

Influence of Voluntary Medical Male Circumcision Communication Strategies on Risk Perception among Secondary School Students in Kenya

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Abstract

This paper analyses the influence of communication strategies on risk perception of circumcised male secondary school students in Kenya. Male circumcision is a surgical removal of the foreskin and can be done as a traditional culture or medical influence. In this regard, we are talking about the medically influenced circumcision, hence, its name being Voluntary Medical Male Circumcision (VMMC). Research has shown that the risk of a medically circumcised male contracting Human Immunodeficiency Virus (HIV) during vaginal sex is reduced by up to 60%, compared to that of an uncircumcised man. However, there is increasing concern that communication of VMMC related messages continues to be done in a disorganized manner in secondary schools and thus circumcised boys may still embark on risky sexual choices despite information that VMMC only offers partial protection from HIV infection. The literature reviewed reveals that there is limited research that has assessed the influence of VMMC communication strategies on risky sexual choices. The study adopted a descriptive survey and was conducted in schools in Migori County in Kenya. It involved 306 male student participants. Data was generated through questionnaires and informant interviews. Quantitative data was presented percentages while qualitative data was analyzed thematically. Findings indicated that whereas circumcised male secondary school students recalled key VMMC messages obtained through informal interpersonal communication, negotiated decoding of VMMC messages still existed. Based on the findings, it is recommended that future VMMC communication efforts use trained peer educators who would accurately capture positive narratives that promote VMMC and at the same time emphasize that there is no cure for HIV/AIDS and that every person could become infected including medically circumcised males.

Keywords: Voluntary Medical Male Circumcision, Communication strategy, Risk Compensation

Introduction

In 2004, the Kenya Institute of Education (KIE) revised the national curriculum to include HIV/AIDS education for both primary and secondary schools. All teachers were expected to teach using the revised curriculum. This integration would act as a form of social vaccine that would permeate through school subjects such as Christian Religious Education and Science, thus accelerating the efforts to curb the spread of HIV among young people in general and students in particular. Githinji & Changa'ch (2011) note that the integration of HIV/AIDS messages in the curriculum aims at increasing the levels of awareness and knowledge among the learners. According to Odu & Akanle (2008), it is expected that when one has the knowledge of HIV/AIDS, the accompanying behavior would be logical. They posit that having the knowledge of prevention, transmission and other facts should encourage individuals to adopt safe sexual behavior. This view has motivated most educational projects on HIV/AIDS in Kenya since it is assumed that increased knowledge will help to overcome fear, denial and also contribute to behavior modification. However, in March 2007, the World Health Organization (WHO) released the results of an expert consultation to determine whether voluntary medical male circumcision should be promoted for preventing HIV infection (WHO & UNAIDS, 2007). The experts - including representatives of governments, civil society, scientists and non-governmental organizations - advised that promoting VMMC should be recognized as an additional, important strategy for the prevention of heterosexually acquired HIV infection in men. The UNAIDS and other organizations have emphasized promotion of Male Circumcision (MC) in combination with other risk reduction methods, such as consistent condom use, partner reduction, delayed onset of sexual initiation, and HIV counseling and testing. UNAIDS recommends a human rights-based approach to introducing and expanding MC services to ensure that procedures are carried out safely, with sound informed consent, and without discrimination (UNAIDS, 2007).

Among those who are targeted for VMMC through various communication strategies in Kenya are male youths in the age bracket of 15-24 years. This is the age range of most male secondary school-going youths. Secondary school education begins around the age of fourteen. In Kenya, it is aimed at meeting the needs of the students who terminate their education after secondary school and also those who proceed onto tertiary education

(Kinuthia, 2009).

In Kenya, the highest prevalence of HIV occurs in some, but not all, of the counties bordering Lake Victoria. These counties account for 31% of all cases in Kenya. According to the UNAIDS, (2014), it is estimated that HIV prevalence in the county is 13.4% against the national rate of 5.6%. This variability shows the need to design programs that address the specific underlying issues in the county. Nationally, the prevalence among Kenyan young men of ages 15-24 years remained relatively stable, between 1.1 % and 1.5%, during the period covering the year 2003 to 2012. According to the UNAIDS (2014) the HIV Prevalence among young people 15 - 24 years would be largely attributed to new infections as opposed to the impact of the scale up of HIV treatment. No study has been conducted in Migori County to examine circumcised male students' sexual behavior considering that they are vulnerable to new infections. This is against the backdrop of statistics which show that Kenya initiated VMMC in 2008 and since then, the program has been scaled up from about 8,000 VMMCs performed annually in 2008 to 190,000 in 2013. Over this five - year period about 50% of the males circumcised were aged 15 - 19 years and about 80% of the VMMCs were conducted in the counties around Lake Victoria region (UNAIDS, 2014).

