# A COMPARATIVE STUDY INTO THE EFFECTIVENESS OF COMMUNICATION TOOLS USED IN THE MEDICAL MALE CIRCUMCISION PROGRAMME IN A RURAL SETTING

by

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**Declaration**

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Date: March 2013

**Abstract**

Based on the significant evidence from the three African randomized controlled trials, the WHO and UNAIDS recommended in 2007 that medical male circumcision should be a priority HIV prevention intervention. The three randomized trials in Africa demonstrated that adult male circumcision decreases the human immunodeficiency virus (HIV) acquisition in men between 51% to 60%, with long-term protective efficacy.

This study intends to document and analyze the effectiveness of three communication interventions used in transferring knowledge about medical male circumcision as an HIV preventative strategy. Furthermore it also aims to determine which communication intervention will have the greatest effect in improving knowledge and understanding about medical male circumcision as an HIV preventative measure for implementation in future health promotion programmes.

The research in this comparative study was conducted on a farm in the Overstrand sub-district of the Western Cape Province in South Africa, Haygrove Haven. A total of 30 male employees aged 18 to 45 was randomly selected to participate in the study.

The data was collected using a self-administered pre-test questionnaire. In order to compare the pre- and post-test answers, the questions were repeated to determine the knowledge transfer after the respective information and training sessions. Analysis of the data was a simple process and limited to the necessary information to graph the required conclusions by using the computer programme Microsoft Excel 2010.

The study looked at the statistical indicators of knowledge, perception and awareness of participants with regards to medical male circumcision as an HIV and AIDS prevention strategy. The findings exhibited that most people knew about MMC but very few had knowledge of the protective effect of the procedure against HIV acquisition and transmission.

The study concluded that providing accurate information with fitting communication material at the right literacy levels, peoples' knowledge of the benefits of medical male circumcision does increase. This will contribute to change the perception and therefore increase the acceptability of the procedure.

This conforms to the subject of the WHO and UNAIDS 2007 study and can improve their findings.

**Opsomming**

In 2007 het die WGO en UNAIDS aanbeveel dat mediese manlike besnydenis ‘n prioriteit MIV-voorkomings program moet raak, wat gebaseer is op die beduidende bewyse van drie Afrika gerandomiseerde gekontroleerde proewe. Die drie gerandomiseerde proewe in Afrika toon dat volwasse manlike besnydenis verminder die menslike immuniteitsgebreksvirus (MIV) in mans met 51% tot 60%, met 'n lang-termyn beskermende doeltreffendheid.

Hierdie studie is van voorneme om die doeltreffendheid van drie kommunikasie-intervensies wat gebruik word in die oordrag van kennis oor mediese manlike besnydenis as 'n MIV-voorkomende strategie, te dokumenteer en te analiseer. Verder stel dit ook ten doel om te bepaal watter kommunikasie-intervensie die grootste invloed in die verbetering van kennis en begrip oor mediese manlike besnydenis as 'n MIV-voorkomende maatreël, vir implementering in toekomstige gesondheidsbevorderingsprogramme.

Die navorsing in hierdie vergelykende studie is uitgevoer op 'n plaas in die Overstrand-sub-distrik van die Wes-Kaap in Suid-Afrika, Haygrove Haven. 'n Totaal van 30 manlike werknemers tussen die ouderdomme 18 tot 45 is lukraak gekies om deel te neem aan die studie.

Die data is ingesamel met behulp van 'n self-geadministreerde vraelys waar die pre-toets vrae in die post-toets herhaal word, om die antwoorde met mekaar te vergelyk, om sodoende te bepaal watter opleidingsessie die grootste kennis oordrag laat plaasvind. Ontleding van die data is beperk en so eenvoudig as moontlik om die gevolgtrekkings te maak en grafies deur te gee deur gebruik te maak van die rekenaarprogram Microsoft Excel 2010.

Die studie kyk na die statistiese aanwysers van kennis, persepsie en bewustheid van die deelnemers met betrekking tot mediese manlike besnydenis as 'n MIV-en VIGS-voorkoming strategie. Die bevindinge van die studie is dat die meeste mense bewus is van mediese manlike besnydenis, maar baie min kennis gehad het van die beskermende effek van die prosedure teen MIV verkryging en oordrag.

Die studie het bevind dat die verskaffing van akkurate inligting met gepaste kommunikasie materiaal op die regte geletterdheidsvlakke, mense se kennis van die voordele van mediese

manlike besnydenis kan laat toeneem. Dit is bydraend om ‘n individu se persepsie te verander en dus die aanvaarbaarheid van die prosedure te verhoog. Dit voldoen aan die onderwerp van die WHO en UNAIDS 2007 studie en kan sodoende hul bevindings verbeter.

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## List of Abbreviations

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|---|---|
| AIDS | Acquired Immunodeficiency Syndrome |
| HIV | Human Immunodeficiency Virus |
| HR-HPV | High Risk Types of Human Papilloma Virus |
| HSV-2 | Herpes Simplex Virus 2 |
| LSM | Living Standard Measure |
| MMC | Medical Male Circumcision |
| NDoH | National Department of Health |
| PEPFAR | President's Emergency Plan for AIDS Relief |
| SACEMA | South African Centre for Epidemiological Modelling and Analysis |
| SANAC | South African National AIDS Council |
| STI | Sexually transmitted infections |
| UNAIDS | United Nations Programme on HIV / AIDS |
| VMMC | Voluntary Medical Male Circumcision |
| WHO | World Health Organization |

# Chapter 1: Introduction

This chapter will include the background to the study, statement of the problem, the significance of the study, the aim and objectives of the study as well as the relevance of the study.

