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Male Circumcision Interpersonal Messages and Uptake of Voluntary Medical Male Circumcision (VMMC) among Married Men in Teso South Sub County, Kenya: A Qualitative Study Using Behavioral Models

Omukule Emojong

Ph.D. Candidate, School of Communication and Development Studies, Jomo Kenyatta University of Agriculture and Technology, Kenya

Hellen Mberia

Dean, School of Communication and Development Studies, Jomo Kenyatta University of Agriculture and Technology, Kenya

Dr. Ndeti Ndati

Director, School of Journalism and Mass Communication, University of Nairobi, Kenya

Abstract:

Voluntary Medical Male circumcision (VMMC) reduces risk of heterosexually acquired HIV. Kenya adopted VMMC as an HIV 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 main objective of this paper is to examine the nature interpersonal communication messages and their influence on uptake of VMMC among married men in Teso South Sub County in Western Kenya. Teso Sub County is among the sub counties with low male circumcision prevalence and high HIV/AIDS prevalence thus a target of the VMMC programme. In-depth interviews were conducted from July 1-31, 2017 with 30 married men aged between 20 and 49 years comprising 15 uncircumcised men and another 15 circumcised while married. Data was captured using digital recorders, and field notes were transcribed verbatim from local language into English. Key constructs and thematic frameworks were developed using health belief model (HBM) and Extended Parallel Process Model (EPPM) and presented verbatim using the participants own words. Based on male circumcision messages shared interpersonally, participants were induced with threat to HIV/AIDS both in its severity and susceptibility to it. The circumcised respondents equally felt highly susceptible to HIV/AIDS. Self-efficacy (confidence in performing a behaviour), and especially response efficacy (the belief of efficacious of message) regarding acceptance of VMMC as a preventive measure were the most important correlates of perception. Low response efficacy was the critical problems in adoption of VMMC. Majority of those who had sought VMMC did it for other reasons such as peer pressure, penis appearance, sexual satisfaction and penile hygiene and not for HIV prevention.

Keywords: *Interpersonal communication, voluntary medical male circumcision, HIV/AIDS, qualitative data, Kenya*

1. Introduction

HIV/AIDS is a global epidemic and unprecedented in its scope and impact. 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).

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 wide 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 by Doyle, 2005) reveals that the Jews adopted the practice as a rite of passage into adulthood. As a matter of fact, 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 as cited by Doyle, 2005) and when non-Jewish male adults convert to Judaism.

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 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 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).

In 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. 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).

Kenya has a relatively high prevalence of male circumcision. 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 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).

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). A study in Uganda found that "circumcision of HIV infected men did not reduce transmission of the virus to uninfected female partners. Furthermore, we cannot exclude the possibility of higher HIV transmission in couples who resumed intercourse before complete healing of the surgical wound... The findings suggest that strict adherence to sexual abstinence during wound healing and consistent condom use thereafter must be strongly promoted when men living HIV receive circumcision" (Wawer et al, 2009:235).

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 et al., 2011; Hallett 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).

Awareness of HIV and sexual behaviour are critical variables in the discourse of male circumcision. Barden-O'Fallon & Degraft-Johnson (2004) claim that in sub Saharan Africa men typically have greater access to education and other social resources and this makes them often more knowledgeable about HIV prevention and transmission than women. In 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. However, Barden-O'Fallon and Degraft-Johnson opine that greater HIV/AIDS awareness among men does not seem to correspond with increased perceived risk. To Meundi et al. (2008) higher HIV knowledge is significantly associated with safe sex behaviours, hence educating the general population about HIV is an important strategy in the control of the HIV epidemic. However, Chikutsa (2011) disagrees and notes that increased support and knowledge of male circumcision for HIV prevention is unlikely to translate to increased uptake by adult men. However, he at least agrees and suggests that improving people's knowledge on the merits of male circumcision can positively influence people's attitudes towards male circumcision.

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.

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. 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 discussions yielded the desired fruits as the elders were satisfied and their concerns of having the cut conducted and supported for medical and not cultural reasons in addition to making it voluntary were incorporated 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.