The Nyanza VMMC communication strategy identifies a mix of communication strategies for the target audience as information cards which are, laminated A4 cards printed in sets of eight-to be used to facilitate participatory group discussions with peer educators and communication program managers, theater tools to be presented in a small leaflet format and will be used by community mobilizers to provoke discussion with their audiences as they perform small skits, Radio spots to be presented as a series, using humor to help drive the messages home, short video clips, Urinals posters to be exhibited above urinals in the men's toilet in various locations Outdoor advertising on exterior surfaces, billboards and Constituency fact sheets for existing social networks or groups that include faith groups , labor unions and businesses. It is therefore expected that the success of the VMMC program in the war against the HIV pandemic in the county is partially dependent on the communication strategies employed to promote it.

Statement of the Problem

Foremost, to date the main focus of VMMC communication efforts have been on information dissemination. With such information, some individuals, groups, or communities may be empowered to act. For some people, however, such information is not enough. In relation to this study, there is little evidence showing that relevant communication materials have been developed specifically for students in secondary schools; materials that would suit different information needs at different stages of the VMMC implementation process.

Secondly, as previously indicated, about 80% of the VMMCs have been conducted in the counties around Lake Victoria region yet these regions still lead in the HIV/ AIDS count. Seemingly therefore, there seems to be an unusual relationship between high demand for VMMC services and a concurrent high infection rates compared to other counties nationally. In Kenya, there has been little research conducted to address this disproportionate relationship, hence the need to conduct research that might uncover the nexus between VMMC communication strategies and risk compensation.

Objectives

The specific objectives of the study were to:

- (i). Identify the VMMC communication strategies that are being used in public secondary schools in Migori County.
- (ii). Assess the influence of the VMMC communication strategies on the sexual risk perception of circumcised male secondary school students in public secondary schools in Migori County.

Significance of the Study

This study provides information about knowledge of the benefits of VMMC, sources of VMMC information and perceptions of risk among circumcised male secondary school students in Kenya. We believe that the study will help health communication stake holders to design communication strategies that would be useful to students in Kenyan secondary schools. Since this study showed perceptions indicative of risk compensation among circumcised male secondary school students, it highlighted the need for VMMC communication strategies to emphasize the need for MMC alongside other HIV prevention measures such as the use of condoms and abstinence by the youth. The finding that there existed a negotiated form of decoding among some circumcised male secondary school students meant that VMMC communication stakeholders also needed to focus on the residual 40% protection that VMMC did not offer. At the same time, the Ministry of Education, Science and Technology and Curriculum developers would make use of the findings to develop an inclusive curriculum that incorporated information on VMMC in secondary schools.

Study Area

This study was conducted in public (mixed or boys only) secondary schools in a county (Migori) found in the Lake Victoria region of Kenya where, as pointed out earlier, about 80% of the VMMCs have been conducted. It would interest scholars in health communication and other stakeholders to know the communication strategies employed in promoting VMMC and the influence they exert on risk perception of the circumcised male students. The area was chosen because there was not any evidence that a similar study had been carried out therein. It is also one of the counties hardest hit by the HIV burden at 13.4% (twice the national rate).

Research Methodology

The theoretical approach that we adopted relied on two seminal works to underpin our inquiry; the Social Ecology Model of Communication and Health Behavior (SEMCHB) and Stuart Hall's Encoding and decoding Model. In this study the SEMCHB was considered as an overarching framework. "It is a set of theoretical principles, for understanding the interrelations among diverse personal and environmental factors in human health and illness." (Stokols, 1996:283). In the model, there are four ascending levels of influence that impact on sexual choices: The individual, social networks, community, and societal. The individual level of the SEMCHB refers to the knowledge, beliefs and the cognitive dispositions an individual has toward a given issue. Informed by personal experience and mediated information, factors in this level relate to how individuals perceive a certain health practice or issue, as well as how it relates to them. According to the SEMCHB, communication channels targeting this level are engagement with mass media, dialogue, counseling, and peer education (Kincaid et al., 2007). This study primarily focused on the individual level factors.