In the late 1980's and 1990's the coverage, intensity and frequency of HIV prevention messages was of great priority in contributing to make a difference. Since the first cases of AIDS were reported in June 1981, significant scientific advances in HIV prevention, diagnosis, and treatment have saved countless lives. As part of the renewed emphasis on preventing HIV, medical male circumcision is recognized as part of the comprehensive package to reduce the risk of men especially in countries with high rates of heterosexual HIV infection, and low rates of male circumcision.

Fourteen countries in the sub-Saharan district of Africa are scaling-up their efforts within voluntary male circumcision programmes. To ensure informed demand and choices that will address cultural concerns about the procedure and promote safer sex after the medical procedure, the efforts need to include evidence based social and behavioural change communication in addition to the provision of quality services. Voluntary medical male circumcision is being promoted through different communication interventions at international, national, provincial and district levels, but the implementation is slow and coverage remains low. In this proposed study the author will discuss and debate the effect of different communication tools used in order to provide knowledge and understanding of medical male circumcision as an HIV preventative measure.

## 1.1 Historical overview of the HIV and AIDS phenomenon

HIV and AIDS have been on the healthcare agenda for two decades and authors, such as Cross & Whiteside (1993) argued that it was established as a homosexual disease between the late 1970's and the early 1980's. AIDS is caused by a virus commonly known as HIV, which attacks the body's immune system by entering the bloodstream through (i) unprotected sexual intercourse with an infected partner, from (ii) an infected mother to her infant, and (iii) through the use of contaminated blood or blood products or by sharing intravenous drug-injecting equipment.

Presently, HIV and AIDS is everyone's problem irrespective of gender, sexual orientation, race and geographic location. People who are infected with HIV may lead relatively healthy and productive lives for many years after they are infected with the virus, as the virus has a long incubation period. However, the virus gradually weakens the immune system and the body becomes increasingly unable to fight off infections.

Despite the coverage of HIV prevention messages, HIV incidence seems to be on the increase and the number of people living with HIV who need medical and prevention services is growing and straining an already burdened health care system. Although life can be prolonged with anti-retroviral treatments, there is as yet no cure for HIV and AIDS.

### 1.2 The current status of the epidemic in South Africa

The World Health Organization estimates that globally 34 million people are living with HIV, with more than 22,9 million people in Sub-Saharan Africa (UNAIDS, 2010). Globally, newly HIV infected adults and children increased from 2,6 million in 2009, to 2,7 million in 2010 (UNAIDS, 2010).

According to the Department of Health's National Antenatal Survey, 2010, South Africa has an estimated 5,7 million HIV infected individuals and is recognised as the country with the fastest expanding epidemic in the world. Unfortunately the combination of historical, socio-economic and developmental factors has facilitated the easier spread of the virus, leaving HIV and AIDS the primary cause of death in sub-Saharan Africa.

### 1.3 Background to the study

Circumcision, one of the oldest surgical procedures in the world, has gained recent attention as a potential HIV prevention strategy. Researchers have been exploring the possibility of a correlation between male circumcision and lowered risk of HIV infection almost since the beginning of the HIV and AIDS epidemic. While the data clearly highlight South Africa having the world's largest population of people living with HIV, it has been estimated that about a third of men in South Africa are circumcised

(www.malecircumcision.org/publications/documents/South_Africa_MC_case_study_May_2008). Three randomized trials in Africa demonstrated that adult male circumcision decreases human immunodeficiency virus (HIV) acquisition in men by 51% to 60%, and the long-term follow-up of these study participants has shown that the protective efficacy of male circumcision increases with time from surgery (Fink, 1986).

The World Health Organisation's Global Health Strategy, 2011 – 2015, (World Health Organisation, 2011) recognizes safe voluntary medical male circumcision as an exceptional HIV preventative intervention in high prevalence areas in that it offers life-long, substantial protection against female–to–male sexual transmission of HIV as well as other sexually transmitted infections.

There is substantial evidence that removal of the foreskin, which inner mucosa is rich in HIV target cells, reduces the risk of male heterosexual HIV acquisition (Fink, 1986). A mathematical modelling study, based on the South African trial, estimates that the practice of male circumcision could avert two million new HIV infections and 300 000 HIV-related deaths over the next 10 years in sub-Saharan Africa (Williams, Lloyd-Smith, & Gouws, 2006). A recent expert review has estimated that one HIV infection could be averted for every five to fifteen medical male circumcision's performed (UNAIDS, WHO, & SACEMA, 2009).

Male circumcision is a minor surgical procedure, provided in aseptic settings, in complete removal of the foreskin, uncovering the end of the penis so as to permanently expose it. However, to maximize the impact of male circumcision on the HIV epidemic, WHO recommends that the surgery should not be provided alone, but as part of a minimum prevention package of services such as complimentary counselling and clinical service components (Hallet, Singh, Smith, White, Abu-Raddad, & Gamett, 2008). The scale-up of voluntary medical male circumcision has been modest in most countries, with reportedly over 550 000 males circumcised for HIV prevention by the end of 2010 in the priority countries (UNAIDS, 2011). This represents 2.7% of the estimated approximately 20 million male circumcisions needed. According to UNAIDS (2011) the greatest success in scaling-up adult voluntary medical male circumcision was in Kenya, where more than 230 000 men have been circumcised in recent years whilst in Zambia and South Africa only 80 000 and 130 000 men, respectively, had been circumcised by the end of 2010.