The most important elements of a successful behaviour 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 behaviour change communication messages and changes in knowledge, attitudes and practices (Babalola, Ouedraogo, & Vondrasek, 2007).

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, and severity such messages elicit to the communication participants. According to Witte, Meyer & Martell (2001) message severity or the threat component should be analyzed based on the severity of the threat (is HIV threat serious or severe?) and susceptibility to threat (can it happen to me or can I contract HIV?). Efficacy issues or recommended response should address response efficacy (does response work?), self-efficacy (can I do response?) and barriers to self-efficacy (what blocks me from doing the response?). For example a message that applies fear appeal focusing on threat alone and no efficacy the conclusion is implicit. In a nutshell, they argue that threat determines the strength of response while efficacy determines the nature of response. However, the authors are quick to add that the definition of threat varies with target audience and target of threat varies culturally (group or individual). In other words, it is expected that a balanced threat (severity and susceptibility) and efficacy (responsive efficacy and self-efficacy) would result in uptake of VMMC as advocated by the Health Belief Model.

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).

Institute of Medicine Committee on Communication for Behavior Change in the 21st Century (2002) that the more an individual believes that performing a given behaviour will offer positive consequences (e.g., "My performing this behaviour will make me feel better"; "will show my partner that I care"; "is the responsible thing to do") and/or prevent negative consequences (e.g., "will protect me from HIV"), the more favorable the individual's attitude is toward performing that behaviour. Likewise, the more an individual believes that performing the behaviour will offer negative consequences (e.g., "My

performing this behaviour 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 behaviour) if the costs of performing that behaviour outweigh the benefits.

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 behaviour 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 behavioural 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, it is important to consider 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 behaviour 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 behaviour 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 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).

The key VMMC messages in all Sub Saharan countries include the fact that male circumcision provides only a 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.

Hatzold et al. (2014) suggest that there is 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.

Sgaier et al. (2015) add their voice by recommending 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 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, behaviour change interventions have moved from giving messages that focus on individual sexual behaviour to processes involving dialogue and discussion about local contexts and barriers to risk reduction, care, and treatment.

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 HIV 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).

In this study, Health Belief Model (HBM) and Extended Parallel Process Model (EPPM) are used to explain when and why the interpersonally communicated message work or fail. HBM is crucial in addressing the individual's perceptions of the threat posed by a health danger (vulnerability, severity), the benefits of avoiding the danger, the factors influencing the decision to act (barriers to self-efficacy). 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 (male circumcision) (Muela, 2003; Irwin et al., 2009)

EPPM 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)

The two models are fundamentally designed for campaign message evaluation and perception health seeking behaviour to establish category of individuals whether they are taking the recommended action or not. This matches with this study which is aimed at exploring the effectiveness of male circumcision interpersonal messages in the uptake of VMMC. Therefore this study is aimed at exploring important factors that have impact on perception among married men aged between and the response they experience on interpersonal messages using HBM and EPPM. Finally, the findings of this study when used as baseline data will enable health educators, message developers, researchers and policy makers to design appropriate and effective VMMC messages to create demand for male circumcision and lower the prevalence of HIV/AIDS.

2. Methods

2.1. Study Site

This study was carried out in the rural blocks of Teso South sub County in Busia County for over a period of 30 days. 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 culturally practice male circumcision as a rite a passage hence a target of VMMC campaign. 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 two 12 rural administrative locations and 1 cosmopolitan urban location (Ang'oromo location). The rural locations have a total of 21346 households.

2.2. Study Design

A qualitative study design was employed to assess male circumcision interpersonal messages among married men aged between 20 and 49 years and their influence on uptake of VMMC. This study was primarily designed to find out the

perception of married men about male circumcision messages shared in their social networks. A qualitative research method was picked to allow exploration of the perception of participants regarding averting the threat of HIV/AIDS using male circumcision, and to understand the factors affecting decision making to respond for those interpersonal messages.