In this study, there were three variables considered to be actively involved in risk compensation among the circumcised. They were: *knowledge* of the benefits of VMMC which was cued to action by mediated and interpersonal *VMMC communication strategies*. The cues to action characterized the production and distribution phase of Hall's model within the individual level of SEMCHB. The cues to action referred to the communication prompts involved in informing as well as influencing *perceptions of susceptibility to HIV or risk perception*. Knowledge of the benefits of VMMC was considered to be characteristic of Hall's consumption phase. They required an engagement with distributed information in order to be discursively constructed. The production phase espoused by Hall's model, or in relative terms, the creation of external cues was envisaged to occur through a normalization of mediated linguistic texts. By making use of VMMC communication channels, texts were assumed to have been distributed to an intended audience who in this study were male secondary school students. At which point the text, with all its connotations and denotations would be actively decoded by the audience or consumers who happened to be circumcised male students in secondary school.

In this study, knowledge and susceptibility were therefore considered to be influenced by how this process of decoding, or interpretation, was realized by the individual. The subject matter of this study, to a large extent, revolved around understanding if, and how male secondary school students undergoing VMMC had interpreted/decoded VMMC messages. Broadly, this approach could be classified as a reception analysis based on its employment of Hall's (1980) seminal contribution to audience research, namely, the encoding/decoding model. Our study presented an exemplar of VMMC health messaging in the form of the VMMC communications guideline, and attempted to explore the manner in which numerous and disparate VMMC communication strategies (mediated or otherwise), shaped circumcised male secondary school students' perception of risk post MMC. Holistically therefore this study adopted a descriptive survey using convergent parallel mixed methods. This was to answer the question, 'what is going on?' Descriptive survey is defined by Bowling (1997) as "a method of collecting information from a sample by personal interviews and self completion questionnaires." (p.174). Using this approach, we collected both quantitative and qualitative data (subjective accounts and perceptions) roughly at the same time. We then integrated the information in the interpretation of the overall results.

This partly prompted us to work from the perspective of an interpretive paradigm and take into account the social construction of knowledge. A survey was chosen because it was cost effective in providing rapid data over a short period of time. The overall intent of the design was to have the qualitative interviews to help explain survey responses in more detail.

Population Description

The target population for this study comprised senior male students in secondary schools. They were considered to have had more exposure to VMMC communication strategies over time. According to Mugenda & Mugenda, (2003) a population is a well defined or set of people, services, elements, events, group of things that are being investigated. Mason, (2002) defines sampling as the way through which the people who will be the sources of data are chosen and accessed. The major aim of sampling is to identify participants who are likely to give rich information in qualitative studies and valid information in quantitative ones. In this study, two sampling techniques were used. In the first phase, simple random sampling procedures were used. According to Fowler

F.J., (2009) the appropriate sample size for a targeted population of around 1500 would be 306 (used in this study) giving a confidence level of 95.5% and a margin of error of 0.05. Creswell, (2009) suggests the need to select participants that show different perspectives on the same problem. Accordingly, in the second phase of our study, we purposively selected another category of 12 participants (2 in each of the six schools in the sample). These provided insights into perceptions of risk perception post VMMC.

Results and Findings

VMMC Communication Strategies

As earlier stated, it was envisaged that the communication channels at the individual level of SEMCHB, included dialogue, counseling, and peer education (Kincaid et al., 2007). They were assumed to operate within social networks. These social networks symbolized the social forces that surrounded and influenced an individual. These could include family and friends, as well as the aggregate normative social influence that individuals were subjected to. From our analysis of the underlying factors shaping perceptions at a primarily interpersonal level, interpersonal communication was seen as part of social influences that determined decisions on sexual matters. Students were therefore asked to indicate the most useful sources from which they obtained key VMMC messages. The majority of the participants (41.9%) mentioned their peers as the most useful source of information on VMMC. Although some of the individuals identified as fellow students could be members of the larger community, they were defined as having a close personal relationship with the participants as friends, and not merely regarded as general community members. 14.4% indicated reading booklets and 11.9% watched videos and documentaries on TV as a way of participation in VMMC communication process. VMMC related media was also notably encountered through other traditional formats such as radio and newspapers, at 20% and 1.9% respectively.

