group, communication among members should be increased in order to realize consensus. Consensus could be achieved by either one faction prevailing over another to accept an opinion or isolating members who seem to disagree and persuading them one by one. Maximum consensus is arrived at by independent assent by each member (Phillips, 1966).

Phillip adds that individuals turn to and depend on others when they have to form opinions or make decisions especially in unclear circumstances. Also, individuals interacting with each other relative to a particular problem which concerns all, will establish a collective approach to that problem and hence create an opinion, an attitude, a decision, or an action which they will hold in common.

People learn from each other. However, Ignatius & Kokkonen (2007) argue that they cannot learn from one another until they have established some measure of rapport, that is, some element of mutual trust, support and respect. Significant findings from nationally representative surveys of nearly 20,000 people ages 12 to 19 conducted in 2004 (5,950 in Burkina Faso; 4,252 in Ghana; 4,012 in Malawi and 5,065 in Uganda) showed that young people want information especially from trusted sources such as health care providers or teachers (Biddlecom et al., 2007). According to UNAIDS & WHO (2011) involving parents and adults in community and school-based HIV awareness and prevention activities have revealed to be effective in addressing the HIV epidemic among young people.

More often people are exposed to communication from different sources, however, are more likely to accept communication from a person that they can trust as a good source of reliable information. The Institute of Medicine Committee on Communication for Behavior Change in the 21st Century (2002) assert that source that delivers health communication campaign message can determine whether the message is perceived as meaningful, credible and/or relevant to the target audience. Different populations relate to or are more or less influenced by different messengers.

Health providers for decades have been identified as important sources of health communication messages relevant to behavior change (Snell & Buck, 1996; Rimer, 1994). Others such as Cruz & Mackalide (2000) have argued that promotion of healthy behaviors that are to a large extent mediated by social influences and norms may be communicated more effectively through peer groups or by family and community members, celebrity role models or religious leaders. Pornpitakpan (2004) has argued that when a source is perceived to be highly credible, a message may more effectively change attitudes and behaviors. He analyzes that overall trustworthiness and expertise, though named differently across studies (eg, reputation and competence), remain the most frequently mentioned, tested, and theoretically agreed-upon dimension of source credibility.

According to Jan & Siraj (2008), the more one communicates with others, the greater the information exchanged. A people usually communicates with others whom they share something in common. They know their problems and their aspirations very well. Communication is most effective when both the source and the receiver are likely to share basic meanings. Similar people, of course, already have a basic vocabulary in common. The same holds true of two people of the same age and sex. They readily understand each other. They share a common vocabulary (Jan & Siraj, 2008). Bandura (1997) adds his voice by stating that the more one can “identify” with the model that is, seeing the model as similar to one’s self, the more one is likely to view the model’s attainments as diagnostic of one’s own capabilities. A person from a similar background to the members of a given community is more likely to share the same language, ideas and motivations and therefore be an effective communicator. Interpersonal communication, therefore, is likely to be successful if there is a high overlap with characteristics in common between communication partners.

People are remarkably accurate predictors of their own behaviors, and appropriate measures of *intention* (one's subjective probability that he or she will or will not engage in a given behavior) consistently have been shown to be the best single predictors of the likelihood that one will (or will not) perform the behavior in question (Van den Putte, 1991). Institute of Medicine Committee on Communication for Behavior Change in the 21st Century (2011) posit that one of the major factors influencing the strength of intentions to performance or nonperformance of a behavior is one's perception of the norms governing the behavior. *Perceived norms* are the degree to which an individual perceives that a given behavior is viewed as appropriate or inappropriate by members of one's social network or society at large. Norms reflect the amount of social pressure one feels about performing or not performing a specific behavior. Broadly, there are two types of normative pressure. Firstly, an individual may believe that particular persons or groups that are important to the individual think that he or she should (or should not) perform the behavior in question. Secondly, a person may believe these important others are, or are not, performing that behavior. It is therefore crystal clear that both types of normative pressures ultimately influence behavior and intention.

Male circumcision is a high involvement decision to which people give serious thought. To engage a potential client, he needs an opportunity to talk with someone who is knowledgeable and whom he trusts. This may facilitate the internal decision-making process and encourage the man to seek male circumcision (WHO, 2010). Therefore VMMC demand creation activities need to be designed with the specific contexts and demographic characteristics of the targeted population in mind (Bertrand et al., 2011).

Male friends who have undergone circumcision and female partners are the key influencers throughout the male circumcision process of pre-intention, intention and action. Sgaier et al (2014) add that Women (wives, girlfriends, and mothers) can be change agents; the protective benefits of VMMC are important to them, too. According to Wouabe (2013) the main stimuli for VMMC demand seem to be peer pressure and the influence of female intimate partners. Lissouba et al. 2011; Westercamp & Bailey, 2007) agree with the evidence that suggests that interpersonal communication, such as support from peers and intimate partners, is often central to a man's decision to undergo VMMC.

Women as intimate partners can influence their partners in the decision to seek circumcision. Male respondents in a study carried out from non-circumcising areas in two districts in Uganda said that their female partners may influence their decisions to undergo circumcision and/or get their sons circumcised. Also, some men reported that they would seek the consent of their wives or partners before undergoing circumcision. This study also reveals that most women are supportive of male circumcision and are capable of positively influencing their men to undergo circumcision (Muhangi, 2010). Another study amongst the Luo ethnic group in Kenya found that women's beliefs may have a strong influence on men's acceptability of circumcision (Bailey et al (2012).

Studies have shown that in as much as many women may be convinced that their husbands are placing their lives at risk by engaging for example in extra marital sexual relations without using protection but because of their secondary status in society, they are often not willing to initiate discussions about HIV/AIDS in the home (Ghosh & Kalipeni, 2005). However, despite their vulnerability some women in rural settings believe that they do, to a certain appreciable extent, have control over their own health and wellbeing. They can talk to their husbands to discourage sexual infidelity or even persuade their husbands to use condoms consistently during extra marital sexual encounters (Schatz, 2005). Zulu & Chepngeno (2003) add array of hope by contradicting Ghosh and Kalipeni by noting that women are more likely than men to indulge their spouses on dangers of HIV and AIDS especially whenever they suspect that they are engaging in extramarital sexual relations and hence VMMC campaign can bank on women.

VMMC efforts have been accused of often neglecting the gender dimension and focusing on men only. In a multi-country (Kenya, Namibia, Swaziland, South Africa and Uganda) research by AIDS Legal Network (ALN), 87% of the women said that they would support the introduction of VMMC in their communities, 74% would want to be personally involved in VMMC decision-making with their partners, and 72% were aware of the partial protection that VMMC offers in HIV prevention (Arnott & Kehler, 2010). Additionally, this study indicated that women's involvement in VMMC programmes and policy development is low in the five countries. The majority of women surveyed did not talk to their partners about circumcision and felt it was ultimately a man's decision to undergo circumcision (Arnott & Kehler, 2010). The findings show that women's involvement in VMMC is shaped by the existing or underlying socio-cultural prescriptions on sexuality and health. In South Africa, findings were mixed (Arnott & Kehler,

2010) in a VMMC programme running in one of the provinces (Gauteng), women indicated that even though they were engaged with their male partners, the extent to which they affected the actual decision for men to be circumcised remains questionable (Nieuwoudt et al., 2012).

Chikutsa (2011) is quick to support the women that they are most likely to play an important role in encouraging their sexual partners to under the male cut. However, in his study he found out that women displayed low levels of knowledge on male circumcision hence are unlikely to play a critical role in promoting male circumcision. He therefore recommends for a need to educate women in particular on issues on male circumcision.

Many countries have found that engaging with traditional leaders can provide reassurance to VMMC candidates that being circumcised will not change their ethnic, religious, or cultural identity. In Malawi, early and ongoing engagement with leaders of traditionally non-circumcising communities has been instrumental in mobilizing community-level support for the VMMC program and in encouraging males to undergo circumcision (Malawi News Agency, 2012).

Traditional and religious leaders often have an important effect on local demand for VMMC services. Surveys of community leaders have identified resistance to VMMC among traditionally circumcising tribes (WHO, 2009), although experience indicates that this need not function as a permanent obstacle to scale-up. In Kenya, for example, health officials, community activists and other stakeholders held repeated respectful discussions with Luo elders, emphasizing the medical purpose and voluntary nature of the intervention and eventually obtaining their support for program implementation (Mwandi et al., 2011).

The deployment of community mobilizers to carryout one-on-one messaging with prospective clients has been one of the most consistently employed and effective strategies across the African countries (Clearinghouse on male circumcision for HIV prevention, 2015a). Many programs would benefit from paying more attention to the value of discussion, as opposed to direct messaging, in driving the development of supportive social norms around VMMC. Discussion between prospective clients and counselors or peers is already proving effective in addressing individual concerns and questions a client may have about the procedure (Sgaier et al, 2015). This kind of IPC allows men who may be contemplating the procedure to ask questions specific to their own concerns in privacy. It works best when mobilizers use a standardized,

comprehensive discussion guide and package of information (Clearinghouse on male circumcision for HIV prevention, 2015b). In South Africa, training, strong management oversight, and a collective incentive structure strengthened the effectiveness of community mobilizers (Clearinghouse on male circumcision for HIV prevention, 2015c). In Malawi, satisfied clients have been employed as mobilizers (Clearinghouse on male circumcision for HIV prevention, 2015d). In Kenya, the Impact Research and Development Organization (IRDO) produced an IPC toolkit to support counselors in conveying information tailored to the individual's stage in the decision-making process (Clearinghouse on male circumcision for HIV prevention, 2015f).

Parker (2012) begins by acknowledging that in as much as community-level campaigns offer wide range of information on HIV prevention; they lack the needed focus on translating knowledge into action. He notes that HIV prevention information is not internalized to the point of action. He observes that sexual behavior of some community educators, leaders and authority figures contradict HIV prevention messages they purport to deliver though he recognizes that traditional, religious and community leaders have not been satisfactorily engaged in the HIV prevention responses.

In Zambia, Society for Family Health (SFH) has used the community engagement methodology of education through listening, which emphasizes the need to draw out and address individual barriers (Clearinghouse on male circumcision for HIV prevention, 2015f). Counseling women on the benefits of VMMC is recognized as an important facilitator of VMMC uptake in most of the priority countries, and the Kenya program has gone a step further in using married women to educate other women and couples about VMMC in women's groups, antenatal clinics, and other health care settings.

Another factor that plays a critical role in the success of interpersonal communication is social distance between the participants. Social distance refers to the socio-cultural-economic factors that make people feel they belong to different class tiers. Education, economic status, class, race or ethnicity, gender and age may all contribute to how close or distant two individuals feel about each other. For example, an illiterate peasant woman and a young, highly trained, city-dwelling male physician who share the same language and were raised within miles of each other are still worlds apart socially. For example, clients bring to medical visits a whole range of emotional,

socio-cultural, economic, educational and psychological traits that affect communication. Social distance should not impede good communication, and health providers must realize that many people, even those in their own circles, may not be conversant with their “language.” Therefore, they should strive to bridge any social gap that might exist between them and their clients and establish an open dialogue, a partnership and an atmosphere of caring. Clients must also do their part to bridge the social distance by being candid and communicative (de Negri, et al., n.d).

The influence of social pressure was also found in a study conducted in the Iringa region of Tanzania. Peer pressure was mentioned by participants as a facilitator of male circumcision. However, respondents highlighted that this facilitator is more relevant in towns and in mixed cultural settings (Plotkin et al, 2011). Another study in traditionally circumcising areas (Mbale and Kasese districts), and non-circumcising areas (Pallisa) in Uganda examined the influence of peer pressure on men’s decisions to undergo male circumcision. In the non-circumcising areas, peer pressure was a key determinant of the uptake of male circumcision. For instance, in this area, individuals made a group decision to undergo male circumcision. Peer pressure also influences individuals in circumcising areas to seek VMMC. In these areas, young people are the most influenced by peer pressure (Muhandi, 2010).

A peer is a member of a group of people who share the same characteristics, for example, people of the same age group and background or those who do the same type of work or have the same or similar lifestyles, experiences or beliefs. The more a peer has in common with a person, with whom he or she interacts, the more likely that person is to receive messages and be influenced (The International Federation of Red Cross and Red Crescent Societies, 2009). Peer education is one of the key HIV prevention strategies amongst young people around the world. Although the implementation of peer education around the world can be somewhat versatile, basically, HIV peer education involves selecting, training, and supporting members of a specific group to educate members of their peer group about HIV and related topics or to promote change and/or service uptake.

Although most of the 14 priority countries have planned to use peer educators for demand creation activities, little evidence suggests that peer educators have been used for demand creation activities. Additionally, in their study Limaye et al (2012) found out that participants

suggested that they did not talk to their friends about sexual issues regularly, as they were afraid to discuss sexual matters with peers, fearing the discussion would lead to rumour and gossip.

According to PATH (2008) one of the ways to ensure that key populations are able to analyze their situation in relation to HIV and male circumcision in an open manner without fear of judgment, is to have IPC facilitators who are also from the key populations for the following reasons: First, key population members best understand and empathize with their peers and are able to win their confidence so that information can be shared and analyzed without fear or prejudice. Second, they are able to communicate well with other key population members and use familiar, colloquial language. Third, key population members can help groups and individuals to discuss ‘secret’ and taboo behaviours in depth. And lastly, the use of key population members as peer IPC facilitators paves the way for the mobilization of key populations and builds a sense of ownership.

Knowing that you are not alone with your problems and having an understanding of shared vulnerability, of shared responsibility, and also of shared power and advocacy possibilities means that there is a greater likelihood that action will be taken by the individual or group (PATH 2008). In a related study by McNeill and Dorgan (n.d) assessing the influence of social networks in promoting women to have mammogram indicated that among several participants, social networks tended to be perceived as providing credible information, especially about pain expectations.

Generally speaking, in order to optimize the potential impact of a given message, the selection of a communication source is crucial and a complex process involving knowledge of the audience and of the health behavior change message. However, the influence of a source partly depends on the nature of the message per se. the “stronger” the message, the less important the source. Credible sources can increase the likelihood that a “weak” message will be accepted, but the credibility of the source has relatively little influence on the likelihood that the audience will just accept a “strong” message (McCroskey, 1970).

These observations compel the question: which interpersonal contacts and their characteristics have the greatest influence in a married man's decision to seek (or not) circumcision given the fact that it is a sexually, socially and culturally sensitive topic in addition to it being a private matter. Many studies have shown that women are great influencers in the decision to adopt male circumcision (e.g. Muhangi, 2010; Bailey, 2012) while some have argued that it is peer pressure none has zeroed in on married men who record low uptake of VMMC as the theatre for analysis. It is therefore imperative to establish a greater understanding of the influence/credibility of male circumcision interpersonal communication sources/communication participants in the uptake of VMMC in order to create demand especially among older and married men.

2.4.3 Interpersonal Communication Context

Communication always takes place within a context: an environment that influences the form and content of communication. In short, Context generally refers to the environment in which communication takes place and is where it may be influenced. This includes the time and place, as well as the background of the participants (Corbin, 2008). At times, this context can be so natural that someone can easily ignore such as the noise on the streets. At other times, the context can as well as stand out to the extent to which it restricts or stimulates communication. In interpersonal communication context refers to the establishment and control of formal and informal relationships (Ackerson & Viswanarth, 2009)

At any given environment or situation that a conversation takes place in, many contexts may be interacting at the same time (McHugh-Schunte (2010). To have a grounded understanding of the interpersonal interaction, the retrospective context and the emergent context should be analyzed and considered. According to Knapp and Daly (2002) the retrospective context is described as everything that comes before a particular behavior that might help understand and interpret that behavior. The emergent context is defined as all events that come after the said behavior and which may also contribute to understanding the behavior. Context in respect to interpersonal communication means the establishment and control of formal and informal relationships (Knapp and Daly, 2002). Broadly, the focus has been on "dyadic communication" referring face to face mutual ideas between two individuals in health communication research with a focus on the patient and the provider. In addition, interest in the role of families, and occasionally among

other key roles in the health care system is all factors on the context of interpersonal communication.

Context can include all aspects of social channels, with examples particularly in: first, physical milieu which is basically the season or weather, current physical location and environment. Second, situational milieu refers to the combination of the social and physical environments in which something occurs. For instance, a classroom, a military conflict, and a hospital can be considered situational milieus. Thus, in order to understand the meaning of what is being communicated, context must be considered (Knapp et al, 2002).

In a hospital context, for instance, internal and external noise can have a profound effect on interpersonal communication. External noise consists of influences around the receiver of the communication that distract from the communication itself. In hospitals, this often includes the sound made by medical equipment or conversations had by team members outside of patient's rooms. Internal noise is described as cognitive causes of interference in a communication transaction (Adler et al, 2012). Internal noise in the hospital setting could be health care professionals' own thoughts distracting them from a present conversation with a client.

Channels of communication also contribute to the effectiveness of interpersonal communication. A communication channel can be defined as the medium through which a message is transmitted. There are two distinct types of communication channels: synchronous and asynchronous. Synchronous channels involve communication where both parties are present. Examples of synchronous channels include face-to-face conversations, video chats, and telephone conversations. Asynchronous communication can be sent and received at different points in time. Examples of this type of channel are text messages, emails, and notices on a message board (Parker & Coiera, 2000).

In a given setting, synchronous and asynchronous communication channels can be useful if employed at appropriate times. An asynchronous communication channel can be an optimal way to deliver that message when the recipient of the message is unavailable. For example, when a doctor is busy with a patient, a written message would be appropriate. When messages are recorded in some way, either hand written or through electronic mediums, they can serve as reminders of what has been done and what needs to be done, which can prove to be beneficial in a fast-paced health care setting, for instance. Some of the disadvantages associated with

communication through asynchronous channels are that the sender does not know when the other person will receive the message. Mix-ups and errors can easily occur when clarification is not readily available. On the other hand, when an urgent situation arises, as they commonly do in a hospital environment, communication through synchronous channels is ideal. Benefits of synchronous communication include immediate message delivery, and fewer chances of misunderstandings and miscommunications. A demerit of synchronous communication is that it can be difficult to retain, recall, and organize the information that has been given in a verbal message. This is especially true when a copious amount of data has been communicated in a short period of time. When used appropriately, synchronous and asynchronous communication channels are both efficient ways to communicate and are vital to the functioning of hospitals (Parker & Coiera, 2000).

Unfortunately, effective communication does not always occur naturally, nor it is easily acquired. Even when participants in a health come from the same geographic area and speak the same language, they often have different educational, socio-economic and cultural backgrounds. Moreover, their expectations about the health encounter may be different, or they may be faced with other problems, such as lack of privacy during the encounter, or time constraints due to heavy patient loads (de Negri et al, n.d).

Decisions around seeking male circumcision can be dynamic and situation specific, and that the roles of wives, health service providers, and other varies according to the situation. Health implementation experience supported by the literature shows that clients frequently cite word-of-mouth as influential in their decision to seek VMMC. This underscores the importance of ensuring that clients are well cared for throughout their VMMC experience. Technical excellence provided in an environment that fosters trust, affirmation, and respect increases client satisfaction and makes it more likely that early adopters will encourage their peers to opt for VMMC, in line with the theory of diffusion of innovation (Sgaier et al., 2015). Ensuring that services are not just available and accessible but also acceptable (i.e., staff are respectful and have a good bedside manner, and counseling is honest and appropriate) may help to drive demand. Maintaining customer-service standards for all facility staff providing VMMC may help generate consistently favorable client narratives about the VMMC experience. In short, interpersonal communication needs to be localized and personalized (Sgaier et al, 2015).

When mistakes occur in hospitals or any other health facility, more often than not, they are a result of communication problems rather than just errors in judgment or negligence as noted by Thompson and Parrott (2002). Furthermore, when there is a lack of understanding and cooperation, due to a breakdown in communication in the hospital milieu, it is the patient who suffers the most (Kron, 1972). Therefore, it is imperative to cultivate an environment conducive to effective communication, through appropriate use of communication channels, as well as the elimination, where possible, of distracting internal and external noise. Also to illustrate, a client who attends a VMMC clinic has already made the decision to undertake VMMC, but his experience at the clinic will inform whether he recommends the procedure to his peers.

Back to efficacy, efficacy has also been theoretically explained in an interpersonal health communication context, more specifically within doctor-patient interactions. The Ask, Understand, and Remember Assessment (AURA) that is designed to measure a patients' perceived self-efficacy when attempting to obtain and process information from their doctor. Researchers have argued that by increasing the communication self-efficacy, the patient may be better able to act on the information they receive (Clayman et. al, 2010).

Because interpersonal relationships are the foundation and theme of human life, most human behavior takes place in the context of the individual's relationships with others. The interpersonal context - who one is with, one's history with this partner and with similar others in related situations, and what one is trying to accomplish with the partner - represents a potent behavior causal factor. Evidence shows that human beings do not respond to the same stimuli in the same way across relationship contexts; indeed, the meaning of stimuli to the individual may change dramatically with changes in relationship context. Thus, to predict and understand behavior, it is necessary to appreciate and understand the relationship context in which the individual is embedded (Reis, Collins & Berscheid, 2000).

We do recognize that communication interventions influence beliefs (and behavior) in different ways. The Institute of Medicine Committee on Communication for Behavior Change in the 21st Century: Improving the Health of Diverse Populations (2002), opines that sometimes people exposed to a message learn the information that it contains, and this knowledge has a “direct” effect on their beliefs. But the context in which one receives the message also may influence how the message is received. For instance, if one is exposed to a message in the company of friends,

their reactions to the message may strongly influence whether the person learns or accepts the message content. If the person's friends respond the message with anger or derision, the context may be converted into one of resistance rather than careful processing and possible acceptance of the message content.

Another component of communication context is culture which is a human made concept that helps to define the beliefs, values, attitudes, and customs of a group of people that have similarities to one another in relation to language and location that have helped the people to survive more throughout time (Samovar, Porter & McDaniel, 2009). Culture has a very strong dependence on communication because of the help it provides in the process of exchanging information in the objective to transmit ideas, feelings, and specific situations present in the person's mind (Fleischer et al, 2009). Culture influences our thoughts, feelings and actions, and when communication is taking place there ought to be an awareness of this (Martin and Nakayama, 2007). This clearly means the more different an individual's cultural background is, the more different their styles of communication will be (Corbin and White, 2008).

Somma & Bodiang (2003:1) aver that "culture is one of the many factors influencing human behavior; it is a determinant of socially acceptable behavior, value systems, beliefs, and practical knowledge. Means of expression or communication...are those creative aspects of culture that we often define narrowly as culture itself." Green (1999) warns that for health programmes that offend the cultural sensibilities of the target audience, there is very possibility that they will achieve zero success in their quest to change the behavior of such target audience. Lending support to this idea is Uwah (2012) who argues that any HIV/AIDS intervention in Africa that does not take cognizance of the cultural dynamics of any given community is bound to achieve limited success in its efforts. He suggests that in Africa, the best option for HIV/AIDS communication is to be rooted in the culture of the people concerned and not on western world based health communication theories that have no practical relevance to the socio-economic and structural realities of the target audience.

The communication context is shaped by the socio-demographic characteristics of the participants such as patient and provider, as well as by the environment in which the communication takes place. The age, sex, ethnicity, and educational background of providers, for instance, and clients affect how they communicate with each other. Other factors such as degree

of privacy, time allotted for encounters, comfort and cleanliness of the clinic, and treatment of clients from the time they enter the clinic until they are seen by a provider, can also inhibit or enhance client-provider interaction (Negri, Brown, Hernandez & Roter, n.d).

Therefore, the first step before communicating with individuals of other cultures is the importance of being aware of the person's background, ideas and beliefs before there is interpretation of their behaviors in relation to communication. It is stressed that there is an importance of cultural safety which is the recognition of social, economic and political positions of individuals before beginning the communication (Bourque-Bearskin, 2011).

According to the assumption of coordinated management of meaning theory two individuals engaging in an interaction are each constructing their own interpretation and perception behind what a conversation means. A core assumption within this theory includes the belief that all individuals interact based on rules that are expected to be followed while engaging in communication. He observes that individuals within any social situation first want to understand what is going on and apply rules to figure things out (Littlejohn, 1996). Littlejohn posits that there are two different types of rules that individuals can apply in any communicative situation. These include constitutive and regulative rules. Constitutive rules are the essentially rules of meaning used by communicators to interpret or understand an event or message whereas regulative rules are the essentially rules of action used to determine how to respond or behave.

This can be manifested by an example seen if one thinks of a hypothetical situation in which two individuals are engaging in conversation. If one individual sends a message to the other, the message receiver must then take that interaction and interpret what it means. Often, this can be done on an almost instantaneous level because the interpretation rules applied to the situation are immediate and simple. However, there are also times when one may have to search for an appropriate interpretation of the 'rules' within an interaction. This simply depends on each communicator's previous beliefs and perceptions within a given context and how they can apply these rules to the current communicative interaction. Important to understand within the constructs of this theory is the fact that these "rules" of meaning "are always chosen from within a context" (Littlejohn, 1996). Furthermore, the context of a situation can be understood as a framework for interpreting specific events.

In the case of family planning and use of contraceptives, interpersonal communication appears to play a critical role in couples' decisions to use contraceptives in their normative understanding about benefits and consequences of contraceptives. Couples tended to report joint decisions around family planning and contraceptives. Embedded in these decisions are high levels of inter-spousal communication and a deliberation process that often take place in private. Specifically, both men and women have reported speaking at night in the bedroom or in the absence of family members such as elders and children (Rimal et al, 2015).

The proponents of this theory believe that there are a number of different contexts an individual can refer to when interpreting a communicative event. These include the relationship context, the episode context, the self-concept context, and the archetype context. Relationship context assumes that there are mutual expectations between individuals who are members of a group; episode context refers to a specific event in which the communicative act is taking place; self-concept context entails one's sense of self, or an individual's personal 'definition' of him/herself; and archetype context is basically one's image of what his or her belief consists of regarding general truths within communicative exchanges.

In a review of HIV and AIDS communication processes over the last three decades in the report "Missing the message" reveals that the "message is missed" because intervention fall short of community participation and involvement. This environment means developing a context for involving local culture and local social networks via dialogue and providing voice for the people (Scalway, 2003). Similarly, scholars of social change such as Melkonte (2000) suggest that social change is a complex, disordered, unstructured and usually uncontrollable process hence having knowledge of what to do and reason for doing it may not be adequate, in major cases, to change behavior. According to Lie (2008: 282-283), a new approach to that looks beyond behavior to that that focuses on social/cultural change is pertinent. Change interventions should therefore focus on what is circulating within the social circles, since social change does not occur at an individual level but in circulated culture and in shared beliefs.

In summary, male circumcision is a private matter, socially, culturally and sexually sensitive and therefore any successful conversations about this topic aimed at influencing men to seek the cut, context can never be ignored. Circumcision is highly stigmatized in some cultures especially those that do not practice it a rite of passage therefore the interpersonal communication

situational, time and socio-psychological factors must be addressed for this HIV intervention to attract demand among older and married men. However, research on contextual variables and how they affect interpersonal communication about circumcision is limited. Therefore, this study addresses these issues by demonstrating how different conversational contexts influence communication about male circumcision effectiveness and consequently uptake of VMMC.

2.4.4 Uptake of Voluntary Medical Male Circumcision

VMMC programme was rolled out as a medical intervention to avert the spread of HIV/AIDS. Therefore the rate of VMMC uptake will largely be dependent on its perceived efficacy in preventing heterosexually acquired HIV as argued by HBM and EPPM behavioral models. However, a major determinant of male circumcision especially among English speaking developed world has been the awareness of improved penile hygiene and the reduction in the risk of STIs. In North America, Europe, Australia and New Zealand, circumcision was mainly sought for health and hygienic reasons. Circumcision was believed to prevent a variety of diseases and behavior such as masturbation, syphilis and nocturnal incontinence (Clifford, 1893 as cited by WHO, 2009). Likewise, in Sub-Saharan Africa, circumcision determinants were found to include penile hygiene and reduced risk of STIs, especially in non-circumcising communities (Westercamp & Bailey, 2007). In a Teaching University Hospital in Lusaka, Zambia, 91% of the clients undergoing circumcision cited a lowered risk of STIs, including HIV infection as a major determinant (Bowa & Lukobo, 2006 as cited by WHO, 2009). Similarly, 96% of the uncircumcised men and 97% of the women in Nyanza Province in Kenya revealed that circumcised men can easily maintain penile hygiene (Mattson, et al., 2005). Likewise, in the United States of America (Dave et al., 2003 as cited by WHO, 2009) and Ghana (Niang, 2006 as cited by WHO, 2009) circumcision was mainly carried out on the perception of improved hygiene. Men attending focus groups in Botswana (Kebaabetswe et al., 2003), Kenya (Mattson et al., 2005) Malawi, the United Republic of Tanzania (Nnko et al., 2001), Zambia and Zimbabwe (Westercamp & Bailey, 2007) believed that male circumcision enhanced penile hygiene.

Additionally, sexual attraction and improved sexual pleasure have been identified as determinants of male circumcision. Studies carried out in the Philippines (Lee, 2005 as cited by WHO, 2009) and in the Republic of Korea (Ku et al., 2003 as cited by WHO, 2009) showed that women preferred circumcised men due to the perception that circumcision enhanced sexual

pleasure. In Nyanza Province, 55% of uncircumcised male respondents were of the view that women enjoyed sex more with circumcised men and this was a strong predictor of circumcision. Moreover, the majority of women in the study were of the opinion that circumcision enhanced sexual pleasure (Mattson et al., 2005). Countries in Africa such as the United Republic of Tanzania (Nnko et al., 2001), South Africa (Lagarde et al, 2003) and Nigeria (Myers et al., 1985 as cited by WHO, 2009) revealed that both men and women perceived that circumcision enhances sexual pleasure.

There is a glaring degree of variation in the age at which circumcision maybe carried out. For effective protective effect against HIV acquisition, Van, Dam & Anastasi (2000) suggest that male circumcision should be conducted before sexual debut or soon after the onset of sexual activity. A study by Bailey et al., (2002) revealed that half of the participants felt male circumcision should be performed during infancy or early childhood for various reasons such as pain, less time to heal and an inherent feel of assuming a circumcised penis is natural. Additionally, medical professionals advocated for neonatal or infant circumcision (Bailey et al., 2002). Likewise, among the Muslim and Jewish cultures, circumcision is mainly conducted at the neonate stage with the exception of male adults converting to either Judaism or Muslim faith (Doyle, 2005).

In many African countries, circumcision is mainly carried out at the teenage stage (Doyle, 2005) however; this is not completely universal as there are country variations. For instance, in Ghana, circumcision is mainly performed among neonates while in Burkina Faso the median age is 5-7 years (DHS, 2006 as cited by WHO, 2006), in Zambia, it is 7-10 years (Bowa, 2006 as cited by WHO, 2009) and 8-16 years in Kenya (Agot & Bailey, 2006 as cited by WHO, 2009) and the late teens or twenties in Tanzania (Nnko et al., 2001) and South Africa (Auvert et al., 2001). In the Middle East, Central Asia and in Muslim-leaning Asian countries such as Indonesia, Pakistan and Bangladesh, circumcision is conducted at infant stage (Drain, 2006 as cited by WHO, 2009). In the Republic of Korea, circumcision is routine and usually takes place at adolescence at ages 10-15 years (Kim, Lee, & Pang, 1999 as cited by WHO, 2009). In the Philippines, male circumcision is practiced at various stages, one study discovered that 42% of the boys had the cut at an age less than 10years, 52% of the boys had the surgery at ages 10-14 years and 5% between

15-34 years (Lee, 2005 as cited by WHO, 2009). Neonatal and child circumcision has been widely adopted in North America, Europe Australia and New Zealand. However, in Central and South America circumcision is uncommon.

In the absence of pharmacological, immunological, and medical interventions, the change in behavior and attitude of the public may only be considered a possible way for the prevention and cure for HIV/AIDS. Recent scientific studies show that Voluntary medical male circumcision (VMMC) is capable of reducing the risk of sexual transmission of HIV from females to males by approximately 60%. In 2007, the WHO and the Joint United Nations Program on HIV/AIDS (UNAIDS) embraced and recommended VMMC part of a comprehensive HIV prevention package in countries with high HIV prevalence and low rates of male circumcision. The target in Eastern and Southern Africa is 80% coverage of adult male circumcision by 2016. While VMMC programs have grown dramatically since inception, they appear unlikely to reach this goal. Kenya has recorded good progress in meeting its target however; uptake among adult men is remarkably low while HIV infection on an increase among married people.

The thirteen Eastern and Southern African countries are struggling to scale-up voluntary medical male circumcision (VMMC) as part of a comprehensive HIV prevention strategy (WHO/UNAIDS, 2011; Hankins, Forsythe, & Njeuhmeli, 2011; Njeuhmeli et al., 2011). Mathematical modeling reveals that circumcising 80% of the male population aged 15–49 in these 13 countries by 2015 and sustaining this coverage level thereafter could avert 430,000 new HIV infections by 2015 and 3.36 million HIV infections by 2025 (Hankins, Forsythe, & Njeuhmeli, 2011; Njeuhmeli et al., 2011).

While redoubling efforts to implement this highly cost-effective HIV prevention strategy, it is equally important to recognize the challenges associated with scaling up VMMC. Unlike other HIV prevention methods, such as delaying sex, being faithful or using a condom, VMMC at present involves a surgical procedure, which many men may understandably be resistant to. Moreover, reaching saturation coverage of VMMC will require far-reaching changes in social norms in many settings (VAC, National Empowerment Network of People Living with HIV/AIDS in Kenya (NEPHAK), Sonke Gender Justice and Uganda Network of AIDS Service

Organizations (UNASO), 2012). According to Herman-Roloff et al (2011) understanding and addressing the barriers and motivators to VMMC uptake to inform effective demand-creation is an urgent priority in the targeted countries in Sub Saharan Africa. Bertrand et al (2012) acknowledge that generating demand for VMMC represents a social marketing challenge par excellence. It is likely to be particularly challenging to market VMMC in traditionally non-circumcising communities, where the connotations of having been circumcised were until recently, largely negative.