2.3. Sample Method

Prior to this study, a quantitative but similar study had been conducted in the same research site targeting married men. During the administration of questionnaires, thirty respondents (fifteen circumcised and 15 uncircumcised) were purposively selected to participate in this study to explore interpersonal communication messages and their influence on uptake of VMMC. The criteria used to select the participants included: aged between 20 and 49 years, married, uncircumcised (15 participants) or circumcised while married (15 participants) and willingness to participate in the study.

2.4. Data Collection Instruments and Procedures

Most studies on message response have used quantitative approach. These previous studies provided this study with guidelines for interviews to see the perception of participants. An interview schedule was designed to guide in asking pertinent questions during the interview sessions. In addition HBM and EPPM constructs were incorporated into the framework and a general discussion guide was developed and adapted to the theoretical framework of the models (Irwin, et al., 2009). The topics captured included: the perceived vulnerability to and severity of HIV/AIDS, recommended response (male circumcision), self-efficacy, perceived benefits of male circumcision and barriers to self-efficacy. The research instrument (interview schedule) was pretested among a population with similar characteristics with the target population before applying to the actual study. The purpose and objectives of the study were explained in detail to the participants prior to the interviews and their identities remain anonymous. Each interview was conducted by the principal investigator who was fluent in the local language. He used a general interview guide to prompt responses and elicit further details through probes. Each interview session lasted approximately 40-60 minutes and ended after the saturation of ideas, that is, redundancy of information. The interviews were conducted in secluded areas, away from other family members to minimize interruptions and there were no other attendees apart from the participant and the principal investigator. Hand written notes of each session were taken at the time of the interview. In view of male circumcision being a culturally and sexually sensitive topic, deliberate efforts were put to encourage participants to express their ideas freely and describe their experience with open talks.

2.5. Data Analysis

Data from in-depth interviews was captured using digital voice recorders, and after each interview session field notes were transcribed verbatim into the English language where applicable. The data was analyzed through thematic analysis. Main themes were derived from the theoretical framework of the two models. By repeatedly reading the text itself, subthemes were derived. After reading the transcripts, the researcher identified emergent themes, and then coded each theme to delineate individual topics identified during the interviews. Statements were grouped by code to the corresponding theme. Once themes were established, the transcripts were re-read for abundance of caution to ensure that the themes appropriately reflected the content of the data. These themes were thereafter compared by sub-group: circumcision status and age to establish groups' similarities and differences. The findings were presented in narratives by thematic areas using HBM and EPPM as the guiding theoretical framework. The quotes in the results were the actual views as expressed in each of the in-depth interview to exemplify emergent themes.

2.6. Ethical Considerations and Approval

This study was approved by the board of Postgraduate studies of Jomo Kenyatta University of Agriculture and Technology and National Council for Science, Technology and Innovations of Kenya (NACOSTI). All participants were given complete and detailed information about the study and signed consent form before the study to show willingness to participate in the study.

3. Results

Thirty in-depth interviews (15 with uncircumcised men and 15 with men circumcised while already married) were conducted. The age of participant ranged from 24 to 49 years. The findings are presented in five thematic groups: awareness of male circumcision's role in HIV prevention, perceived threat, perceived efficacy, perceived benefit and barriers to self-efficacy.

3.1. Awareness of HIV/AIDS and VMMC as its Prevention Method

All participants had heard of HIV/AIDS and male circumcision as one of the methods of preventing it. They were also aware that male circumcision only offers partial prevention against heterosexually acquired HIV/AIDS. Majority of the participants had heard about male circumcision "could help" prevent other STIs such as Gonorrhoea and Syphilis.

3.2. *Perceived Threat from HIV/AIDS (Susceptibility to and Severity of HIV/AIDS)*

All participants in this study believed that AIDS is an incurable deadly disease. Majority of the participants regardless of circumcision status claimed susceptibility to HIV and some of reasons were unfaithful sexual partners and multiple sexual partners. One circumcised participant said, "...you cannot trust these women we are marrying today. Our mothers were very faithful and there was respect for marriage but these days...just like men, women cheat or even cheat more."

Less commonly, a few participants, regardless of circumcision status, believed themselves to be not susceptible as they were not promiscuous. One participant said, "...this thing (HIV/AIDS) is dealing and killing promiscuous men and women. At my age (49 years), I don't have the energy to expose myself to AIDS...."