The fact that Parents (2%) were the least cited non mediated source of VMMC information and by extension least involved in the VMMC decision making process suggested that there was weak family support in the VMMC communication process. Teachers' usefulness in providing information on MMC (7.9%) was rather low because Kenya's Ministry of Education had incorporated HIV/AIDS education programs in secondary schools and teachers were expected to play a leading role in the communication process. It meant that VMMC was not talked about by teachers as much as would have been expected. nevertheless, we deduced that interpersonal communication played a vital role in bolstering confidence to undergo VMMC and also illuminated details of the procedure itself. The data therefore suggested that friends played a central role in influencing sexual decisions of circumcised males and the type of communication used was primarily face to face interpersonal communication. Additionally, when participants were asked whether they received regular counseling on safe sex post MMC, (63.3%) stated that they did not receive regular counseling on safe sex while 36.9% said they did. It was therefore apparent in the data gathered that there were limited counseling services available to the participants post MMC.

Knowledge of the Benefits of MMC

The first core message in the VMMC communication guide is a projection of the fact that MMC is effective at reducing the risk of HIV acquisition through vaginal intercourse by approximately 60%. In line with the first objective, this study assessed the participants' knowledge of the benefits of MMC. They were expected to recall and write the prophylactic benefits of MMC. The most commonly reported reason for undergoing VMMC was said to be the lessened risk of contracting HIV and other sexually transmitted infections. In fact, 79% of the participants alluded to this capability of MMC to offer protection from HIV infection. of these, only 21% could specify that MMC offered a 60% reduction in risk to HIV publicized by VMMC channels of communication . Based on Stuart's seminal works, this was interpreted to mean that there was a dominant hegemonic form of decoding of the first core VMMC message by circumcised male secondary school students.

The second most cited benefit of VMMC by 60% of the participants was improved sexual performance because of delayed orgasm. This pointed at the probability that male secondary school students were very much sexually active and hence the interest on the topic of sexual satisfaction. Other reported benefits included: added cleanliness (40%) and improved cosmetic appearance of the penis (10%).

There were some responses bordering on myths such as, "it increases the strength of a boy", and that "it prevents unwanted pregnancies" or, "it prevents women from having pain in the abdomen." The responses given above generally showed two things: First, the unreliability of solely depending on interpersonal information because all of these respondents had listed fellow students as their main source of information on VMMC and second, the presence of myths surrounding VMMC. 4% of the participants indicated that they were now "real men" Showing confusion between VMMC and circumcision practiced as a cultural rite of passage by some communities in Kenya.

Susceptibility to HIV Infection (Risk Perception)

We assessed the participants' responses that corresponded to or differed from the second core message in the VMMC communication guide. The communication guide emphasizes that MMC does not replace other HIV prevention measures like abstinence, and condom use for every sexual encounter. This was aligned to the third question which assessed the influence of VMMC communication strategies on the risk perception of circumcised male secondary school students.

To investigate how participants appreciated their own susceptibility to HIV, questioning not only revolved around agreeing or disagreeing with the statement that HIV could be contracted through sex even after circumcision but also understanding what measures the participants took to protect themselves from HIV infection within their own sexual relationships. Condom use and abstaining from sex for at least six weeks after circumcision was equated to a high perceived susceptibility to HIV infection.

If condom use was absent and sex was engaged in before the lapse of six weeks following circumcision, then the participant was thought to constitute a low sense of perceived susceptibility to HIV infection. The participants were first asked if they perceived themselves to be at risk of contracting HIV.

Amongst the 252 circumcised participants in the study, 89% perceived themselves to be susceptible to HIV infection. This was not viewed as an absolute or definitive reflection of participants' approach to HIV prevention, but a glimpse into how the issue of HIV was being perceived amongst circumcised male students in secondary school.

Besides being asked about their risk perception, the participants were also asked if they had ever had sex before circumcision. It emerged that that majority of the participants (57.9%) had sex before circumcision while 40.8% did not. Most of the male students were therefore sexually active while abstinence was practiced by the minority. Most of the students could therefore be said to be at the centre of the HIV/AIDS epidemic in terms of vulnerability and new infections. The findings also suggested that the students' social environment provided opportunities for sexual activities.