Studies utilizing either quantitative or qualitative or both methods have been carried out to establish the acceptability of male circumcision in a number of countries. To start, the Women's HIV prevention Track Project (WHiPT) was carried out in five African countries: Kenya, Namibia, South Africa, Swaziland and Uganda (AVAC, 2010). The aim of the project was to "document and analyze women's perspectives and levels of participation in discussions and decisions about Medical Male Circumcision for HIV prevention" (AVAC, 2010, p.5). The study employed both quantitative and qualitative research approaches with a sample of 494 women for the survey and 40 focus group discussions. The results highlighted that women would accept the implementation of medical male circumcision with 87% vouching for the introduction of the surgery. Additionally, another study carried out in Kenya, South Africa, Swaziland, Tanzania and Zimbabwe determined the acceptability of male circumcision revealed that 60% of the men interviewed mentioned the need to be circumcised (UNAIDS, 2006).

Westerncamp & Bailey (2006) reviewed studies carried out in Sub-Saharan Africa to establish acceptability of male circumcision in traditionally non-circumcising communities. They reviewed thirteen studies from 9 countries. In Botswana, Kenya, South Africa and Swaziland results showed that majority of women would prefer circumcision for their sexual partners or male children while majority of men preferred circumcision for both self and son. The researchers revealed that 75% of the parents would consider circumcision for their sons citing that it was affordable and protective of STIs and HIV. Overall, the median proportion of uncircumcised men willing to undergo the procedure was 69% (range 29-87%). Similarly, 69% of the female participants favored circumcision of their partners and 71% and 81% of men and women respectively were willing to circumcise their sons. There were however notable

geographical variations, with 51% and 45% of the men in rural and urban settings respectively willing to be circumcised. Studies that were both urban and rural in nature showed an acceptability rate of 77%.

Kebaabetswe et al., (2003) conducted a cross sectional survey in 9 geographically representative locations in Botswana to find out the acceptability of male circumcision, preferred age and setting for circumcision. Standardized questionnaires were utilized to collect data both pre and post informational session outline the risk of and benefits of male circumcision. A total of 605 people were surveyed and results highlighted that the median age was 29 years and 52% were male. During pre-information sessions 68% of the respondents said that they would accept and circumcise a male child if the surgery was offered free of charge in a hospital setting. This number increased during post information session to close to 90%. Among 238 uncircumcised men, 61% opted for circumcision, this number increased during the post information debriefing to over 80%. The preferred age for circumcision was 6 years and 90% of the participants vouched for male circumcision to be carried out in the hospital.

Bailey et al. (2002) researched on the acceptability of male circumcision in Nyanza, among the Luo ethnic group, a traditionally non circumcising tribe. Focus group discussions (FGDs) and semi-structured interviews were employed to collect data. FGDs targeted adult men and women separately. Semi-structured interviews were conducted with 9 health professionals. FGDs highlighted that participants favored circumcision majorly for STIs/HIV risk reduction and improved cleanliness (Bailey et al., 2002). Additionally, FGD showed that the male “cut” might make the Luo community more acceptable to Kenyans, as participants perceived that the Luo have been discriminated against several aspects of the socio-political platform. Moreover, the researchers highlighted that the acceptability of male circumcision among boys and young Luo men was associated with peer identification.

Halperin et al (2005) in their study to determine the acceptability of male circumcision among men at various beer halls in Harare revealed a lower stance on male circumcision than other similar studies carried out in African countries. The study was done in 2000 and data was collected from 200 men and FGDs conducted on 12 men. A rare revelation is that despite the

absence of male circumcision information, education and communication then, close to half the men expressed willingness to undergo the surgery. Forty five percent agreed to be circumcised; however, this proportion is lower than other studies carried out in Africa, for example, Kenya and Botswana that recorded acceptability rates of 60% and above 80% respectively.

The AIDS epidemic for many years has been shrouded in ignorance- and that ignorance does not help prevent the spread of the infection according to Middle East and North Africa and UNAIDS (2006). A review of the global literature found that "there is a significant unmet need for information, education, and services for sexual and reproductive health for married and unmarried young people" (Shaw, 2009: 135). In order to change behavior, people need to know what the risks are and how to protect themselves. And they need this information early enough to make a difference in outcomes.

Moses et al. (1998) have documented a positive biological correlation between male circumcision and STIs (chancroid and syphilis). Lack of circumcision was thought to enhance the risk of STIs and HIV infection due to the physiological nature of the prepuce (Fleming & Wasserhei, 1999 as cited by Weiss et al., 2000). Observational data have highlighted plausible biological reasons as to why the removal of the foreskin would reduce the risk of acquiring HIV in men (Justman et al., 2013). The foreskin is susceptible to epithelial disruptions, or tears, during intercourse, which may allow HIV a portal of entry and compared with the tissue of the outer foreskin, the foreskin's HIV target cells (Langerhans cells with CD4 receptors) are closer to the epithelial surface (Dinh & Fahrback, 2011; Krieger & Heyns, 2009).

Knowledge of HIV and sexual behavior are important variables in the discourse of male circumcision as an additional prevention strategy. Mavhu et al. (2011) conducted a research to find out male circumcision prevalence, knowledge, attitudes among rural Zimbabweans. A total of 2,746 individuals participated in the study in which 64% were women and only 20% of the men were circumcised. Knowledge of male circumcision and its health benefits was low. However, given the role of male circumcision on HIV infection, 52% of the men reported that they would undergo circumcision. In another study and still in Zimbabwe, few participants were found to be aware of the benefits of male circumcision. Sixty-nine percent of the respondents revealed that male circumcision reduces STIs (Halperin et al., 2005). However, only 39% of the

men indicated the impact of male circumcision on HIV and only 12% mentioned that circumcision promotes hygiene and sexual cleanliness (Halperin et al., 2005).

On the contrary the results were not the same as a study conducted in Mazowe, Zimbabwe, a mining and farming community. People have “very good” knowledge of HIV in terms of how it is transmitted and how one can prevent possible infection. It was reported that 21 percent perceive that they had no risk of getting infected with HIV while another 32.6 percent said stated low risk. Here, the reasons attributed to for the low risk range from faithfulness (57 percent), abstaining (17 percent) and condom use (18 percent). It is imperative to note that in this study one person is reported to have cited circumcision as the reason for the perceived low risk and 7 percent questioned the efficacy of male circumcision for HIV prevention (Chikutsa, 2011).

According to Barden-O’Fallon & Degraft-Johnson (2004) men who are raised in urban environments are, on average, more equipped with HIV information than men who are raised in rural environments, perhaps because urban children typically have greater access to educational resources than rural children. They acknowledge that among both men and women, higher levels of education correspond to increased knowledge about HIV/AIDS and that people who have lost friends or family member to the fatal disease are likely to have greater knowledge about HIV/AIDS because of their personal and firsthand exposure to the problem.

Barden-O’Fallon & Degraft-Johnson make an unexpected revelation that greater HIV/AIDS awareness among men does not seem to correspond with increased perceived risk; on the other hand, ballooning levels of knowledge about HIV/AIDS do correlate positively to perceived risk among women. Since higher HIV knowledge has been shown to be significantly associated with safe sex behaviors (Meundi et al., 2008), educating the general population about HIV is an important strategy in the control of the HIV epidemic. However, Chikutsa (2011) adds that increased support and knowledge of male circumcision for HIV prevention is unlikely to translate to increased uptake by adult men. However, he reckons that improving people’s knowledge on the advantages of male circumcision will positively influence people’s attitudes towards male circumcision.

Although male circumcision is not a panacea to spread of HIV, it is a necessary “tool” to combat that spread. Since there are effective alternatives, there is no basis for restricting access to

information to prevent HIV transmission through sex. While abstinence, fidelity and condom use may work pretty well for some people in some cases, promoting these behaviors at the expense of [male circumcision] deprives people of complete information and services for HIV prevention (Human Rights Watch, 2004). Additionally, it is suggested that it is possible to improve individuals' knowledge of medical male circumcision through interpersonal communication interventions as IPC interventions have previously been used in many different areas of public health with varied population (Piotrow et al, 1997).

Today male circumcision is executed for reasons beyond religion and ethnicity. These include social, health and hygienic purposes for example, in North Korea, circumcision is preferred by 61% of the boys and the reason attributed to this choice is to avoid being ridiculed by peers. A strong factor of male circumcision especially among Anglophone developed countries has been the knowledge of improved penile hygiene and the STI reduction risk. In North America, Europe, and Australia, male circumcision was majorly adopted for hygienic and health reasons. Male circumcision was believed to prevent a range of diseases and sexual behavior such as masturbation, syphilis and nocturnal incontinence (Clifford, 1893 as cited by WHO, 2009). Westercamp & Bailey (2007) add that in Sub-Saharan Africa, male cut determinants especially among non-circumcising communities were found to entail penile hygiene and reduced risk of STIs.

In Zambia, a study was conducted by Lukobo & Bailey targeting urban and rural married and unmarried men aged 18 to 39. Thirty-four focus group discussions were carried out; 17 with men and 17 with women in four districts. The study examined male circumcision practices, opinions, and acceptability as an intervention to improve male genital hygiene and reduce sexually transmitted infections, including HIV-1. Results showed diverse perceptions on male circumcision. Traditional groups practicing male circumcision revealed that uncircumcised men experienced premature ejaculation, decreased penile hygiene and were unfit for marriage. For men, circumcision was believed to be a developmental milestone. It was also perceived to protect one from sexually transmitted diseases. Opinions were expressed in respect to enhanced sexual pleasure; circumcised men were thought to “perform” longer, thereby increasing their female partner's satisfaction (Lukobo & Bailey, 2007). However, men not practicing traditional male circumcision expressed limited interest in the practice although some expressed considering

circumcision because of beliefs that women preferred circumcised men (Lukobo & Bailey, 2007). Likewise, non-circumcised participants revealed that they would adopt male circumcision for themselves or their sons if it was proven to reduce the risk for HIV and STIs and if it was offered free of charge or at minimal cost.

Additionally, sexual attraction and improved sexual pleasure have been mentioned as determinants of male circumcision. Studies carried out in the Philippines (Lee, 2005 as cited by WHO, 2009) and in the Republic of Korea (Ku et al., 2003 as cited by WHO, 2009) highlighted that women preferred circumcised men due to the perception that circumcision boosted sexual pleasure. In Nyanza Province, Kenya, 55% of uncircumcised male respondents carried the opinion that women enjoyed sex more with circumcised men and this was a strong predictor of circumcision. Similarly, the majority of women involved in the research were of the opinion that circumcision enhanced sexual pleasure (Mattson et al., 2005). Some African countries such as the Tanzania (Nnko et al., 2001), South Africa (Lagarde et al, 2003) and Nigeria (Myers et al., 1985 as cited by WHO, 2009) showed that both men and women perceived that circumcision enhances sexual pleasure. According to Castellsague et al. (2002) add their voice by stating that improved uptake of male circumcision may be triggered by involving motivators for male circumcision beyond those associated with individual risk perception for instance improved hygiene, perception of responsible man choice, perception of sexual partner preferences, and enhanced health benefits for their female partners, including a reduced risk of cervical cancer.

Several challenges stand in the way of rolling out a successful male cut programme. Studies have revealed pain, bleeding and cultural tradition as some of the obstacles to male circumcision acceptability. Wamai et al (2011) highlighted that there are potential health care system challenges that might make it unattainable to have a successful male circumcision intervention programme. Factors such as, the politics surrounding policy development, funding and changing socio-cultural perceptions and beliefs about male circumcision might be possible obstacles (Potts et al., 2008; Patrick et al., 2009 as cited by Wamai et al., 2011).

Bailey et al., (2002) noted that in Kenya being uncircumcised was regarded as an identity for the Luo culture, this was perceived as a cultural tradition that was regarded as an obstacle to

adoption of circumcision. Participants in the study regarded the lack of male circumcision as a significant component of Luo identity aside from language. The introduction of circumcision was thought to erode their identity as tribes. The study revealed that pain during and immediately after the procedure and during the healing process was seen as a significant barrier to circumcision. Participants expressed concern over bleeding in medical, traditional or religious circumstances. Infections and poor healing process were also seen as possible barriers to circumcision. This was especially expressed in the context of traditional circumstances where non-sterile conditions abound.

In a study conducted using 12 focus group discussions on uncircumcised men in Nyanza Province to assess the non-hypothetical, facilitators and barriers to the uptake of male circumcision revealed that participants identified time away from work; culture and religion; possible adverse events; and the post-surgical abstinence period as the primary barriers to circumcision uptake. Other barriers documented included: long distance to the health facility, a decrease in male and female sexual satisfaction and peer influence against male circumcision (Herman-Roloff et al, 2011).

Social and cultural barriers to male circumcision go beyond lack of knowledge, however, and include lack of social support. In families and among married couples, many sexual and reproductive health topics are highly stigmatized and charged with emotion, shame and fear. Women for example are traditionally unable to discuss such issues with their husbands. Therefore, to promote male circumcision initiatives that continue to challenge the status quo and patriarchal traditions that keep sexual issues restricted and stigmatized are crucial (kumar, Hessini & Mitchell, 2009). Duggan (2006) observes that silence or avoidance of health issues reduces the ability of the people to receive the necessary social support that would enable them to cope with health problems, access health care, and make health-related decisions.

Plotkin et al. (2013) recommend that VMMC programme implementers need to address barriers to VMMC services especially among adult men such as shame associated with being circumcised at an older age by providing selected service delivery sites segregated by age to render services that are “friendly” to adult men. They add that these services ought to be complemented with behavior change communication initiatives to address concerns of older

men, encourage women's support for circumcision and adherence to post-surgical abstinence period and change social norms that impede older men from seeking circumcision. Health communication interventions should be directed at changing those variables that are important determinants of seeking male circumcision in the target population. Communication interventions that address an "unimportant" variable are likely to fail. Thus, before developing a communication intervention, it is important to determine whether people have or have not formed an appropriate intention, and, if not, to ascertain whether that intention is influenced primarily by attitudes, norms, and/or issues of self-efficacy.

Institute of Medicine Committee on Communication for Behavior Change in the 21st Century (2002) have argued that once the critical determinants of a specific behavior change in a particular population have been identified, what should follow is to develop health communication interventions to change those determinants. Ultimately, this process involves changing a person's underlying beliefs about the consequences of performing the health behavior, about the expectations or behaviors of others, or about one's ability to perform the behavior under a variety of challenging circumstances. For example, in order to change an attitude towards male circumcision, it is usually necessary to change outcome expectancies, that is, beliefs that seeking male circumcision will lead to certain positively or negatively valued outcomes. The more that a person believes that seeking male circumcision will lead to "good" outcomes (such as it will make me feel good) and prevent "bad" outcomes (such as prevent acquisition of HIV), the more favorable the person's attitude will be toward performing the cut. Similarly, the more one believes that specific relevant others think he should seek circumcision and the more one believes these others are performing the behaviors themselves; the more one will experience social pressure to seek circumcision. Lastly, the more an individual believes he can seek circumcision, even when specific impediments are present, the stronger that person's sense of self-efficacy will be. Therefore, a deeper understanding of the influence of interpersonal communication in the uptake of VMMC is necessary to create demand among older and married men.

2.4.5 Intervening Influence of Demographic Factors on Interpersonal Communication and on Uptake of VMMC

Male circumcision offers partial prevention against heterosexually acquired HIV. HIV/AIDS communications must be culturally appropriate, although, when certain dominant cultural and traditional norms and values favor the conditions for the spread of HIV, communication interventions may need to challenge them (UNAIDS & PennState (1999). The norms are the degree to which a person perceives that a given behavior such as talking about male circumcision or adopting it is viewed as appropriate or inappropriate by members of the person's social network or society at large. Norms reflect the amount of social pressure one feels about performing or not performing a specific behavior. Culturally speaking, self-disclosure is perceived as a weakness. Whenever an adult finds it necessary to communicate himself at an intimate level to a friend, he usually gives an excuse to do so. There is little cultural support for self-disclosure (Egan, 1973).

Cultural barriers to male circumcision go beyond lack of knowledge, however, and include lack of social support. In families and among married couples, many sexual and reproductive health topics are highly stigmatized and charged with emotion, shame and fear. Women for example are traditionally unable to discuss such issues with their husbands. Therefore, to promote male circumcision initiatives that continue to challenge the status quo and patriarchal traditions that keep sexual issues restricted and stigmatized are crucial (kumar, Hessini & Mitchell, 2009). Duggan (2006) opines that silence or avoidance of health issues reduces the ability of the people to receive the necessary social support that would enable them to cope with health problems, access health care, and make health-related decisions. According to Allen, Emmers-Sommer & Crowel (2002) partner communication is an important variable in affecting sexual behavior. Studies reveal that safer sexual behavior requires interpersonal communication and cooperation between partners. Alluding to this line of thought also, Sheeran, Abraham & Orbell (1999) argue that the ability to discuss sexual matters with a partner is an important factor in HIV intervention.

Male circumcision is a private sexual matter and thus discussions about it are often normatively defined as either being appropriate or inappropriate according to the context and nature of interpersonal relationship (Prazak, 2000; West, 1999). In Malawi and in the context of partner-to-partner communication, males are fearful of discussing sex including protective behavior,

with their female partners because such discussions are perceived to suggest unfaithfulness. Among peers, such discussions are not regular for fear that such discussions would lead to rumors and gossip while attempts by parents to engage their children in a sensitive sexual topic were constrained by norms regarding sexual communication. Most parents perceived talking about a sexual matter was shameful and immoral (Limaye et al., 2012).

In a mixed method study involving a sample size of 320 learners in Limpopo Province of South Africa found that young people were not willing to talk about sexually sensitive topics with their parents, culture and age played a dominant role. Most of the participants insinuated that culturally it was wrong, disrespectful and improper, a taboo even, for them to discuss such a sensitive topic with older people such as their parents. Other studies provide support for culturally-related reasons resulting in unwillingness to talk about sexually-related topics on the part of both parents and young people (Klu, Frempong & Odoi 2012; Lambert & Wood 2005; Namisi et al. 2009).

In addition to culture, demographic factors such as age and gender relation (social distance between the participants) can act as a barrier to interpersonal communication. Social distance refers to the socio-cultural-economic factors that make people feel they belong to different class tiers. Education, economic status, class, race or ethnicity, gender and age may all contribute to how close or distant two individuals feel about each other. Religion is also mentioned in literature in relation to barriers to interpersonal discussions about sexuality and HIV/AIDS. For instance, Ragnarsson et al. (2009) argue that religious beliefs often frame individuals' perceptions in conversations related to HIV/AIDS. The research respondents mentioned that they would not be able to talk about such topics because exposing their religious stance on such issues would cause their friends to undermine them.

In a review of studies on sex communication (Bastien, Kajula & Muhwezi, 2011), five factors were identified as those needing to be addressed in behavior change programming: perception about readiness to learn about sex and sexuality; knowledge about sexual practices and norms; having a high level of responsiveness (openness) regarding such topics; timing of communication; and message content. At this juncture and given the above, the relevant question

to ask is: what are the factors impeding married men from talking about male circumcision and their influence on uptake of VMMC. As such, this study provides additional insights into the influence of factors on conversations and seeking circumcision - a culturally and socially sensitive topic yet an important health intervention among married men.

2.5 Empirical Review

Communication is as much science as it is an art. The science of communication is a research-driven consultative process involving planning, design and implementation of individuals within the population over a period of time. It is communication via mass media, community activities and interpersonal discussions that introduces individuals and communities to new ideas and opportunities. Consequently, what was previously unknown becomes familiar while what was previously regarded as a taboo becomes a community norm (Pietrow et al., 1997).

The artistic side of communication involves designing creative messages and products, and identifying effective interpersonal, group and mass media channels based on the sound knowledge of the participants we seek to reach. Communication can spread knowledge and social norms. Such knowledge includes the idea of VMMC in HIV prevention among other benefits. Interpersonal communication makes it possible to learn about the position of others – for example, which and how many of one’s relatives; friends and neighbors have sought male circumcision. The perception of what everyone else is doing influences what people accept as normative, acceptable behavior (Pietrow et al., 1997).

Communication plays a critical role to the success of many public health campaigns but it suffices to state that unlike other areas of public health; male circumcision individual decision-making prevails. Matters to do with reproduction, sexual behavior and circumcision are private though with public health consequences. What an individual or couple may consider as “nobody’s business but my own” becomes everyone’s concern. In rolling out campaigns to address health issues involving private behavior, many challenges abound in designing, implementing and evaluating the public health programmes (Pietrow, et al, 1997). Communication is the crucial process underlying changes in knowledge of health and in openness of local cultures to new ideas and new health behavior. This communication can occur both spontaneously, within and between social groups of a society, and deliberately, by means of

planned interventions by governmental and non-governmental agencies. This planned communication can initiate change, accelerate changes already underway, or reinforce change that has already taken place (Piotrow, et al., 1997).

There is a host of evidence regarding the influence of communication on adopting behavior such as contraceptive use and male circumcision. Some of these are reviewed as follows: Storey et al. (1999) in a study found increased health worker interpersonal interaction skills, improved quality of client-provider interactions, increased client self-efficacy in dealing with health workers, improved client attitudes toward health services and toward the practice of family planning, increased adoption of family planning, and increased family planning service utilization, all attributable to radio communication.

Likewise, a study to establish the influence of mass media messages and social networks on prompting women to have cancer mammograms found out that media was most influential when complemented by social networks; however, social networks ultimately emerged as a powerful barrier to screening (McNeill & Dorgan, n.d). Media was quite effective at raising awareness of cancer risks; however, a woman's social networks can have an even more profound effect on her screening behaviors. Studies have indicated that social networks, especially family and friends have strong effects on women's use of preventive health services (Hurdle, 2001).

Hatzold et al (2014) conducted a population-based survey on VMMC conducted among different age groups of men in Zimbabwe with 2350 respondents aged 15–49. This study used logistic regression to determine predictors of male circumcision uptake compared to intention to circumcise. Focus group discussions were held with men purposively selected to represent a range of ethnicities. 68% and 53% of female/male respondents, respectively, had heard about VMMC for HIV prevention, mostly through the radio (71%). Among male respondents, 11.3% reported being circumcised and 49% reported willingness to undergo VMMC. Factors which men reported motivated them to undergo VMMC included HIV/STI prevention (44%), improved hygiene (26%), enhanced sexual performance (6%) and cervical cancer prevention for partner (6%). Factors that deterred men from undergoing VMMC included fear of pain (40%), not believing that they were at risk of HIV (18%), lack of partner support (6%). Additionally, there were differences in motivators and barriers by age. FGDs suggested additional barriers including

fear of HIV testing, partner refusal, reluctance to abstain from sex and myths and misconceptions.

In the same study the majority (71.4%) of the male respondents cited the radio as the source of information about VMMC. Television was the second most frequently mentioned communication channel (40.4%), followed by newspaper (28.9%), billboards (22.2%) and posters (22.2%). Among the interpersonal communication channels, the majority of respondents cited the health and community worker as the primary source of information (28.7%), followed by peers, friends and relatives (26.2%), small group discussions (7.3%), road shows organized by PSI (5.6%), door-to-door visits by community mobilizers (5.2%) and community drama (3.4%) (Hatzold et al., 2014).

In Zambia as reported in IAS conference (2013) it was found out that in men possessing mobile phones were 40 percent more likely to get circumcised and men who at least knew someone who had already had VMMC were 70 percent more likely and the figure halved to 35 percent if they knew someone who had had a traditional form rather than medical circumcision. This study also found out that more than 50 percent who had been afraid of pain and difficulties in healing overcame that thanks to personal relationships. Personal contacts were the most important sources of male circumcision information, with most men learning about it through friends and acquaintances and a paltry 43 percent through mass media. The situation replicates in Nyanza Province of Kenya where it is reported that word of mouth is the most important source of information about male circumcision followed by mass media (Progress Report on Kenya's Voluntary Medical Male Circumcision Programme 2008-10, 2011).

In a similar study carried out in Geita Gold Mine, Tanzania Mubekapi (2013) found out that the acceptability of MC among uncircumcised males was high (95.6%). Reasons for this desire included prevention of STIs/HIV, promoting hygiene and for religious and cultural grounds. Overall, the majority of the respondents were knowledgeable about the health benefits of MC. Nearly all respondents (89.6%) expressed willingness to circumcise a male child.

Male circumcision can be regarded as a high involvement decision to which men give serious thought, to engage uncircumcised man, he needs an opportunity to talk to someone who is knowledgeable and whom he trusts. This may facilitate the internal decision-making process and encourage the man to seek the cut. The report also acknowledges that men may decide to be circumcised for reasons other than HIV prevention including hygiene, appearance and social pressure from partners. Access to sources of information is vital in the scaling up of male circumcision for HIV prevention. Studies reveal that many people prefer to get information from trusted sources such as health care providers or teachers (Biddlecom et al., 2007). The mass media are the leading sources of information about health issues; it is always from news reports that most of the public learn about HIV (Radford, 1996; Chapman & Lupton, 1994). To effectively employ the media in promoting adoption of male circumcision as HIV intervention, it is important to understand the national context in which male circumcision deliberations and efforts take place (Wang et al., 2009).

The overarching question is: Does interpersonal communication really matter in behavior change but most specifically in seeking male circumcision for HIV prevention? This has been one of the recurring issues in communications research. To Freimuth & Quinn (2004); Simon-Morton, Donohew & Crump (1997); and Bingham et al. (2011) there are tissues of empirical evidence to support the conclusion that interpersonal communication matter. While not casting aspersions at the reasoning that the interpersonal communication has measurable input in the changing of behavior, Valente (1996) and Hanan (n.d) caution that it is quite alluring if not compelling to lavishly exaggerate the role and impact of the interpersonal communication in a behavior change campaign.

A large body of evidence suggests that health communication campaigns relying exclusively on media appeals are not a sufficient means of changing attitudes and behavior. Recent review of 24 published evaluations of health promotion programs revealed that media interventions alone had little impact on behavior (Redman, Spencer & Sanson-Fisher, 1990). Decisions around seeking male circumcision can be dynamic and situation specific, and that the roles of wives, health service providers, and other varies according to the situation. In view of this, Puri et al (2007) observe that health communications campaigns are increasingly implementing interpersonal communication approaches. In families and among couples, many sexual and reproductive health

topics, including male circumcision, can be highly stigmatized and charged with emotion, shame, and fear (Kumar, Hessini, & Mitchell, 2009).

Limaye et al (2012) carried out a mixed-method study using a household survey (n=1812) and 15 FGDs to explore communication about sex and sexuality in Southern Malawi. Quantitative study findings show that self-efficacy, perceived benefits and injunctive norms about talking about a sexual matter are important factors influencing intentions to discuss sexual issues with partners while qualitative research discovered that communicating regarding sexuality between parents and children, partners, and peers was uncommon, and when there was communication, messages focused on negative consequences of sexual activity.

People do not act in isolation, the people around them and the environment in which they live in influence most people to a great extent. An individual is guided as much by what others around him or her say and do, and by the “rules of the game” as he or she is by personal choice. Different interventions have been applied in health behavior change strategies that focus on interpersonal communication, including family relationships and social support networks as entry points for social change. The significance of these kinds of processes for health promotion knowledge development has also been documented by a number of researchers (Duggan, 2006; Figueroa et al., 2002; Labonte, Feather, & Hills, 1999). In particular, the use of these techniques has been applied to interventions around highly stigmatized, potentially sensitive, or exposing topics such as HIV/AIDS and tuberculosis (Morrill & Noland, 2006; Valente & Fosados, 2006).

Male circumcision is a “man’s” thing just like abortion is a “woman’s” thing. A man plays a major role in the decision for a woman to procure safe abortion. Society and cultural belief system contain a wide range of influences, including husbands or partners, families, friends, and communities. Nyanzi, Nyanzi, & Bessie (2005) noted the significant role of men—as husbands, partners, fathers, brothers, or sons—in women's abortion decisions in southwestern Uganda and suggested that interventions and policies should reflect this reality. A new paradigm shift in social change and development strongly suggests “another development”, also known as participatory communication, upholds “the opening of dialogue, continuous source and receiver interaction, thinking constructively about the situation, identifying developmental needs and problems, deciding what is needed to improve the situation, and acting upon it” (Nair & White, 1993:51). These elements usually are crucial in enabling better learning and development of

critical thinking and critical consciousness. The progress to interactive dialogue is also promoted by other scholars as the pillar to facilitate discussion. The epicenter to the discussion is feedback where people involved can discuss, negotiate and make collective decisions (Joram, 2010).

Besides parental communication, partner communication is a significant variable in affecting sexual behavior. Several studies have found that safer sexual behavior demand interpersonal communication and cooperation between partners. In particular, if a female wish to have safer sex through the use of a condom, she must communicate this request to her partner (Allen, Emmers-Sommer & Crowell, 2002). Communication and negotiation for safer sex play a critical role in HIV prevention because condom use is a primary method for preventing sexual transmission of HIV (Noar, Carlyle & Cole, 2006), and the ability to discuss sexual issues with a partner is a key factor in HIV prevention (Sheeran, Abraham & Orbell, 1999).

Although media campaigns undoubtedly have a role to play in increasing awareness of VMMC services, evidence suggests that interpersonal communication is critical to service uptake. According to surveys, the support of family members, friends and sex partners is often central to a man's decision (Lissouba et al., 2011). In particular, women (mothers, spouses, girlfriends and friends) are often highly influential with respect to men contemplating VMMC (Obure et al., 2011). Experience in Kenya indicates that outreach programs are highly effective in building demand for VMMC services (Donnelly, 2011)

A keen review of HIV prevention studies in sub-Saharan Africa on condom use, for example, revealed the interventions' effects on condom use at last sex were larger in men than in women in most studies, suggesting that "women still experience marked difficulties in negotiating condom use or assuming full control over their sexual activity" (Michielsen et al., 2010: 1201). Given the risks faced by women, "women deserve a larger share of resources and policy attention than they have been receiving" (Bruce et al., 2011: 2).

Bingham et al. (2011) posit certain knowledge, attitudes, and behaviors can be changed through a dialogue-based IPC intervention even with short intervention duration, and their process evaluation suggests that community-based trainers are able to effectively implement such an intervention. IPC process can help to fill the void that exists in current efforts to upscale VMMC especially among married adults at the community level in two important ways. Interventions

that emphasize IPC are particularly suited for promoting openness and discussion about sensitive, stigmatizing, or exposing topics among families, couples, and peer networks in order to ensure good health outcomes (Duggan, 2006; Valente & Fosados, 2006). Duggan established that silence or avoidance reduces the ability of people to receive the social support that would enable them to cope with health problems, access appropriate care, and make health-related decisions. IPC interventions help participants break through this silence and improve their ability to discuss these sensitive health issues with others through dilemma-based role playing, dialogue, and communication skills building.

Second, IPC has the potential of building important community engagement platforms in which social discussing group members become catalysts in transmitting information to their personal and peer networks. The discussions are consistent with the Communication for Social Change model, in which community discussion and collective action work together to produce social change (Figuerola et al., 2002). This communication model posits that once a new idea, opinion, behavior, or innovation has been introduced by a change agent through a mass-media platform, it is through dialogue-based IPC that this information is most credibly diffused through communities (Rogers, 1995); a general process outlined in Figuerola et al. (2002) as a key outcome in dialogue-based IPC interventions.

The government of Kenya has applied several approaches to scale up medical male circumcision in order to realize the UNAIDS target of circumcising 80% of uncircumcised and HIV negative males by 2015 (Mwandi et al., 2011). One of the key steps the government took was to engage the cultural, political, religious, women and youth leaders in communities that culturally do not embrace male circumcision and therefore the government saw need to demystify the association between medical male circumcision and cultural identity. These leaders were to be used as change agents.

Male circumcision is a man's issue however; studies have shown that women play a big role in a man's decision to undergo the cut (Obure, Nyambedha & Oindo, 2011). Another similar study found out that men were enticed to undergo the procedure by their sexual partners (International AIDS Society, 2013). This has also encouraged the government of Kenya to develop a

comprehensive communication campaign that recognizes and addresses women's roles in men's decisions about VMMC (VMMC communication guide for Nyanza Province, 2010). The Report on Kenya's Voluntary Medical Male Circumcision Programme 2008-10 (2011) asserts that making the decision to get circumcised is not an easy one and suggests that in "mobilizing the community, mobilizers should reach out to wives, girlfriends and mothers who often play an important role in a man's decision to become circumcised" (pp. 11). However, the same report concludes by suggesting need to conduct studies on the impact of IPC on the uptake of medical male circumcision. Similarly, Joram (2010) asserts that applying a listening, dialogical, communitarian, open discussion form of communication, where meaning is constructed by all those participating coupled with giving priority to local leaders who have the respect of the people to communicate HIV prevention and management message is paramount to any successful intervention.

Limaye et al (2012) found out that in view of partner-to-partner communication, males were fearful of discussing sex, including protective behavior, with their female partners because these discussions suggested unfaithfulness. On the other hand, female participants had similar concerns about the implications of unfaithfulness if they tried to discuss condom use with a sexual partner. Females believed that they would be perceived as loose if they asked their male partner to use a condom. Similarly, married women were also afraid to discuss sexual protection with their partners. More specifically, older women did not want to raise the idea of HIV testing as they believed that testing positive led to marriages falling apart.