3.3. *Perceived Efficacy of Recommended Method (Self-Efficacy and Response Efficacy)*

Most of the participants' response efficacy, regardless of circumcision status, towards VMMC is low. The participants especially the uncircumcised mostly thought that circumcision "cannot help" prevent HIV/AIDS infection. Uncircumcised participant said,

"...personally I reject and cannot entertain someone telling me to seek circumcision because of preventing HIV... My friend, I can name many people who are six feet under (buried) because of nothing but AIDS yet they were circumcised. Cut or uncut, we can all contract HIV and die. That virus does not respect the appearance of your tool (penis)..."

In contrast, very few participants all being circumcised believed that VMMC can offer partial prevention against heterosexually acquired HIV/AIDS. One participant said,

"...Circumcision can prevent one from contracting HIV though not hundred percent. Scientists have discovered that. In addition AIDS is killing many people mainly in regions that do not traditionally practice male circumcision..."

Most uncircumcised participants' aged below 40 years scored very high on self-efficacy towards VMMC. One participant said, "...I have no problem going for circumcision..." another participant said, "...I don't fear circumcision it is a small thing to do..." However majority of participants aged above 40 years scored low in self-efficacy. One participant said, "...at my age (44 years) it's too late to get circumcised..."

3.4. *Perceived Benefits of VMMC*

The majority of participants, regardless of circumcision status and age, believed that male circumcision had advantages in relation to penile hygiene, prevention of STIs such as Gonorrhoea and Syphilis, peer pressure, giving the penis a nice appearance, improved sexual performance and for religious reasons. One participant stated:

"...This thing (circumcision) is good especially that it makes it easy to clean the penis, it appears good and I'm told women also like it when its cut. When you see many people going for it then it must be a good thing..."

Less commonly, a few participants mostly in their 40s claimed circumcision to be an aggression on their culture, inappropriate at older age and had no value.

"...My brother, in less than two years I will be 50 years. People of my age are the custodians our culture. I don't want to be associated with other people's culture (circumcision). This circumcision gospel that people are preaching today is against my culture. I am not a teso by invitation or by human choice. What will circumcision help me with? I have 9 strong children who are alive. My wife has never complained about my circumcision status..."

Another participant said,

"...The health workers have been telling us to embrace circumcision to prevent acquiring HIV/AIDS. What is annoying is that they again inform us to use condoms even after circumcision to again prevent HIV/AIDS. Why take me through the longer and painful route when I can directly use a condom without going the circumcision way. After all, the circumcised and uncircumcised converge at the point of condom use..."

3.5. *Perceived Barriers to Recommended Method*

Various factors including cultural, medical, and socio-economic and beliefs about male circumcision were found to affect seeking of VMMC by married men. Some of the barriers included: stigma associated with being circumcised an older age, pain during and after the surgery, post-surgery sexual abstinence, limited cultural support, lack of post-surgery support, taking too long to heal. A major barrier to seeking VMMC is the stigma resulting from circumcision at older age (above 40 years) from peers and community. As the community believes just like in other neighboring communities that practice traditional circumcision, it is carried out on young men and adolescents as a rite of passage (transition to adulthood). One participant 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 neighbors 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..."

Another participant said. "...Two years ago, I really wanted to be circumcised and decided to consult my wife. She categorically told me to drop that idea and leave it to boys..."

Another outstanding barrier to seeking VMMC is the socio-economic post-surgery support. Circumcision requires a period of recuperation that may involve not being able to support one's family. One participant eloquently stated:

“...I can face the knife even now but my problem is that whatever my family and I eat every day comes from riding this bodaboda (motorbike used as public transport). If I get circumcised today, who is going to take care of my wife and our seven children? ...How will you convince friends or relatives to feed your family for two months because of your stupid sickness? People will never give you audience...”

Related to this, is the uncertainty about the healing duration and other complications associated with circumcision at an older age. One participant age 44 years said,

“...What guarantee do I have that I will heal within a month after being circumcised? What of if it takes forever to heal? Man, some careless decisions can cause you a marriage or destabilize your family. For example, I may be diabetic and I don't think VMMC people do test for blood sugar before conducting the surgery. If you are diabetic, the wound may take forever to heal.