To further assess whether circumcised male secondary school students perceived the risk reduction benefits of VMMC as intended in the communication guide, we probed if their perceptions of condom usage was affected by their interpretation of the prophylactic benefits of VMMC. Reduced condom use would be a pointer of risk compensation. As described in other literature found in this study, risk compensation alludes to a situation where an individual's perceived sense of security ushers in riskier sex; exposing the individual to greater overall risk, rather than being of protective benefit. Asking the students if they had consistently used a condom when having sex before circumcision was meant to establish whether they had perceptions of practicing safe sex that reduced risk of vulnerability to HIV/AIDS and other sexually transmitted infections.

The data revealed that before circumcision, 40.1% of the participants consistently used a condom during sex while 49.3% did not while 10.6% did not respond to the question. Evidently, a number of students engaged in unprotected sexual activities.

A comparative question posed on sexual behavior after circumcision revealed that 60.7% of the participants had had sex after circumcision while 40% had engaged in abstinence. This showed a significant increase in the incidences of sex among the circumcised male students in this sample. At the same time, Analysis of the data, indicated that 51.8% of the participants never used condoms after circumcision. This was a decrease in condom use after circumcision by 1.5%. This characterized a negotiated interpretation (not directly as intended) of how VMMC affected condom use, or more specifically, how it should not affect condom use. Those who never used condoms gave explanations such as Participant 12 who said, *'I trust my partner and she looks healthy.'* And participant 6 who stated, *'I realized that I and my partner are safe and clean'*

These suggest that the participants who gave the responses believed that they could afford to rely more heavily on the partial risk reduction benefits provided through MMC. The belief that a healthy-looking person cannot be infected with HIV was a misconception that was revealed by the first response above and evidently resulted in unprotected sexual intercourse. Rejecting major misconceptions about modes of HIV transmission is as important as correct knowledge of true modes of transmission. There were other responses such as participant 7 who said, *'We agreed that there is no need to use a condom'*. And participant 2 who stated, *'I believed that after circumcision, it was not that easy to get HIV/AIDS.'*

These responses pointed out participants who perceived VMMC to be a natural condom, making a number of circumcised male secondary school students to be promiscuous thereby risking HIV infection. This once again reinforced the argument that VMMC communication strategies should continue to encourage condom use amongst male youths in secondary schools post MMC.

The fact that a number of circumcised male students (40.1%) understood the need for continued condom use after undergoing VMMC suggested that they saw MMC as a means of enhancing protection from HIV and STIs, but they were in the minority. One can understand these participant's desire to be as cautious and circumspect over matters of sexual health as possible in light of their perceived severity of HIV and this is the trend that should be encouraged. The fact that 10.6% of the participants did not respond to the question could be

a pointer to the sensitivity of disclosing condom use among certain segments of the society.

The VMMC communication guidelines dictate that men undergoing VMMC should not engage in sexual intercourse for at least six weeks following their operation. Failure to adhere to these parameters could result in heightened risk to HIV and STIs, as well as wound complications. Thus, it is quite understandable why this has been identified as a key message to be circulated by VMMC communication initiatives. In questioning participants about this period of abstinence, the aim was to gauge the risk perception of the participants. Some of the responses given for having sex before the lapse of six weeks following circumcision included: Participant 5 who said, 'I wanted to test if my penis was still working'; and participant 6 who stated, 'My girlfriend wanted to know if I still loved her' From these responses, it seemed that experimentation was at the heart of the decisions made by the participants who could not wait for six weeks to elapse before having sex after being circumcised.

Discussion

Findings indicated that a number of circumcised male secondary school students had been exposed to MMC information and the majority was able to state that it reduced chances of being infected by HIV. This knowledge of the prophylactic benefits of MMC in relation to HIV and AIDS was not surprising because HIV and AIDS has been the cornerstone of many of the health education programs being implemented to combat the pandemic. Since the discovery of the first HIV and AIDS case in Kenya in 1984, there have been investments in a variety of interventions including treatment, prevention, management, care and support. A need for a clear policy to support the various interventions was felt soon after the government of Kenya declared HIV and AIDS a national disaster in 1999. The results are consistent with findings from previous studies that found that the level of awareness of HIV and AIDS in Kenya was over 80% by the year 2007 (UNAIDS, 2008).