In March 2007 the World Health Organization (WHO) and the Joint United Nations Programme on AIDS, concluded that medical male circumcision programs should be rolled-out to reach 80% of young men within the next five years. The South African National AIDS Council (SANAC) and the National Department of Health (NDoH) have been leading the process of policy development on medical male circumcision in South Africa. The Western Cape Provincial Department of Health developed an Implementation Policy on medical male circumcision, after which the communication strategy for the Overberg district followed in December 2011. In preparation for medical male circumcision scale-up in the Overberg district, widespread public information campaigns were developed to describe the risks and benefits and place male circumcision into the larger prevention context.

The challenges on deciding whether or not to be circumcised occur within a complex social, cultural, religious and political context and are influenced by interacting factors such as communication, language and culture. Communication is a cross-cutting activity and a combination of communication approaches that range from community mobilization, advocacy, media, behaviour change and advertising have been implemented in promoting medical male circumcision, without any success.

Bowa & Lukobo (2006) suggest more intensive community mobilization efforts with the focus on social, cultural, religious and political barriers through the implementation of appropriate and effective communication tools.

### 1.4 Statement of the problem

Medical male circumcision is not a routinely acceptable practice under the male population in the Overberg district, despite the intensive communication approaches and implementation of communication tools. Circumcision is mostly done for either religious reasons (Moslem, Islam or Jewish) or culturally determined as part of the transferring to manhood procedure in the Xhosa community (Drain, Halpern, Hughes, Klausner, & Bailey, 2006). Accurate information and communication efforts should raise the communities' consciousness for medical male circumcision in order for them to understand within their own philosophical systems. However, it is not sure whether the community can conceptualise male circumcision and symbolic means of learning and transmitting knowledge by exposing them to different communication tools. The rural communities in Overstrand sub-district had access to

information on MMC mostly through: community outreach, health workers and community theatre.

### 1.5 Research question

Which communication tool is the most effective for gaining knowledge around medical male circumcision in males residing in the Overstrand sub-district?

### 1.6 Rationale

The urgency of scaling-up adult voluntary medical male circumcision to reach 80% of all adults and new born males circumcised by 2015, stems both from the continuing large numbers of new HIV infections in sub-Saharan Africa and the powerful effectiveness of male circumcision to reduce HIV incidence. It can be cost saving and change the future course of the epidemic in the Overberg district if carefully designed communication programmes are implemented.

### 1.7 Aim of the study

To determine which communication tool has the greatest effect on knowledge attainment relating to medical male circumcision in order to decrease the concerns, myths and misconceptions in the rural population.

### 1.8 Objectives of the study

- To establish which communication tools are currently used to distribute information about MMC to male farm residents
- To establish the existing knowledge of male farm residents about MMC before intervention
- To establish the knowledge of male farm residents about MMC after the intervention with different communication tools
- To determine which one of the tools has the greatest impact on knowledge related to medical male circumcision
- To make suggestions for improvement of medical male circumcision community mobilization programmes

## 1.9 Scope of the study

The study was limited to a representative group of male employees working at Haygrove Haven in the Overstrand Sub-district. This group of employees only represents farm workers. The study was focused in determining the awareness and attitude of male adults on MMC as a preventative strategy for HIV and AIDS transmission.

## 1.10 Significance of the study

The results of this study will be operationalized to define the loopholes and supplement to the already available communication programmes on medical male circumcision in an effort to reduce the transmission of HIV. It is a facilitating factor that community programmes need to be carefully designed in order to improve the scale-up of male circumcision. Supporting community generated solutions to HIV prevention means finding ways to communicate meaningful, and acceptable information to the audience about medical male circumcision in order for the audience to become knowledgeable or informed. This information could be useful in planning for future health programmes.

## 1.11 Structure of the research report

**Chapter 1: Introduction**

The uptake of medical male circumcision as part of a comprehensive package for HIV prevention is low, despite the intensive communication approaches and implementation of communication tools. This chapter will introduce the study, including the background, provide a statement of the problem, and highlight the aims and objectives as well as the significance of the study.

**Chapter 2: Literature review**

In this chapter, a thorough review of the literature pertaining to the topic will be presented. It is in this chapter that information from prior studies will also be mentioned to highlight the relevance of the research topic. The review of literature will include broad commentary on some of the research conducted.

**Chapter 3: Research methodology**

The focus of this chapter is methodological. It includes the research design, study population and procedures for sampling will be discussed as well as triangulation, data collection and ethical issues.

**Chapter 4: Analysis, findings, discussion and study limitations**

The description of the sample and the research findings of the study will be presented in this chapter in table format as well as graphically. The qualitative data will be presented with selective but relevant quotes from the participants. This chapter also focuses on the discussion of the findings and comments are made regarding the study limitations.

**Chapter 5: Recommendations, conclusions and comments**

This chapter focuses on the recommendations and conclusion of the study. Comments are made regarding recommendations for future studies.

# Chapter 2: Literature review

## 2.1 Introduction

In this chapter, a thorough review of the literature pertaining to the topic will be presented. It is in this chapter that information from prior studies will also be mentioned to highlight the relevance of the research topic. It will also provide an historical perspective on the practices of male circumcision, both their advantages and disadvantages, as quoted by various authors.

## 2.2 Biologic plausibility

Male circumcision, one of the oldest surgical procedures in the world, has been the subject of renewed international attention as it evidently reduces men's risk of becoming infected with HIV through heterosexual intercourse.

In uncircumcised men, the foreskin of the erect penis retracts, exposing its inner mucosa to vaginal secretions that can transmit HIV and other infections. The inner mucosa is rich in HIV target cells and is much more susceptible than the external surface of the foreskin to tears and ulceration, which facilitates the entry of HIV. Laboratory studies of the foreskin show a high concentration of target cells, called Langerhans cells that are very susceptible to HIV infection in comparison with other penile tissue such as the inner mucosa having less deposition of fibrous protein (Patterson, Landay, Siegel, Flener, Pessis, & Chaviano, 2002). According to Patterson et al (2002), this is one of the potential biological explanations as to why circumcision may reduce HIV acquisition.