Pain during and after circumcision is another obstacle to seeking VMMC to some married men. A teacher from one of the local schools stated, “...the pain of circumcision is not worth its benefits. That is self-inflicted pain. Why should I seek pain that will not give me total immunity against AIDS”

Some participants felt that VMMC services are not offered in environments that are “friendly” to older men. One participant said, “...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? Who have I killed or what have I stolen to be subjected to that?

Misinformation as a result of interpersonal messages is another major barrier to seeking VMMC. A circumcised participant said,

“...Before I was circumcised, people fed me with lots of misinformation about circumcision such as circumcision causes a permanent back pain, it reduces sexual performance and satisfaction and it may lead to uncontrolled passage of urine if carried out at an older age. All these information made me delay to go for the cut for I thought they were true...”

4. Discussion

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 on the individual's self-efficacy and perceived benefits as well. The distinction between the expected behavioural outcome and efficacy of message is critical because both are required for behaviour 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 behaviour change (self-efficacy, that is, one is able to seek VMMC to prevent HIV/AIDS). For a message to be effective in eliciting behaviour change, individuals must (as HBM theorizes) feel threatened by their current behavioural 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 shared messages about HIV/AIDS elicit adequate threat to both circumcised and uncircumcised participants. The threat is higher among the uncircumcised than among the circumcised participants. In addition, participants felt susceptible 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 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.

Efficacy takes the form of self-efficacy and recommended efficacy. In this study, self-efficacy was examined based on participants' willingness and confidence to undergo male circumcision to partially prevent HIV. Response efficacy, the perception that the recommended action in the messages is an effective and feasible method to avoid the threat, was examined based on participants' subjective assessment that male circumcision was indeed effective in averting the HIV/AIDS danger. 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.

In summary, it can be deduced that overall interpersonal messages elicit high threat in respect to susceptibility to and severity of HIV/AIDS to both circumcised and uncircumcised men. Regarding efficacy, circumcised participants' self-efficacy and responsive efficacy are quite high while among the uncircumcised participants efficacy hits a lower score especially in response efficacy. 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 efficacy is low where individuals believe that the recommended action (circumcision) cannot avert the threat (HIV/AIDS) and even if they could it would not work anyway hence 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).

Further, this study found out that about a half of the uncircumcised participants was willing to seek circumcision for other reasons such as penile hygiene but not as a measure to prevent HIV. 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.

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 behaviour. 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.

The cultural barrier to seeking VMMC is supported by Institute of Medicine Committee on Communication for Behaviour Change in the 21st Century (2011) argues that one of the major factors influencing the strength of intentions to performance or nonperformance of a behaviour is one's perception of the norms governing the behaviour. It defines Perceived norms as the degree to which an individual perceives that a given behaviour 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 behaviour. 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 behaviour in question. Secondly, a person may believe these important others are, or are not, performing that behaviour. It is therefore crystal clear that both types of normative pressures ultimately influence behaviour and intention.

Suffice it to note that the findings show that there were negative messages and inaccurate information about male circumcision that was being shared. Previous studies show that conversational valence has a substantial influence on health-related attitudes, subjective norms, perceived behavioural control, intentions, and behaviours (Hendriks et al., 2014). Discussions that is positive toward healthy behaviours or negative toward unhealthy behaviours result in desirable and healthy attitudes, intentions, and behaviours. However, when people speak negatively about healthy behaviours (being circumcised) or positively about unhealthy conduct (being uncircumcised), this results in unhealthier determinants of health behaviours.

The barriers identified by this study are supported by what other previous studies found out such 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).

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). This means that there is need to address the above perceived barriers to adopting circumcision.

5. Conclusion

In conclusion, this study revealed various fundamental insights into the nature of interpersonal messages about male circumcision 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). 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, many people are seeking circumcision for other reasons not HIV prevention such penile hygiene and improved sexual performance. 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 in addition to addressing the barriers to VMMC (self-efficacy).

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