Additionally, this study showed that peers were a major source of information for young people. This finding was consistent with Runganga & Aggleton, (1998:63), findings which showed that "peers were more relied upon for information and guidance about sex issues." These findings emphasized the big role played by interpersonal communication among student peers in relaying VMMC information in a school environment. Low ratings for parents as a source of VMMC information indicated the sensitivity of discussing topics related to sex with family members and religious leaders. The findings meant that aspects related to sex (including HIV/AIDS and VMMC) were not being freely discussed in the students' homes. At the same time, it emerged that that among media and ICT platforms radio remained the most widely available, reaching directly more individuals living in the rural parts of the County. The finding that there were limited counseling services available to the participants post MMC paralleled a study by Grund & Hennink, (2011) Whose findings showed that men who received less counseling were more inclined to risk compensate, adding that the cultivation of dominant or accurate interpretations of VMMC information was likely contingent to some extent upon exposure over time.

overall, the findings uncovered here related to one of the key messages within the VMMC communications guideline; the "Importance of continued adherence to HIV prevention" methods (JHHESA *et al.*, 2008:10). Despite a number of participants adhering to condom use post VMMC, the majority showed diminished circumspection within their sexual relationships. In these cases, VMMC was concluded to have acted as a back-up plan for inconsistent condom use hence a tendency towards risk compensation.

Ultimately, findings in this study were more aligned with research highlighting the limited, yet still existent nature of risk compensation - or at least the potential for such an outcome, following VMMC (Riess *et al.*, 2010; Grund & Hennink, 2011). Of the mass media mentioned as sources of VMMC information, radio was the most prolific. Given the rural setting of the research area, it was apparent that among the traditional media, radio reached more individuals with VMMC information. This was followed by leaflets and television in that order. It can be said that mass media influences therefore played a significant role in shaping circumcised male secondary school students' perception of VMMC and its benefits alongside the more dominant interpersonal communication among peers.

Whereas the majority of the participants considered themselves to be at high risk of contracting HIV after being circumcised many of those who perceived themselves to be at risk did not consistently use condoms after undergoing VMMC. The reasons given by the participants for having sex without using condoms pointed at sexual experimentation as being at the heart of their risky sexual choices; some of the participants were in a hurry to find out the difference between sex before and after circumcision. Whereas others trusted their sexual partners, some circumcised male students went for unprotected sex since they now felt safe after learning that they were HIV negative, following tests carried out just before being circumcised. These findings gave reason to believe that a substantial number of participants were placing themselves at risk of contracting HIV. The participants' responses mentioned earlier were characterized as negotiated forms decoding of VMMC communication. The findings suggested that the normative definition of the MMC messages were acknowledged, while other aspects of the same messages were interpreted in an aberrant fashion. Some circumcised male secondary school students interpreted MMC as a viable means of reducing the spread of HIV but misinterpreted its partially protective benefit. Evidently, reasons for this misinterpretation stemmed from the decoders' own

personal communication milieu which shaped their individual frameworks of knowledge. This served as a theoretical explanation as to why possible misconceptions developed in the presence of MMC health communication efforts.

Recommendations

This study aimed at finding out what VMMC communication strategies were commonly used in the promotion of VMMC and how the strategies influenced the risk perception of the circumcised male secondary school students post MMC. Questionnaires and interviews were used for data collection. The study contributes to the field of health communication by showing that VMMC communication efforts should emphasize MMC not as a stand-alone solution to the HIV menace but as part of a comprehensive package that includes other preventive measures like abstinence and condom use. The VMMC campaigns should use a variety of communication strategies that are both participatory and sustained even after circumcision. In as much as the key sources in secondary schools revolved exchanges among peers, they were informal, uncoordinated and irregular discussions among students. We recommend regular counseling services to the circumcised post MMC. The networks of friends should be organized into trained peer educators who would accurately capture positive narratives that promote VMMC and at the same time emphasize that there is no cure for HIV/AIDS hence the need for safe sexual practices. This is because whereas interpersonal communication played a major role in the VMMC communication process it was prone to distortions and negotiated interpretations of VMMC messages. To prevent risk compensation, this study recommends that Mass media messages should clearly emphasize that MMC is not a stand-alone HIV control measure and that one still faces 40% risk of HIV infection despite being circumcised. At the same time, there is need to strengthen evidence based information on VMMC through texts incorporating VMMC. These should be made available in print and digital forms for use in secondary schools. It was therefore concluded in this study that risk perception and hence risk compensation was a dynamic process and circumcised male youths did not just adopt safe sex practices or only engage in risky compensatory practices. VMMC messages needed to be framed in such a way that underscored the remaining 40% risk of HIV infection, as opposed to primarily spotlighting the 60%. This would help bring about a more judicious appreciation of risk.