However, Crocker cautions that for behavior change to occur a non-directive communication is essential because often, community members (insiders) do not respond to directive messages from technical specialists (outsiders). The specialists are not part of the trusted group that influences decision-making in the community, so their messages are often ignored (Crocker, 1991). This is particularly true in communication about sensitive issues such as male genital cutting. Because sexuality is such a private topic, and because sexual behavior is largely determined by cultural beliefs, it is difficult for outsiders to discuss male circumcision with community members, let alone prescribe behaviors to stop it. A more effective approach is for outsiders to facilitate interpersonal communication in which all viewpoints are discussed. While

we now know a great deal about the influence of interpersonal communication in health interventions little research has been done on adopting VMMC a culturally and sexually sensitive issue as an HIV prevention strategy.

In summary, the adoption of male circumcision for HIV prevention on a scale that would generate population-level health outcomes requires broad societal acceptance (WHO/UNAIDS, 2008). There is need to enhance community-wide education and promotional activities that target both proximal and distal factors in the environment that facilitate changes in community-wide beliefs about MC. These promotional activities should not be limited to motivate MC services-seeking behaviors among the target population, but also seek the persuasive support of other interpersonal influences.

2.6 Critique of Related Literature

Most of the evidence presented in the above section is based on male circumcision acceptability studies conducted in priority African countries. In fact, the median proportion of uncircumcised men willing to become circumcised is 65% (range 29–87%). Sixty-nine percent (47–79%) of women favor circumcision for their partners, and 71% (50–90%) of men and 81% (70–90%) of women are willing to circumcise their sons. These findings are encouraging but seem inconsistent with the slow progress of MC scale-up (Mubekapi, 2013).

While the information from these studies is very useful, they have a few shortcomings, which may explain the seeming disconnect with VMMC take up. First, while it appears that study populations were formed by men and women from traditionally non circumcising communities, the study populations may not be representative of all non-circumcised households, much less the general population. For instance, the studies conducted in Kenya were in Nyanza province among the Luo ethnic group (Mubepaki, 2013). Second, most of the studies are focus group studies, which suffer limitations including the small sample size, possible peer pressure to provide similar answers as the others in the group, and the moderator's skill in phrasing questions that can influence the answers of participants. Third, even when respondents are not in a group setting, there may still be “acceptability bias” in their answers—for example, answering that fear of complications is the main barrier instead of fear of reduced masculinity. Lastly, and most

important, the studies have not investigated the influence of interpersonal communication in creating awareness of VMMC, changing attitudes towards the male cut and in enhancing the practice of male circumcision especially among married men.

Several research findings show limited or lack of discussion between partners, peers and between parents and their children on the sensitive sexual matters such as condom use and by extension male circumcision. Most literature about voluntary medical male circumcision categorizes it as a sensitive sexual issue hence discussions around it are regulated by cultural norms. However, there has not been an investigation to look at how people perceive having discussions around male circumcision and how such discussions can influence uptake of circumcision.

As discussed above, a study found out that media are effective at raising awareness of cancer risks; however, a woman's social networks can have an even more profound effect on her screening behaviors. Studies have indicated that social networks, especially family and friends have strong effects on women's use of preventive health services (Hurdle, 2001). In the cancer study social networks seemed to complement existing personal fears, thereby restricting the use of mammography (McNeill & Dorgan, n.d). So, even if a woman is exposed to media messages, her social networks may affect her decision to seek or avoid cancer screening (Kang & Bloom, 1993). In the same breath it is important to carry out a similar investigation to find the influence of a man's social networks on his decision to seek or avoid male circumcision as an HIV intervention.

Kumar, Hessini & Mitchell (2009) aver that shame and lack of social support are obstacles to men seeking MC. They observe that in families and among married couples, many sexual and reproductive health topics are highly stigmatized and charged with emotion and fear. The authors support their observation by an example that women are traditionally unable to discuss sexual and reproductive health issues openly with their husbands. To Duggan (2006) silence or avoidance of health issues reduces the ability of the people to receive the necessary social support that would enable them cope with health problems, access health care, and make health related decisions.

Since being circumcised involves deep-seated values, beliefs, and motivational factors that vary with ethnic, religious, and cultural identities, sensitive approaches are required to ethically and responsibly aid men and entire communities in their consideration of VMMC. Therefore, to promote MC initiatives that continue to challenge the status quo and patriarchal traditions that keep sexual issues restricted and stigmatized are critical. Similarly, Joram (2010) asserts that applying a listening, dialogical, communitarian, open discussion form of communication, where meaning is constructed by all those participating coupled with giving priority to local leaders who have the respect of the people to communicate HIV prevention and management message is paramount to any successful intervention. Duggan (2006) adds that IPC interventions help participants break through the silence and improve their ability to discuss these sensitive health issues with others through dilemma-based role playing, dialogue, and communication skills building. From Puri et al (2007) perspective, decisions around seeking MC can be dynamic and situation specific, and that the roles of wives, health service providers and others varies depending on situation hence the need for VMMC campaigns to increasingly adopt and implement IPC approaches. Another benefit of IPC interventions is that many people are made change agents who diffuse accurate information and VMMC stories throughout their communities (Figuerola et al., 2002).

In day-to-day life people get involved in discussions about health topics or even the specific content of health campaigns with one another, and such discussions remarkably do influence the impact of health campaigns (Real & Rimal, 2007). Southwell & Yzer added that interpersonal communication can play three vital functions in the context health campaign effects. In the first instance, when people talk about health topics it can be an outcome of health campaign therefore increasing the distribution of the intended health message (Katz, 1957). The second instance is when these health-induced discussions can impact on persuasion outcome, thereby directly serving a mediating function (Van den Putte et al, 2011). The third instance is when these health campaign-laced discussions can change, undermine or amplify health campaign effects, thereby seizing a moderating function (Southwell, 2005).

From the standpoint of Hanan (n.d) interpersonal communication is the most effective means in influencing the behavior of an individual or a small group of people because of following reasons. (a) Message is delivered by a person who belongs to that particular group to whom

message is constructed (opinion leader influence). (b) Content of message is more harmonized with local culture, tradition, norms and values. (c) Interpersonal communication has been considered a successful way in addressing the sensitive issues of sexual behavior. (d) The mass media campaigns are typically of limited duration. Therefore, for sustained promotions among individuals and groups it requires an interpersonal communication component for behavior change especially in HIV/AIDS prevention campaign. In addition, some studies for example Dunlop et al., (2010) have recorded that aside with whether people discuss health topics, how negatively or positively people talk about health topics influence health behaviors and health campaign effects.

In light of the foregoing, this study is investigating the influence of interpersonal communication messages, participants, context and barriers in health interventions specifically in seeking male circumcision to prevent HIV/AIDS. This study is more comprehensive in approach on the subject of interpersonal communication and its influence on uptake and also non-uptake of male circumcision.

2.7 Research Gap

The demand for medical male circumcision to date appears to be mixed across priority countries. In some countries such as Kenya, South Africa and Tanzania robust demand has been reported (Mwandi et al., 2011; Lissouba et al., 2011; Bridges et al., 2011; Mahler et al., 2011). In such countries where early demand for the procedure had been observed, greater demand appears to be among teenagers rather than men in their 20s and above who are most likely to be sexually active and at risk of HIV infection (see Mwandi et al., 2011). The group of men aged between 20 and 49 years is mostly married and consequently sexually active hence a target population for VMMC. For this reason, this study therefore seeks to establish the influence of interpersonal communication in adopting VMMC among this target population. Although previous studies have examined the influence of interpersonal communication in public health interventions, there has been very limited effort to investigate it on uptake of male circumcision, a cultural and sexually sensitive issue and targeting married men.

2.8 Summary

The understandings generated from this review of the literature show that interpersonal communication matter in behavior change and hence can be the unlocking key in creating demand for VMMC among married men. Four elements of interpersonal communication: messages, participants, context and demographic factors play a critical role in seeking male circumcision as an HIV intervention. What also emerged, however, was the detrimental role that social networks can play, particularly when their advice goes unchecked. Social networks in this case can act as a barrier to preventative health care which could prove especially harmful in rural communities where health information may be more readily obtained from family members and friends than from doctors.

Given the observed trends it is important that health programs select messages that have been evaluated for their impact and appeal, as well as their accuracy. In Kenya, for example, emphasis on the HIV prevention benefits of VMMC played an important role in assuaging initial resistance of Luo tribal elders in the early stages of VMMC scale-up in Nyanza Province (AVAC, 2012). Surveys in South Africa also suggest that the HIV-protective effect of VMMC is the most consistently resonant message across all ethnic groups (Bridges et al., 2011). However, there are also indications as by reviewed literature that some men are less motivated by HIV prevention than by the perceived non-medical benefits of male circumcision with respect to personal hygiene, penile appearance, personal sexual satisfaction and the preferences of sex partners (Lissouba et al., 2011; Bridges et al., 2011).

There were strong barriers to dialogue on sensitive issues, particularly as issues regarding sexual behavior that were traditionally seen to be taboo. These social taboos against open discussion about sexuality constitute important barriers that people have to overcome in order to feel they can efficiently engage in discussions about sex or any other sexually sensitive matter. Interventions should, therefore, attempt to remove barriers to facilitate communication across all relationship types. Their studies suggest that there is a need to convince people that many benefits can be gained from talking and it seems that people intend to talk if they think that they are expected (injunctive norms) to do so.

In a nutshell, the interaction effect between interpersonal communication and descriptive norms reinforces the idea that discussions can serve to propagate normative influences in a community. Indeed, unlike laws that are explicitly codified in society, and whose infractions provide well-calibrated sanctions and punishment, norms are socially negotiated, understood, and implemented. Discussions between members of the community serve this social function: it is through discussions that norms derive their meaning (Rimal et al., 2015).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section offers the *modus operandi* for the execution of the study. It consists of the following sections: research design, research site, and population under study, sample size and sampling techniques, data collection methods and ethics guiding the study.

3.2 Research Design

This study employed a mixed methods sequential cross sectional research design. A cross-sectional design permits the researcher to observe research problems from multiple perspectives, contextualize information, develop a more complete understanding and triangulate results making it a more comprehensive design to apply in research (Bryman, 2007). According to Yin (2006) mixed methods research compels the methods to share the same research questions, to gather complementary data, and to carry out counterpart analyses. Creswell and Plano (2007: 10), assert that “this kind of research is ‘practical’ because individuals tend to solve problems using both numbers and words, combine inductive and deductive thinking ...” This approach allows for a better understanding of the subject, given that it is examined using both approaches. The approach is important because it enables investigators to address more complicated research questions and be able to gather a richer and stronger shades of evidence that can never be realized using any single method alone.

The adoption of cross-sectional mixed methods research design offered this study the impetus to understand, describe and also explain the influence of social construction and interaction on seeking making male circumcision which is a culturally, socially and sexually sensitive and complex topic. The researcher employed a sequential inquiry strategy in course of this study to collect data. First, quantitative data was used then followed by qualitative method. The mixed methods strategy was found beneficial because the qualitative research method was used to interpret, understand and explain the findings of quantitative findings, and therefore enable the researcher understand the social phenomenon on in comprehensive terms. The researcher who conducted the interviews was “protected” from the knowledge of the quantitative results, and so was not biased by them.

This mixed methods approach also offered this study complementary strengths and minimized weaknesses associated with reliance on one method. Sometimes it is important to show internal consistency by measuring the same thing using multiple indicators. This equivalency reliability applies when a construct is measured with multiple specific measures. If the different indicators point to the same construct, then a reliable measure will give the same results with multiple indicators. In this study, data was collected sequentially where quantitative data was collected before qualitative data. This was also because quantitative approach was critical in recruiting participants and informing qualitative approach.

3.3 Study Population

VMMC programme targets males aged up to 49 years. This study therefore targeted married adult men aged between 20 and 49 years. This decision was informed by previous studies that showed that though Kenya had recorded promising success in conducting VMMC in targeted regions, this success was observed among adolescents with dismal success among adults and most specifically married adult men (Mwandi et al., 2011).

This study was carried out in Teso South sub County in Busia County. The choice of the sub County was based on the fact that it is predominantly occupied by people from the Iteso ethnic group who do not traditionally practice male circumcision as a rite a passage. According to Kenya National Population Census report (2009), there are 27372 households in Teso South Sub County with a total population of 66629 males. This sub County is subdivided into 12 rural administrative locations and one cosmopolitan urban location (Ang'orom location). The rural locations have a total of 21346 households.

3.4 Sample Size and Sampling Techniques

3.4.1 Sample Size

In order to reach the target population of married men aged between 20 and 49 years, the study took a household based approach. According to Kenya National Population Census report (2009), there are 21346 rural households in Teso South Sub County. The sample for this study was based on Krejcie and Morgan (1970) formula for determining sample size:

$$s = X^2NP(1 - P) \div d^2(N - 1) + X^2P(1 - P).$$

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

They came up with the table below for ready and easy reference constructed based on their formula:

Note.— N is population size.

S is sample size.

Therefore, the sample size for this study's quantitative approach was 377 households/respondents that were proportionately distributed across the targeted locations based on total number of households in each administrative unit as follows:

Table 3.1: Distribution of Respondents

No	Name of Location	Total Households	Sample Size
1	Asinge	2080	37
2	Akoreet	1494	26
3	Okame	1825	32
4	Aremi	1650	29
5	Apegei	1533	27
6	Kwang'amor	1667	29
7	Among'ura	2128	38
8	Amukura	1179	21

9	Kaliwa	2216	39
10	Kaujakito	2563	45
11	Kotur	933	17
12	Ochude	2078	37
Total		21346	377

Source: Kenya National Population Census Report (2009)

In respect to qualitative approach and in cognizance of male circumcision being a sensitive private issue, the study employed saturation concept using N=30 married men. This comprised of 15 married men aged between 20 and 49 years and who underwent VMMC when married and another 15 married men aged between 20 and 49 years and had not undergone male circumcision. This sample size was within the recommendations of Griffin and Hauser (1993) and Guest, Bunce & Johnson (2006). Griffins and Hauser argue that until the definite answer is provided, N=30 informants is a reasonable starting point for deciding qualitative sample size that can reveal nearly the full range of potentially important perceptions while Guest, Bunce & Johnson conclude that studies with a high level of homogeneity among population, a sample of 6 interviews may be sufficient to enable development of meaningful themes and useful interpretations though they claim that saturation often occurs around 12 participants.

3.4.2 Sampling Techniques

Systematic random sampling was used to pick the 377 households/respondents for this study. This sampling technique yielded a representative sample in addition to being a more conducive method of covering a wide study area. This random sampling technique employed to pick respondents for this study, gave it the necessary external validity as the findings of this study can be generalized to the target population. Using either a local chief's office or a road junction as the starting point in a given administrative location, counting of households started from the first homestead on the left side of the road. While walking, every household/homestead seen or identifiable (only on one side of the road) was counted. Every third household/homestead was selected as a potential respondent household.

Whenever nobody was found in the selected household, the researcher moved on and chose the next household until somebody could be found in a household for administering the questionnaire. After this finally selected household the counting started again with “1” and the next household/homestead no. 3 was selected. Only one man was selected from each household, and in households with more than one eligible man, a Kish Table was used to select the study participant so that to ensure random selection of the sample. This involved ascertaining the number of eligible men in the household and listing them by age then the table determined the man to be picked. Respondents qualified for the study only if they fulfilled the following criteria: aged 20–49 years; married, being a member of the household for at least 12 months; available during the 30 days’ period scheduled for administering the questionnaires (data collection). These measures that were employed ensured 100% response rate for this study.

The rules observed during the random route walk were: 1) from the starting point the researcher turns left and starts counting immediately the households on his left side; at the first possibility to turn right. 2) He turns right and goes on the right side of the road (and counting), again until he reaches the first possibility to turn left. 3) The researcher then turns left and goes to the left side of the road. He continues with the next possibility to turn right (step 2) and so forth

On reaching a dead end (or river without bridge or steep cliff or location’s boundary), the researcher turns and goes back on same side of the route he came (now without counting the households) meaning that he will have then switched the road side (that “same” side of the road that was the right side, is now the researcher’s left side). He then continues until the next possibility to turn to the correct side (if after the turn he was on left side, it means he needs to turn right: if he was on right side, it means he turns left. From that “new” turn he will start counting the households again. These rules gave zero bias to the picking of respondents of this study as every man in the targeted population had equal chance of being selected.

Regarding qualitative data, the sampling technique used was purposive. This technique was cognisant of the fact that male circumcision is a private matter that is highly stigmatized, culturally, politically and socially sensitive. Purposeful sampling enables the researcher to seek out individuals who are able to answer the research questions (Ritchie & Lewis, 2003). Contacts with chiefs, assistant chiefs and village elders were established in the local community during

administration of questionnaires that enabled the recruitment of interview participants who would match the desired characteristics. After establishing their circumcision status while administering the questionnaires, a follow up call was made to recruit informants based on their willingness and availability for the interviews. Fifteen circumcised men and another 15 uncircumcised ones were interviewed by the researcher.

3.5 Data Collection Methods

This study generated both qualitative and quantitative data as a result of a mixed research approach adopted. This research applied a mix of data collection techniques in order to realize a more rounded view of the objectives of the study (Biggam, 2011). The data was collected in the months of May, June and July of 2017.

3.5.1 Quantitative Data

This study employed self-administered questionnaires to collect quantitative data. According to Rubin et al. (2010) self-administered questionnaires are best for collecting personal or sensitive information like information on male circumcision. The Kenya National Strategy on VMMC appreciates as a matter of principle that male circumcision is a culturally sensitive matter and recommends the need to minimize stigma that may be associated with an individual's circumcision status. Quantitative data collected included the nature of interpersonal communication messages about male circumcision and their influence of seeking VMMC, context of discussing about male circumcision and their influence on uptake of VMMC, nature of interpersonal communication partners/sources and their influence on uptake or non-uptake of VMMC in addition to establishing demographic factors as obstacles to talking about male circumcision and uptake of VMMC.

The questionnaire used was structured into four sections: **Section A** captured the socio-demographic details of the respondents such as age, highest education level attained, duration in marriage among others; **Section B** was aligned to establishing the influences of interpersonal communication VMMC messages in terms of types, perceived threat and efficacy of the messages; **Section C** found out the sources of VMMC information and requiring respondents to identify and rate interpersonal communication sources in relation to trustworthiness, similarity with self and expertise in influencing them seek VMMC; and **Section D** was dedicated to establishing the influence of different male circumcision communication contexts such as

physical location, time and socio-psychological on uptake of VMMC. A Five point Likert Scale (Strong Agree, Agree, Not Sure, Disagree and Strongly Disagree) was used to measure respondents' opinions.

3.5.2 Qualitative Data

According to Strauss & Corbin (1998), qualitative methods can be used to explore substantive areas about which little is known or about which much is known to try to gain novel understanding. Also, they can be used to obtain details about phenomena such as feelings, thought processes, and emotions which are difficult to extract or learn through other conventional research methods.

The overall goal of qualitative research is to access the 'insider' perspective of members of a culture (or subculture), to understand the way people think and make meaning within their social context, and how they express these understandings through communication (Priest, 1996: 103). According to Aisha Gilliam's understanding, qualitative methods are most relevant in order to provide detailed, in-depth information, to describe diversity, to determine the quality of content and interventions, to identify unexpected outcomes, to document interactions, and to create response (2005: 2).

In-depth interviews were conducted after administration of the questionnaires to provide individual life histories regarding male circumcision, participants' perception regarding the nature and effectiveness interpersonal communication messages (threat and recommended action), nature of communication partners and their influence on seeking circumcision, context of interpersonal communication and how it influences seeking of circumcision, barriers (norms and demographic factors) to interpersonal communication and on uptake of male circumcision for HIV prevention. Interviews provide valuable qualitative data not readily obtained with any other data collection techniques (Quible, 1998). The method is useful because of its "explanatory power" (Jensen, 1991) that can help to interpret quantitative information obtained from surveying. In order to establish a framework around the interviews and so as not to lose focus on specific issues with different interviewees, the interviews were structured with questions formulated beforehand, but the interviewer were open to new issues and follow different, related

leads depending on the responses and willingness of the interviewee. Structured questions that made use of open ended questions were applied in order to encourage meaningful responses.

Thirty married men drawn from across the Teso South Sub County were purposively sampled based on their circumcision status and interviewed. The participants were recruited during administration of questionnaires. The first batch of 15 participants comprising married men aged between 20 and 49 years and had undergone VMMC while married were interviewed to offer this study the perspective of the influence of IPC in the uptake of VMMC. Another batch of 15 participants made up of married men, aged between 20 and 49 years but uncircumcised was interviewed to offer the perspective of the influence of IPC on non-uptake of VMMC.

All the interviews were conducted singularly by the researcher during the day in suitable private areas at participants' homes, church and school compounds that were easily accessible, agreeable and conducive to the two parties. They were also carried out in languages agreed upon by the participant and the interviewer. An interview schedule informed by the research questions was designed to guide in asking pertinent questions during the interview sessions. All interviews were digitally recorded, translated and transcribed verbatim. Each interview session lasted approximately 30-60 minutes and closed after saturation of ideas (redundancy of information). Detailed and hand written notes of each interview were taken during the session.

The questionnaire guide used probed questions that were corresponding to the ones in the questionnaire. However the questions were open to give the participants a latitude to give more information. Participants were asked to explain reasons and circumstances under which they sought circumcision if "cut" or reasons why they were not circumcised. The guide was heavily informed by the quantitative approach.

3.6 Pilot Testing

A pilot is a small pre-test study designed to test or gather general information prior to carrying out the main research study in order to improve the quality and efficiency of the latter (Ruxtons & Colegrave, 2006). A pilot study can reveal difficulties in the design of a proposed questionnaire or procedure which can be addressed before waste of time and resources in a large scale. In this case, all the data collection tools for this research were piloted before carrying out the actual study.

The pilot site for this research was in rural blocks of Kisumu County in Western Kenya. This choice was informed by the fact that Kisumu County share common characteristics with Teso sub Counties in that the predominant ethnic groups in the two counties culturally do not practice male circumcision as a rite of passage, they both have high HIV prevalence and are both targets for VMMC programme. The questionnaires were pretested on a sample of 33 respondents (or 8.8% of the sample size) aged between 20 and 49 years randomly selected. In short, the procedures used in pretesting were similar to those employed in the actual study. The lessons learnt from the pilot survey were used to fine tune and finalize the research instruments, redefine data analysis methods and set up strong, logistical arrangements to promote success of the study.

3.7 Data Analysis and Presentation

3.7.1 Quantitative Data

Descriptive and inferential statistics were used to analyze content of quantitative data obtained from the questionnaires administered to the sample under this study. Quantitative data was tabulated and then appropriate statistical analysis, interpretation, and recommendations pertaining to the research objectives were made through the following steps: Firstly, coding of survey questions responses was done where responses were classified into meaningful categories with numbers assigned making intuitive sense. Secondly, entering of coded data into the computer using Statistical Package of the Social Science (SPSS). Thirdly, descriptive Statistics Tables such as those showing mean of constructs were also used, and fourthly, inferential Statistics were also used where Anova, Chi square tests were applied in the Analysis to indicate presence of statistical significance in results among Quantitative and Qualitative Variables respectively

Coding procedure according to Kothari (1992) is often conducted at stage to which data is categorized and transformed into symbols that may be counted or tabulated or represented in form of graphs. Coding was done on the raw data that were received from the fields. The codes were assigned according to the manner in which the respondents had answered the questions by picking the options provided in the questionnaire. Related options were given the same numerical codes that were applied in correlation analysis.

Tabulation involved classification of data in the form of tables. The coded information generated was presented in form of tables and some cases where percentages were involved then graphs were preferred.

In statistical analysis relationship between or differences supporting or at variance with the research questions were subjected to test of significance to determine validity of data and indicate conclusions. In statistical analysis, causal analysis of correlation analysis was applied. According to Kothari (1992) analysis is a joint variation of two or more variables whereas causal analysis was concerned with the study of how one variable affected changes in another variable; the functional relationship existing between existing two variables hence, regression analysis by use of a computer software SPSS. Open responses were coded before all were captured in SPSS for analysis. Data analysis focused on individuals' knowledge and perception of the danger of HIV/AIDS (severity and susceptibility) and efficacy of male circumcision (response efficacy and self-efficacy) as informed by interpersonal communication messages, willingness and barriers to undergoing male circumcision, nature of interpersonal communication participants, exposure to and trust in VMMC health information from different interpersonal sources, contexts of discussions about male circumcision and barriers to talking about male circumcision. Correlation, regression and X^2 test were used to determine whether responses types on messages, source attribute, context and uptake of male circumcision were related to socio-demographic characteristics of the respondents. A p-value <0.05 was considered to be sufficient.

The analyzed quantitative data was presented using text, tables and graphs. Tables were used for giving structured numeric information, graphs and charts for showing relationships and text to explain key points.

3.7.2 Qualitative Data

The digitally recorded interviews were translated and transcribed verbatim. This enabled the researcher to concentrate on the data collection process and more crucial to capture everything said by the informants. Qualitative data gathered from the study were analyzed based around the iterative process of *description, analysis and interpretation* (Wolcott 1994) particularly in relation to extracting and understanding emerging themes. A thematic analysis framework was developed by reading through all transcriptions. However, Biggam (2011) cautions that qualitative data analysis rarely consists of only description and analysis of themed groups of sub-

questions in isolation. Consequently, this study applied cross referencing of participants' data, linking different themes, adding cumulative through an interactive process particularly comparing and contrasting raw data description and analysis with the literature reviewed.

The analyzed data from the interviews were presented in pros forms, narrations and verbatim. The researcher deliberately selected quotes that were poignant and/or most representative of the research findings. These quotes used were typical views as expressed in each of the in-depth interview to exemplify emergent themes.

3.8 Ethical Considerations

The researcher sought consent from the research participants before engaging them. This study engaged the participants on a voluntary basis. Participants were informed of the purpose of the study. This study was also approved and licensed by National Council of Science, Technology and innovation (NACOSTI) of Kenya.

Male circumcision is a private matter involving individual decision with a cultural implication. The researcher employed research assistants from outside the sub county to administer the questionnaires. This move was to protect the privacy of the participants by assuring them anonymity. No names were written on the questionnaires.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

Chapter four presents the findings of the study. It is against the background of research objectives and research questions that the results for this research were examined. Quantitative and qualitative data were triangulated to strengthen validity and reliability of the study results.

4.2 Socio-Demographic Characteristics of Respondents

Demographic information was gathered using the questionnaires. This section also provides the background information of the 377 respondents.

4.2.1 Age of the Respondents

Table 4.1 shows the distribution of respondents by age. Respondents were between ages 20 and 49 years against. A majority of respondents (26.5%) were aged between 25 and 29 years followed by those aged between 30 and 34 year (18.6%). Respondents aged between 40 and 44 years constituted 18% while those aged between 30 and 34 years were 17.5%. A total of 12% were aged between 45 and 49 while 20 to 24 years formed the smallest age group.

Table 4.1: Age of Respondents

Age Group (Years)	Frequencies	Percentage
20-24	27	7.2
25-29	70	18.6
30-34	66	17.5
35-39	100	26.5
40-44	68	18.0
45-49	46	12.0
Total	377	100

4.2.2 Educational Level of the Respondents

Table 4.2 shows distribution in respect to the highest educational level attained by the respondents. It shows that 41.4% of the respondents had only basic primary education while the rest (58.6%) had at least secondary education. This means that majority were adequately educated according to Kenya's levels of literacy. Kickbusch (2001) says that a person who has attained at least secondary education is empowered to read and write, and has critical problem

solving knowledge in addition to positive thinking, which is important in behavior change to promote healthy life. Baker et al. (2011) found a strong relationship between education levels and determinants of health such as health behaviors, beliefs and use of preventive services. They argued that highly educated people are healthier, readily consume health messages and generally live longer.

Table 4.2: Highest Education Level Attained by Respondents

Education Level	Frequency	Percentage
Primary	156	41.4
Secondary	151	40.1
Tertiary /College	52	13.8
University	18	4.8
Total	377	100

4.2.3 Marriage Duration of the Respondents

The focus of this study is on married men and therefore Table 4.3 indicates that majority of respondents have been married for between 6 and 10 years (34.5%) followed by those married for between 11 and 15 years (23.6%). This means that more than a half of the respondents had been married for between 6 and 15 years. Respondents married for more than 20 years consisted 9.5% perhaps because this study targeted married men not more than 49 years. Those married for between 16 to 20 years were 13.5% while those married for less than 5 years were 18.8%.

Table 4.3: Marriage Duration of the Respondents

Time (Years)	Frequency	Percentage
0 – 5	71	18.8
6 - 10	130	34.5
11 - 15	89	23.6
16 - 20	51	13.5
>20	36	9.5
Total	377	100

4.3 Descriptive Statistics of Independent Variables

4.3.1 Influence of Interpersonal Communication Messages on Uptake of VMMC

Objective 1 of this research sought to assess the influence of interpersonally communicated messages on uptake of male circumcision for HIV/AIDS prevention. It required to first establish

the nature of interpersonal messages about male circumcision before examining their influence in respect to threat elicited, recommended action and barriers to self-efficacy as informed by the Health Belief Model.

4.3.1.1 Nature of Interpersonally Communicated VMMC Messages

Table 4.4 below outlines the most salient messages about male circumcision as transacted through interpersonal channels obtained from the quantitative approach of this research. 41.6% of respondents said that they have heard that circumcision undermines their culture and identity, 98.4% said it prevents HIV/AIDS, 69.8% said prevents penile cancer, 77.1% said it gives nice appearance to the penis, 78.8% said circumcision is very painful, 40.6% said it improves sexual performance, 92.6% mentioned that it does not at all help in preventing sexually acquired STI/HIV/AIDS, 71.4% said it improves penile hygiene, if done on married and mature men it will take too long to heal, 47.5% said it may lead to wives/sexual partners cheating during healing sexual abstinence, 43.5% said it helps prevents cervical cancer to female sexual partners, 20.2% said that what they have heard is that circumcision reduces sexual satisfaction and 13.5% said that circumcision is only good for children and promiscuous men.

In practical these findings suggest that in as much as the VMMC campaign was rolled out as an HIV/AIDS prevention strategy, what is rather outstanding is that majority (98.4%) of respondents said that they have heard of the role of VMMC in HIV/AIDS prevention. This demonstrates high knowledge levels of the VMMC campaign message partly as a result of interpersonal communication. VMMC was implemented with the sole objective of checking the spread of heterosexually acquired HIV. However, it is important to note that 92.6% of the respondents had heard through interpersonal channels that male circumcision does not help prevent sexually transmitted HIV/AIDS which counters the VMMC campaign message which stresses that male circumcision partially prevents heterosexually acquired HIV. Other popular positive information doing rounds in the social networks about male circumcision such as it improves penile hygiene, prevents penile cancer and gives the penis nice appearance could instead encourage more men to seek circumcision. Other negative popular information about male circumcision include the procedure being very painful, undermines culture and identity, if done on married and mature men it will take too long to heal and reduction of sexual satisfaction

and may account for low uptake of VMMC. This is in tandem with Dunlop et al (2010) who argues that how positively or negatively people talk about a health topic influence health behavior and health campaign effects.

Table 4.4: Nature of Interpersonally Communicated Male Circumcision Messages

Variable	Characteristics	Frequency (n=377)	Percentage (%)
Interpersonal communication VMMC messages	It undermines my culture and identity	157	41.6
	It prevents infection of STI/HIV/AIDS	371	98.4
	It prevents penile cancer	263	69.8
	Gives nice appearance to the penis	291	77.1
	It is very painful	297	78.8
	It improves a man's sexual performance	153	40.6
	It improves penile hygiene	269	71.4
	It does not at all help prevent sexually transmitted HIV/AIDS	349	92.6
	It helps prevent cervical cancer among female sexual partners	164	43.5
	It reduces sexual satisfaction	76	20.2
	It takes too long to heal if done on married and mature men	199	52.8
	It make wives/sexual partners cheat during healing	179	47.5
	It is only good for children and promiscuous men	51	13.5

In order to examine health risk messages, perceived threat, benefits and barriers to recommended response play critical roles. Threat is determined by severity and vulnerability to the threat (HIV/AIDS).

VMMC programme was formulated on the basis of HIV/AIDS prevention. Various tenets of Health belief model are employed in achieving an effective VMMC communication strategy. According to the Health belief model, message effectiveness is dependent not only on the

individual's perceived threat and perceived barriers but perceived benefits of recommended action as well. The distinction between the expected behavioral outcome and efficacy of message is critical because both are required for behavior modification (Rogers & Storey, 1987). For individuals to positively respond and act on the health information that they receive, they must believe that the change will benefit them in a way and they must be willing to overcome the barriers in adopting the behavior change. For a message to be effective in eliciting behavior change, individuals must (as HBM theorizes) feel threatened by their current behavioral patterns (perceived vulnerability to and severity of HIV/AIDS) and feel that change aimed by health information will result in a valued outcome at acceptable cost (perceived benefit, that is, protection from contracting STIs). They must also feel themselves competent to overcome perceived barriers to taking action (Stretcher & Rosenstock, 1997).

4.3.1.2 Influence of Threat Messages on Uptake of VMMC

Threat was examined by perceived susceptibility to and severity of HIV/AIDS. Table 4.5 below indicates analysis of individual threat constructs where severity was measured by respondents' perception of HIV/AIDS being severe at 97.6%, having serious negative consequences at 97.3% and the disease being extremely harmful at 97.1%. Susceptibility to HIV was measured by perceived likelihood of getting HIV at 87.5% and only 2.4% said they were not sure, existing risk of getting HIV at 89.4% and 1.6% had no opinion while real possibility of getting HIV at 83.6% and again 1.6% recorded no opinion.