The higher rate of sexually transmitted genital ulcerative disease, such as syphilis, observed in uncircumcised men may also increase susceptibility to HIV infection (Weiss, Thomas, Munabi & Hayes, 2006).

## 2.3 HIV risk reduction

Data from three randomized clinical trials, (Auvert, Taljaard & Lagarde, 2005) (Gray, Kigozi & Serwadda, 2007) (Bailey, Moses & Parker, 2007) showed that men who were circumcised are less than half as likely as uncircumcised men to become infected with HIV during the trial periods. In South Africa, a trial in Orange Farm enrolled 3 000 men from the ages 18 to 24. The circumcised men were approximately 60% less likely to acquire HIV than the uncircumcised men (Auvert et al, 2005). A study of 4 996 men aged between 15 and 49 in Uganda's Rakai District indicated that circumcision reduced the risk of HIV infection by approximately 51% (Gray et al, 2007). In Kenya, 2 784 men aged 18 to 24 joined another

study in Kisumu. The HIV risk of those that were circumcised, reduced by approximately 59% (Bailey et al, 2007).

These findings are supported by over 40 sociological and epidemiological studies presenting a strong link between a lower HIV prevalence rate for circumcised heterosexual men as compared with uncircumcised heterosexual men (Siegfried, Muller, Volmink, Deeks, Egger, Low, Walker, & Williamson, 2005).

An on-going follow-up study (Bailey, Moses & Parker, 2008) found that this protective effect was sustained over 42 months, reducing men's chances of becoming infected with HIV by 64%. These findings are consistent with a large number of observational studies in Africa and in the United States that there is substantial evidence where removal of the foreskin reduces the risk of male heterosexual HIV acquisition (Tobian, Gray & Quinn, 2009).

Circumcision is also associated with a lower risk of HIV infection in homosexual men. However, the effect of male circumcision on reducing HIV acquisition among men who have sex with men is unclear. No clinical trials have tested whether circumcision reduces HIV risk among men who have sex with men, and observational studies have yielded mixed results. Male circumcision appeared to have a protective effect in several studies among men who have sex with men in the United States (Buchbinder, Vittinghoff & Heagerty, 2005) (Kreiss & Hopkins, 1993). Results from Peru suggest that circumcision may confer some protection against HIV to men who engage exclusively in insertive anal sex. There may be protection against insertional but not against receptive anal intercourse, so men practicing both forms of sexual intercourse may have limited protection associated with male circumcision (Guanaria, Lam & Goicochea, 2007). However, other studies among men who have sex with men in the United States (Millett, Ding & Lauby, 2007) and Australia (Templeton, Jin& Prestage, 2007) found no reduced risk associated with circumcision overall or among insertive partners. An analysis of the data from 18 observational studies among men, who have sex with men found no evidence that male circumcision protects them against HIV or other sexually transmitted infections (Millett, Flores & Marks, 2008).

No extensive research was done with regards to the effect of medical male circumcision on male-to-female HIV transmission. According to a trail conducted by Waiver (2009) in Uganda, it was found that circumcision did not reduce HIV transmission to uninfected female partners.

Based on the data from the clinical trials, models have estimated that routine medical male circumcision across Sub-Saharan Africa could prevent up to six million new HIV infections and three million deaths in the next two decades (Williams, Lloyd-Smith Gouws, Hankins & Getz, 2006).

## 2.4 Ethical issues

The topic of male circumcision carries an enormous amount of ethical baggage. The ethics of male circumcision cannot be considered apart from its historical context. In the past, medical communities in industrialised countries have recommended male circumcision to prevent or treat several health conditions.

The protection and promotion of human rights focuses on the need for accessible services within a framework of informed consent, and the provision of comprehensive HIV prevention education and counselling that emphasises the partially protective effects of medical male circumcision (Gollaher, 2000).

Therefore, human right and ethical issues involving the individuals need to be considered as medical male circumcision is often thought of as "population health" intervention (Renni, Westreich & Muula, 2007).

## 2.5 Culture and religion

The most common determinant of medical male circumcision worldwide is religion. Based on their faith, almost all Muslin and Jewish men get / are circumcised. In recent years difference of opinion occurred within religions conforming to circumcision and debates included whether the practice should continue as details of the origin thereof differ. Other reasons include the connotation to sexual violence as mentioned in the Old Testament and the very most nature of human dignity (Moss, 1991).

A potential for stigma and discrimination could also be created where this procedure is used to indicate citizenship, religion and / or even racial difference, as argued by Dowset (2007).

MMC is not merely a technical procedure as its roots are deeply embedded in the culture of a society. Culture influences people's beliefs and values, which affect the way people interact. Traditionally, it is a practice with a host of social meanings. These may include what it is to be a man, a rite of passage into adulthood, religious connotations and most recently, public health reasons (Rizvi, Naqvi & Hussain, 1999) (Steinberg & Halperin, 2002). Aggleton

(2007) argued that medical male circumcision is a cultural act with social, individual and physical consequences.

Approximately 30% of men worldwide are circumcised, most of them for religious or cultural reasons. However, cultural beliefs can perpetuate the spread of the HIV epidemic. There are various practices according to culture, with different ways of doing it; from a small cut to the complete removal of the foreskin (WHO, UNIADS, 2007). The argument is supported by Van Dyk (2001) that culture plays a vital role in accelerating the spread of the pandemic. Seepamore (2000) raised the concern that polygamy is still regarded as culturally acceptable in some black cultures. It also concluded that patriarchy is socially acceptable and that women are inferior to men and therefore not allowed to make decisions. They may also not initiate condom use as it is regarded as lack of respect and trust. This can result in protected sexual events not taking place while it was obvious that most men have multiple partners although being circumcised (Seepamore, 2000).