REFERENCES

- Agot, K., Kiarie, J., Huang, Q., Odhiambo, J., Onyango, T., & Weiss, N., (2007). Male circumcision in Siaya and Bondo districts, Kenya: Prospective cohort study to assess behavioral disinhibition following circumcision. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 44(1), 66-70.
- Auvert, B., Taljaard, D., Lagarde, E., Sobngwi, T. J., Sita, R., & Puren, A., (2005). Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: The ANRS 1265 Trial. *PLoS Med*, 2(11), e298.
- Ayiga, N., & Letamo, G. (2011). Impact of male circumcision on HIV risk compensation through the impediment of condom use in Botswana. *African Health Sciences*, 11(4), 550-559
- Bowling, A. (1997). *Research methods in health: Investigating health and health services*. Buckingham: Open University Press.
- Bryman, A. (2004). *Social Research Methods*. (2nd Ed.). London: Oxford University Press.
- Cassel, M. M., Halperin, D. T., Shelton, J.D. & Stanton, D. (2006) Risk compensation: The Achilles heel of innovations in HIV prevention? *British Medical Journal*, 7(332), 605-7.
- Creswell, J. W. (2009). *Research design: qualitative, quantitative and mixed approaches* (3rd Ed.). London: Sage Publications Limited.
- FHI 360, (2010). *Voluntary Medical Male Circumcision (VMMC) Communication Guide for Nyanza Province*. Retrieved from [https://www.google.com/search?q=Voluntary+Medical+Male+Circumcision+\(VMMC\)Communication+Guidefor+Nyanza+Province&ie=utf-8&oe=utf-8](https://www.google.com/search?q=Voluntary+Medical+Male+Circumcision+(VMMC)Communication+Guidefor+Nyanza+Province&ie=utf-8&oe=utf-8)
- Fisher, A., and Foreit, R., (2002). *Designing HIV/AIDS Intervention Studies. An operations Research Handbook*. Retrieved December 1, 2012, from <http://www.popcouncil.org/pdfs/horizons/orhivaidshndbk.pdf>
- Fowler, F.J. (2009). *Survey research methods* (4th Ed.). Thousand Oaks, CA: Sage.
- Githinji, F. W. & Chang'ach, J. K. (2011). Perceptions of Primary School Teachers and Pupils on Adequacy of HIV/AIDS Life Skills Education in Nairobi and Thika Districts, Kenya. *International Journal of Humanities and Social Science*, 1(15): 71 – 79.
- Government of Kenya (GOK) (2004). *Education sector policy on HIV and AIDS*. Nairobi: Government Printer.
- Gray, H., Kigozi, G., & Serwadda, D. (2007). Male circumcision for HIV prevention in young men in Rakai, Uganda: A randomized trial. *The Lancet*, 369 (9562), 657-66.
- Grund, J. M., & Hennink, M. (2012). A qualitative study of sexual behavior change and risk compensation following adult male circumcision in urban Swaziland. *Pubmed*, 24(2),245-51
- Hall, S. (1980). Encoding/Decoding. In Hall, S., Hobson, D., Lowe, A. & Willis, P. (Eds.), *Culture, Media,*