Table 4.5: Perceived Severity and Susceptibility

Component	Construct	SA/A (%)	N/S (%)	D/SD (%)	Mean	Std. Deviation
Severity	HIV/AIDS is severe	97.6	0.0	2.4	1.1220	.50103
	HIV/AIDS has serious negative consequences	97.3	0.0	2.7	1.1300	.53751
	HIV/AIDS is extremely harmful	97.1	0.0	2.9	1.1565	.55488
Susceptibility	Likelihood of getting HIV	87.5	2.4	10.1	1.5623	.94922
	Risk of getting HIV	89.4	1.6	9.0	1.5438	.90731
	Real possibility of getting HIV	83.8	1.6	14.6	1.7480	1.07814

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. n=377

These results show that there is averagely high perceived threat (both in severity and susceptibility) of HIV/AIDS among respondents. It is expected that the higher the perceived vulnerability to a negative event and perceived severity of a health condition or other negative consequence, the higher the intention to follow the recommendations. According Witte, Mayer & Martell (2001) threat motivates action while efficacy determines the nature of action to be taken. They add that when the threat is low, there is no response expected to the message where it is not even processed while efficacy is not even considered.

4.3.1.3 Influence of Recommended Action Messages on Uptake of VMMC

In this study the recommended action (efficacy) is to adopt male circumcision as a measure to prevent heterosexually acquired HIV/AIDS. As observed earlier, threat motivates but efficacy determines the nature of action to be taken that is uptake or non-uptake of VMMC. Uptake of VMMC was measured by perceived self-efficacy and response efficacy among respondents. Self-efficacy was examined based on respondents’ perceived ability to undergo male circumcision in order to prevent HIV/AIDS. Response efficacy, the perception that the recommended action (VMMC) is an effective and feasible method to avoid the HIV/AIDS, was measured using a Likert scale of the respondents’ subjective assessment that male circumcision as effective in preventing HIV/AIDS. High self and response efficacy suggest high uptake of VMMC.

Table 4.6: Perceived Self-Efficacy and Response Efficacy

Component	Construct	SA/A (%)	N/S (%)	D/SD (%)	Mean	Std Deviation
Self-Efficacy	I am able to seek circumcision to prevent HIV	81.1	0.0	18.9	2.2732	1.01171
	I am able to approach and talk to a health worker about adopting circumcision to	91.3	0.3	8.5	1.6923	.89071

	prevent HIV							
	It is easy to seek	84.1	0.5	15.4	2.1910	.91420		
	circumcision							
Response	Male circumcision is	48.8	1.3	49.9	3.0424	1.31816		
Efficacy	effective in preventing							
	HIV/AIDS							
	Less likelihood of getting	28.6	1.3	70.1	3.6233	1.24469		
	HIV if circumcised							

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) = 3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

Individual efficacy constructs shown on Table 4.6 was measured by perceived ability to seek circumcision in order to prevent HIV/AIDS at 81.1%, ability to approach a health provider and seek information about the role of male circumcision in HIV/AIDS prevention at 91.3% and 0.3% not sure while perceived ease of seeking circumcision to prevent HIV/AIDS at 84.1%. Response efficacy in respondents was measured by perceived effectiveness of male circumcision in preventing HIV where 48.8% agreed while perceived reduced likelihood of getting HIV/AIDS if circumcised has only 28.6% either agreeing or strongly agreeing.

4.3.4 Analysis of Threat and Recommended Action

Table 4.7 below shows that a majority of respondents (97.7%) averagely said that HIV/AIDS is severe while 86.9% consider themselves susceptible to HIV infection and only 1.9% expressed no opinion. This Table also indicates that 81.5% of respondents believed that they are able to seek circumcision to prevent acquiring HIV (self-efficacy) and only 0.3 were not sure while a paltry average of 38.7% of respondents believed that male circumcision is effective in preventing acquisition of HIV/AIDS (responsive efficacy).

Table 4.7: Threat versus Recommended Action

Component	Construct	Average	Average	Average	Mean
		SA/A (%)	N/S (%)	SD/D (%)	
Threat	Severity	97.3	0.0	2.7	1.1362
	Susceptibility	86.9	1.9	11.2	1.6180
Recommended	Self-Efficacy	85.5	0.3	14.3	2.0522
Action	Response Efficacy	38.7	1.3	60.0	3.3329

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

It is expected that the higher the self-efficacy and the more efficacious recommended response, the higher the intention to follow the recommendation. According to the Extended Parallel Process Model (EPPM) when the threat is high and efficacy is high then people control the threat and protect themselves. When the threat is high and efficacy is low then people control their fear and ignore the message.

From analysis threat and recommended action illustrated on Tables 4.7, it can be deduced that overall interpersonally communicated messages elicit high threat in respect to susceptibility and severity of HIV/AIDS among respondents. Regarding self-efficacy, it is evidenced that self-efficacy among respondents are quite high. However, response efficacy was the lowest among respondents. According to Witte, Meyer & Martell (2001) when the threat is high, that is, individuals believe the threat is real, severe and they are vulnerable to it yet efficacy is low, that is, individuals believe that the recommended action (circumcision) cannot avert the threat (HIV/AIDS) and even if they could it would not work anyway, people control their fear and ignore the message.

This finding was replicated in the qualitative approach where majority of research participants (circumcised and uncircumcised) said that they do not agree with the effectiveness of male circumcision in HIV prevention. Consider the situation in which one uncircumcised participant said:

I don't believe that circumcision can prevent HIV. Circumcised or not one can contract HIV. We have buried many circumcised men who died because of AIDS. Just two weeks ago during a burial ceremony people murmured a lot when one of these young local leaders while addressing mourners advocated for male circumcision. We were mad at him because we all know that mwalimu (teacher) who was being buried was circumcised and had died of AIDS! (R1 uncircumcised respondent).

Another case in point is where a participant said:

If I will still need to use a condom even after being circumcised so as to prevent HIV then why should I take a longer and painful route instead of directly using a condom? Why are these scientists telling us that we have to use condoms even after circumcision? (R8 uncircumcised respondent).

Even a circumcised participant had this to say:

Some people say that circumcision can help prevent STIs including HIV but I don't believe that circumcision can really prevent HIV. You mess around, you go (die) even if you were circumcised by the best doctor from America or Europe. This thing (HIV virus) does not respect the appearance of your tool (penis) (RB8 circumcised respondent).

Various tenets of health belief model are employed in achieving an effective VMMC communication strategy. According to this behavior change model, message effectiveness is dependent on the individual's self-efficacy and perceived benefits as well. The distinction between the expected behavioral outcome and efficacy of message is critical because both are

required for behavior modification (Rogers & Storey, 1987). For individuals to positively respond and act on the health information that they receive, they must believe that the change will benefit them (responsive efficacy, that is, VMMC is effective in preventing HIV) and they must be willing and capable of adopting the behavior change (self-efficacy, that is, one is able to seek VMMC to prevent HIV/AIDS). For a message to be effective in eliciting behavior change, individuals must (as HBM theorizes) feel threatened by their current behavioral patterns (perceived vulnerability to and severity of HIV/AIDS) and believe that change aimed by health information will result in a valued outcome at acceptable cost (perceived benefit, that is, protection from contracting HIV/AIDS). They must also feel themselves competent to overcome perceived barriers to taking action (Stretcher & Rosenstock, 1997).

The results of this study show that the interpersonally communicated messages elicit high threat to HIV/AIDS among both circumcised and uncircumcised respondents. In addition, majority respondents felt vulnerable to HIV/AIDS infection regardless of their circumcision status. The Extended Parallel Process Model (EPPM) states that the higher the perceived vulnerability to a negative event and perceived severity of a health condition or other negative consequence, the higher the intention to follow the recommendations. According to Witte, Mayer & Martell (2001) threat motivates action while efficacy determines the nature of action to be taken. They add that when the threat is low, there is no response expected to the message where it is not even processed while efficacy is not even considered.

It is expected that the higher the perceived self-efficacy and the more efficacious recommended response, the higher the intention to follow the recommendation. According to the EPPM when the threat is high and efficacy is high then people control the threat and protect themselves. When the threat is high and efficacy is low then people control their fear and ignore the message.

This study found out that interpersonally communicated messages elicit high threat and self-efficacy to both circumcised and uncircumcised men. However, response efficacy is quite low to both circumcised and uncircumcised respondents. According to Witte, Meyer & Martell (2001) when the threat is high where individuals believe the threat is real, severe and they are vulnerable to it while response efficacy is low where individuals believe that the recommended action (circumcision) is not effective in averting the threat (HIV/AIDS) and even if they adopted

circumcision it would not save them anyway it follows, then people control their fear and ignore the message.

Witte, Meyer & Martell assert that as long as the perceived efficacy is stronger than the perceived threat, then individuals are most likely to control the danger by accepting the message's recommendation and take appropriate action. However they add that when the perceived threat slips above the perceived efficacy, where people no longer think they can do something to effectively avert the threat. Once that perceived threat exceeds perceived efficacy, then people begin to control their fear instead of the danger therefore they reject the message (Witte, Meyer & Martell, 2001).

Given the low response efficacy of interpersonally communicated messages (finding of this study), it can be assumed that the high uptake of VMMC among the respondents (86.7%) can be attributed to other reasons but not for HIV/AIDS prevention (the objective of VMMC programme). To fortify this assumption, this study found out that 75% (n=36) of the uncircumcised respondents were willing to seek circumcision for other reasons such as penile hygiene but not as a measure to prevent HIV (Table 4.8). This is in tune with IAS conference that reported that the so-regarded as secondary benefits of social conformity, sexual attractiveness and feelings of being in control as a man were considerably more critical in making the decision to undergo the surgery than the expected perceived direct health benefits (International AIDS Society, 2013) and Lissouba et al (2011) who observes that while many men seeking VMMC may understand the protective benefits of circumcision, they are more likely to consider VMMC for other reasons, including hygiene, pleasing a sexual partner, and conforming to peer norms. Doyle and colleagues (2010) argue that VMMC campaign message emphasize that male circumcision is an additional prevention method for men, but that it does not replace measures such as delay in the onset of sexual relations, avoidance of penetrative sex, reduction in the number of sexual partners, and correct and consistent use of male or female condoms (Doyle et al., 2010). However according to Dikson et al (2011) there is enough evidence that communicating partial protection remains challenging. This may account for low responsive efficacy in the male circumcision messages shared via interpersonal contacts.

Table 4.8: Willingness to Seek MC for Non-HIV/AIDS Reasons

	Circumcised Respondents (n=327)		Uncircumcised Respondents (n=48)	
	Frequency	Percent	Frequency	Percent
SA/Agree	239	73.1	36	75
SD/Disagree	88	26.9	12	25

Note: “Undecided” are omitted.

Respondents perceived other benefits of male circumcision shown in Table 4.9 included: Male circumcision helps in preventing sexually transmitted diseases where 48% agreed and 4% had no opinion. A total of 51.2% agreed that male circumcision improves sexual performance while 3.2% recorded no opinion. A further 83.3% agreed that male circumcision promotes penile hygiene and 92% believed that it gives the penis a nice appearance. Another 52% agreed that male circumcision helps prevent penile cancer and cervical cancer among sexual partners and 5% were not sure.

Table 4.9: Perceived Other Benefits of MC

Opinion Statement on Perceived Benefits of MC	SA/A (%)	N/S (%)	SD/D (%)	Mean	Std. Deviation
Male circumcision helps prevent STI and HIV/AIDS	48.0	4.0	48.0	3.0212	1.30244
Male circumcision improves sexual performance	51.2	3.2	45.6	3.0106	1.32685
Male circumcision promotes penile hygiene	83.3	0.0	16.7	1.7719	1.13031
Male circumcision gives the penis a nice appearance	92.0	1.1	6.9	1.6313	.83753
Male circumcision helps prevent penile cancer and cervical cancer among men’s sexual partners	57.0	5.0	38.0	2.7772	1.5464

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) = 3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. n=377

4.3.1.5 Influence of Perceived Barriers to Self-Efficacy

Having examined the threat/efficacy beliefs, it was imperative to establish barriers to recommended action (undergoing male circumcision). According to Witte, Meyer & Martel

(2001), a high efficacy message addresses barrier to recommended response. The potential negative aspect of a particular health action may act as an impediment to undertaking the proposed behavior. A kind of cost benefit analysis is thought to occur wherein the individual weighs the action's effectiveness against perceptions unpleasant, inconvenient, and dangerous and so forth.

Table 4.10: Perceived Barriers to Seeking MC

Opinion Statement on Perceived Barriers to Seeking MC	SA/A (%)	N/S (%)	SD/D (%)	Mean	Std. Deviation
It is shameful to get circumcised if married or an adult	42.2	0.3	57.5	3.1698	1.28114
Male circumcision is only for appropriate for promiscuous married men	19.4	0.0	80.7	3.6180	1.04040
Male circumcision procedure is very painful	86.7	0.0	13.2	2.1247	.83018
Male circumcision results in a very long and unmanageable sexual abstinence	32.1	0.0	67.9	3.3979	1.25935
Male circumcision makes men worried that their wives/sexual partners could cheat on them to during post-surgery healing/sex abstinence:	9.3	0.0	90.8	4.0716	.83962
Male circumcision takes too long to heal among married men and adults	36.3	0.0	63.7	3.2891	1.29184
Male circumcision reduces sexual pleasure	19.6	4.5	75.9	3.5862	.98587
Married men and adults do not get the necessary post-surgery support from and for their family	94.4	0.5	5.0	1.8196	.67975
Male circumcision undermines my culture and identity	80.1	0.0	19.9	2.2095	1.02683

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. n=377

Table 4.10 shows that 42.2% of respondents agreed that it was shameful to “cut” at mature age or after marriage and only 0.3% were not sure. A total of 19.4% believed that male circumcision

is only appropriate to promiscuous married men while 86.7% said male circumcision procedure was very painful. A further 32.1% agreed with the notion that male circumcision resulted in a very long and unmanageable sexual abstinence. Among the respondents, only 9.3% agreed that married men were worried that their wives/sexual partners would cheat on them during post-surgery healing. Another 36.3% agreed that male circumcision takes too long to heal if done on married men while 19.6% believed it reduces sexual pleasure and 4.5% had no opinion. A total of 94.4% said that married men and adults do not receive necessary post-surgery support from and for their families while 0.5% recorded not sure. On culture, 80.1% agreed that male circumcision undermined their culture and identity.

These findings on barriers to seeking circumcision were majorly supported by qualitative data. For example one circumcised participant had this to say:

Before I was circumcised, my friends used to tell me that ooh if I get circumcised I will have a permanent back problem ooh that it will make me not do menial work especially in my farm. Others scared me that the wound could take forever to heal while others said it will reduce my sexual performance and pleasure and all these made me delay my decision to get circumcised (RB2, 47 years old Circumcised respondent).

Furthermore, uncircumcised interview participant eloquently said:

As a man with a daughter in law and grandchildren, it can be shameful to see yourself before them covering yourself with shukas during healing just because you have been circumcised. In short, it is shameful to get circumcised after reaching some age. For example, how do you expect me to go for circumcision with my sons? Oh no... it's too late. Surely, how do you expect my son with his age mates queuing with me at the hospital benches waiting to be circumcised? How will my friends react? Who have I killed or what have I stolen to be subjected to that nonsense? (R2, 49 years old).

Lending support to the above is a circumcised interview participant who admittedly said:

Many children in this area have been circumcised and that discourages older men from seeking circumcision. It is shameful to be circumcised at an old age especially after your sons. Our neighbours the luhya circumcise as a rite of passage to adulthood then how do you expect an old man to transit to adulthood after his own sons are already adults (circumcised)? It is too late for me to be circumcised. I don't want to be the talk of the village (RB5).

In this study's qualitative approach, culture stood out as a barrier to seeking circumcision especially among respondents above 40 years. One illustration of this is a polygamous and uncircumcised interviewee who said:

I will never wish to have anyone talk to me about circumcision. People should respect my culture the way we respect their cultures. I respect my culture and not even my children should ever be circumcised. I am not tired of being a Teso and I will die a Teso. Our neighbors say bad things about us Tesos who are uncircumcised. I will not fall into their trap (R3, 26 years old).

The finding of culture as an impediment to behavior change is supported by Institute of Medicine Committee on Communication for Behavior Change in the 21st Century (2011) argues that one of the major factors influencing the strength of intentions to performance or nonperformance of a behavior is one's perception of the norms governing the behavior. It defines perceived norms as the degree to which an individual perceives that a given behavior is viewed as appropriate or inappropriate by members of one's social network or society at large. Norms reflect the amount of social pressure one feels about performing or not performing a specific behavior. Broadly, there are two types of normative pressure. Firstly, an individual may believe that particular persons or groups that are important to the individual think that he or she should (or should not) perform the behavior in question. Secondly, a person may believe these important others are, or

are not, performing that behavior. It is therefore crystal clear that both types of normative pressures ultimately influence behavior and intention.

Some of the barriers identified in this study are supported by what other recent studies have found out such as fear of HIV testing that precedes circumcision, concerns about adverse effects (e.g. lack of sexual pleasure), (Lagarde et al., 2003; Ngalande et al, 2006) transport costs (Nieuwoudt et al., 2012), time off from work (Nieuwoudt et al. 2012; Rain-Taljaard et al, 2003), temporary sexual abstinence and unsupportive cultural norms (Nnko et al., 2001). Herman-Ruloff et al. (2011) noted that among older men it is the hesitations about taking time off work after surgery and particular concerns regarding abstinence from sex for the recommended six weeks' post-surgery especially among married men. To others it is the fear that it would be painful (International AIDS Society, 2013).

Suffice it to note that out of the interviews the findings show that where there are discussions about male circumcision, a significant content of messages shared about it were negative such as it being painful, the wound taking too long heal, shameful and inappropriate at older age. Previous studies show that conversational valence has a substantial influence on health-related attitudes, subjective norms, perceived behavioral control, intentions, and behaviors (Hendriks et al., 2014). Discussions that is positive toward healthy behaviors or negative toward unhealthy behaviors result in desirable and healthy attitudes, intentions, and behaviors. However, when people speak negatively about healthy behaviors (being circumcised) or positively about unhealthy conduct (being uncircumcised), this results in unhealthier determinants of health behaviors. Despite these studies demonstrating the important consequences of conversational valence, it is not yet known whether conversational valence can be predicted by health campaign exposure. However, health campaigns can prompt a more negative conversational valence about unhealthy behaviors because many health messages aim to reduce unhealthy conduct by stressing the negative consequences of unhealthy behavior (Hendriks, n.d; Hendriks et al., 2014).

Thus, as Rosenstock of the health belief model observes that the combined levels of susceptibility and severity provides the energy or force to act and the perception of benefit (less barriers) provides a preferred course of action (Rosenstock, 1974). There is therefore need to address the above perceived barriers to adopting circumcision. From the interpersonal communication messages, there is a high combined level of susceptibility and severity that offers

adequate force for men to seek male circumcision so as to enjoy the perceived benefit (HIV prevention and other non-medical reasons such as penile hygiene). However, there are outstanding barriers such as post-surgery support which counters the force to act (seek circumcision) hence impeding uptake of VMMC.

4.3.2 Influence of Interpersonal Communication Source Attribute on Uptake of VMMC

The second objective of this study was *to examine the influence of interpersonal communication source attributes on uptake of VMMC among married men in Kenya*. To achieve this, respondents were asked to rate VMMC source trustworthiness, expertise and similarity with recipient based their perceived credibility and influence on uptake of VMMC. To start, it is important to find out the respondents' sources of VMMC information.

4.3.2.1 VMMC Communication Sources

Literature on health interventions state that mass media is important in creating awareness while interpersonal influence is critical is influencing an individual adopt a healthy practice. In order to optimize the potential impact of a given message, the selection of a communication source is crucial and a complex process involving knowledge of the audience and of the health behavior change message. The “stronger” the message, the less important the source. However, credible sources can increase the likelihood that a “weak” message will be accepted, but the credibility of the source has relatively little influence on the likelihood that the audience will just accept a “strong” message (McCroskey, 1970).

In this respect, the respondents of this study were asked to identify their sources of VMMC information and results were as shown in Table 4.11.

Table 4.11: Sources of VMMC Information

Source	Frequency (n=377)	Percent
Mass Media	317	84.1
Public Meetings	301	79.8
Health Worker	339	90.0
Wife	183	48.5

Male Friend	307	81.4
Female Friend	11	2.9
Parent	34	9.0
Other Relatives	69	18.3
Other Sexual Partners (<i>Mpango wa Kando</i>)	13	3.4
Religious/Cultural/Political Leaders	31	8.2
Others	2	.5

The Table shows that respondents were mainly exposed to VMMC information via health workers (90%), mass media (84.1%), male friend (81.4%), public meetings (79.8), wife (48.5%) and other relatives (18.3%). Female friend and other sexual partners were mentioned by only 2.9% and 3.4% respectively meaning that married men seldom talk about VMMC with their female friends and other sexual partners. This finding in Teso sub region of Kenya replicates what was found out in Nyanza Province of Kenya where it was reported that word of mouth was the most important source of information about male circumcision followed by mass media (Progress Report on Kenya's Voluntary Medical Male Circumcision Programme 2008-10, 2011). Similarly, this finding is also a replica of Kaler (2003; 2004) studies that observed that in Malawi many Malawians obtain sexual health information, including information on HIV/AIDS, through interpersonal contacts with members of their communities.

4.3.2.2 Influence of Communication Source Trustworthiness on Uptake of VMMC

People are exposed to communication from different sources, but are most likely to accept communication from a person that they trust because they consider it to be a good source of reliable information. The Institute of Medicine Committee on Communication for Behavior Change in the 21st Century (2002) assert that source that delivers health communication campaign message can determine whether the message is perceived as meaningful, credible and/or relevant to the target audience. Different populations relate to or are more or less influenced by different messengers. One of the criteria to determine credibility of health communication sources is trustworthiness of the source which can be as a person's natural position in the family or community or through their personal qualities or actions.

In this study, the researcher wanted to establish how respondents rated perceived trustworthiness as the most credible and influential source attribute in seeking VMMC. The results were as shown in Figure 4.1.

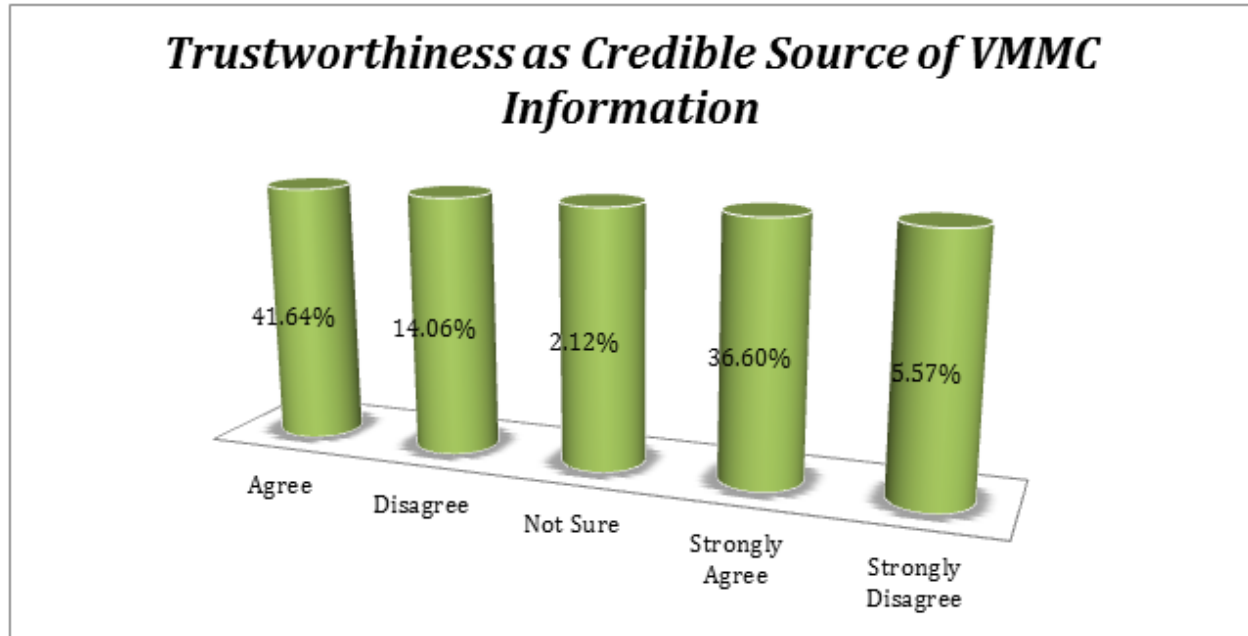


Figure 4.1: Influence of Communication Source Trustworthiness Attribute on Uptake of VMMC

Figure 4.1 shows that majority of respondents (41.64%) agreed that trustworthiness is an important communication source attribute in the uptake of VMMC while 36.60% strongly agreed while 2.1% registered no opinion. A total of 14.06% disagreed with trustworthiness as an important source attribute in seeking VMMC while only 5.57% disagreed. Table 4.12 below summarizes this finding by showing the mean rating.

Table 4.12: Trustworthiness as Credible Source of VMMC Information

Opinion on Statement	SA/A (%)	N/S (%)	SD/D (%)	Mean	Std. Deviation
I regard trustworthiness as the most credible and influential source attribute in the decision to seek MC	78.2	2.1	19.7	2.1034	1.20169

Note: "Strongly agree" and "agree" are combined as SA/A while "Strongly Disagree" and "Disagree" as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

Table 4.12 shows that majority of respondents (78.2%) agreed that perceived trustworthiness was a critical interpersonal source attribute in seeking VMMC while 19.7% disagreed and only 2.1% recorded no opinion. The mean of 2.1034 shows that majority of respondents agree that source trustworthiness was a factor in seeking VMMC. The respondents were further asked to identify the source they perceived as trustworthy when seeking VMMC and the results were as shown in Table 4.13

Table 4.13: Cross Tabulation of Trusted Sources and Circumcision Status

Source	Circumcised Respondents (n=327)		Uncircumcised Respondents (n=48)	
	N	%	N	%
Mass Media	19	5.8	2	0.4
Health Worker	113	34.6	19	39.6
Male Friend	166	50.8	21	43.8
Just a friend/Neighbour	3	0.9	2	0.4
Wife/Sexual Partner	19	5.8	3	6.3
Family Member	4	1.2	0	0
Opinion Leader	2	0.6	1	2.1
Others	1	0.3	0	0

Table 4.13 shows that a male friend is perceived as the most trusted by 50.8% and 43.8% of circumcised and uncircumcised respondents respectively followed by a health provider (34.6% and 39.6%) among circumcised and uncircumcised respondents respectively. Among the uncircumcised, 6.3% identified their wives/sexual partners as the most trusted source of VMMC information and 5.8% of the circumcised respondents consented. It is imperative to note that in a health provider is more trusted among uncircumcised respondents than among the circumcised ones.

This finding, however, challenges a similar study by Weinert & Burman (1994) who stated that rural residents (the focus of this study) place special importance on neighbors and family members as sources of health information and support more often than health care providers.

4.3.2.3 Influence of Communication Source Expertise on Uptake of VMMC

In this study, male circumcision is carried out as a medical intervention and therefore the influence of expertise of information provider cannot be down played. According to Eagley & Chain (1993) expertise means the knowledge, expertise status, and familiarity with the topic. Credibility of sources as a result of their expertise comes from respect for their qualifications or training. Respondents were asked to rate how they perceived expertise as the most influential information source attribute in the decision to seek VMMC. The responses were as shown in Figure 4.2.

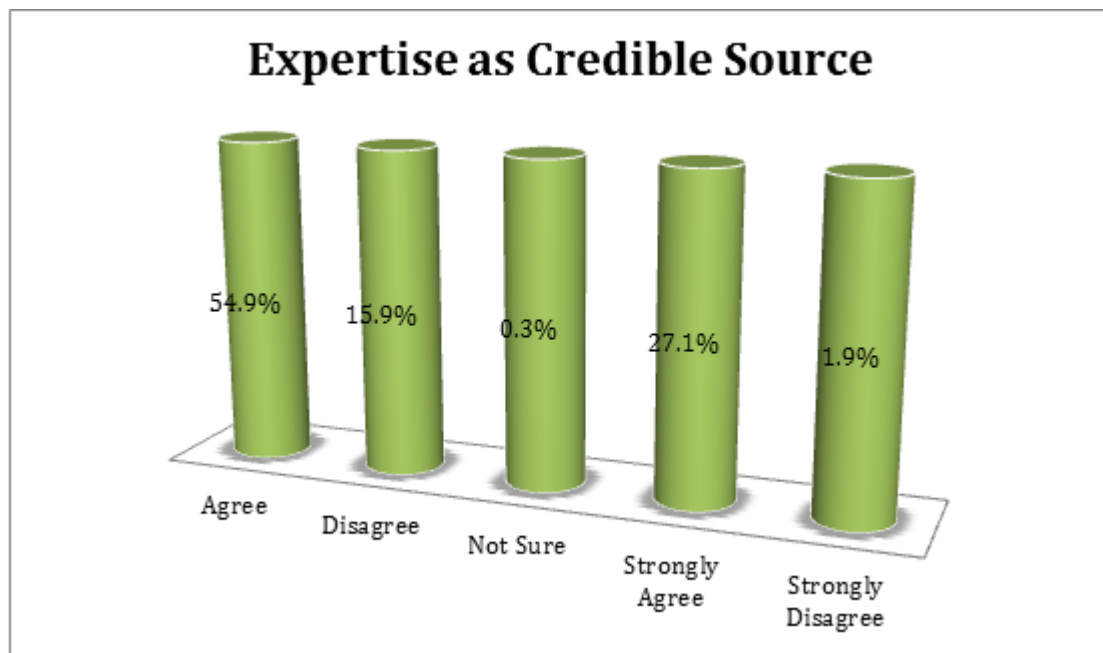


Figure 4.2: Influence of Communication Source Expertise Attribute on uptake of VMMC

Figure 4.2 shows that 54.9% and 27.1% agreed and strongly agreed respectively that source expertise is an important attribute in seeking VMMC while 0.3% were not sure. On the other hand, 15.9% disagreed and 1.9% strongly disagreed. Table 4.14 shows the summary and the mean rating of expertise source attribute.

Table 4.14: Expertise as Credible Source of VMMC Information

Opinion on Statement	SA/A	N/S	SD/D	Mean	Std.
	(%)	(%)	(%)		Deviation
I regard expertise as the most credible and influential source attribute in the decision to seek MC	82.0	0.3	17.8	2.1061	1.03368

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

Table 4.14 indicates that majority of respondents (82%) rated (mean=2.1061) expertise as either strongly agreed or agreed as an important criteria of establishing credibility of communication source in the uptake of VMMC. So far these findings on trustworthiness and expertise source attributes are supported by Pornpitakpan (2004) analysis where he argues that trustworthiness and expertise, though named slightly different across studies (eg, reputation and competence), remain the most frequently mentioned, tested, and theoretically agreed-upon dimension of source credibility.

The respondents were further asked to identify sources they perceived as experts in providing VMMC information and the results are shown in Table 4.15.

Table 4.15: Perceived Expert Source of VMMC Information

VMMC Information		Circumcision Status		
Source	Circumcised Respondents (n=327)		Uncircumcised Respondents (n=48)	
	Frequency	Percent	Frequency	Percent
Mass media	19	5.8	2	0.4
Health Worker	204	62.4	31	64.6
Male friend	101	30.9	9	18.6
Just a friend/ Neighbour	3	0.9	1	2.1
Wife/Sexual Partner	21	6.4	4	8.3
Parent/Family Member	3	0.9	0	0

Opinion Leader	16	4.9	1	2.1
Others	1	.3	0	0

Table 4.15 indicates that majority of respondents both circumcised and uncircumcised consider a health worker as expert they would wish to seek information from about male circumcision if they were to consider seeking circumcision. This was distributed to a total of 62.4% and 64.6% uncircumcised respondents agreed. This was followed by a friend who was mentioned by 30.9% and 18.6% of circumcised and uncircumcised respondents respectively. Only 5.2% of circumcised respondents perceived opinion leader as expert they would seek male circumcision information from while 2.1% of uncircumcised respondents concurred. Parents and other family members were mentioned by only 0.9% of respondents who were all circumcised

This finding is supported by Snell & Buck (1996) and Rimer (1994) who argue that health providers for decades have been identified as important sources of health communication messages relevant to behavior change.

From the interviews, the issue came out strongly. This is evidenced by uncircumcised interview participant who had this to say:

I have no problem with getting circumcised but what I need is to privately meet a doctor who can persuade me to go for this thing (circumcision) because I believe he is better placed because of his training to address my concerns such as the pain during and after the surgery, duration it will take to heal, how to take care of the wound and other small small issues (R11, 37 years old).

To illustrate the interplay between expertise and similarity between interpersonal communication participants, one uncircumcised interview participant had noted the following:

Just in case there is any medical reason for adopting circumcision then I will need an expert to explain to me. This expert should come from my community or any

other community that do not practice traditional circumcision so that I don't feel as if he wants to impose his cultural practice on me (R1 49 years old).

Literature gives support to the influential role of health workers in health interventions. Negri et al (2009) have stated that effective interpersonal communication between health care providers is one of the most important elements for improving client satisfaction, compliance and health outcome. They observe that patients who understand the nature of their illness and treatment, and believe the provider is concerned about their well-being, show greater satisfaction and are more likely to comply with treatment or recommended action.

4.3.2.4 Influence of Similarity with Source Attribute on Uptake of VMMC

Another important parameter for determining source credibility comes from the extent to which the communication source shares characteristics such as ethnicity, age, education or experiences with the receiver. A person from a similar background to the members of a given community is more likely to share the same language, ideas and motivations and thus be a more effective communicator. On similarity, the respondents showed preference to talking about male circumcision to people from their own ethnic communities which does not practice traditional circumcision and to fellow men as indicated in Table 4.16.