### 2.5.1 Acceptability

It is important to know people's beliefs and understanding about circumcision and to be aware of potential stigmatization associated with the procedure. In recent years there have been a number of acceptability studies that challenge the principles of how approachable men of different countries are to male circumcision as well as their reasons of interest and / or obstructions to the procedure (Scott, Weiss & Viljoen, 2005). A review of Westercamp & Bailey, (2007), acceptability studies across nine sub-Saharan African countries showed that the most common barrier to MMC among men are fear of pain, culture and religion, cost and time away from work and the interference with sex life due to the six week healing period.

According to Madhivanan, Krupp & Chandrasekaran (2008) circumcision has different meanings in different settings. Tribal groups who are traditionally circumcised are dominant, "and therefore circumcision may be a symbol of "oppression" (Madhivanan, Krupp & Chandrasekaran, 2008). In other cases circumcision is more common among the least dominant tribes, and may be seen by others as a mark of inferiority (Madhivanan, Krupp & Chandrasekaran (2008). Those rolling out circumcision programs will need to be sensitive to such issues and design communication campaigns accordingly.

Eight studies were conducted in communities that do not traditionally circumcise. The median proportion of uncircumcised men who said they would be willing to be circumcised

was 65%. In these studies, almost 70% of the women said that they would prefer that their partners were circumcised and would circumcise their sons if the procedure was safe, affordable, and protective against HIV (Westercamp et al, 2007).

Shapiro, Essex, Thior, Mandevu, Mogwe, Lockman, & Kebaabetswe (2001) had a similar founding when some respondents changed their opinion about circumcision. Within the sample of 238 men, 61% noted that they would consider the procedure themselves if it were offered in a hospital setting at no cost. After an informational session, this number increased to 81%.

The study of Auvert, Marseille, Korenromp, Lloyd-Smith & Sitta, (2008) determined that to create MMC activities that provide factual information about the advantages and disadvantages of the procedure, improve awareness and can influence the attitude and intentions, as well as the decisions of men to seek MMC amenities.

### 2.6 Risk compensation

One key question for all partially protective HIV prevention strategies is whether individuals using it will use condoms or other prevention methods less than before, thus cancelling out any benefit. The three randomised controlled trials of male circumcision for HIV prevention provide some data on this question.

The Uganda trial found no evidence of risk compensation among circumcised men (Gray et al, 2007) while the researchers in the South African trial (Auvert et al, 2005) reported that there were no differences in sexual behaviour between those who were circumcised and those who were not. According to Auvert et al (2005) the condom-use between circumcised and uncircumcised men appears to be lower (0,84%), however the difference is not statistically significant.

The end of the Kenya trial concluded that circumcised participants reported more unprotected sex acts than their uncircumcised counterparts (Bailey et al, 2007). A separate study, conducted in the Siaya & Bondo districts of Kenya, found that circumcised men in the study were no more likely to report inconsistent condom use, nor did they report having more non-spousal partners than the uncircumcised men (Agot, Kiarie & Nguyen, 2007). Men in all of these studies received extensive risk-reduction counselling, condoms, and other HIV prevention services. Data presented at the XVII International AIDS Conference in Mexico

City in 2008 showed that the protective effect of male circumcision was sustained for at least 42 months, well beyond the 2-year period originally estimated (Bailey et al, 2008).

Researchers therefore emphasize the need to provide male circumcision as part of comprehensive HIV prevention services that include HIV counselling and testing, condom distribution and diagnosis and treatment of sexually transmitted infections.

## 2.7 Benefits of medical male circumcision

The greatest advantage of circumcision is that it is a once-off procedure, with no on-going costs or supply issues to worry about.

### 2.7.1 Health benefits

The procedure also has health benefits. Uncircumcised men and boys have a much higher risk of contracting urinary tract infections, syphilis, human papilloma virus and invasive penile cancer. Some studies have suggested that their female partners have a higher risk of cervical cancer (World Health Organization, 2008).

In addition to HIV, male circumcision has been shown to reduce the risk of other heterosexually acquired sexually transmitted infections (STI's). Observational studies in the United States show that male circumcision is associated with reduced risk of men acquiring heterosexual HIV and HR-HPV infection by 32% to 35% (Tobian et al, 2009) (Warner, Ghanem, Newman, Macaluso, Sullivan & Erbelding, 2009).

These findings were supported with the South Africa study (Sobngwi-Tambedou, 2009) that male circumcision helped reduce the risk of acquiring HSV-2 by about 50%. Among a study in the United States (Lu, Wu, Nielson, Flores, Abrahamsen, Papenfuss, Harris, & Giuliano, 2009) the circumcised participants who became infected with human papillomavirus, were more likely than uncircumcised men to have their immune systems clear the virus by the end of the study.

Two trials demonstrated that male circumcision reduces the risk of acquiring genital herpes by 28% to 34%, and the risk of developing genital ulceration by 47%. While some consider male circumcision to be primarily a male issue, one trial also reported derivative benefits for female partners of circumcised men; the risk of HR-HPV for female partners was reduced by

28%, the risk of bacterial vaginosis was reduced by 40%, and the risk of trichomoniasis was reduced by 48% (Tobian et al, 2009) (Wawer, Tobian & Kigozi, 2011).