- Language*. London, Hutchinson.
- Halperin, D.T., 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), 238–39.
- JHHESA. UNAIDS. UNICEF. UNFPA. WHO. (2008). *Male circumcision and HIV Prevention in eastern and southern Africa: Communications guidance*. Retrieved from http://data.unaids.org/pub/Manual/2008/20080515_mc_hivprevention_eastern_southern_africa_en.pdf
- Kincaid, D.L., Figueroa, M. E., Storey, J.D. & Underwood, C.R. (2007) A social ecology Model of communication, behaviour change, and behaviour maintenance. Working paper. Center for Communication Programs, Johns Hopkins Bloomberg School of Public Health.
- Kinuthia, W. (2009). Educational development in Kenya and the role of information and communication technology. *International Journal of Education and Development using ICT*, 5(2), 138-153. Retrieved from <http://ijedict.dec.uwi.edu/viewarticle.php?id=740>
- Mason, J., (2002). *Qualitative researching* (2nd Ed.). London: Sage Publications.
- 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 in Kenya, *AIDS care*, 17(2), 182-94.
- Mattson, C.L., Campbell, R.T., Bailey, R.C., Agot, K., Ndinya-Achola, J.O. (2008). Risk compensation is not associated with male circumcision in Kisumu, Kenya: A multi-faceted assessment of men enrolled in a randomized controlled trial. *PLoS ONE* 3(6), e2443.
- Miles, B.M., & Huberman, A.M., (1994). *Qualitative Data Analysis. An expanded Source book*. Sage Publications
- Ministry of Education Science & Technology.(2013). *Awendo district enrollment statistics*, Nairobi: Government Printer.
- MoH, (2010). *Communication guide for Nyanza province*. Retrieved from http://www.malecircumcision.org/programs/documents/Nyanza_communication_guide_a.pdf
- MoH, (2014). *Kenya HIV estimates, 2014*. Retrieved from http://www.nacc.or.ke/attachments/article/428/HIV%20estimates%20report%20Kenya%202014_print.pdf
- Mugenda, O. and Mugenda, A. (2003). *Research methods: Quantitative and qualitative approaches*. (2nd rev. Ed.). Nairobi: Act press.
- NACC, (2009). *Kenya national AIDS strategic plan 2009/10 – 2012/13: Delivering on Universal Access to Services*. Retrieved from http://www.nationalplanningcycles.org/sites/default/files/country_docs/Kenya/kenya_national_hiv_aids_strategic_plan_2009-2013.pdf
- NACC & NASCOP, (2012). *The Kenya AIDS epidemic update 2011. Nairobi, Kenya*. Retrieved February 7, 2013, from http://www.unaids.org/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/ce_KE_Narrative_Report.pdf
- NASCOP, (2010). *Progress report on Kenya's voluntary medical male circumcision programme, 2008–09: summary*. Nairobi: NASCOP. Retrieved from http://www.malecircumcision.org/documents/VVM MCP_Report.pdf
- Ngalande, R.C., Levy, J., Kapondo, C.P. & Bailey, R.C. (2006). Acceptability of male circumcision for prevention of HIV infection in Malawi. *AIDS Behaviours*, 10(4), 377-85.
- Odu, B. K. & Akanle, F. F. (2008). Knowledge of HIV/AIDS and sexual behavior among the Youths in South West Nigeria. *Humanity and Social Science Journal*, 3 (1): 81-88.
- Ong'ondo, C. O., & Jwan J. O. (2011). *Qualitative research: An introduction to principles and techniques*, Eldoret: Moi University Press.
- Riess, T.H., Achieng, M.M., Otieno, S., Ndinya-Achola, J.O., & Bailey, R.C. (2010). When I was circumcised I was taught certain things: Risk compensation and protective sexual behavior among circumcised men in Kisumu, Kenya. *PLoS ONE*, 5(8), e12366.
- Runganga, A., & Aggleton, P. (1998). *Migration, the family and the transformation of a sexual culture*, London: New Longman Publishers.
- Stokols, D. (1996). Translating social ecology theory into guidelines for community health promotion. *American Journal of Health Promotion*, 10(4), 283.
- UNAIDS, (2008). Report on the Global HIV/AIDS Epidemic Geneva: UNAIDS
- UNAIDS, (2012). *Report on the global AIDS Epidemic*. Retrieved from http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/20121120_UNAIDS_Global_Report_2012_en.pdf.
- UNAIDS, (2013). *Report on the global AIDS epidemic*. Retrieved, from <http://kff.org/global-health-policy/fact-sheet/the-global-hivaids-epidemic/#footnoteUNAIDSSlides>
- UNAIDS, (2014) *Kenya AIDS Response Progress Report 2014*. Retrieved, from

http://www.unaids.org/sites/default/files/country/documents/KEN_narrative_report_2014.pdf

WHO &UNAIDS, (2007). *Male circumcision: Global trends and determinants of prevalence, safety and acceptability*. Geneva: UNAIDS. Retrieved from https://www.unaids.org/en/media/unaids/contentassets/dataimport/pub/report/2007/jc1360_male_circumcision_en.pdf

WHO/UNAIDS/UNICEF, (2013). *Global update on HIV treatment*. Retrieved from <http://kff.org/global-health-policy/fact-sheet/the-globalhivaidsepidemic/#footnote-WHOGlobalResponse>

ZIMSTAT. (2012) *Zimbabwe demographic and health survey 2010-11*. Harare, Zimbabwe. Retrieved from http://www.saf aids.net/files/zimbabwe_dhs_survey_2010-11.pdf