Table 4.16: Similarity with Self as a Credible Source of VMMC Information

Similarity with Source Attribute	SA/A (%)	N/S (%)	SD/D (%)	Mean	Std. Deviation
Age	85.4	1.9	12.5	1.9176	1.38799
Ethnicity	84.1	1.6	14.4	2.0822	1.38038
Gender	36.3	1.1	62.4	3.3501	1.61754
Marital Status	12.5	0.5	86.5	4.2387	3.44505

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) = 3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

Table 4.16 demonstrates that 85.4% would consider similarity with source in relation to age as an important attribute discussing about VMMC and 1.9% were not sure. A total of 84.1% agreed

that similarity in ethnicity to be an important attribute while 1.6% recorded no opinion. A further 36.3% agreed that similarity in relation to gender to be important and 1.1% were not sure. Only 12.5% said similarity in terms of marital status to be an important consideration for discussing and uptake of VMMC.

Studies show that communication is most effective when both the source and the receiver share basic meanings. Similar people, of course, already have a basic vocabulary in common. The same holds true of two people of the same age and sex. They readily understand each other. They share a common vocabulary (Jan & Siraj, 2008). Bandura (1997) aptly puts it by stating that the more one can “identify” with the model that is, seeing the model as similar to one’s self, the more one is likely to view the model’s attainments as diagnostic of one’s own capabilities. The more a peer has in common with a person, with whom he or she interacts, the more likely that person is to receive messages and be influenced (The International Federation of Red Cross and Red Crescent Societies, 2009). A peer is a member of a group of people who share the same characteristics, for example, people of the same age group and background or those who do the same type of work or have the same or similar lifestyles, experiences or beliefs.

Knowing that you are not alone with your problems and having an understanding of shared vulnerability, of shared responsibility, and also of shared power and advocacy possibilities means that there is a greater likelihood that action will be taken by the individual or group (PATH 2008). This issue of similarity between interpersonal communication participants was well articulated in this study via one circumcised bodaboda rider interview participant who said:

There are two events that made me seek circumcision. First, I saw my neighbours and friends some of whom were my classmates getting circumcised and secondly, one evening after work while having my usual drink and chatting with my colleagues, neighbors and friends, somebody started the circumcision topic but I cannot remember how it started or even how it ended. What I can remember is that during the hot discussion my colleague who like me was not circumcised dared me to accompany him the following day for circumcision if

I was a man enough. I took up the challenge and that is how I finally got circumcised (RB11, 37 years old).

From a communication point of view and when it comes to large groups, this quote and previous studies suggest that members tend to direct their communications to people similar to themselves and as a group gets larger, factions may start to appear. Webb and Thomas –Hayes (2002) concur by stating that people of same values choose to associate with each other and adds that groups demand conformity to continue identity, existence and accomplish goals. Factions are clusters of members that restrict their communications to others who believe as they do. It is important to note that clusters may develop around criteria external to the discussion, such as religion, status, socioeconomic values among others thus reinforcing the similarity argument.

An analysis of similar research conducted show that influence of social pressure was also found in a study conducted in the Iringa region of Tanzania. Peer pressure was mentioned by participants as a facilitator. However, respondents highlighted that this facilitator is more relevant in towns and in mixed cultural settings (Plotkin et al, 2011). Another study in traditionally circumcising areas (Mbale and Kasese districts), and non-circumcising areas (Pallisa) in Uganda examined the influence of peer pressure on men's decisions to undergo male circumcision. In the non-circumcising areas, peer pressure was a key determinant of the uptake of circumcision. For instance, in this area, individuals made a group decision to undergo male circumcision. Peer pressure also influences individuals in circumcising areas to seek VMMC. In those areas, young people are the most influenced by peer pressure (Muhandi, 2010).

To illustrate the interplay between expertise and similarity between interpersonal communication source and receiver, one uncircumcised interview participant noted the following:

Just in case there is any medical reason for adopting circumcision then I will need an expert to explain to me and address my concerns. This expert should come from my community or any other community that do not practice traditional circumcision so that I don't feel as if he wants to impose his cultural practice on me (R1 49 years old).

This finding shows that the similarity with interpersonal VMMC source is crucial in a man's decision to seek circumcision. The finding is supported by McNeill and Dorgan (n.d) research assessing the influence of social networks in promoting women to have mammogram which indicated that among several participants, social networks (involving women who were similar to them) tended to be perceived as providing credible information, especially about pain expectations.

To fortify the similarity with source argument in health interventions, PATH (2008) recommended one of the ways to ensure that key populations are able to analyze their situations in relation to HIV/AIDS and male circumcision in an open manner without fear of judgment, is to have interpersonal communication facilitators who are also from the key populations for the following reasons: First, key population members best understand and empathize with their peers and are able to win their confidence so that information can be shared and analyzed without fear or prejudice. Second, they are able to communicate well with other key population members and use familiar, colloquial language. Third, key population members can help groups and individuals to discuss 'secret' and taboo behaviors in depth. And lastly, the use of key population members as peer interpersonal communication facilitators paves the way for the mobilization of key populations and builds a sense of ownership.

Generally, perceptions of source credibility significantly determine how an individual process health and risk messages, and may also influence relevant behaviours. When a source is perceived to be highly credible, a message may more effectively change attitudes and behavior (Pornpitakpan, 2004).

From interpersonal communication perspective which is central in this study, studies show that people learn from each other. However, Ignatius & Kokkonen (2007) have argued that they cannot learn from one another until they have established some measure of rapport that is some element of mutual trust, support and respect. Male circumcision is a high involvement decision to which people give serious thought. To engage a potential client, he needs an opportunity to talk with someone who is knowledgeable and whom he trusts. This may facilitate the internal decision-making process and encourage the man to seek circumcision (WHO, 2010).

Similarly, male circumcision is a private matter and according to Communication Private Management Theory (CPMT), individuals maintain and coordinate private boundaries (the limits of what they are willing to share) with various communication partners depending on the perceived benefits and costs of information disclosure (Petronia, 1991). Since private information can be about yourself or others, the decision as to what is private and whom to share it with plays a part when taking the idea of boundaries into consideration (Mathews, Derlega & Morrow, 2006). This means that for one to share information about male circumcision he needs to have developed some form of trust with the communication partner as it results in co-ownership of the private information.

In other words, CPM theory argues that when someone chooses to share private information such as about circumcision information with another person, he is making that person a co-owner of the information. Co-ownership comes with rules, responsibilities, and rights which the discloser of the information and receiver of it negotiate (Petronia, 1991). It is therefore important to establish communication source/partner characteristics and how they influence uptake of VMMC.

Qualitative approach of this study generated mixed results on interpersonal influences in seeking circumcision. Some circumcised participants said that they were encouraged by their wives to seek the “cut.” One demonstration of this is a participant who said:

My wife was always complaining of my sexual under performance and kept on recommending circumcision. That made me feel less of a man and I went for circumcision which made my wife very happy and we are now at peace (RB5 circumcised Respondent).

To fortify the role of women in influencing men seek circumcision, consider the situations in which two interview participants eloquently said:

My circumcised bodaboda colleagues and friends always boast that circumcision improved their sexual performance. I do not believe if indeed circumcision can

improve sexual performance because it is the men who are saying that and not the ladies. If it were the ladies, then I would believe. If my wife was to tell me that my circumcision will improve our sexual life which I doubt if she can say that but if she does then I will face the knife (R6, 24 years old and uncircumcised).

From my experience as a community based health worker involved in educating the community about HIV/AIDS I believe that in order to encourage married men to seek circumcision in this community then we need to use women to persuade their husbands. Women need to know that circumcision improves sexual performance and improves penile hygiene. Such a message resonates well with women. Women need to see circumcision beyond HIV prevention. Circumcision involves a sex organ and that is why men will trust their wives (RB10, 44 years old community based health worker dealing with VMMC).

Previous studies suggest that women as intimate partners can influence their partners in the decision to seek circumcision. Male respondents in a study carried out from non-circumcising areas in two districts in Uganda said that their female partners may influence their decisions to undergo circumcision and/or get their sons circumcised. Also, some men reported that they would seek the consent of their wives or partners before undergoing circumcision. This same study also revealed that most women are supportive of male circumcision and are capable of positively influencing their men to undergo circumcision (Muhangi, 2010). Another study amongst the Luo ethnic group in Kenya found that women's beliefs may have a strong influence on men's acceptability of circumcision (Bailey et al (2012).

On one hand this study has established the influential role of women in men's decision to seek circumcision on the hand the same study, however, the wife factor was clearly refuted by especially some uncircumcised and older interview participants. A case in point is a participant who said:

I have never discussed the issue of circumcision with my wife. What for? She found me this way. If she introduces such a topic for discussion, then I will be offended. I may think that she has started cheating on me by “tasting” someone who is different from me! (R2, uncircumcised and 49 years old).

Furthermore, the interviews revealed that indeed women as wives can go the extra mile to discourage their partners from seeking circumcision. One illustration of this is an uncircumcised participant who eloquently said:

Two years ago I really wanted to go for circumcision but when I consulted my wife about it she blatantly refused. She said that she is not prepared to see me lying in bed, in pain with a wound that she cannot help nurse. She even went ahead and said that our children were already teenagers but what made me erase totally the idea of getting circumcised is when she said that she is not complaining of my circumcision status and went further to challenge me to name whoever was complaining. (R15, 48 years old)

4.3.3 Influence of Interpersonal Communication Context on Uptake of VMMC

Interpersonal communication is contextual. In other words, this communication does not take place in isolation. The interpersonal communication context is shaped by the socio-demographic characteristics of the participants as well as by the environment in which the communication takes place. Objective 3 of this research is to assess the influence of different interpersonal discussion contexts on uptake of male circumcision.

In this study, respondents unanimously agreed that information about male circumcision which is also a medical intervention is perceived as private information. Egan (1973) posits that the “sharing of the human condition – in its sublimity, sanality, and deformity – pulls people together” (p.41). He observes that deception and concealment is the cause of the many emotional problems people suffer. Concealment in itself results in emotional disturbances and that self-

revelation, even when accompanied by relevant behavioural change effects a cure. In most groups, the prospect of revealing oneself is unsettling and is always approached gradually. Many members of a group know that self-revelation, if engaged in responsibly is a value in human living, still they need time to muster courage needed to talk about oneself. Studies show that context in interpersonal communication is one of the factors that motivate individuals to conceal or reveal private information (Durham, 2008; Petronio, 2002). It is therefore critical to establish interpersonal communication contexts that promote self-disclosure of information about male circumcision.

4.3.3.1 Influence of Communication Physical Location on Uptake of VMMC

Discussions about a private matter such as circumcision takes place in some physical setting and different factors determine the choice of the place to hold such discussion. Petronio (1991) argues that in interpersonal communication rules are set in different social situations which dictate the type of disclosure that should be made, for example, the difference between self-disclosure at a family member's birthday party at home versus an office event at work. Petronio asserts that each situation will come with its own set of rules for managing privacy that are learned over time hence influencing disclosure. In this study, the researcher wanted to find out the preferred physical location to constructively discuss about male circumcision if the respondents were to be given opportunity to choose. The results were as shown in Table 4.17.

The table shows that close to a half (49.6%) of respondents would prefer to hold such discussions at their homes while 52.8% preferred a health facility. A total of 46.4% agreed that they would be comfortable holding discussion about male circumcision anywhere however 53.6% were only fine with anywhere but private.

Table 4.17: Preferred Place for Discussing about VMMC

Preference of Physical Location for Talking about VMMC	SA/A (%)	N/S (%)	SD/D (%)	Mean	Std. Deviation
Home	49.6	0.0	50.4	2.9151	1.19761
Health Facility	52.8	0.0	47.2	2.9072	1.32061
Anywhere	46.4	0.0	53.6	2.9629	1.67227
Anywhere but Private	53.6	0.0	46.4	2.9867	1.63646

Note: "Strongly agree" and "agree" are combined as SA/A while "Strongly Disagree" and "Disagree" as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (N/S) = 3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

4.3.3.2 Influence of Communication Time on Uptake of VMMC

MC is traditionally practiced by many communities in Kenya as a rite of passage to adulthood. It is therefore a culturally sensitive issue especially among communities that do not traditionally practice circumcision and a target of VMMC programme. This study sought to find out the influence of these circumcision seasons on seeking VMMC. The results shown in Figure shows that 19.6% and 7.2% agreed and strongly agreed that traditional circumcision seasons of neighboring communities influence seeking of VMMC. On the other hand, 68.7% and 4.5% registered disagreed and strongly disagreed respectively. Figure 4.3 summarizes this finding including providing the respondents mean rating of the seasons.

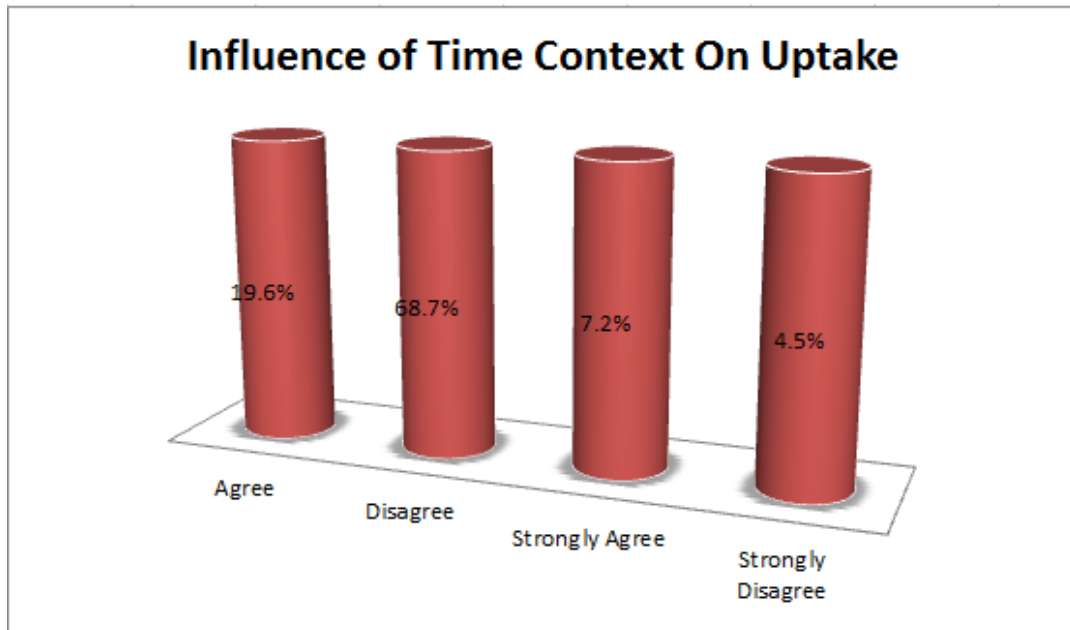


Figure 4.3: Influence of Traditional Circumcision Seasons on Uptake of VMMC

Table 4.18 below shows that majority of respondents (73.2%) with a mean of 3.4377 would not give a damn to those seasons when seeking VMMC. This is an important finding bearing in mind what Bailey et al (2002) noted that in Kenya being uncircumcised was regarded as identity of particular communities and was also perceived as a cultural tradition. Therefore introduction of the topic of circumcision especially when it is at the agenda of other communities (circumcision season) was thought to erode their identity as tribes.

Table 4.18: Influence of Traditional Circumcision Season on uptake VMMC

Opinion on Statement	SA/A	N/S	SD/D	Mean	Std.
	(%)	(%)	(%)		Deviation
I regard traditional circumcision season of my neighboring communities as inappropriate time to talk about VMMC	26.8	0.0	73.2	3.4377	1.07780

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (NS) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

4.3.3.2 Influence of Communication Socio-Psychological Context on Uptake of VMMC

Table 4.19: Influence of Socio-Psychological context on Discussing about VMMC

Opinion on Statement	SA/A	N/S	SD/D	Mean	Std.
	(%)	(%)	(%)		Deviation
I regard presence of my spouse/sexual partner and/or other family members as appropriate in discussing about VMMC	39.3	2.1	58.6	3.1777	1.40959
I regard presence of persons of the opposite gender (woman) as inappropriate when discussing about VMMC:	31.0	1.1	67.9	3.2440	1.31839
I regard confidentiality of information shared as very important consideration in discussing about VMMC:	26.5	0.0	73.5	3.3554	1.24025
I regard privacy as a very important consideration in discussing about VMMC:	22.3	1.3	76.4	3.5093	1.27394
I find it easy to self-disclose personal information about male circumcision:	76.7	0.0	23.3	2.3183	1.19596

Note: “Strongly agree” and “agree” are combined as SA/A while “Strongly Disagree” and “Disagree” as D/SD

Ranked on Scale: Strongly Agree (SA) = 1; Agree (A) = 2; Not Sure (NS) =3; Disagree (D) = 4; and Strongly Disagree (SD) = 5. N=377

Table 4.19 shows that only 39.3% of respondents find it appropriate to discuss about VMMC in the presence of their wives/sexual partners or family members and 2.1% registered no opinion. Again, 31% regard presence of women as inappropriate when discussing about VMMC and 1.1% were not sure. A total of 26.5% of respondents agreed that confidentiality of information shared important when discussing about VMMC while 22.3% regard privacy as very important consideration in discussing about VMMC. Furthermore, 76.7% find it easy to disclose personal information about male circumcision when discussing about VMMC. These findings goes against the assertion by Limaye et al (2012) in view of partner-to-partner where they alleged that males were fearful of discussing sex including protective communication behavior in presence of their female partners because these discussions suggested unfaithfulness.

4.4 Descriptive Statistics for Uptake of VMMC

Table 4.20: Respondents Uptake of VMMC

Uptake of Male Circumcision	Frequency	Percent
Circumcised Respondents	327	86.7
Uncircumcised Respondents	48	12.7
No Answer	2	.6
Total	377	100.0

Table 4.20 shows that of all the men surveyed 86.7% were circumcised while 12.7% were not and 0.6% did not answer. This uptake of circumcision is above the WHO & UNAIDS target of circumcising 80% of males from non-circumcising communities by 2011. It is equally important therefore to establish when the respondents were circumcised.

Table 4.21: When the Circumcised Respondents were circumcised

When Respondents were Circumcised	Frequency	Percent
After Marriage	117	35.7
Before Marriage	208	63.6

No Answer	2	.7
Total	327	100.0

From Table 4.21 above, only 35.7% said that they were circumcised after marriage and 63.6% circumcised before marriage. What can be deduced is that there are fewer people getting circumcised while already married. This means marriage and mature age are barriers to seeking circumcision. In other words, there is low uptake of VMMC among married men and this gives impetus to this study. This finding is also in tune with scholars such Sgaier et al (2015), Westcamp et al (2012) and Mwandi et al who observed older males are largely not adopting VMMC and suggested need to create demand among this category of males. Consequently, there is need formulate strategies to make VMMC attractive to married and adult males.

4.5 Intervening Influence of Demographic Factors on Interpersonal Communication and Uptake of VMMC

The fourth objective of this study was to establish the intervening influence of demographic factors on interpersonal communication and uptake of VMMC. Demographic characteristics such as age, educational level and duration of marriage do intervene between uptake of male circumcision and interpersonal communication. This study focused on age, education level and duration of marriage as demographic characteristics intervene on the relationship between interpersonal communication and uptake of VMMC among married men in Kenya.

4.5.1 Intervening Influence of Demographic Factors on VMMC Interpersonal Messages

A Pearson Product-Moment Correlation Coefficient was computed to establish the relationship between demographic factors and interpersonal communication messages. Table 4.22 presents the findings: It indicates that there exists an insignificant negative correlation between age and elicited threat = $-.226$, $p < 0.000$ and barriers to seeking VMMC = $-.256$, $p < 0.000$ are both below 0.05. On another hand age had an insignificant positive relationship with self-efficacy = $.324$, $p < 0.000$ and a significant positive relationship with response efficacy = $.070$, $p < 0.176$.

Education as a demographic factor had a significant negative relationship with threat = $-.042$, $p < 0.418$, self-efficacy = $-.022$, $p < 0.667$ and response efficacy = $-.012$, $p < 0.813$ and a significant positive relationship with barriers to seeking VMMC = $-.051$, $p < 0.323$.

Marriage duration had a significant negative correlation with threat = $-.096$, $p < 0.064$ and insignificant correlation with barriers to seeking VMMC = $-.298$, $p < 0.000$. It recorded insignificant positive correlation with self-efficacy = $.249$, $p < 0.000$ and response efficacy = $.137$, $p < 0.008$.

Table 4.22: Influence of Demographic Factors on Interpersonal Messages

		Correlations						
		Threat	Response Efficacy	Self-Efficacy	Age	Education Level	Uptake of VMMC	Marriage Duration
Threat	Pearson Correlation	1	-.218**	-.115*	-.226**	-.042	.051	-.096
	Sig. (2-tailed)		.000	.026	.000	.418	.323	.064
	N	377	377	377	377	377	377	377
Response Efficacy	Pearson Correlation	-.218**	1	.252**	.070	-.012	.002	.137**
	Sig. (2-tailed)	.000		.000	.176	.813	.961	.008
	N	377	377	377	377	377	377	377
Self-Efficacy	Pearson Correlation	-.115*	.252**	1	.324**	-.022	-.007	.249**
	Sig. (2-tailed)	.026	.000		.000	.667	.896	.000
	N	377	377	377	377	377	377	377
Age	Pearson Correlation	-.226**	.070	.324**	1	.108*	.044	.612**
	Sig. (2-tailed)	.000	.176	.000		.035	.399	.000
	N	377	377	377	377	377	377	377
Education Level	Pearson Correlation	-.042	-.012	-.022	.108*	1	.136**	-.138**
	Sig. (2-tailed)	.418	.813	.667	.035		.008	.007
	N	377	377	377	377	377	377	377
Uptake of VMMC	Pearson Correlation	.051	.002	-.007	.044	.136**	1	.063
	Sig. (2-tailed)	.323	.961	.896	.399	.008		.226
	N	377	377	377	377	377	377	377
Marriage Duration	Pearson Correlation	-.096	.137**	.249**	.612**	-.138**	.063	1
	Sig. (2-tailed)	.064	.008	.000	.000	.007	.226	
	N	377	377	377	377	377	377	377
Barriers to Self-Efficacy	Pearson Correlation	-.001	-.116*	-.282**	-.256**	.051	-.167**	-.298**
	Sig. (2-tailed)	.984	.025	.000	.000	.323	.001	.000
	N	377	377	377	377	377	377	377

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

4.5.2 Influence of Demographic Factors on Interpersonal Communication Source Attribute

A Pearson Product-Moment Correlation Coefficient was again computed to assess the relationship between demographic factors and interpersonal communication source attribute. Table 4.23 indicates that there exists a significant positive correlation between age and source trustworthiness = .422, $p < 0.000$. However, there was a significant negative correlation with expertise = -.333, $p < 0.000$ and an insignificant negative correlation with similarity with self attribute = -.071, $p < 0.166$.

Education as a demographic factor had insignificant positive relationship with trustworthiness = .301, $p < 0.000$, expertise recorded a significant negative correlation = -.264, $p < 0.000$ and similarity had insignificant negative correlation = -.014, $p < 0.793$.

Marriage duration had a significant positive correlation with trustworthiness = -.096, $p < 0.064$, insignificant negative correlation with source expertise attribute = -.298, $p < 0.000$ and an insignificant negative correlation with similarity = .008, $p < 0.881$.

Table 4.23: Influence of Demographic Factors on Source Attribute and on Uptake of VMMC

		Correlations						
		Age	Education Level	Uptake of VMMC	Marriage Duration	Similarity with Source	Trust	Expertise
Age	Pearson Correlation	1	.108*	.044	.612**	-.071	.422**	-.333**
	Sig. (2-tailed)		.035	.399	.000	.166	.000	.000
	N	377	377	377	377	377	377	377
Education Level	Pearson Correlation	.108*	1	.136**	-.138**	-.014	.037	.001
	Sig. (2-tailed)	.035		.008	.007	.793	.476	.990
	N	377	377	377	377	377	377	377
Uptake of VMMC	Pearson Correlation	.044	.136**	1	.063	.070	.060	-.053
	Sig. (2-tailed)	.399	.008		.226	.174	.246	.304
	N	377	377	377	377	377	377	377
Marriage Duration	Pearson Correlation	.612**	-.138**	.063	1	-.008	.301**	-.264**
	Sig. (2-tailed)	.000	.007	.226		.881	.000	.000
	N	377	377	377	377	377	377	377
Similarity with Source_weighted	Pearson Correlation	-.071	-.014	.070	-.008	1	.014	.070
	Sig. (2-tailed)	.166	.793	.174	.881		.790	.177
	N	377	377	377	377	377	377	377
Trustworthiness	Pearson Correlation	.422**	.037	.060	.301**	.014	1	-.454**

	Sig. (2-tailed)	.000	.476	.246	.000	.790		.000
	N	377	377	377	377	377	377	377
	Pearson Correlation	-.333**	.001	-.053	-.264**	.070	-.454**	1
Expertise	Sig. (2-tailed)	.000	.990	.304	.000	.177	.000	
	N	377	377	377	377	377	377	377

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

4.5.3 Influence of Demographic Factors on Interpersonal Communication Context

4.5.3.1 Physical Location

Table 4.24: Cross Tabulation of Demographic characteristics with Preferred Place of Interpersonal Communication about VMMC

		Physical Location/Place				
		Home	Health facility	Anywhere public	Anywhere but private	other
Age	< 40 (n=263)	5.7	9.1	58.2	25.5	1.5
	≥ 40 (n=114)	26.3	9.6	9.6	39.5	15.0
Education	≤ Primary (n=156)	14.7	14.1	39.1	31.4	0.7
	≥ Secondary (n=221)	10.0	13.1	45.7	28.5	2.7
Period in Marriage	≤10 years (n=201)	7.0	12.9	51.7	26.9	1.5
	>10 years (n=176)	17.6	14.8	34.1	32.9	0.6
Time of circumcision	Before Marriage (n=210)	9.0	11.4	50.5	28.1	1.0
	After Marriage (n=117)	14.5	11.1	45.3	25.6	3.5

Note: “Strongly agree” and “agree” are combined

Table 4.24 demonstrates a majority respondents aged below 40 years (58.2%) believe that VMMC could be discussed anywhere regardless of privacy concerns while majority of respondents aged above 40 years (39.5%) believe it should be done anywhere but private. Another popular venue for discussing about VMMC by respondents aged above 40 years is home

where 26.3% agreed while only 5.7% of respondents aged below 40 years concurred. It can be deduced that men aged 40 years and above consider privacy of the place and at home in discussing about VMMC while men below 40 years are comfortable with anywhere and a quarter of them anywhere but private.

Respondents married for more than 10 years favor anywhere (34.1%), anywhere but private (32.9%), health facility (14.8%), home (17.6) and other (0.6%) while respondents married for up to 10 years preferred anywhere (51.7%), anywhere but private (26.9%), health facility (12.9%), home (7.0%) and others (1.5%). Just like age, men married for more than 10 years anywhere private. However more men married for more than 10 years prefer home and health facility for discussing about VMMC. Education as a demographic factor seems not to influence significantly the place of discussing about VMMC

4.6.3.2 Time/Season

Table 4.25: Cross Tabulation of Demographic Characteristics and Perception of Traditional Circumcision Season as the Preferred Time/Season of Seeking VMMC

		Frequency (n=377)	Traditional Circumcision Seasons (%)
Age	< 40 (n=263)	33	9.1
	≥ 40 (n=114)	70	44.7
Education	≤ Primary (n=156)	38	24.4
	≥ Secondary (n=221)	63	28.5
Period in Marriage	≤10 years (n=201)	36	18.1
	>10 years (n=176)	61	34.7
Time of circumcision	Before marriage (n=210)	42	20.0
	After marriage (n=117)	79	67.5

Note: “Strongly agree” and “agree” are combined

Table 4.25 demonstrates more respondents aged 40 years and above (44.7%) compared to 9.1% of those aged below 40 years consider traditional circumcision seasons of neighbouring as inappropriate for seeking VMMC. Likewise, more respondents married for more than 10 years (34.7%) compared to those married for up to 10 years (18.1%) find traditional circumcision seasons inappropriate time to seek VMMC. In relation to education, respondents educated up to primary school (18.1%) compared to 28.5% of those who have attained up to secondary and above education. This means that more men in their 40s are negatively influenced to talk and seek VMMC during traditional circumcision seasons and therefore strategies promoting uptake of VMMC targeting older men above 40 years need to optimize and consider non-traditional circumcision seasons of neighbouring communities (every even year in the months of August and December). Traditional circumcision is a cultural practice in some communities that act as an act of passage to adulthood and identity while VMMC is a medical intervention targeting communities that do not practice traditional male circumcision.

Table 4.26: Cross Tabulation of Demographic Characteristics and Influence of Socio-Psychological Context

		Presence of wife/sexual partner	Privac y	Confidential information	Presence of other women/ladies
Age	< 40 (n=263)	36.5	9.9	14.4	27.8
	≥ 40 (n=114)	47.4	50.8	54.4	38.6
Education	≤ Primary (n=156)	43.6	13.5	16.0	39.1
	≥ Secondary (n=221)	37.1	28.5	33.9	25.3
Period in Marriage	≤10 years (n=201)	35.8	15.4	21.9	23.9
	>10 years (n=176)	44.3	30.1	31.8	39.2
Time of circumcision	Before marriage (n=210)	20.0	8.6	11.0	16.2
	After marriage (n=117)	67.5	34.2	35.0	53.0

Note: “Strongly agree” and “agree” are combined

Table 4.26 indicates that more than a half of respondents aged ≥ 40 years consider privacy (50.8%) and confidentiality of information shared (54.4%) when talking about MC. Presence of wives, sexual partners or other women together with privacy and confidentiality of information shared are not considered by respondents aged below 40 years.

This narrative is supported by the qualitative approach of this study where most participants (especially the uncircumcised ones) showed need of ensuring confidentiality and privacy in discussing about circumcision. One uncircumcised interviewee said:

I may seriously consider circumcision if a doctor talks to me in confidence and addresses my fears especially pain and healing duration (R4, 40 years old).

Conversely, only 9.8% and 10.4% of circumcised and uncircumcised respondents respectively agreed that traditional circumcision seasons of their neighbouring communities that practice traditional circumcision will be a factor in considering holding a conversation about circumcision. However, this was disputed in the interviews where uncircumcised men especially in their 40s were uncomfortable with holding any discussion about circumcision during such seasons claiming that it will be equated to an aggression on their culture.

For young people, that is the right time (circumcision season) because I see many boys here getting circumcised during that time but I don't like that because it mixes up cultures and ends up diluting our culture. If these NGOs want to circumcise our people or even talk to us about this this circumcision then they should deliberately avoid those (traditional circumcision) seasons after all it takes place once in the month of August after every two years (R11, 47 years old).

Evidence shows that human beings do not respond to the same stimuli in the same way across relationship contexts; indeed, the meaning of stimuli to the individual may change dramatically with changes in relationship context. Thus, to predict and understand behavior, it is necessary to

appreciate and understand the relationship context in which the individual is embedded (Reis, Collins & Berscheid, 2000).

If I have to discuss anything to do with circumcision perhaps after a proven medical intervention that I can see with my eyes, then such discussion has to be very private and confidential because of the shame and stigma associated with this circumcision thing especially at my age. Remember people of my age are now the custodians of our culture (R1 49 years).

About holding a conversation about male circumcision in the presence of family uncircumcised interviewee had the following to say:

I don't have a serious issue with having a general conversation about circumcision in the presence of my family but what I'm against is someone talking to me about it in the presence my children with an aim of influencing me to seek circumcision. Obviously there are some things I would be uncomfortable to say before my kids or even before my own wife (R13 42 years).

According to communication privacy management theory the decision to share is ultimately left up to the process of the privacy rule management system which combines rules for coordination of information, characteristics of disclosure, and attributes of the nature of boundaries. People develop *privacy rules* based on a set of criteria; for instance, they are motivated to conceal or reveal information based on cultural norms, gender, context, the risk-benefit ratio, and others (Durham, 2008; Petronio, 2002). This theory therefore supports this study's finding that male circumcision being a private issue, the motivation to conceal or reveal (share) such private information is based on cultural norms, circumcision status and composition of communication participants.

In health interventions, effective interpersonal communication is necessary in order to perform an accurate diagnosis which is always based on a full disclosure of information by the client

therefore leading to appropriate treatment that the patient can agree on (Negri et al, 2009). When it comes to disclosing personal information about circumcision, Researcher sought to find out from the respondents their willingness to share personal circumcision information such as their circumcision status, experiences during and after circumcision (for those circumcised) and perceived barriers to seeking circumcision (for those uncircumcised) with their friends. The results are shown in Table 4.27.

Table 4.27: Cross Tabulation of Demographic Characteristics with Self-Disclosure of MC Information

		Self-disclosure of MC information		χ^2	P value	Φ
		Disclose	Not disclose			
Circumcision status	Circumcised before marriage (n=207)	188(90.8)	19(9.2%)	74.844	0.000	0.447
	Circumcised after Marriage (n=114)	80(70.2%)	34(29.8%)			
	Uncircumcised (n=45)	14(31.1%)	31(68.9%)			
Age	< 40 (n=261)	244(93.5%)	17(7.9%)	137.28	0.000	0.612
	≥ 40 (n=106)	39(36.8%)	67(63.2%)	5		
Education Attained	≤ Primary (n=151)	113(74.8%)	38(25.2%)	0.754	0.385	0.045
	≥ Secondary (n=216)	170 (78.7%)	46(21.3%)			

Using chi-square, Phi and Cramer's V analysis, Table 4.26 shows that there exists a significant relationship between circumcision status and self-disclosure of male circumcision information; $\chi^2 = 74.844$, $\alpha = 0.000$ and $V = 0.447$. Majority of circumcised respondents (>70%) can disclose "personal" information about male circumcision to their friends while only 31.1% of uncircumcised respondents manage to disclose "personal" information about circumcision. There is evidence of a perfect association/relationship between age of respondents and self-disclosure of "personal" male circumcision information; $\chi^2 = 137.285$, $\alpha = 0.000$, $\phi = 0.612$. Majority of respondents age <40 years (93.5%) disclose personal information about male circumcision while only 36.8% of uncircumcised respondents disclose such "personal" information. However, there

exists an insignificant relationship between highest education attained by respondents and self-disclosure of male circumcision information; $\eta^2 = 0.754$, $\alpha = 0.385$ and $\phi = 0.045$.