### 2.7.2 Sexual function and satisfaction

Well-designed studies of sexual sensation and function in relation to male circumcision are few, and the results present a mixed picture. There are a range of concerns and beliefs about how circumcision status affects sexual function and sexual pleasure. However, several studies conducted among men after adult circumcision suggest that few men report their sexual functioning is worse after circumcision, most report either improvement or no change (Krieger, Bailey & Opeya, 2007) (Collins, Upshaw & Rutchik, 2002) (Senkul, Iseri & Sen, 2004) (Masood, Patel & Himpson, 2004).

The three African trials found high levels of satisfaction among the men after circumcision however; no significant differences in male sexual satisfaction or dysfunction among trial participants (Auvert et al, 2006) (Bailey et al, 2007) (Gray Kigozi & Serwadda, 2007) (Kigozi, Watya & Polis 2010).

## 2.8 Disadvantage of medical male circumcision

Circumcision requires medical intervention and a procedure that's carried out safely in a sterilised environment under local anaesthesia.

Studies shown that the potential risks of surgery carried out by traditional circumcisers where one blade may be used for several initiates, leading to speculation that it can cause post-surgical adverse events in up to 35% (Berer, 2007). A study of a thousand men in Western Kenya found that 25% of circumcised males experienced an adverse event carried out by traditional circumcisers (Bailey et al, 2008). If done poorly, men can experience more tears during their sexual life, thus potentially increasing their risk of HIV infection. Traditional puberty ceremonies where newly circumcised boys are expected to have sex soon afterwards, pose similar risks.

However, studies performed in Kisumu, Kenya and Orange Farm has shown that circumcision can be performed safely on young adults in clinical settings where the rates of adverse events were 1.7% and 3.6%, respectively (Mayatula & Mavundla, 1997).

Also problematic is that male circumcision for HIV prevention is partially protective for HIV negative men but not for their partner(s), whether male or female, unless they also use

condoms. Berer (2007) stated that "it is the only HIV prevention intervention that does not protect both sexual partners, to some extent".

## 2.9 Cost-effectiveness

Mathematical models by UNAIDS, WHO & SACEMA in 2009, demonstrated that medical male circumcision is cost-effective, with five to fifteen circumcisions averting one HIV infection in high HIV prevalence settings. These concluded that rapid initial scale-up produces direct and indirect effects earlier and are considerably more cost-effective, with fewer circumcisions required to avert one infection and more infections averted at a lower cost per infection averted over time (UNAIDS, WHO & SACEMA, 2009).

In support of efforts to scale-up medical male circumcision (MMC) in PEPFAR programs, impact and costing estimates suggest a scaling-up of voluntary medical male circumcision to reach 80% coverage among males 15–49 years old in the 14 priority countries by 2015. This would entail performing 20.3 million circumcisions by 2015 and would avert 3.4 million, or 22%, of new HIV infections by 2025. In addition, while the model shows that this scale-up would cost a total of US$1.5 billion by 2015, it would result in net savings (due to averted treatment and care costs) amounting to US$16.5 billion. Other models have suggested that VMMC scale-up would reduce HIV incidence in Eastern and Southern Africa by roughly 30–50% over 10 years (UNAIDS, WHO & SACEMA, 2009).

Cost-effectiveness is not only applicable to the procedure itself. Furthermore, the development of a standardised package with communication activities to use with health promotion programmes for MMC, is desirable however not realistic in practice. According to Fieno, (2008) the allocation of costs to design such a package vary, depending on a number of factors such as geographical area to be covered, mix of communication channels to be used, number of languages required to reach the majority of the intended audience. Fieno, (2008) concluded that "tailoring demand creation to the specific context increases its effectiveness and makes it more cost-efficient".

## 2.10 MMC and demand creation activities

Media reports have an enormous effect in terms of how HIV and AIDS are viewed and as a consequence have a massive effect in terms of the stigma and discrimination attached to the decease and procedure. To avoid this division, people need to get a voice and there needs to

be a better understanding of how they conceptualize male circumcision within their own environment – ranging from gender, social dynamics, philosophical systems, symbolic meanings and transmitting knowledge (Senegal, Gineau-Bissau, Cheikh & Hamadou, 2007).

The BBC News Report, 2010, made mention regarding medical male circumcision that can be gleaned from the confusing way the practice is talked about in the media. It is noticed that the media speak of medical male circumcision in terms of a "one-time intervention", offering "life-time protection", while others frame it as an "irreversible procedure" with "only partial protection (http://news.bbc.co.uk/l/hm/world/africa/10350471.stm).

Messages on MMC are not reaching rural areas in languages and formats which can be easily understood by illiterate communities. UNAIDS (2002) argues that illiteracy is the other challenge accelerating the spread of HIV. Most men and women of rural communities do not know how to read and write (UNAIDS, 2002). That applies to home language and that becomes worse when coming to inherited languages like English. Most MMC messages are delivered in English. As a result, the message is not reaching the people.Monroe (1945) argued that information campaign designers must include persuasion theories that attempt to raise awareness and affects positive changes in attitude and behavior to make it acceptable for the audience. In addition, Monroe (1945) suggested that the psychological ordering of information can play a vital role in behavior change such as (a) attention, (b) need, (c) visualization and (d) action.

Role-playing activities are an effective communication intervention that can easily gain the attention of the audience and are a safe venue in dealing with attitudes and feelings (Van Ments, 1993). Oberle, (2004) agreed that to increase reliability and effectiveness of the message, participants must be introduced to "real-world" situations where they can visualize the message content through action.

Traditional teaching methods do not appeal to the audience and fails in making the connection towards the message content. Therefore, adding supporting material to sessions will improve the credibility and acceptability of the content. It will also ensure that sessions are not boring and dull.