Qualitative approach to this study gave an insight as to possible reasons as many interview participants said it was shameful to talk about circumcision especially with circumcised friends when you are not circumcised. Another issue that arose especially among men in their 40s who said that at their age circumcision becomes very private and there is no perceived benefit in disclosing personal information about circumcision to their peers.

Duggan (2006) argues that silence or avoidance reduces the ability of people to receive the necessary social support that would enable them cope with health problems, access appropriate care, and make health related decisions. In day-to-day life people get involved in discussions about health topics or even the specific content of health campaigns with one another, and such discussions remarkably do influence the impact of health campaigns.

CPM theory meticulously provides evidence based understanding on how individuals manage their private information. The theory suggests that individuals maintain and coordinate privacy boundaries, that is, the limits of what they are willing share with various communication partners depending on perceived benefits and costs of information disclosure. Petronio (1991) argues that the permeability of these boundaries is ever changing, and allow certain parts of the public access to certain pieces of information belonging to the individual. However, he adds that this sharing occurs only when the individual has weighed their need to share the information against their need to protect themselves.

Male circumcision being a culturally and socially sensitive matter that is personal thus qualifies to be private information. According to Durham (2008) and Petronio (2002), individuals are motivated to conceal or reveal information based on cultural norms, gender, context, the risk-benefit ratio, and other. Other studies have indicated that perceived risk is critical to individual's disclosure decisions. Individuals consider the risk discloser, the receiver, the relationship between them, and/or third parties such as one's family when making disclosure decisions (Afifi et al, 2005; Steuber, 2009).

4.5.4 Influence of Demographic Factors on Uptake of VMMC

Table 4.28: Cross Tabulation of Demographic Characteristics and Uptake of VMMC

		Circumcision Status		χ^2	α	Φ
		Circumcised (n=327)	Uncircumcised (n=48)			
Age	< 40 (n=263)	228	35	9.426	0.003	0.112
	≥ 40 (n=114)	99	15			
Education Attained	≤ Primary (n=156)	124	32	29.783	0.010	0.281
	≥ Secondary (n=221)	203	18			
Duration in Marriage	≤10 years (n=201)	187	14	18.143	0.005	0.219
	>10 years (n=176)	140	36			

Using chi-square, Phi and Cramer's V analysis, Table 4.28 demonstrates that there exists an insignificant relationship between uptake of circumcision and age of the respondents; $\chi^2 = 9.426$, $\alpha = 0.003$ and $V = 0.112$. There is also evidence of insignificant relationship between education of respondents' uptake of circumcision; $\chi^2 = 29.783$, $\alpha = 0.010$, $\phi = 0.281$. The relationship between duration in marriage and uptake of circumcision is equally insignificant where; $\chi^2 = 18.143$, $\alpha = 0.005$ and $\phi = 0.219$.

Kickbusch (2001) says that a person who has attained at least secondary education is empowered to read and write, and has critical problem solving knowledge in addition to positive thinking, which is important in behavior change to promote healthy life. Baker et al (2011) found a strong relationship between education levels and determinants of health such as health behaviors, beliefs and use of preventive services. They argued that highly educated people are healthier, readily consume health messages and generally live longer. This partly explains the slight high uptake of VMMC among the respondents who have attained at least secondary education. Two thirds (66.7%) of uncircumcised respondents have attained up to primary education.

4.6 Overall Influence of Interpersonal Communication Elements on Uptake of VMMC

Table 4.29: Overall Influence of Interpersonal Communication on Uptake of VMMC

	N	Minimum	Maximum	Mean	Std. Deviation
Communication Messages	377	11	34	17.5	4.3
Communication Source Attribute	377	14	41	26.6	4.0
Communication Context	377	14	33	25.5	4.8
Age	377	1	6	3.7	1.5
Length of Marriage	377	1	5	2.6	1.2
Educational Level	377	1	4	1.8	.8

The results for descriptive statistics above (Table 4.29) indicate that; Communication Source Attributes had the highest average value a mean of 26.6 and a standard deviation of 4.0 this was followed by Interpersonal Communication Context with an average of 25.5±4.8 while the one with the lowest factor was Interpersonal Communication Message with a mean value of 17.5±4.3. Thus Interpersonal Communication Source Attribute had more influence on Voluntary Medical Male Circumcision, followed by Interpersonal Communication Context, Interpersonal Communication Messages, Age, length of marriage and finally education level in that order.

The first objective of the study was to establish the effect of Interpersonal Communication Message on the VMMC Uptake. In this regards, Interpersonally Communicated Messages were found to have insignificant positive influence on the Uptake ($\beta_0 = 0.026$, $p = 0.622 > 0.05$) thereby accepting the null hypothesis, $H_0: \beta_0 = 0$, there is no significant relationship between Interpersonal Communication Message and Uptake of VMMC in Kenya.

However, the findings such like those positing that discussions that are positive towards healthy behaviors or negative toward unhealthy behaviors result in desirable and healthy attitudes, intentions, and behaviors are not in congruent with the findings of this study. Study findings also contradict Hendriks (n.d) and Hendriks et al. (2014) who claimed that when people speak negatively about healthy behaviors (being circumcised) or positively about unhealthy conduct (being uncircumcised), this results in unhealthier determinants of health behaviors.

The second objective of the study sought to determine the effect of Interpersonal Communication Sources' Attributes on Voluntary Medical Circumcision. In this regard, the study found out that Interpersonal Communication Sources' Attributes were found to have insignificant positive influence on Voluntary Medical Circumcision ($\beta_1 = 0.071$, $p = 0.168 > 0.05$) thus accepting the null hypothesis, $H_0: \beta_1 = 0$, c Interpersonal Communication Sources' Attributes doesn't affect Voluntary Medical Circumcision in Kenya.

The result that Interpersonal communication source attribute influences voluntary medical circumcision contradicts previous findings such as those of (McCroskey, 1970) which state that credible sources can increase the likelihood that a "weak" message will be accepted, but the credibility of the source has relatively little influence on the likelihood that the audience will just accept a "strong" message).

The Third objective of the study sought to determine the Influence of Interpersonal Communication Context on Uptake of Voluntary Medical Circumcision. In this regard, the study found out that Communication Context had insignificant negative influence on Voluntary Medical Circumcision ($\beta_1 = -0.98$, $p = 0.091 > 0.05$) thus accepting the null hypothesis, $H_0: \beta_2 = 0$, Interpersonal Communication Context doesn't have effect of Voluntary Medical Male Circumcision .

4.7 Test of Assumptions of Study Variables

4.7.1 Linearity Test

This study resorted to the use of a Multiple Linear Regression Model in addressing the study objectives. It is within this backdrop that the following diagnostic check was done and as shown from Table 4.30 VIF falls below the spectrum of 1-10 indicating that multicollinearity between independent variables was random and therefore not Strong enough to introduce errors into the model

4.7.2 Multi-Collinearity Test

Table 4.30: Multi-Collinearity of Independent Variables

Model		Standardized	T	Sig.	Collinearity Statistics	
		Coefficients				
		Beta			Tolerance	VIF
1	(Constant)		-.341	.733		
	Communication Message	.026	.494	.622	.971	1.030
	Communication Source Attribute	.071	1.380	.168	.991	1.009
	Communication Context	-.098	-1.694	.091	.778	1.286
	Length of Marriage	.092	1.359	.175	.572	1.747
	Age	-.072	-1.020	.308	.522	1.915
	Education Level	.163	3.060	.002	.914	1.094

4.7.3 .Normality Test

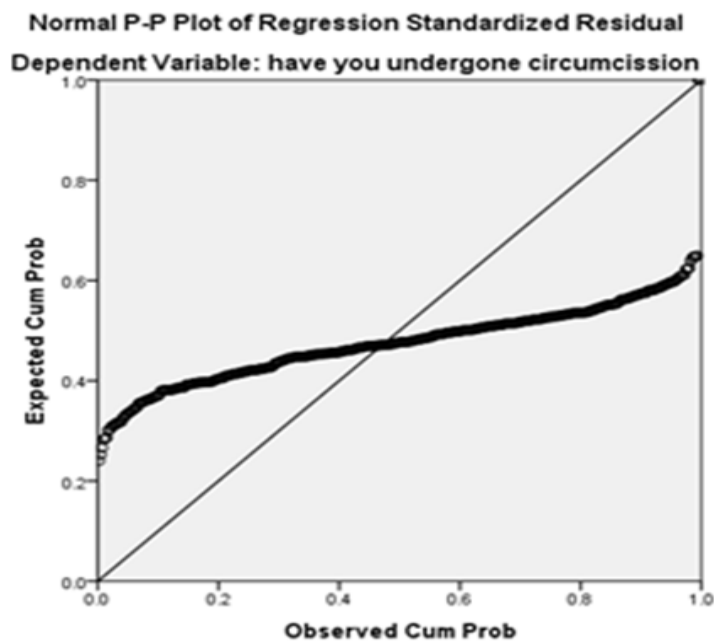


Figure 4.4: Normality of Residuals

The normality plot above (Figure 4.4) shows an equal spread of data points this is a clear indication that residuals are normally distributed.

4.7.4 Homoscedasticity Test

Table 4.31: Homoscedasticity Assumptions

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.198 ^a	.039	.024	6.96985	.039	2.527	6	370	.021	1.998

a. Predictors: (Constant), Education Level, Communication Source Attribute, Communication Context, Communication Message, Length in Marriage, Age

b. Dependent Variable: Circumcision Uptake

Finally the homoscedasticity assumptions was tested and the Durbin Watson value of 1.998 approximately 2 indicates that error terms are uncorrelated as demonstrated in Table 4.31 above.

4.8 Regression Analysis

The study also sought to rank factors (**Interpersonal Communication Messages, Interpersonal Communication Source Attribute, And Interpersonal Communication Context, Age, Education Level and Duration of Marriage**) on how they influenced Uptake of Voluntary Medical Circumcision among Married Men in Kenya. The following table 4.32 shows the outcome:

Table 4.32: Summary Model of Regression Analysis

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.198 ^a	.039	.024	6.96985	.039	2.527	6	370	.021	1.998

a. Predictors: (Constant), Education Level, Communication Source Attribute, Communication Context, Communication Message, Length of Marriage, Age

b. Dependent Variable: have you undergone circumcision

KEY:

Adjusted R squared - Coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable.

R - The correlation coefficient which shows the relationship between the study variables.

From the findings in the above table the value of adjusted R squared was 0.02 which indicated that there was variation of 2 per cent on the Uptake of VMMC which could account for changes in the three independent factors: Interpersonal Communication Context, Interpersonal Communication Source Attribute, Interpersonal Communication Message and the Socio-Demographic Factors (Age, Education Level and duration of Marriage) at 95 per cent confidence Level. It can also be deduced from the findings shown in the table above there was a weak positive relationship between the study variables as shown by 0.198 R Coefficient.

The value of Durbin-Watson was 1.999. Generally the value of the Durbin-Watson statistic ranges from 0 to 4. As a rule of thumb, the residuals are uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates strong positive correlation, while a value of 4 indicates a strong negative correlation. The computed value is also close to 2, which indicates the absence of heteroscedasticity. The researcher can thus reject the general form of research hypothesis that none of the independent variables is a significant predictor of the dependent variable (i.e. H_0 = none of the independent variables is a significant predictor of Uptake of VMMC). The following is the outcome of multiple regression of the three independent variables against the dependent variable (Table 4.33):

Table 4.33: Multiple Regression

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.353	3.965		-.341	.733		
	Interpersonal Communication Messages	.041	.084	.026	.494	.622	.971	1.030
	Interpersonal Communication Source Attribute	.125	.091	.071	1.380	.168	.991	1.009
	Interpersonal Communication Context	-.145	.085	-.098	-1.694	.091	.778	1.286
	Length in Marriage	.534	.393	.092	1.359	.175	.572	1.747
	Age	-.348	.341	-.072	-1.020	.308	.522	1.915
	Education Level	1.363	.446	.163	3.060	.002	.914	1.094

The established regression equation/model was as follows:

$$\text{VMC} = -1.35 + 0.071 \text{ Communication Source Attributes} + 0.26 \text{ Communication Message} - .098 \text{ Communication Context} + .092 \text{ Length in Marriage} - .742 \text{ Age} + .163 \text{ Education Level}$$

A multivariate regression model was applied to determine the relative importance of each of the variables with respect to VMC Uptake by using four latent Constructs

From the above regression equation it was revealed that only one variable had significant positive influence on Voluntary Medical Cut. This variable is: Education Level ($\beta_0 = 0.163$, $p = 0.002 < 0.05$)

These findings implied that *Ceteris Paribus*, a unit increase in Education Level would lead to an increase of .163 in Uptake of VMC

However, at least one of the four factors were found to be statistically significant as shown in the Anova Table 4.34 below:

Table 4.34: ANOVA Test for All Variables

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	736.495	6	122.749	2.527	.021 ^b
	Residual	17974.163	370	48.579		
	Total	18710.658	376			

a. Dependent Variable: have you undergone circumcision

b. Predictors: (Constant), Education Level, Communication Source Attribute, Communication Context, Communication Message, Length in Marriage, Age

4.9 Correlation Analysis

Since the Regression Assumptions (Homoscedasticity, Normality, Multicollinearity) were adequately met, a correlation analysis between the four dimensions for Interpersonal Communication and Uptake of Voluntary Medical Circumcision was under taken and the results presented in Table 4.35 below.

The table indicates that there is an insignificant positive association between uptake of Voluntary Medical Circumcision and Interpersonal Communication Message ($r = 0.04$, $p = 0.430$), Interpersonal Communication Source Attribute and Circumcision uptake ($r = 0.07$, $p = 0.177$), Age and uptake of MC ($r=0.044$, $p=.399$) and a Significant Positive relationship was also observed between Education level and Uptake of VMMC ($r=.136^{**}$, $p=0.008$)

However, on the other hand, an insignificant negative correlation existed between Interpersonal Communication Context and Uptake of VMMC ($r = -0.09$, $p = 0.09$).

Table 4.35: Relationship between Interpersonal Communication Dimension and Uptake of VMMC

Correlations								
		Message	Source Attribute	Context	Age	Length of Marriage	Education Level	Uptake of VMMC
Communication Message	Pearson Correlation	1	.061	-.109*	.012	.101*	-.052	.040
	Sig. (2-tailed)		.236	.035	.816	.050	.315	.434
	N	377	377	377	377	377	377	377
Communication Source Attribute	Pearson Correlation	.061	1	.056	-.026	.015	-.001	.070
	Sig. (2-tailed)	.236		.278	.620	.772	.978	.177
	N	377	377	377	377	377	377	377
Communication Context	Pearson Correlation	-.109*	.056	1	-.443**	-.346**	.052	-.088
	Sig. (2-tailed)	.035	.278		.000	.000	.312	.088

	N		377	377	377	377	377	377	377
Age	Pearson		.012	-.026	-.443**	1	.612**	.108*	.044
	Correlation								
	Sig. (2-tailed)		.816	.620	.000		.000	.035	.399
	N		377	377	377	377	377	377	377
Length of Marriage	Pearson		.101*	.015	-.346**	.612**	1	-.138**	.063
	Correlation								
	Sig. (2-tailed)		.050	.772	.000	.000		.007	.226
	N		377	377	377	377	377	377	377
Education Level	Pearson		-.052	-.001	.052	.108*	-.138**	1	.136**
	Correlation								
	Sig. (2-tailed)		.315	.978	.312	.035	.007		.008
	N		377	377	377	377	377	377	377
Uptake of VMMC	Pearson		.040	.070	-.088	.044	.063	.136**	1
	Correlation								
	Sig. (2-tailed)		.434	.177	.088	.399	.226	.008	
	N		377	377	377	377	377	377	377

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The association between some of the independent variables, particularly Interpersonal Communication Messages and Interpersonal Communication Source At ($r = 0.06$, $p = 0.236$), Interpersonal Communication Message and Interpersonal Communication Source ($r = -.109$, $p = 0.035$) all suggest the existence of multicollinearity. However, the estimated variances of inflation factors indicate that the multi Collinearity less than 6 was not strong enough to introduce errors in the estimated parameters (Pedhazur, 1997)

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the full implications and import of the information contained in the findings and analysis of the previous chapter are examined and used in summarizing, concluding and recommending important issues of this study. The question as to whether interpersonal communication influences uptake of VMMC is examined from the perspective of interpersonal communication messages, sources and contexts in addition to the intervening influence of demographic characteristics of the targeted population that form the specific objectives of this research.

5.2 Summary of Findings

5.2.1 Influence of Interpersonal Communication Messages on Uptake of VMMC

This study established insignificant positive correlation ($\beta_2=0.026$, $p\text{-value}=0.622$) between Interpersonal Communication Messages and uptake of VMMC in Kenya as shown in the overall

Model: $VMMC = -1.35 + 0.071 * \text{Communication Source Attributes} + \mathbf{0.026 \text{ Communication Message}} - 0.098 * \text{Communication Context} + 0.092 * \text{Length in Marriage} - 0.742 * \text{Age} + 0.163 * \text{Education Level}$.

According to Sgier et al. (2014) VMMC messaging often emphasizes HIV prevention as the primary benefit of circumcision, while at the same time communicating that the procedure provides only partial protection against HIV. Successful advertising positions the product or service in a way that resonates with the prospective customer rather than communicating only the most obvious features. For example, research found that anti-smoking campaigns targeting youth were most effective if the messages did not emphasize the negative long-term effects of smoking, but rather the deceptive promotional practices of cigarette manufacturers and the effects of secondhand smoke on others (Pechmann & Reibling, 2000 cited by Sgaier et al. 2014). This form of messaging weakens the responsive efficacy component in the message resulting to low uptake of VMMC for HIV prevention reason.

Interpersonally communicated VMMC messages elicit adequate threat in terms of perceived severity and vulnerability to HIV/AIDS to both circumcised and uncircumcised respondents. Self-efficacy being the ability to seek male circumcision for HIV/AIDS prevention was quite high among circumcised (81.0%) and uncircumcised (62.5%) respondents. However, these messages score very low in the perceived effectiveness of male circumcision in preventing HIV/AIDS (response efficacy) among both circumcised (44.7%) and uncircumcised (20.9%) respondents. These messages are therefore ineffective in persuading men to seek circumcision for HIV/AIDS prevention based on behavioural change models of HBM and EPPM.

This study found out that 73.1% of circumcised men would seek circumcision for other reasons not HIV prevention and 75% of uncircumcised men can consider seeking circumcision for other reasons and not to prevent HIV/AIDS. This finding is supported by Lissouba et al (2011) who argued that while many men seeking VMMC may understand the protective benefits of circumcision, they are more likely to consider VMMC for other reasons, including hygiene, pleasing a sexual partner, and conforming to peer norms.

This research reveals that there is almost universal knowledge of the role male circumcision in STI/HIV prevention which is the key VMMC message. However, the nature of messages about male circumcision shared through interpersonal contacts is mostly negative, complex and some not very true. Conroy (2006) cautions that sexual health information obtained from these interpersonal discussions may not be accurate. Some of the negative and inaccurate interpersonal messages revealed in this study include circumcision is very painful perhaps in reference to traditional circumcision carried out in some African communities where anesthesia is not used, circumcision is inappropriate at old age (above 40 years, if someone gets circumcised at old age he will experience permanent back problem and the wound may not heal, and that male circumcision reduces sexual pleasure. This distorted information about male circumcision discourage men from seeking circumcision. According to health belief model such inaccuracies act as perceived barriers responsive efficacy (male circumcision) hence low uptake of the recommended action.

5.2.2 Influence of Interpersonal Communication Source Attribute on Uptake of VMMC

This study revealed insignificant positive correlation between Interpersonal Communication Source Attribute and uptake of VMMC ($\beta_1=0.071$, $p\text{-value}=0.168$) as shown in the model below:

$$\text{VMMC} = -1.35 + \mathbf{0.071 * \text{Communication Source Attributes}} + 0.026 \text{ Communication Message} \\ - .098 * \text{Communication Context} + .092 \text{ Length in Marriage} - .742 \text{ Age} + .163 \text{ Education Level}$$

However, a majority of respondents (90.0%) cited health workers as their sources of VMMC information. On trust, health workers were rated highest by both circumcised (69.4%) and uncircumcised (60.4%) respondents. VMMC is a health issue and this study found out that majority (62.4% circumcised and 64.6% uncircumcised) of respondents perceived health workers as experts on matters male circumcision. However, circumcised male friend was mentioned by 48.9% of uncircumcised respondents as having the greatest potential to influence the decision to seek circumcision while among circumcised respondents, 49.1% mentioned a circumcised friend as having actually greatly influenced their decision to seek circumcision. This implies that testimonies of men circumcised while married have the greatest potential in influencing fellow married men seek circumcision.

In as much as this study found out that circumcised male friends to be most influential in a married man's decision to seek information, Conroy (2006) cautions that sexual health information obtained from these interpersonal discussions may not be accurate. As a way forward Gostin & Hankins (2008) have suggested that health professionals should be made responsible for providing full and accurate information necessary to secure informed consent for male circumcision, including risks, benefits, and the right to refuse the procedure without risk of reprisal or other adverse consequence. Such clinical information should be communicated in a culturally appropriate manner, with due regard for the person's age. It suffices to mention that this study found out that the majority of respondents perceived health workers as experts in the subject of male circumcision.

The role of women in influencing men to seek circumcision was evidenced in the interviews where some interviewees disclosed that indeed they were influenced by their wives to be circumcised. This evidence disputes literature that suggests that in as much as many women may be convinced that their husbands are placing their lives at risk by engaging for example in extra

marital sexual relations without using protection but because of their secondary status in society, they are often not willing to initiate discussions about HIV/AIDS in the home (Ghosh & Kalipeni, 2005). However, this study's finding concurs with Schatz (2005) who stated that despite their vulnerability, some women in rural settings believe that they do, to a certain appreciable extent, have control over their own health and wellbeing. They can talk to their husbands to discourage sexual infidelity or even persuade their husbands to use condoms consistently during extra marital sexual encounters. Zulu & Chepnego (2003) add that women are more likely than men to indulge their spouses on dangers of HIV and AIDS especially whenever they suspect that they are engaging in extramarital sexual relations and hence VMMC campaign can bank on women.

It is interesting however to note women can also act as inhibitors to their spouse's decision to seek circumcision. This study discovered from the interviews that women as wives do discourage their husbands especially those aged above 40 years from seeking circumcision. These women perceive the cost of circumcision (pain, long period to heal, them not being able to nurse the wound and so forth) to outweigh the benefits (HIV prevention). In his study, Chikutsa (2011) found out that women are most likely to play an important role in encouraging their sexual partners to under the male cut. However, he discovered that women displayed low levels of knowledge on male circumcision hence are unlikely to play a critical role in promoting male circumcision. He therefore recommended for a need to educate women in particular on issues on male circumcision.

Another important variable in the success of interpersonal communication in seeking male circumcision is the similarity between communication participants. This clearly came out in the interviews where uncircumcised interviewees said they were comfortable to disclose their information about circumcision to men from their own communities or from any other community that does not practice traditional circumcision as a rite of passage. Importance to them is the age of the communication participant where the men are more comfortable disclosing personal circumcision to their age mates. This is supported by Negri et al (n.d.) who stated that social distance between participants plays a key role in the success of interpersonal communication. Social distance refers to the socio-cultural-economic factors that make people

feel they belong to different class tiers. Education, economic status, class, race or ethnicity, gender and age may all contribute to how close or distant two individuals feel about each other.

5.2.3 Influence of Interpersonal Communication Context on Uptake of VMMC

The third objective of this study sort to examine the Influence of Interpersonal Communication Context on Uptake of Voluntary Medical Circumcision in Teso South Sub County. The study revealed insignificant negative correlation between Interpersonal Communication Context and Voluntary Medical Circumcision ($\beta_3 = -0.098$, $p\text{-value} = 0.091$).

VMMC = $-1.35 + 0.071 \text{ Communication Source Attributes} + 0.26 \text{ Communication Message} - .098 * \text{Communication Context} + .092 \text{ Length in Marriage} - .742 \text{ Age} + .163 \text{ Education Level}$

However, information about male circumcision is private matter. According to communication privacy management theory, the decision to share private information is determined by the process of privacy rule management system which combines rules for coordination of information, characteristics of disclosure and attributes of the nature of boundaries. This means that for one to share private information such male circumcision, several contextual issues have to be considered.

To demonstrate the privacy of male circumcision information, this study found out that 95.4% and 79.2% of circumcised and uncircumcised respondents can talk about circumcision. Similarly, more than a half (54.1%) of circumcised respondents do not have issues on the location of male circumcision discussion and only 30.3% of uncircumcised respondents concurred. Almost a half (47.9%) of uncircumcised respondents preferred a health facility as the right place to hold a conversation about circumcision.

The uncircumcised men would prefer to discuss about circumcision with fellow men, men from similar cultural backgrounds that do not practice traditional circumcision, age mates, and in a way that privacy and confidentiality is guaranteed. This evidence is strengthened by Negri et al (n.d) who argues that communication context is also shaped by the socio-demographic characteristics of the participants, as well as by the environment in which the communication takes place. The age, sex, ethnicity, and educational background of interpersonal communication participants affect how they communicate with each other. Other factors such as degree of privacy, time allotted for encounters, comfort and cleanliness of the setting, and treatment of

clients, for instance, from the time they enter the clinic until they are seen by a provider, can also inhibit or enhance client-provider interaction.

All communication is culture bound. To support the role of culture in discussions about male circumcision, Samovar et al (2009) stated that culture is a human made concept that helps to define the beliefs, values, attitudes, and customs of a group of people that have similarities to one another in relation to language and location that have helped the people to survive more throughout time. Culture has a very strong dependence on communication because of the help it provides in the process of exchanging information in the objective to transmit ideas, feelings, and specific situations present in the person's mind (Fleischer et al, 2009). Culture influences our thoughts, feelings and actions, and when communication is taking place there ought to be an awareness of this (Martin and Nakayama, 2007). This clearly means the more different an individual's cultural background is, the more different their styles of communication will be (Corbin and White, 2008). In Africa, many communities practice traditional circumcision as a rite of passage. It is a cultural practice that identifies a particular community. Communities that do not traditional practice circumcision have alternative rituals that act as a rite of passage. This makes male circumcision a culturally sensitive topic to discuss especially among communities that do not have it as a cultural practice.

5.2.4 Intervening Influence of Demographic Factors on Interpersonal Communication and Uptake of VMMC

The Fourth objective sort to investigate the Influence of Demographic Factors on Interpersonal Communication and on Uptake of VMMC. The correlation between Socio-Demographic factors was as follows:

Education level as socio-demographic factor had insignificant negative correlation with both communication message ($r=-0.052$, $p=0.315$) and communication source attributes' ($r=-0.001$, $p=0.978$), but had a significant positive correlation with medical circumcision Uptake at ($r=0.136$, $p=0.008^*$). These survey results are in congruent with those of Kickbusch (2001) Who says that a person who has attained at least secondary education is empowered to read and write, and has critical problem solving knowledge in addition to positive thinking, which is important in behavior change to promote healthy life. Baker et al (2011) found a strong relationship between education levels and determinants of health such as health behaviors, beliefs and use of

preventive services. They argued that highly educated people are healthier, readily consume health messages and generally live longer. This partly explains the high uptake of VMMC among the respondents who have attained at least secondary education.

Age had a positive relationship with both Interpersonal communication Message($r=0.012, p=0.816$) and Uptake ($r=0.044, p=0.399$) while on the other hand it had an insignificant negative correlation with Interpersonal Communication Source Attributes' ($r=-0.026, p=0.62$) and a strong significant negative correlation with Interpersonal Communication Context ($r=-0.443, p=.000^*$). This is an indication that elderly Circumcised cared less on Interpersonal Communication Context these results are however in contrary with Egan's(1973) who posits that the "sharing of the human condition – in its sublimity, sanity, and deformity – pulls people together" (p.41). He observes that deception and concealment is the cause of the many emotional problems people suffer. Concealment in itself results in emotional disturbances and that self-revelation, even when accompanied by relevant behavioural change effects a cure. In most groups, the prospect of revealing oneself is unsettling and is always approached gradually. Many members of a group know that self-revelation, if engaged in responsibly is a value in human living, still they need time to muster courage needed to talk about oneself. Studies show that context in interpersonal communication is one of the factors that motivate individuals to conceal or reveal private information (Durham, 2008; Petronio, 2002). It is therefore critical to establish interpersonal communication contexts that promote self-disclosure of information about male circumcision.

It is imperative to note that older men (above 40 years) were found to be uncomfortable talking about male circumcision for they find it inappropriate. Others believe they are custodians of their culture and therefore they cannot engage in talking about a "foreign" culture. There are other men who believe that male circumcision is a man's thing and therefore they cannot talk to someone of the opposite gender including their own sexual partners about it.

Finally a positive correlation was observed between Length of Marriage with Interpersonal Communication Message($r=0.101, p=0.05$), Communication Source Attribute ($r=0.015, p=0.772$) and Circumcision Uptake ($r=0.063, p=0.226$) however a significant negative correlation between Interpersonal Communication Context and Length of Marriage was established($r=-0.346, p=0.000^*$). An indication that married couples were less concerned on the

Communication context as compared to those not married although they cared more on the interpersonal communication source attribute.

5.3 Conclusion

Not only has this work added to the scope of available research in communication generally, its specific focus on Africa and Kenya being the theatre of study is of monumental value since health communication related research about the continent is relatively limited. Furthermore, the investigation of uptake of male circumcision for HIV prevention in a continent with the highest prevalence has shown the immense potential of interpersonal communication in influencing men to seek circumcision as well act as inhibitor to a man's decision to seek circumcision to avert HIV/AIDS.

On the first objective which sought to find out the influence of Interpersonal Communication Messages on Uptake of VMMC, the study concludes that an insignificant positive relationship exists between Interpersonal Communication Message and uptake of VMMC. This study revealed various fundamental insights into the nature of interpersonally communicated male circumcision messages and examined their effectiveness in the uptake of VMMC among married men based on the health belief model (HBM) and extended parallel process model (EPPM). Because of low response efficacy on VMMC messages, more men are seeking male circumcision for other reasons such as penile hygiene, peer pressure, perceived improved sexual performance to but a few and not as a method to prevent HIV/AIDS- the overall objective of VMMC program. It is important therefore for new campaign messages to focus more on response efficacy (because people are already scared of HIV/AIDS).

There is a significant proportion of inaccurate and negative interpersonal messages about male circumcision. Some of these messages include: one can experience permanent back ache if circumcised at old age, VMMC is as painful as the traditional one done without anesthesia, it is inappropriate for older men, reduces sexual pleasure among others. It is however interesting to note that despite the inadequacy of the interpersonal messages, majority of men have actually been circumcised. One can only deduce that many men are seeking circumcision for other reasons such as penile hygiene and not for HIV prevention.

The second objective of the study was to establish the influence of Interpersonal Communication Source Attribute on uptake of VMMC in Teso South Sub County and the study concludes that Interpersonal Communication Sources Attribute had insignificant positive effect on Voluntary Medical Circumcision in Teso Sub County. From the interpersonal communication sources' point of view, the findings show that circumcised male friends and health workers are more influential in a man's decision to seek circumcision. Friends especially circumcised ones are regarded as trustworthy and are perceived to be similar to them and therefore people need to learn from their experiences. In other words, friends and health workers are key in providing information that can help men address the fears they have about seeking circumcision. Besides male friends, women as sexual partners play an important role in influencing the decision of their partners to seek circumcision. However, this study found out that the same women can also act as inhibitors to their partners' decision to seek circumcision and this is more pronounced in couples who have been married for a longer period, couples with teenage or mature children, and older men above 40 years. They consider the benefits of circumcision to be less the cost of circumcision such as pain, sexual abstinence, taking long to heal, shame associated with late circumcision among others. This is executed via not talking to their spouses about circumcision, negative talk or directly talking and discouraging their spouses.

The Third objective of the study was to establish the Influence of Interpersonal Communication Context on Uptake of VMMC and the study concludes that Interpersonal Communication Context has a negative and insignificant effect on Uptake of VMMC in Teso South Sub County. This objective sort to unearth the Influence of Interpersonal Communication Context on Uptake of VMMC in Teso South Sub County. Its corresponding null hypothesis was that of Interpersonal Communication Context doesn't affect Voluntary Medical Circumcision Uptake in Teso South Sub County. The study revealed insignificant negative correlation between Interpersonal Communication Context and uptake of Voluntary Medical Male Circumcision.

Talking about male circumcision is no longer a taboo topic however older men in their 40s still experience challenges in disclosing personal information about circumcision or openly talking about it. They regard such talk to be inappropriate and some still believe that their culture does not support such talks. Uncircumcised men find it difficult to disclose information about circumcision or even participate in discussing about it as compared to their circumcised

counterparts. To such people, discussing about circumcision can only be context specific. Self-disclosing information and sharing about circumcision is dependent of composition of communication participants where some believe it should be limited to men, homogeneity in cultural backgrounds, and should be premised on privacy and confidentiality of information shared.

The Fourth objective sort to investigate the influence of demographic factors on interpersonal communication and on uptake of VMMC. The Study revealed that Education Level as Socio-Demographic factor had insignificant negative correlation with both Interpersonal Communication Message($r=-0.052, p=0.315$) and Communication Source Attributes'($r=-0.001, p=0.978$) ,but had a significant positive correlation with Medical Circumcision Uptake at ($r=0.136, p=0.008^*$). This implies that a unit increase in Education Level will increase Uptake of Circumcision among the Teso South married males community and that both Age and Length of Marriage negatively influenced communication context .

All findings and discussions above lead to address the billion dollar question: does interpersonal communication influence uptake of VMMC for HIV prevention. So far, this study has provided evidence that the messages, context, sources and demographic factors influenced uptake of VMMC. It would therefore appear that interpersonal communication do influence the uptake of VMMC in Teso South Sub County and by extension Kenya.

5.4 Recommendations

Based on the foregoing findings and conclusions the study therefore recommends the following:

- a) Since a positive significant relationship exists between Education Level and Uptake of Circumcision in Teso sub County, emphasis should be laid on increase of budget allocations on VMMC campaigns to reach out less educated married males who are at higher risk of HIV infection.
- b) Since the study revealed that Length of Marriage negatively correlated with Communication Context it is imperative that VMMC Programmes appreciate the variation in privacy needs across newly married couples and those elderly couples.

- c) VMMC campaign messages need to focus more on response efficacy (because people are already scared of HIV). This can be done by firstly by addressing the barriers to seeking male circumcision and secondly providing more evidence of male circumcision's effectiveness in preventing HIV. Furthermore, given that HIV prevention—the public health goal of VMMC—may not be the highest priority or most attractive benefit of the procedure for most males, it is important to consider positioning and messaging VMMC in ways that move beyond HIV.
- d) Removing obstacles to action. VMMC programme policy makers and implementers need to address medical, economic and socio-cultural barriers to seeking male circumcision in addition to providing selected VMMC service delivery sites segregated by age to offer services that are friendly to older men.
- e) Given the influence of interpersonal communication in propagating norms, the accuracy of information disseminated in a community must be of particular concern to public health professionals. Inaccurate information discouraging uptake of VMMC. This is a call to public health professionals to be cognizant about dominant narratives that exist in a community and be responsible in providing full and accurate information. Such clinical information should be communicated in a culturally appropriate manner, with due regard for the person's age.
- f) VMMC efforts have been accused of often neglecting the gender dimension and focusing on men only. As evidenced in this study, women as sexual partners to the men can act as either catalysts or inhibitors to their decisions to seek circumcision. It is therefore imperative to recognize the role of women and incorporate them as key stakeholders in the VMMC campaign. Women need to be educated on benefits of male circumcision not only to their partners but also to them.
- g) Finally, population based HIV/AIDS programmes should aim at harnessing interpersonal communication to promote sustained uptake of VMMC among adult and married men.

5.5 Recommendations for Future Research

Although the current study offers support for and extends the influence of interpersonal communication in health interventions in highly stigmatized and emotive issue (male circumcision), the limitations of this study must be recognized when interpreting the results. First, the focus of this study was on married men aged between 20 and 49 years. This study recognizes that male circumcision is a private matter, a “man’s thing” and culturally sensitive, it is limiting to assume the influence of conversations on uptake of circumcision should be looked from the perspective of only men. Previous studies for example have shown that women as mothers and sexual partners have greater influence on the decision to seek circumcision (Obure, Nyambedha & Oindo, 2011; Lissouba et al., 2011; Bailey et al., 2012). In this research, participants described their wives as either catalysts or inhibitors to their decision to seek circumcision. Indeed women as wives, girlfriends, and mothers can be change agents as the protective benefits of VMMC are important to them, too. At the center of male circumcision is the man but suggesting that interpersonal communication influence can only be examined from the man’s perspective as is the focus in this research does not necessarily reflect the extent of interpersonal communication influence on uptake of VMMC especially when targeting married men. There is need therefore to open up and investigate in detail the role of women as interpersonal communication partners in influencing men to seek or not seek circumcision.

Considering the relevance of both interpersonal communication and health campaign for health variables, as well as the potential moderating role of interpersonal communication within health campaign effects, it seems worthwhile to further examine how the interplay between interpersonal communication and health message exposure affects health outcomes such as creating demand for VMMC. A moderating relationship implies that health conversations influence the effects of health campaigns on health variables as opposed to simply examining the mediating relationship that simply implies that occurrence of such conversations is important for the effects of mass mediated messages which basically reflects the tenets of two step flow theory. This theory posits that messages simply flow from mass media to individuals who, in turn, spread the message further via the process of interpersonal communication. There are a few studies that have suggested that conversations may alter, undermine or reinforce the effects of mass-mediated health messages however none has specifically investigated VMMC issue.

REFERENCES

- Abroms, L. & Maibach, E. (2008). The effectiveness of mass communication to change public behavior. *Annual Review of Public Health*, 29, 219–234.
- Ackerson, L.; Viswanath, K. (2009). The social Context of interpersonal communication and health. *Journal of Health Communication*, 14 (1), 517–517.
- Adler, R., Rosenfeld, L., Proctor II, R. & Winder, C. (2012). *Interplay: The Process of Interpersonal Communication*. Don Mills: Oxford University Press.
- Afifi, T. D., Olson, L., & Armstrong, C. (2005). The chilling effect and family secrets: Examining the role of self-protection, other protection, and communication efficacy. *Human Communication Research*, 31, 564 – 598.
- Afifi, T. D., & Steuber, K. (2009). The revelation risk model (RRM): Factors that predict the revelation of secrets and the strategies used to reveal them. *Communication Monographs*, 76, 144 – 176.
- Allen, M., Emmers-Sommer, T., & Crowell, T. (2002). Interpersonal communication research: advances through meta-analysis. In M. Allen, R. W. Preiss, B. Gayle & N. Burrell (eds.), Lawrence Erlbaum Associates, Mahwah, NJ: Lawrence Erlbaum Associates.
- Ally, M., Menon, V., Kioko, U., et al. (2012). *Costs and impacts of scaling up voluntary medical male circumcision in Tanzania*. Dar es Salaam: Tanzanian Ministry of Health and Social Welfare, USAID, HPP & UNAIDS.
- Arnott, J., & Kehler, J. (2010). Medical Male Circumcision for HIV Prevention: Are Women Ready? Cape Town: AIDS Legal Network. Retrieved November 3, 2015 from http://www.malecircumcision.org/advocacy/documents/SA_MMC_women_ready.pdf
- AVAC, National Empowerment Network of People Living with HIV/AIDS in Kenya, Sonke gender Justice Network and Uganda Network of AIDS Service Organisations (2012). *A call to action on voluntary medical male circumcision: Implementing a key component of combination HIV prevention*. Retrieved November 25, 2014, from <http://www.avac.org/sites/default/files/resourcefiles/A%20Call%20to%20Action%20on%20Voluntary%20Medical%20Male%20Circumcision%202012.pdf>

- Auvert, B., Taljaard, D., Lagarde, E., Sobngwi-Tambekou, J., Sitta, R., & Puren, A. (2005). Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 Trial. *PLoS Med* 2, e298.
- Babalola, S., Ouedraogo, D., & Vondrasek, C. (2007). Motivation for late sexual debut in Cote d'Ivoire and Burkina Faso: a positive deviance inquiry. *Journal of HIV/AIDS Prevention & Education for Adolescents and Children*, 7(2): 65-87.
- Bailey, R., Moses, S., Parker, C., Agot, K, et al. (2007). Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. *The Lancet*, 369, 643–656.
- Bailey, R. C., Muga, R., Poulussen, R., & Abicht, H. (2002). The acceptability of male circumcision to reduce HIV infections in Nyanza Province, Kenya. *AIDS Care*, 14(1), 27-40.
- Baeten, J. M., Celum, C., Coates, T. J. (2009). Male circumcision and HIV risks and benefits for women. *Lancet*, 374, 182–184.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior*, 4. New York: Academic Press.
- Bandura, A. (1997). *Self-Efficacy: the exercise of control*. New York: Freeman.
- Banerjee, S., Andersen, K., Warvadekar, J. & Pearson, E. (2013). Effectiveness of a behavior change communication intervention to improve knowledge and perceptions about abortion in Bihar and Jharkhand, India. *International Perspectives on Sexual and Reproductive Health*, 39(3), 142-151.
- Barden-O'Fallon, Janine & Degraft-Johnson, Joseph (2004). Factors Associated with HIV/AIDS Knowledge and Risk Perception in Rural Malawi. *AIDS and Behavior*, 8(2), 131–140.
- Bastien, S., Kajula, L., & Muhwezi, W. (2011). A review of studies of parent-child communication about sexuality and HIV/AIDS in sub-Saharan Africa. *Reproductive Health*, 8, 25.
- Beck, K.H., & Lund, A.K. (1981). The effects of health threat seriousness and personal efficacy upon intentions and behavior. *Journal of Applied Social Psychology*, 11(5), 401-415.
- Becker, M. (1974). The Health Belief Model and personal health behavior. *Health Education Monographs*, 2, 324–473.

- Becker, G. (1974). Theory of social interactions. *Journal of Political Economy*, 82(6), 1063-1093.
- Berger, J. (2011). Arousal increases social transmission of information. *Psychological science*, 22, 891-893.
- Bertrand, J., Njeuhmeli, E., Forsythe, S., Mattison, S., Mahler, H., & Hankins, C. (2011). Voluntary Medical Male Circumcision: a qualitative study exploring the challenges of costing demand creation in Eastern and Southern Africa. *PLoS One.*, 6(11).
- Biddlecom, A., Hessburg, L., Singh, S., Bankole, A. & Darabi, L. (2007). *Protecting the next generation in Sub-Saharan Africa: learning from adolescents to prevent HIV and unintended pregnancy*. New York: Guttmacher Institute.
- Bingham, A., Drake, J., Goodyear, L., Gopinath, C., Kaufman, A. & Bhattarai, S. (2011). The role of interpersonal communication in preventing unsafe abortion in communities: the dialogues for Life Project in Nepal. *Journal of Health Communication*, 16(3), 245–263.
- Bourque-Bearskin, R. L. (2011). A critical lens on culture in nursing practice. *Nursing Ethics*, 18, 548–559.
- Boone, T., & Lefkowitz, E. (2007). Mother-adolescent health communication: are all conversations created equally? *Journal of Youth and Adolescence*, 36, 1038-1047.
- Brazil sets example for taming AIDS. (July 6, 2004). *AP*, p.7.
- Brennan, E., Durkin, S., Wakefield, M., & Kashima, Y. (2010). Interpersonal discussions about anti-smoking campaigns: why smokers talk and why it matters. Paper presented at the annual meeting of the International Communication Association, Suntec City, Singapore.
- Bruce, J., Haberland, N., Joyce, A., Roca, E & Sapriano, T. (2011). *First generation of gender and HIV programs: seeking clarity and synergy*. New York: Population Council.
- Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research*, 1, 8.
- Buckey, S. (September 17, 2000). Brazil becomes model in fight against AIDS. *The Washington Post*. P. A22.

- Castellsague, X., Bosch, F., Munoz, N., et al. (2002). Male circumcision, penile human papillomavirus infection, and cervical cancer in female partners. *New England Journal of Medicine*, 346, 1105–1112.
- Central Bureau of Statistics [Kenya]. Ministry of Health [Kenya], and ORC Macro (2004). *Kenya Demographic and Health Survey 2003*. Calverton, Maryland.
- Central Bureau of Statistics [Kenya]. Ministry of Health [Kenya], and ORC Macro (2010). *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland.
- Chapman, S. & Lupton, D. (1994). *The fight for public health: principles and practice of media advocacy*. London: BMJ Books.
- Chatterjee, N. (1999). AIDS-related information and exposure in the media and discussion with social networks among married women in Bombay, India. *AIDS Care*, 11(4), 443-446.
- Chikutsa, A. (2011). *Contextualising the adoption of male circumcision as an HIV prevention strategy in Zimbabwe*. Harare: Zimbabwe Open University.
- Cialdini, R., & Trost, M. (1998). Social influence: Social norms, conformity and compliance. *The Handbook of Social Psychology*. McGraw-Hill: pp. 151-192.
- Clayman, M., Pandit, A., Bergeron, A., Cameron, K., Ross, E., & Wolf, M. (2010). Ask, understand, remember: a brief measure of patient communication self-efficacy within clinical encounters. *Journal of Health Communication*, 1572-1579.
- Clearinghouse on Male Circumcision for HIV Prevention (2015a). New York: AIDS Vaccine Advocacy Coalition. Campaign materials from ‘*Creating Demand for VMMC*’ website. Retrieved April 12, 2015 from: <https://www.malecircumcision.org/demand-creation/campaign-materials>
- Clearinghouse on Male Circumcision for HIV Prevention (2015b). New York: AIDS Vaccine Advocacy Coalition. *Research led message development for “SMART” campaign and management of social mobilization (PSI Zimbabwe)* [cited 2015 February 18].
- Clearinghouse on Male Circumcision for HIV Prevention (2015c) [Internet]. New York: AIDS Vaccine Advocacy Coalition. South Africa: CareWorks [cited 2015 February 18].

- Clearinghouse on Male Circumcision for HIV Prevention (2015d) [Internet]. New York: AIDS Vaccine Advocacy Coalition. *Lilongwe district VMMC scale-up (I-TECH, Malawi)* [cited 2015 February 18].
- Clearinghouse on Male Circumcision for HIV Prevention (2015e) [Internet]. New York: AIDS Vaccine Advocacy Coalition. Kenya: IRDO, *creating a demand creation toolkit* [cited 2015 April 14].
- Clearinghouse on Male Circumcision for HIV Prevention (2015f) [Internet]. New York: AIDS Vaccine Advocacy Coalition. Zambia: *SFH community mobilisation, mid media campaigns and national communications materials* [cited 2015 April 14].
- Clearinghouse on Male Circumcision for HIV Prevention (2015g) [Internet]. New York: AIDS Vaccine Advocacy Coalition; c2015. Uganda: *Rakai “Stylish Man” Campaign: combining traditional and new approaches to demand creation for safe male circumcision (SMC)* [cited 2015 April 14].
- Cohen, E., Shumate, M., & Gold, A. (2007). Anti-smoking media campaign messages: theory & practice. *Health Communication*, 22(2), 91-102.
- Conroy, A., Blackie, M., Whiteside, A, et al. (2006). *Poverty, AIDS and hunger: breaking the poverty trap in Malawi*. New York: Palgrave Macmillan.
- Corbin, C. & White, D. (2008). *Interpersonal communication: a cultural approach*. Sydney, NS. Cape Breton University Press.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks: Sage Publications.
- Cresswell, J.W., & Plano Clark, V.L. 2007. *Designing and conducting mixed methods research*. London and New Delhi: Sage.
- Cruz, TH & Mickalide, AD (2000). The national safe kids’ campaign child safety seat distribution program: a strategy for reaching low-income, underserved, and culturally diverse populations. *Health Promotion Practice*, 1(20), 148-154.

- Dikson, K., Tran, N., Samuelson, J., Njeuhmeli, E., Cherutich, P., *et al.* (2011) Voluntary medical male circumcision: a framework analysis of policy and program implementation in eastern and southern Africa. *PLoS Medicine*, 8, e1001133.
- Dowsett, G. W., & Couch, M. (2007). Male circumcision and HIV prevention: is there really enough of the right kind of evidence? *Reproductive Health Matters* 15, 33-44.
- Doyle, D. (2005). Ritual male circumcision: a brief history. *Journal of Royal College of Physicians of Edinburgh*, 35(3), 279-285.
- Doyle, S., Rech, D., Taljaard, D., Lissouba, P. *et al* (2010). A model for the roll-out of comprehensive adult male circumcision services in Africa low-income settings of high HIV incidence: *The ANRS 12126 Bophelopele project*. DOI:1371/Journal.pmed.1000309
- Duggan, A. (2006). Understanding interpersonal communication processes across health contexts: Advances in the last decade and challenges for the next decade. *Journal of Health Communication*, 11, 93–108.
- Dunkle, K., Stephenson, R., Karita, E., Chomba, E., Kayitenkore, K., Vwalika, C., Greenberg, L., & Allen, S. (2008). New heterosexually transmitted HIV infections in married or cohabiting couples in urban Zambia and Rwanda: an analysis of survey and clinical data. *Lancet*, 371, 91-183.
- Durham, W. T. (2008). The rules-based process of revealing/concealing the family planning decisions of voluntarily child-free couples: a communication privacy management perspective. *Communication Studies*, 59, 132 – 147.
- Edberg, M. (2010). *Essential readings in behavior change: theory and practice*. Sudbury, MA: Jones & Bartlett Learning.
- Family Health International (2002). *Behavior Change Communication (BCC) for HIV/AIDS: a strategic framework*. Arlington, VA: FHI.
- Figueroa, M., Kincaid, D., Manju, R., & Lewis, G. (2002). *Communication for social change: An integrated model for measuring the process and its outcomes*. New York: The Rockefeller Foundation.
- Fleischer, S., Berg, A., Zimmermann, M., Wüste, K., & Behrens, J. (2009). Nurse-patient interaction and communication: a systematic literature review. *Journal of Public Health*, 17(5), 339–353.

- Freimuth, V., & Quinn, S. (2004). The contributions of health communication to eliminating health disparities. *American Journal of Public Health*, 94(12), 2053–2055.
- Ghosh, J. & Kalipeni, E. (2005). Women in Chinsapo, Malawi: Vulnerability and Risk to HIV/AIDS. *Journal of Social Aspects of HIV/AIDS*, 2(3), 320–332.
- Goldstein, A., Greer, S., Saletin, J., Harvey, A., Nitschke, J., & Walker, M. (2013). Tired and apprehensive: anxiety amplifies the impact of sleep loss on aversive brain anticipation. *Journal of Neuroscience*, 33, 10607-10615.
- Gostin L. & Hankins C. (2008). Male circumcision as an HIV prevention strategy in sub-Saharan Africa: sociolegal barriers. *Journal of the American Medical Association*, 300 (21), 2539-2541.
- Green, E. C. (1999). *Indigenous theories of contagious disease*. Thousand Oaks, CA: AltaMira.
- Gilliam, A. (2005). *Evaluation of HIV Prevention Programs using Qualitative Methods*. Retrieved on February 29, 2016 from: http://www.cdc.gov/HealthyYouth/publications/hiv_handbook/
- Gray, R., Kigozi, G., Serwadda, D., et al. (2007). Male circumcision for HIV prevention in Rakai, Uganda: a randomized trial. *Lancet* 369(9562), 657-666.
- Griffin, A., & Hauser, J. R (1993). The voice of the customer. *Marketing Science*, 12(3), 1-27
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18, 59-82.
- Hallett, T., Alsallaq, R., Baeten, J., Weiss, H., Celum, C., et al. (2011). Will circumcision provide even more protection from HIV to women and men? New estimates of the population impact of circumcision interventions. *Sexually Transmitted Infections*, 87, 88.
- Halperin, D., & Eppstein, H. (2004). Concurrent sexual partnerships help to explain Africa's high HIV prevalence: implications for prevention. *Lancet*, 364(9428), 4-6.
- Halperin, D., Fritz, K., McFarland, W., & Woelk, G. (2005). Acceptability of adult male circumcision for sexually transmitted disease and HIV prevention in Zimbabwe. *Sexually Transmitted Diseases*, 32(4), 238-239.

- Hanan, M. A. (n.d). HIV/AIDS Prevention Campaigns: a Critical Analysis. *Canadian Journal of Media Studies*, 5(1), 129-158. Available: <http://cjms.fims.uwo.ca/issues/05-01/hanan.pdf>
- Hankins, C, Williams, B., Schmid, G., et al. (2006). Male circumcision and the HIV epidemic: the kindest cut? (abstract). *Canadian Journal of Infectious diseases and Medical Microbiology*; abstracts of the 15th Annual Canadian Conference on HIV/AIDS Research; Quebec.
- Hankins, C., Forsythe, S., & Njeuhmeli, E. (2011). Voluntary medical male circumcision: an introduction to the cost, impact, and challenges of accelerated scaling up. *PLoS Medicine*, 8, e1001127.
- Hatzold, K., Mavhu, W., Jasi, P., Chatora, K., Cowan, F., et al. (2014). Barriers and motivators to voluntary medical male circumcision uptake among different age groups of men in Zimbabwe: results from a mixed methods study. *PLoS One*, 9(5), e85051.
- Hendriks, H. (n.d). *Let's talk about alcohol: Role of interpersonal communication and health campaigns*. Amsterdam: University of Amsterdam.
- Hendriks, H., van den Putte, B., De Bruijn, G-J, & de Vreese, C. (2014). Predicting health: the interplay between interpersonal communication and health campaigns. *Journal of Health Communication*, 19, 625-636.
- Herman-Roloff, A., Llewellyn, E., Obiero, W., Agot, K., Ndinya-Achola, J., et al. (2011) Implementing voluntary medical male circumcision for HIV prevention in Nyanza Province, Kenya: lessons learned during the first year. *PloS One* 6: e18299.
- Hochbaum, G. M. (1958). *Public participation in medical screening programs: a sociopsychological study*. Washington, DC: U.S. Public Health Service. Publication No. (PHS) 572.
- Holmes, K. K., Levine, R., & Weaver, M. (2004). Effectiveness of condoms in preventing sexually transmitted infections. *Bulletin World Health Organization*. 82, 61-454.
- Human Rights Watch (2004). *Access to condoms and HIV/AIDS information: a global health and human rights concern*. New York: Human Rights Watch.
- Human Rights Watch (2004b). *Epidemic of abuse; Human Rights Watch, Future forsaken: Discrimination against children affected by HIV/AIDS*. New York: Human Rights Watch.

- Hurdle, D.E. (2001). Social support: a critical factor in women's health and health promotion. *Health & Social Work*, 26(2), 72-79.
- Ignatius, E., & Kokkonen, M. (2007). Factors contributing to verbal self-disclosure. *Nordic Psychology*, 59(4), 362-391.
- Institute of Medicine (US) Committee on Communication for Behavior Change in the 21st Century: Improving the Health of Diverse Populations (2002). *Speaking of health: assessing health communication strategies for diverse populations*. Washington DC: National Academie Press.
- International AIDS Society. (2013). 7th IAS Conference on HIV pathogenesis, treatment and prevention: Summary report. Retrieved April 23, 2014, from http://www.iasociety.org/Web/WebContent/File/IAS2013_Summary_Report.pdf
- International Council of AIDS Service Organizations. (2007). *Barriers to Condom Access: Setting an advocacy Agenda*. ICASO Advocacy Briefing. Retrieved May 12, 2015, from http://www.icaso.org/publications/condom_access2007_eng.pdf
- International Encyclopedia of Marriage and Family. Retrieved December 22, 2016 from Encyclopedia .com: <http://www.encyclopedia.com/reference/encyclopedias-almanacs-transcripts-and-maps/sexual-communication>
- Irwin, K., Valdiserri, R., & Holmber, S. (2009). Acceptability of voluntary HIV antibody testing: a decade of lessons learned as from 1985 to 1995. *AIDS Behavior*, 15, 866-872.
- Jato, M. et al. (1999). The impact of multimedia family planning promotion on the contraceptive behavior of women in Tanzania. *International Family Planning Perspectives*, 25(2), 60–67.
- Jensen, K. B. (1991). *A handbook of qualitative methodologies for mass communication research*. In Klaus Bruhn Jensen & Nick Jankowski (Eds.). London: Routeledge.
- Jessen, R.J. (1978). *Statistical survey techniques*. New York: Wiley.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: a research paradigm whose time has come. *Educational Researchers*, 33, 14-26.
- Justman, J., Goldberg, A., Reed, J., Bock, N., Njeuhmeli, E., & Thomas, A. (2013). Adult male circumcision: reflection on successes and challenges. *Journal of Immune Deficiency Syndrome*, 63(Supplement 2), S140-143.

- Kaler, A. (2003). My girlfriends could fill a yanu-yanu bus: rural Malawian men's claims about their own serostatus. *Demogr Res.*, 11, 349-372.
- Kaler A. (2004). AIDS-talk in everyday life: the presence of HIV/AIDS in men's informal conversation in Southern Malawi. *Social Science Medicine*, 59, 285-97.
- Kang, S. H. & Bloom, J. R. (1993). Social support and cancer screening among older black Americans. *Journal of the National Cancer Institute*, 85, 737-742.
- Kebaabetswe, P., Lockman, S., Mogwe, S., Mandevu, R., Thior, I., Assex, M., & Shapiro, R.L. (2003). Male circumcision: an acceptable strategy for HIV prevention in Botswana. *Sexual Transmitted Infections*, 79(3), 214-19.
- Kenya Ministry of Public Health and Sanitation (2010). *Voluntary Medical Male Circumcision (VMMC) communication guide for Nyanza Province*. Retrieved January 3, 2015, from http://www.c.hubonline.org/7815/17/NYANZA_COMMUNICATION_GUIDE.pdf
- Kenya Ministry of Public Health and sanitation (2008). *Reversing the trends: the second national health sector strategic plan of Kenya*. Nairobi: Ministry of Public Health and Sanitation.
- Kincaid, D. L. (2002). Drama, emotion, and cultural convergence. *Communication Theory*, 12, 136-152.
- Kincaid, D. L. (2004). From innovation to social norm: bounded normative influence. *Journal of Health Communication*, 9, 37-57.
- Klu, E., Frempong, G. & Odoi, D. (2012). The role of culture, taboo and language in engendering the effective dissemination of HIV/Aids message in Africa. *Southern African Journal for Folklore Studies*, 22(2), 141-146.
- Knapp, M., & Daly, J. (2002). *Handbook of interpersonal communication (3rd ed.)*. Thousand Oaks, Ca: Sage Publications.
- Knapp, M., Daly, J., Albada, K. & Miller, G. (2002). *Handbook of interpersonal communication (3. ed.)*. Thousand Oaks, California: Sage Publications.
- Kothari, C.R. (1992). *Research methodology: methods and techniques*. New Delhi: Wiley Eastern Ltd.
- Korhonen, T., Uetela, A., Korhonen, H., & Puska, P. (1998). Impact of mass media and interpersonal health communication of smoking cessation attempts: a study in North Karelia, 1989-1996. *Journal of Health Communication*, 3(2), 105-118.

- Krejcie, R. & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Krieger, J., & Heyns, C. (2009). Male circumcision and HIV/AIDS risk-analysis of scientific evidence. *African Journal of Urology*, 15(2).
- Kron, Thora (1972). *Communication in nursing (2nd ed.)*. Philadelphia: W.B. Saunders.
- Kumar, A., Hessini, L., & Mitchell, E. (2009). Conceptualizing abortion stigma. *Culture, Health & Sexuality*, 11, 625–639.
- Lagarde, E., Dirk, T., Puren, A., Reathe, R., Bertran, A. (2003). Acceptability of male circumcision as a tool for preventing HIV infection in a highly infected community in South Africa. *AIDS*, 17(1), 89-95.
- Lambert, H. & Wood, K. (2005). A comparative analysis of communication about sex, health and sexual health in India and South Africa: Implications for HIV prevention. *Culture, Health & Sexuality*, 7(6), 527-541.
- Lanham, M., L'Engle, K. L., Loolpapit, M., Oguma, I. (2012). Women's Roles in Voluntary Medical Male Circumcision in Nyanza Province, Kenya. *PLoS ONE*, 7(9): e44825.
- Limaye, R. J. (2012). *The role of interpersonal communication & communication networks on HIV/AIDS-related behaviors in Malawi: Implications for behavior change programming (Unpublished Masters Thesis)*. USA: The John Hopkins University.
- Limaye, R., Rimal, R., Mkandawire, G., Roberts, P., Dothi, W., & Brown, J. (2012). Talking about sex in Malawi: toward a better understanding of interpersonal communication for HIV prevention. *Journal of Public Health Research*, 1:e17.
- Lissouba P., Taljaard, D., Rech, D., Doyle, S., Shabangu, D., et al. (2010). A Model for the Roll-Out of Comprehensive Adult Male Circumcision Services in African Low-Income Settings of High HIV Incidence: The ANRS 12126 Bophelo Pele Project. *PLoS Medicine* 7(7): e1000309. doi:10.1371/journal.pmed.1000309.
- Lissouba, P., Taljaard, D., Rech, D., et al. (2011). Adult male circumcision as an intervention against HIV: An operational study of uptake in a South African community (ANRS 12126). *BMC Infectious Diseases*, 11(1), 253.

- Littlejohn, S. (1996). *Theories of human communication* (5thed.). Belmont, CA: Wadsworth Publishing.
- Lukobo, M., & Bailey, R.C. (2007). Acceptability of male circumcision for prevention of HIV infection in Zambia. *AIDS Care*, 19, 471-477.
- Malawi News Agency (2012). *Ngoni chiefs rise to the challenge, accept male circumcision in Malawi AIDS fight*.
- Manning, J. (2014). A constitutive approach to interpersonal communication studies. *Communication Studies*, 65(4), 432–440.
- Martin, Judith & Nakayama, Thomas (2007). *Intercultural communication in contexts* (4thed.). New York: McGraw-Hill.
- Matthews, Alicia; Derlega, Valerien; Morrow, Jennifer (Aug 20, 2006). "What is Highly Personal Information and How Is It Related to Self-Disclosure Decision-Making?" *Communication Research Reports*, 23 (2), 85–92.
- Mattson, M. (1999). Toward a reconceptualization of communication cues to action in the Health Belief Model: HIV test counseling. *Communication Monographs*, 66, 240-265.
- Mattson, C. L., Bailey, R. C., Muga, R., Poulussen, R., & Onyango, T. (2005). Acceptability of male circumcision and predictors of circumcision preference among men and women in Nyanza Province, Kenya. *AIDS Care*, 17(2), 182–194.
- Mavhu, W., Buzdugan, R., Langhaugh, L., et al. (2011). Prevalence and factors associated with knowledge of and willingness for male circumcision in rural Zimbabwe. *Tropical Medicine & International Health*, 16(50), 589-597.
- McCroskey, J. C. (1970). Measures of communication-bound anxiety. *Speech Monographs*, 37, 269-277.
- McHugh-Schuste, P. (2010). *Communication for nursing: how to prevent harmful events and promote patient safety*. USA: F. A. Davis Company.
- McNeill, K.B., & Dorgan, K.A. (n.d). *The influence of media messages and social networks in prompting Appalachian women to have mammograms*. N.P: Centre for Disease Control and Prevention.

- Melkote R. S., & Steeves, L. H. (2001). *Communication for development in third world: theory and practice for empowerment*. London: Sage Publications.
- Meundi, A., Amma, A., Rao, A., Shetty, S., Avinash, K., & Shetty, A. (2008). Cross-sectional population-based study of knowledge, attitudes, and practices regarding HIV/AIDS in Dakshina Kannada District of Karnataka, India. *JIAPAC*, 7: 27-34.
- Michielsen, K., Chersich, M., Luchters, S., de Koker, P., van Rossem, R. & Temmerman, M. (2010). Effectiveness of HIV prevention for youth in Sub Saharan Africa: systematic review and meta-analysis of randomized and non-randomized trials. *AIDS*, 24(8), 1193-1202.
- Middle East and North Africa (MENA) and UNAIDS (2006). *2006 report on the global HIV/AIDS epidemic annex 2*. Geneva: UNAIDS.
- Montaño, D., Kasprzyk, D., Hamilton, D., Tshimanga, M., & Gorn, G. (2014). Evidence-based identification of key beliefs explaining adult male circumcision motivation in Zimbabwe: targets for behavior change messaging. *AIDS Behavior*, 18(5), 885–904.
- Moses, S., Bailey, R.C., & Ronald, A.K. (1998). Male circumcision: assessment of health benefits and risks. *Sexually Transmitted Infections*, 74, 368-373.
- Mugenda, A. G. (2008). *Social science research: conception, methodology and analysis*. Nairobi: Kenya Applied Research and Training Services.
- Muhangi, D. (2010). Factors that Influence Decisions to Seek Medical Male Circumcision Services. *USAID/JHU Associate Cooperative Agreement* no. 617-A-00-07.0005-00.
- Mwandi, Z., Murphy, A., Reed, J., Chesang, K., Njeuhmeli, E., et al. (2011) Voluntary medical male circumcision: translating research into the rapid expansion of services in Kenya, 2008–2011. *PLoS Medicine*, 8: e1001130.
- Nagelkerke, N., Moses, S., de Vlas, S., Bailey, R. (2007). Modelling the public health impact of male circumcision for HIV prevention in high prevalence areas in Africa. *BMC Infectious Diseases*, 7: 16.
- Namisi, F., Flisher, A., Overland, S., Bastien, S., Onya, H., Kaaya, S. & Aarø, L. (2009). Socio-demographic variations in communication on sexuality and HIV/AIDS with parents,

- family members and teachers among in-school adolescents: A multi-site study in Tanzania and South Africa. *Scandinavian Journal of Public Health*, 37, 65-74.
- National AIDS and STI Control Programme (NASCOP), Ministry of Health, Kenya (2008). *Kenya AIDS Indicator Survey 2007: Final Report*. Nairobi: NASCOP.
- National AIDS and STI Control Programme (NASCOP), Kenya (2018). *Kenya AIDS Indicator Survey 2017: Preliminary Report*. Nairobi: NASCOP.
- National AIDS and STI Control Programme (2008). *National Guidance for Voluntary Medical Male Circumcision in Kenya*. Nairobi: Ministry of Health, Government of Kenya.
- Retrieved April 10, 2013, from http://www.malecircumcision.org/programs/country_implementation_updates.html
- National AIDS and STI Control Programme (2009). *Kenya National Strategy for Voluntary Male Circumcision*. Nairobi: Ministry of Public Health and Sanitation, Government of Kenya.
- National AIDS and STI Control Programme (2011). *Progress Report on Kenya's Voluntary Medical Male Circumcision Programme, 2008-2010*. Nairobi: Ministry of Health, Government of Kenya.
- Negri, B., Brown, L., Hernández, O., Rosenbaum, J., & Roter, D. (n.d). *Improving interpersonal communication between health Care providers and clients*. Bethesda, MD: USAID.
- Ngalande, R., Levy, J., Kapondo, L., & Bailey, R. (2006). Acceptability of male circumcision for prevention of HIV infection in Malawi. *AIDS Behavior*, 10(4), 377- 385.
- Nieuwoudt, S., et al. (2012). *Uncovering the “dirt” on demand creation for medical circumcision*. Johannesburg: Centre for HIV and AIDS Prevention Studies (CHAPS).
- Njeuhmeli, E., Forsythe, S., Reed, J., et al. (2011). Voluntary medical male circumcision: modeling the impact and cost of expanding male circumcision for HIV prevention in eastern and southern Africa. *PLoS Medicine*, 8: e1001132.
- Nnko, S., et al. (2001). Dynamics of male circumcision practices in northwest Tanzania. *Sexually Transmitted Diseases*, 28(4), 214-218.
- Noar, S. M., Carlyle, K., & Cole, C. (2006). Why communication is crucial: meta-analysis of the relationship between safer sexual communication and condom use. *Journal of Health Communication*, 11, 365-390.