According to Quiroga (2002) interpersonal communication in using community health workers, community mobilizers and small media such as brochures, posters and pamphlets, is essential for demand creation for MMC.

# Chapter 3: Research methodology

## 3.1 Introduction

This chapter discusses the manner in which the data is collected for the research project. The study adopted a mixed-method approach. Both quantitative and qualitative approaches were used. The quantitative approach entailed information from close-ended questions in the survey and the qualitative approach, from the open-ended questions. Procedures for sampling will be discussed as well as triangulation, data collection, and ethical issues.

## 3.2 Study area

The Overberg district is one of the six districts within the Western Cape Province in South Africa. It is primarily an agricultural area and contributes 11.6% to all agricultural production in the Western Cape. Poverty is rife and many people survive on government social grants. A combination of deprivation indices includes income and material deprivation, unemployment, health, education and living environment. The population of the Overberg district as reported by Statistics South Africa, 2009 is 215 233 with rural, semi-rural as well as urban areas. There are four main geographical zones in the Overberg district with a population distribution and HIV prevalence rates as summarized in table one (Department of Health, 2009).

Table 1: Population and HIV prevalence of the Overberg sub-districts

| | Population | 2009 HIV Prevalence |
|---|---|---|
| Theewaterskloof | 89 371 | 26,6% |
| Overstrand | 70 185 | 25,1% |
| Swellendam | 27 807 | 1,8% |
| Cape Agulhas | 27 151 | 6,5% |

The study was conducted on a farm, Haygrove Haven, in the Overstrand sub-district. The reason for the decision to include this farm in the research study was that the workers on the farm have never been exposed to an informational talk about medical male circumcision. The nearest clinic for medical services is Mount Pleasant Primary Health care clinic and approximately 25km from the farm. The nearest hospital service is Hermanus Hospital that is 32km from the farm.

### 3.3 Research design

The researcher opted for a comparative study between male farm workers working in a rural setting on a farm in the Overstrand sub-district. They received three different communication interventions to determine the baseline of knowledge of pre-interventions and to determine the extent of knowledge transfer that took place during post-interventions.

### 3.4 Study population

The sample population was only thirty male farm workers, due to the small workforce on the farm during the time of the study. The primary research participants were made up of male farm workers, between eighteen and forty-five years, with no prior knowledge of medical male circumcision that were available between 14h30 and 17h00 on the day of the study. They represent diverse culture and traditions and their educational levels were unknown.

### 3.5 Sample size

The representative sample size was thirty men, divided into three groups of ten each between the age of eighteen and forty-five. They were the primary audience most affected by HIV and AIDS and other sexually transmitted infections mainly as a result of the level of sexual activity and propensity to risky sexual behaviours.

### 3.6 Sampling technique

The study employed simple random sampling to select the sample. In order to save some time to accommodate production on the farm, assistance was given from Pauline Burrows, Human Resource Manager and Project Co-ordinator of Haygrove Haven. A random selection of three groups of ten each was made from a pre-prepared list of names of workers employed on the day of data collection. The researcher made use of a numbering system to select groups. Numbers one to three were used, starting from the top of the list. Three groups of men were then collated as their numbers indicated. The researcher then described the purpose of the study to the whole group. Interested parties were asked to participate during an informed consent process in the language of their choice. Their subsequent decision to enrol, gave them the opportunity to complete a signed consent form. No male terminated his participation prematurely and all completed the process.

### 3.7 Questionnaire design

The researcher developed a self-administered questionnaire as primary source of data collection to survey the effectiveness of different communication tools in the transfer of knowledge, in the medical male circumcision programme to support the introduction and scale-up of MMC for HIV prevention in the Overstrand sub-district. The questionnaire is one of the most common tools used to evaluate training programs and the decision to use a questionnaire was made, since the study was concerned with variables that cannot be directly observed, such as knowledge, attitude, views, opinions, and awareness. The questionnaire was drafted in English.

The five open-ended questions were with probes about the perception of MMC that gave participants the opportunity to express their own thoughts. The researcher designed the pre-test questionnaire (appendix 1) with twelve close-ended multiple choice questions with probes about participants' understanding and knowledge of MMC (including the procedure and post-operative care), risk and benefit associated with MMC, the preventative role of MMC in association with HIV prevention strategies and the acceptability of MMC. The multiple choice close-ended questions were kept simple, short, specific and straightforward in order to avoid confusing any respondents, or leading respondents to a desired response. The close-ended questions required that the respondent simply tick the correct answer.

The questions asked in the pre-test questionnaire were repeated in the post-test to ascertain the process of data collection closely in order to compare pre-and post-test answers linked to knowledge transfer after the respective training.

#### 3.7.1 Pre-testing the questionnaire

Based on the aim of the study and on the literature review, data collection instruments were developed. Before actual data collection commenced, data collection instruments were pre-tested to enable the team to gain first-hand experience in administering the tools, assess the clarity and logic and understand how the data will be analysed. The researcher pre-tested the questionnaire on a farm in the Overstrand sub-district to establish the relevance and understanding of the items in order to measure what they were intended to measure. It was introduced to men at an awareness session with approximately the same job level as the study participants and the respondents were asked to point out the questions that they found ambiguous or difficult to understand. Respondents were also given the opportunity to suggest further questions and to give general comments on the survey which

assisted in developing a well-designed questionnaire. Valuable information was gained from the pilot study in terms of a few questions that were not easily understood and were adapted to prevent ambiguity.