- Nyanzi, S., Nyanzi B., Bessie, K. (2005). Abortion? That's for women! Narratives and experiences of commercial motorbike riders in south-western Uganda. *African Journal of Reproductive Health*, 142–161.
- Obure, A., Nyambedha, E. O., Oindo, B. (2011). Interpersonal influences in the scale-up of male circumcision services in a traditionally non-circumcising community in rural western Kenya. *Global Journal of Community Psychology Practice* 1, 1–11.
- Parfitt, T. (2002). *The Lost Tribes of Israel: The History of a Myth*. London: Weidenfield and Nicolson.
- Parker, W. (2012). *HIV prevention among adult women in South Africa: opportunities for social behavior change communication*. Washington, DC: FHI 360/C-Change.
- Parker, J. & Coiera, E. (2000). Improving clinical communication: a view from psychology. *Journal of the American Medical Informatics Association (American Medical Informatics Association)*, 7(5), 453–461. doi:10.1136/jamia.2000.0070453.
- PATH: Program for Appropriate Technology in Health (2008). *Interpersonal communication for action on HIV (interact IPC): a guide to dialogue-based communication methods to help key populations put HIV messages into practice in India*. New Delhi: PATH.
- Peltzer, K. & Mlambo, M. (2012). Prevalence and acceptability of male circumcision among young men in South Africa. *Ethno Med.*, 6(3), 179-86.
- Perloff, R.M. (2008). *The dynamics of persuasion: Communication and attitudes in the 21st century* (3rd ed.). New York: Lawrence Erlbaum Associates.
- Petronio, S. (1991). Communication boundary management: a theoretical model of managing disclosure of private information between marital couples. *Communication Theory*, 1(4), 311-335.
- Petronio, S. (2002). *Boundaries of privacy: dialectics of disclosure*. Albany, NY: SUNY Press.
- Petronio, S. (2007). Translational Research Endeavors and the Practices of Communication Privacy Management. *Journal of Applied Communication Research*, 35, 218-222.
- Pidgeon, N., Kasperson, R., & Slovic P. (2003). *Introduction: the social amplification of risk*. Cambridge, UK: Cambridge University Press.

- Piotrow, P., Kincaid, D., Lawrence, R., Jose, G., & Rinehart, W. (1997). *Health communication: lessons from family planning and reproductive health*. London: Praeger.
- Plotkin, M. et al. (2013). “Man, what took you so long?” social and individual factors affecting adult attendance at voluntary medical male circumcision services in Tanzania. *Global Health Science Practice*, 1, 108-116. doi: 10.9745/GHSP-D-12-00037.
- Plotkin, M., Mziray, H., Kuver, J., Prince, J., Mahler, K., & Curran H. (2011). “Embe Halijamenywa: The Unpeeled Mango A Qualitative Assessment of Views and Preferences Concerning Voluntary Medical Male Circumcision in Iringa Region, Tanzania.”
- Pornpitakpan, C. (20004). The persuasiveness of source credibility: a critical review of five decades’ evidence. *Journal of applied Social Psychology*, 34(2), 243-281.
- Potts, M., Halperin, D.T., Kirby, D. et al. (2008). Reassessing HIV prevention. *Science*, 320(5877), 749-750.
- Prazak, M. (2000). Talking about sex: contemporary construction of sexuality in rural Kenya. *Africa Today*, 47, 82-97.
- Price, J., Phiri, L., Mulenga, D., Hewett, P., Topp, S., Shiliya, N., et al. (2014). Behavior change pathways to voluntary medical male circumcision: narrative interviews with circumcision clients in Zambia. *PLoS One*, 9(11), e111602.
- Priest, S.H. (1996). *Doing media research: an introduction*. London: Sage Publications.
- Puri, M., Ingham, R. & Matthews, Z. (2007). Factors affecting abortion decisions among young couples in Nepal. *Journal of Adolescent Health*, 40, 535–542.
- Quible, Z. K. (1998). A focus on focus groups. *Business Communication Quarterly*, 61(2), 28-38
- Radford, T. (1996). Influence and power of the media. *The Lancet*, 347, 1533-1535.
- Rain-Taljaard, R., et al. (2003). Potential for an intervention based on male circumcision in a South African town with high levels of HIV infection. *AIDS Care* 15(3), 315-327.

- Ragnarsson, A., Onya, H. E. & Aarø, L.E. (2009). Young people's understanding of HIV: A quantitative study among school students in Mankweng, South Africa. *Scandinavian Journal of Public Health*, 37(2), 101-106.
- Real, K. & Rimal, R.N. (2007). Friends talk to friends about drinking: exploring the role of peer communication in the theory of normative social behavior. *Health Communication*, 22, 169-180.
- Reis, H., Collins, W., & Berscheid, E. (2000). The relationship context of human behavior and development. *Psychological Bulletin*, 126(6), 844-872.
- Ritchie, J. & Lewis, J. (eds.) (2003). *Qualitative research practice. A guide to social science students and researchers*. London: Sage.
- Rimal, R., Scripal, P., Speizer, I., & Calhoun, L. (2015). Interpersonal communication as an agent of normative influence: a mixed method study among the urban poor in India. *Reproductive Health*, 12, 71.
- Rimer, B. K. (1994). Mammography use in the U.S.: trends and the impact of interventions. *Annals of Behavioral Medicine* 16, 317-326.
- Roger, E. M. (1973). Mass media and interpersonal communication. In I.D.S. Pool, F.W. Frey, W. Schramm, N. Maccoby, & E.B. Parker (Eds.). *Handbook of Communication* (pp.290-310). Chicago, IL: Rand McNally.
- Rogers. E. M. (1995). *Diffusion of innovations*, 4th ed., New York: Free Press.
- Rogers, E. M. (2003). *Diffusion of innovations*. New York: Free Press.
- Rogers, E. M., & Kincaid, D. L. (1981). *Communication networks: Toward a new paradigm for research*. New York: Free Press.
- Rogers, E.M., & Storey, J.D. (1987). Communication campaigns. In C. Berger & S. Chaffee (Eds.). *Handbook of communication science* (pp. 817-846). Newbury Park, Ca: Sage.
- Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Education Monograph* 2: 334.

- Rosenstock, I. M. (1990). The health belief model: explaining health behavior through expectancies. In: *health behavior and health education: theory, research, and practice* (pp.39-62). San Francisco: Jossey-Bass Publishers.
- Rosenstock, I. M. (1960). What research in motivation suggests for public health. *American Journal of Public Health*, 50, 295–301.
- Rosenstock, I. M. (1966). Why people use health services. *Milbank Memorial Fund Quarterly*, 44 (Supplement), 94–124.
- Rubin, R. B., Rubin, A. M., Haridakis, P. M., & Piele, L. J. (2010). *Communication research: strategies and sources* (7thed.). Boston, MA: Wadsworth Cengage Learning.
- Ruxtons, G. D., & Colegrave, N. (2006). *Experimental design for the life sciences* (2nded.). Oxford, UK: Oxford University Press.
- Samovar, L. A., Porter, R. E., & McDaniel, E. R. (2010). *Communication between cultures*. Belmont, CA: Wadsworth/Cengage Learning.
- Sanders, JS, & Robinson, WL. (1979). Talking and not talking about sex: male and female vocabularies. *Journal of Communication*, 29, 22-30.
- Schatz, Enid (2005). Take Your Mat and Go!': Rural Malawian Women's Strategies in the HIV/AIDS Era. *Culture, Health & Sexuality*, 7(5), 479–92.
- Sgaier, S. K., Reed, J. B., Thomas, A., & Njeuhmeli, E. (2014). Achieving the HIV Prevention Impact of Voluntary Medical Male Circumcision: Lessons and Challenges for Managing Programs. *PLoS Medicine*, 11(5), e1001641. doi:10.1371/journal.pmed.1001641.
- Sgaier, S., Baer, J., Rutz, D., Njeuhmeli, E., Saifert-Ahanda, K., Basinga, P., Parkyn, R., & Laube, C. (2015). Toward a systematic approach to generating demand for voluntary medical male circumcision: insights and results from field studies. *Global Health Science Practice*, 3(2), 209-229.
- Sheeran, P., Abraham, C., & Orbell, S. (1999). Psychosocial correlates of heterosexual condom use: a meta-analysis. *Psychology Bulletin*, 125, 90-132.
- Simon-Morton, B., Donohew, L., & Crump, A. (1997). Health communication in the prevention of alcohol, tobacco and drug use. *Health Education & Behavior*, 24(5), 544-554.

- Snell, J. L., & Buck, E. L. (1996). Increasing cancer screening: a meta-analysis. *Preventive Medicine*, 25, 702-707.
- Somma D. B., & Bodiang K. C. (2003). *The cultural approach to HIV/AIDS prevention*. Geneva: Swiss Agency for Development and Cooperation/Swiss Centre for International Health.
- Southwel, B.G., & Yzer, M.C. (2007). The role of interpersonal communication in mass media campaigns. *Communication Yearbook*, 31, 419-462.
- Stephenson, M.T., & Witte, K. (2001). Creating fear in a risky world: Generating effective health risk messages. In R.E. Rice & C.K. Atkins (Eds.), *Public communication campaigns* (3rd ed.), (pp. 88-102). Thousand Oaks, CA: Sage.
- Strack, F., & Mussweiler, T. (1997). Explaining the enigmatic anchoring effect: mechanisms of selective accessibility. *Journal of Personality and Social Psychology*, 73(3), 437-446.
- Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. London: Sage Publications.
- Storey, D., Boulay, M., Karki, Y., Heckert, K. & Karmachrya, D. (1999). Impact of the integrated radio communication project in Nepal, 1994-1997. *Journal of Health Communication*, 4(4), 271-294.
- Stretcher, V., & Rosenstock, I. (1997). The health belief model. In K. Glanz, F.M Lewis, & B.K. Rimer (eds.). *Health behavior and health education: theory, research and practice* (2nd ed.). San Francisco: Jossey-Bass.
- Sturges, R. & Rogers, W. (1996). Preventive health psychology from a development perspective: an extension of protection motivation theory. *Health Psychology*, 15(3), 158-166.
- Suarez, L., Ramirez, A. G., Villarreal, R., Marti, J., McAlister, A., Talavera, G. A. et al. (2000). Social networks and cancer screening in four U.S. Hispanic groups. *American Journal of Preventive Medicine*, 19, 47-52.
- Thompson, T. & Parrott, R. (2002). *Handbook of interpersonal communication* (3rd ed.). Thousand Oaks, California: Sage Publications. pp. 680-725.

- Thompson, J. (2011). Communication privacy management in collegiate athletics: Exploring privacy dilemmas in the athletic/academic advisor student-athlete interpersonal relationship. *Journal of Sport Administration & Supervision*, 3(1), 44-60.
- UNAIDS. (1999). *Sexual behavioral change for HIV: Where have theories taken us?* Geneva: UNAIDS.
- UNAIDS & PennState (1999). *Communications framework for HIV/AIDS: a new direction*. Geneva: UNAIDS.
- UNAIDS & WHO (2011). *Technical guidance notes for round 11 global fund HIV proposals: prevention, treatment, care and support for young people*. Geneva: UNAIDS.
- UNAIDS/WHO/SACEMA Expert Group on Modelling the Impact and Cost of Male Circumcision for HIV Prevention (2009). Male Circumcision for HIV Prevention in High HIV Prevalence Settings: What Can Mathematical Modelling Contribute to Informed Decision Making? *PLoS Medicine*, 6(9), e1000109. doi:10.1371/journal.pmed.1000109.
- UNAIDS/UNAIDS/UNICEF (2011). *Global HIV/AIDS responses: epidemic update and health sector progress towards universal access: progress report 2011*. Geneva: WHO.
- Valente, T. W. (1996). Mass-media-generated interpersonal communication as sources of information about family planning. *Journal of Health Communication: International Perspectives*, 1(3), 247-266.
- Valente, T. W., & Fosados, R. (2006). Diffusion of innovations and network segmentation: The part played by people in promoting health. *Sexually Transmitted Disease*, 33, S23–31.
- Van den Putte, B. & Meijs, M., (2011-05-25). The Effects of Interpersonal Communication and Health Campaign Exposure on Condom Use. *Paper presented at the annual meeting of the International Communication Association, TBA, Boston, MA* Online<APPLICATION/PDF>. 2014-01-10 from http://citation.allacademic.com/meta/p490331_index.html
- Van den Putte, B. Yzer, M., Southwel, B., de Bruijn, G., & Willemsen, M. (2011). Interpersonal communication as an indirect pathway for the effect of antismoking media content on smoking cessation. *Journal of Health Communication*, 16(5), 470-485.
- Walque, D. (2007). Sero-Discordant Couples in Five African Countries: Implications for Prevention Strategies. *Population and Development Review*, 33(3), 501-523.

- Wawer, M. J., Makumbi, F., Kigozi, G., Serwadda, D., Watya, S., et al. (2009). Circumcision in HIV-infected men and its effect on HIV transmission to female partners in Rakai, Uganda: a randomised controlled trial. *The Lancet*, 374, 229–237.
- Weinert, C. & Burman, M. (1994). Rural health and health-seeking behaviors. *Annual Review of Nursing Research*, 13, 65-92.
- Weiss, H., Hankins, C., & Dickson, K. (2009). Male circumcision and risk of HIV infection in women: a systematic review and meta-analysis. *The Lancet Infectious Diseases*, 9, 669-677.
- West, J. (1999). (Not) talking about sex: youth identity and sexuality. *Sociology Review*, 47, 525-547.
- Westercamp, N., & Bailey, R. C. (2007). Acceptability of Male Circumcision for Prevention of HIV/AIDS in Sub-Saharan Africa: A Review. *AIDS Behavior*, 11(3), 341-355.
- Westercamp, M., Agot, K., Ndinya-Achola, J., & Bailey, R. (2012). Circumcision preference among women and uncircumcised men prior to scale-up of male circumcision for HIV prevention in Kisumu, Kenya. *AIDS Care*, 24(2), 157–166.
- White, R. G., Glynn, J. R., Orroth, K. K. et al. (2008). Male Circumcision for HIV prevention in sub-Saharan Africa: who, what, and when? *AIDS* 2008, 22, 1841-1850.
- WHO (2007). *Helping parents in developing countries improve adolescents' health*. WHO Publication, Geneva, Switzerland: WHO Publication.
- WHO/UNAIDS (2007a). *New data male circumcision HIV previous policy programme implications: conclusions recommendations*. Retrieved February 26, 2015, from http://whqlibdoc.who.int/publications/2007/9789241595988_eng.pdf
- WHO/UNAIDS (2007, 23 February). *WHO and UNAIDS Secretariat welcome corroborating findings of trials assessing impact of male circumcision on HIV risk*. Retrieved February 2, 2015, from <http://www.who.int/mediacentre/news/statement/2007/s04/en/>
- WHO. (2009). *Male circumcision: global trends and determinants of prevalence, safety and acceptability*. Retrieved September 19, 2015, from http://apps.who.int/iris/bitstream/10665/43749/1/9789241596169_eng.pdf
- Witte, Kim, Meyer, Gary, & Martell, Dennis (2001). *Effective health risk messages: a step-by-step guide*. London: sage Publications.

- Witte, K. (1992). Putting the fear back into fear appeals: the extended parallel process model. *Communication Monographs*, 59, 329-347.
- Witte, K. (1998). Fear as a motivator: using extended parallel process model to explain fear appeal successes and failures. *Handbook of Communication and Emotion Research, Theory, Applications and Contexts* (vol. xxxii, pp. 423–450). San Diego, California: Academic Press.
- Witte, K., Meyer, G., & Martell, D. (2001). *Effective health risk messages: A step-by-step guide*. Thousand Oaks, California: Sage Publishing, Inc.
- Wouabe, E. (2013). *International initiative for impact evaluation: scoping report on interventions for increasing the demand for voluntary medical male circumcision*. N.P: 3ie.
- Wamai, R.G., Morris, B.G., Bailis, S.A., Sokal, D., Klausner, J.D., Appleton, R., & Banerjee, J. (2011). Male circumcision for HIV prevention – current evidence and implementation in Sub-Saharan Africa. *Journal of the International AIDS Society*, 14, 49.
- Wolcott, H. (1994). *Transforming qualitative data: description, analysis and interpretation*. Thousand Oaks, CA: Sage Publications.
- Yin, R. K. (2006). Mixed methods research: are the methods genuinely integrated or merely parallel? *Research in the Schools*, 13, 41-47.
- Zukav, G. (1979). *The dancing Wu Li masters*. New York: William Morrow & Company.
- Zulu, E. M., & Chepngeno, G. (2003). Spousal Communication about the Risk of Contracting HIV/AIDS in Rural Malawi. *Demographic Research*, 1, 247–78.

APPENDICES

Appendix I: Introduction and Informed Consent Form

CONSENT FORM

My name is Omukule Emojong'. I am a PhD student in Communication at the Jomo Kenyatta University of Agriculture and Technology (JKUAT). I am collecting data for my Dissertation whose objective is to examine the ways in which interpersonal communication influences married men seeking male circumcision for HIV prevention. I kindly request you to participate in this study. The exercise will take 30 minutes of your time.

The information that you provide during the study will be kept confidential. By participating in this study and answering the questions, you will help to increase my understanding of the role interpersonal communication can play in influencing uptake of VMMC in regards HIV intervention targeting married men.

Your participation in this study is voluntary and you have the right to refuse to participate or answer any questions that you feel uncomfortable with. If you change your mind about participating during the course of the study, you have the right to withdraw at any time.

Declaration of the respondent

I have understood the purpose of this study and therefore consent voluntarily to participate as a respondent.

Signature of the respondent: -----

Date: -----

Area of data collection (location): -----

Appendix II: Survey Questionnaire

SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

N°	QUESTIONS	ANSWERS	SKIP
101.	How old are you?	01 = 20 – 24 years 02 = 25 -29 years 03 = 30 -34 years 04 = 35-39 years __ __ 05 = 40 – 44 years 06 = 45 – 49 years 99 = Don't Know	
102.	How long have you been married?	01= 0-5 years 02= 6-10 years 03= 11-15 years __ __ 04= 16-20 years 05= More than 20 years	
103.	What is your religion?	01 = Catholic 02 = Protestant __ __ 03 = Muslim 04 = Other (Specify) _____	
104.	How best would you describe your present educational level?	01= Primary 02 = Secondary 03 = Tertiary College __ __ 04 = University 98 = No formal education	

SECTION B: INTERPERSONAL COMMUNICATION MESSAGES AND UPTAKE OF VOLUNTARY MEDICAL CIRCUMCISION

N°	QUESTIONS	ANSWERS	SKIP
201	What have you heard from your peers and the people around you about male circumcision? (More than one answer allowed)	01 = It undermines my culture and identity 02 = It helps prevent HIV/AIDS __ __ 03 = it prevents penile cancer 04 = It gives nice appearance to the penis 05 = It is very painful 06 = It improves sexual performance 07 = It improves penile hygiene 08 = Prevents cervical cancer to female sexual partners 09 = It does not at all help prevent sexually acquired HIV/AIDS 10 = Reduces sexual satisfaction 11 = It is only good to children and promiscuous men 12 = If it is done on married and mature men it will take too long to heal 13 = Other (specify) -----	
As a result of the messages about HIV/AIDS that you have heard from your peers and others around you, to what extent do you agree with the following statements:			
202	Male circumcision is effective in preventing HIV/AIDS:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
203	If circumcised, I am less likely to get HIV/AIDS:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	

204	I am able to seek circumcision for HIV/AIDS prevention:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
205	I can confidently approach and talk to a health worker about adopting circumcision to prevent HIV/AIDS:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
206	I can easily seek circumcision to prevent HIV/AIDS:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
207	I believe that HIV/AIDS is severe:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
208	I believe that HIV/AIDS has serious negative consequences:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
209	I believe that HIV/AIDS is extremely harmful:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree	

		05 = Strongly disagree	
210	It is likely that I will get HIV/AIDS:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
211	I am at risk of getting HIV:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
212	It is possible that I can get HIV:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
213	Male circumcision helps prevent STIs:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
214	Male circumcision improves sexual performance:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	

215	Male circumcision promotes penile hygiene:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
216	Male circumcision gives the penis a nice appearance:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
217	Male circumcision helps prevent penile cancer and cervical cancer among men's sexual partners:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
218	It is shameful to get circumcised as a married man or an adult:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
219	Male circumcision is for only appropriate for promiscuous married men:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
220	Male circumcision procedure is very painful:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree	

		05 = Strongly disagree	
221	Male circumcision results in a very long and unmanageable sexual abstinence:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
222	Male circumcision makes men worried that their wives/sexual partners could cheat on them during post-surgery healing/sex abstinence:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
223	Male circumcision reduces sexual pleasure:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
224	Male circumcision takes too long to heal among married men and adults:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
225	Married men and adults do not get the necessary post-surgery support from and for their family:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
226	Male circumcision undermines my culture and identity:	01 = Strongly Agree 02 = Agree	

		03 = Not Sure __ __	
		04 = Disagree	
		05 = Strongly disagree	

SECTION C: INTERPERSONAL COMMUNICATION SOURCE ATTRIBUTES AND UPTAKE OF VOLUNTARY MEDICAL CIRCUMCISION

N°	QUESTIONS	ANSWERS	SKIP
301	Have you ever heard about Voluntary Medical Male Circumcision (VMMC)?	01 = Yes 02 = No __ __	
302	If yes, Which is your source of VMMC/male circumcision information? (More than one answer allowed)	01 = Mass Media 02 = Health Worker __ __ 03 = Wife 04 = Male Friend 05 = Female Friend 06 = Parent 07 = Other Relatives 08 = Neighbour 09 = Other Sexual Partner(s) 10 = Community (Religious/Political) leaders 11 = Other (Specify).....	
303	Which of the following information sources do you regard as the most trusted in providing VMMC information?	01 = Mass Media 02 = Health Worker __ __ 03 = Male Friend 04 = Neighbour 05 = Wife/Sexual Partner 06 = Family Member/Relative 07 = Opinion Leader 08 = Other Sexual Partner(s) 09 = Other (Specify).....	
304	I regard trustworthiness as the most credible and influential information source attribute in the decision to	01 = Strongly Agree	

SECTION D: INTERPERSONAL COMMUNICATION CONTEXT AND UPTAKE OF VOLUNTARY MEDICAL CIRCUMCISION

N°	QUESTIONS	ANSWERS	SKIP
Rate the following as the right physical location for talking about VMMC:			
401	Home	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
402	Health Facility	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
403	Anywhere	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
404	Anywhere but private	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
405	Other (Specify).....		
To what extent do you agree with the following statements regarding the context male circumcision discussions:			

406	I regard presence of persons of the opposite gender (woman) as inappropriate when discussing about VMMC:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
407	I regard privacy as a very important consideration in discussing about VMMC:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
408	I regard presence of my spouse/sexual partner and/or other family members as appropriate in discussing about VMMC:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
409	I regard confidentiality of information shared as very important consideration in discussing about VMMC:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
410	I regard traditional circumcision season of my neighboring communities as inappropriate time to discuss about VMMC:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
411	I find it easy to self-disclose personal information about male circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree	

		05 = Strongly disagree	
412	I indeed disclose my personal information about male circumcision	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	

SECTION E: INTERVENING INFLUENCE OF DEMOGRAPHIC CHARACTERISTICS ON INTERPERSONAL COMMUNICATION AND UPTAKE OF VOLUNTARY MEDICAL CIRCUMCISION

N°	QUESTIONS	ANSWERS	SKIP
501	How easy is it to openly talk about male circumcision?	01 = Very Easy 02 = Easy __ __ 03 = Not Sure 04 = Not easy 05 = Not easy at all	
502	How easy is it to disclose personal information about male circumcision?	01 = Very Easy 02 = Easy __ __ 03 = Not Sure 04 = Not easy 05 = Not very easy at all	
To what extent do you agree with the following statements regarding talking and seeking male circumcision:			
503	In my culture, it is not acceptable to openly talk about circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
504	In my culture, it is not acceptable to undergo	01 = Strongly Agree	

	circumcision:	02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
505	At my age, it is shameful to talk about male circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
506	At my age, it is not right to undergo circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
507	I feel guilty to talk with other people about circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
508	If I will need to go for circumcision then I would have to do so without telling anyone:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
509	I cannot openly talk about male circumcision because my cultural and other opinion leaders do not approve:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	

510	I cannot seek circumcision because my cultural and other opinion leaders do not approve that:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
511	I cannot openly talk about male circumcision because my religion does not condone:	01 = Strongly Agree 02 = Agree 03 = Disagree __ __ 04 = Strongly disagree	
512	I cannot seek circumcision because my religion does not encourage that.	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
513	Because I am married, I cannot openly talk about male circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	
514	Because I am married, it is not right to seek circumcision:	01 = Strongly Agree 02 = Agree 03 = Not Sure __ __ 04 = Disagree 05 = Strongly disagree	

SECTION F: UPTAKE OF VOLUNTARY MEDICAL CIRCUMCISION

601	Have you undergone circumcision?	01 = Yes	If NO, go to 603
-----	----------------------------------	----------	------------------

		02 = No _ _ _ 98 = No answer	
602	If yes, when did you undergo the surgery?	01= after marriage _ _ _ 02= Before marriage 99= Don't know	
To what extent do you agree with the following statements about seeking VMMC:			
603	I could consider seeking VMMC in order to prevent HIV/AIDS	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
604	I could consider seeking VMMC for reasons other non-HIV/AIDS prevention reasons:	01 = Strongly Agree 02 = Agree 03 = Not Sure _ _ _ 04 = Disagree 05 = Strongly disagree	
605	If Yes, what are these reasons? (More than one answer allowed)	01 = Penile hygiene 02 = Improved sexual satisfaction 03 = Peer pressure _ _ _ 04 = Appease my wife {and my other sexual partner(s)} 04 = Others (Specify).....	

Write down any comments or additional information

.....

.....

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Thank you very much for your time and help.

Appendix III: Interview Schedule (A)
INTERVIEW SCHEDULE FOR CIRCUMCISED MEN

Influence of Interpersonal Communication Messages on Uptake of VMMC

How did the knowledge and experience you acquired during social interactions with peers and others influence your decision to seek male circumcision?

Probe for the nature of messages received about MC, knowledge of circumcision the role in HIV/AIDS prevention, positive messages about MC, negative messages about MC, threat of HIV/AIDS, perceptions efficacy of circumcision in HIV prevention and his reasons for seeking the cut..

Seek his opinion and Probe for information on whether the married men like or dislike male circumcision messages. What are their attitudes, behaviors, habits? Do male circumcision messages address their unique habits, attitudes and mannerisms? Do the married men accept or reject these messages? If so, what reasons do they give for rejecting these messages? On the other hand, what do they like about the messages?

Influence of Interpersonal Communication Sources Attribute on Uptake of VMMC

What are the interpersonal sources of VMMC information?

(Probe: How do they get this information? Which sources does he trust most and why? Given an opportunity who will he prefer to share/talk with about VMMC? Which VMMC source does he consider as expert? Is similarity with source an important consideration in talking about MC? What similarity issues are important – age, gender, ethnicity, marital status etc?

In his opinion, what source can be the most influential in the decision to seek/not seek MC? What source attribute is most influential in the decision to seek circumcision? What do married

men like and or dislike about people who communicate male circumcision and HIV/AIDS preventive messages to them? Who influenced him to seek circumcision?

Influence of Interpersonal Communication Context on Uptake of VMMC

Does the context of interpersonal communication matter when discussing a sensitive topic such as male communication?

probe on his experience, the ideal or most preferred physical setting, influence of traditional circumcision seasons of neighboring communities on discussing about MC, influence of composition of discussants such gender, age, ethnicity, influence of privacy in discussing about MC, any concerns about confidentiality of information shared during discussion, self-disclosure of personal circumcision information, concerns on the time of the day.

Intervening Influence of Demographic Characteristics on Interpersonal Communication and Uptake of VMMC

How easy is it to openly talk about male circumcision? *(Probe on the answer given)*

What challenges do men/does he face in discussing about male circumcision? *(Probe around social norms, age, highest education level attained, duration of marriage, circumcision status, religious beliefs, etc)*

How do demographic characteristics impede/promote uptake of circumcision? *(Probe on age, educational attainment, religion, social-cultural norms)*

What did you do or what do think should be done to overcome these barriers?

What can be done to improve uptake of circumcision among married men?

Thank you very much for your time and cooperation

Appendix IV: Interview Schedule (B)

INTERVIEW SCHEDULE FOR UNCIRCUMCISED MEN

Influence of Interpersonal Communication Messages and on Uptake of VMMC

How did the messages and experience you acquired during social interactions with peers influence your decision not to seek male circumcision?

Probe for the nature of messages received about MC, knowledge of circumcision the role in HIV/AIDS prevention, positive messages about MC, negative messages about MC, threat of HIV/AIDS, perceptions efficacy of circumcision in HIV prevention and his reasons for not seeking the cut.

Seek his opinion and Probe for information on whether the married men like or dislike male circumcision messages. What are their attitudes, behaviors, habits? Do male circumcision messages address their unique habits, attitudes and mannerisms? Do the married men accept or reject these messages? If so, what reasons do they give for rejecting these messages? On the other hand, what do they like about the messages?

Influence of Interpersonal Communication Sources Attributes on non-uptake of VMMC

What are the interpersonal sources of VMMC information?

(Probe: How do they get this information? Which sources does he trust most and why? Given an opportunity who will he prefer to share/talk with about VMMC? Which VMMC source does he consider as expert? Is similarity with source an important consideration in talking about MC? What similarity issues are important – age, gender, ethnicity, marital status etc?

In his opinion, what source can be the most influential in the decision to seek/not seek MC? What source attribute is most influential in the decision to seek circumcision? What do married men like and or dislike about people who communicate male circumcision and HIV/AIDS preventive messages to them? Who has influenced him not to seek the “cut”?

Influence of Interpersonal Communication Context on non-uptake of VMMC

Does the context of interpersonal communication matter when discussing a sensitive topic such as male communication?

probe on his experience, the ideal or most preferred physical setting, influence of traditional circumcision seasons of neighboring communities on discussing about MC, influence of composition of discussants such gender, age, ethnicity, influence of privacy in discussing about MC, any concerns about confidentiality of information shared during discussion, self-disclosure of personal circumcision information, concerns on the time of the day.

Influence of Interpersonal Communication Context on non-uptake of VMMC

Does the context of interpersonal communication matter when discussing a sensitive topic such as male communication? (probe on his experience, the ideal setting, season such as circumcision season of neighboring communities, composition of discussants such gender, age, ethnicity, etc, time of the day)

Intervening Influence of Demographic Factors on Interpersonal Communication non-uptake of VMMC

How easy is it to openly talk about male circumcision? (*Probe on the answer given*)

What challenges do men/does he face in discussing about male circumcision? (*Probe around social norms, age, highest education level attained, duration of marriage, circumcision status, religious beliefs, etc*)

How do demographic characteristics impede/promote uptake of circumcision? (*Probe on age, educational attainment, religion, social-cultural norms*)

What did you do or what do think should be done to overcome these barriers?


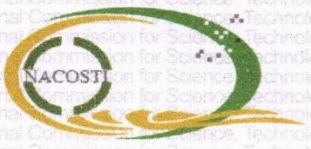
What can be done to improve uptake of circumcision among married men?

Thank you very much for your time and cooperation


Appendix V: Research Permit


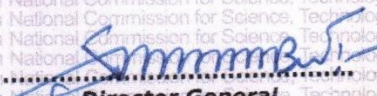
CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice


REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation
RESEARCH CLEARANCE PERMIT
Serial No. **A3723**
CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MR. OMUKULE ANDREW EMOJONG
of JOMO KENYATTA UNIVERSITY OF
AGRICULTURE AND TECHNOLOGY,
0-40100 Kisumu, has been permitted to
conduct research in Busia County
on the topic: INTERPERSONAL
COMMUNICATION AND UPTAKE OF
VOLUNTARY MEDICAL MALE
CIRCUMCISION AMONG MARRIED MEN IN
KENYA
for the period ending:
12th April, 2018


Applicant's Signature



Director General
National Commission for Science, Technology & Innovation

Permit No : NACOSTI/P/17/53526/16683
Date Of Issue : 12th April, 2017
Fee Received :Ksh 2000