### 3.8 Data collection method

After selection of the study sample all participants were gathered in one venue where the researcher explained the study purpose, the objectives and how they can contribute to the study. Participants were informed about the consent process and voluntary consent was obtained from the thirty representatives of the sample. Participants were given the opportunity to ask questions about the study. Assistance was provided by three trained administrators as well as three translators.

The three groups, with ten participants randomly selected to each group where then allocated to three separate venues. Socio-demographical information of the participants such as age category, educational level, ethnic group, marital status and religion was collected before the pre-test questionnaire, after informed consent was obtained. Each questionnaire was accompanied by a covering letter that clearly explained the purpose of the study to the participant. General instructions on completing the questionnaire and the importance of completing all questions were included. This helped to improve the response rate and encourage the participants to make comments that can be useful to improve future programs. General instructions on completing the questionnaire and the importance of completing all questions were included. Three translators were available in case of illiteracy or poor command of English. Additionally, the researcher trained three research administrative assistants that could use the same questionnaire to assist with structured interviews if any of the participants were illiterate.

Furthermore, individual responses were treated as strictly confidential with only a numbered / coded system used to link the pre-and-post-questionnaire in order to determine if any knowledge transfer took place pre and post the communication interventions. The questionnaire is presented in appendix 1.

The researcher developed a few key messages that ought to be correct, clear, relevant and appropriate to the context and provided it to the three groups responsible for the communication interventions a month before the research took place such as:

- An understanding of medical male circumcision that circumcision is for both traditionally circumcising and non-circumcising communities. Scientific evidence show medical male circumcision reduces the risk of HIV infection in men by about 60%. The risks of MMC such as pain, bleeding, swelling and infection. Benefits such as good hygiene also reduce risk of HIV and STI's such as herpes, syphilis, genital warts and reduce risk of cancer of the penis and cervical cancer.
- The preventative role of MMC in association with HIV prevention strategies; circumcision does not replace other methods of HIV prevention and that there is a need to use condoms consistently and correctly, abstinence, and limit the number of sexual partners.
- The procedure last between 15 and 30 minutes and must take place in a health facility with appropriately trained providers, proper equipment and aseptic conditions.
- Post-operative care must be done at a health facility within three days, healing period is 6 weeks and there must be no sexual activities. Condom use must be consistently and correctly.

The three communication interventions were scheduled for twenty minutes and took place after the pre-test questionnaire was completed. It was conducted in English, with the availability of three translators to assist to those of poor English command. The three communication interventions were the following:

- Group one: informational talk,
- Group two: informational talk with English poster display, and
- Group three: a role-play.

The post-test questionnaire was completed after the communication interventions and all participants received a 20 minute time allocation and assistance from the three translators and research administrative assistants.

### 3.9 Ethical consideration

Ethical clearance was granted by the Human Research Ethics Committee of the University of Stellenbosch on 6 September 2012 (protocol study number: HS828/2012). Permission was also sought from the management of Haygrove Haven to conduct the study (appendix 3). Participants received a covering letter explaining the purpose and objective of the study and

informed consent was voluntary (appendix 2). In general; total anonymity was not appropriate and each participants' pre and post-questionnaire were numbered to link pre and post-questionnaires. However, participants were provided with appropriate assurances of confidentiality on the questionnaire.

The participants were informed that they could withdraw from the study at any time without providing reasons. They were also informed that if they felt any discomfort in answering the questions they can be referred immediately, as arranged before the study were conducted, for local counselling services at Hermanus Provincial Hospital.

### 3.10 Data procession, analysis and presentation

Once the questionnaires were completed and collected per group, the researcher took it away to get captured. A data entry screen, mirror of the questionnaire, was developed using Microsoft Excel 2010. The data entry screen allowed for individual response, compared between pre-and-post interventions as well as a summarized response per group. The responses of the numbered pre-and-post-questionnaires of each participant were entered by the researcher and three administrative assistants. After each participant's comparison was concluded it was analyzed per question per group. The analysis was as simple as possible and limited to what is necessary to draw the required conclusions. The programme that was used in processing the data was Microsoft Excel 2010. Interpretation of results from percentages and averages were determined with the aid of a scientific calculator.

The socio-demographic data was analyzed in:

- Age distribution,
- Ethnical group,
- Marital status,
- Religion,
- Educational level

Included in the socio-demographic data was knowledge of their HIV status and working pattern such as seasonal or permanent worker.

The data from the close-ended questionnaires were analyzed under the following variables:

- Level of knowledge about MMC as an HIV prevention strategy

- Perception of MMC as an HIV prevention strategy
- Acceptability of MMC as an HIV prevention strategy
- Awareness about MMC as an HIV prevention strategy

Data from the open-ended questions are qualitative and will be descriptive under the following variables:

- Knowledge about MMC as HIV prevention strategy
- Perception of MMC as an HIV prevention strategy
- Acceptability of MMC as an HIV prevention strategy

Pie charts were created to show the components of something that add up to 100%, however difficult to read when the number of categories increases. The bar charts were created to compare the data of the pre-and-post interventions. Summarized tables were also drawn to present the findings.

# Chapter 4: Data analysis, findings, discussion and study limitations

## 4.1 Introduction

In this chapter the researcher presents and analyse the results obtained from the three communication interventions used in the study. The description of the study sample, the research findings as well as the discussion of the findings are categorised into four main sections namely socio-demographic characteristics of respondents, level of knowledge and understanding of MMC, respondents' perception of MMC and acceptability of the procedure and level of awareness about MMC as a preventative strategy. The calculable results are presented in table format as well as graphically. The qualitative data will be presented with selected but relevant quotes from study participants. The chapter concludes with comments with regards to study limitations.

## 4.2 Socio demographic characteristics of the respondents

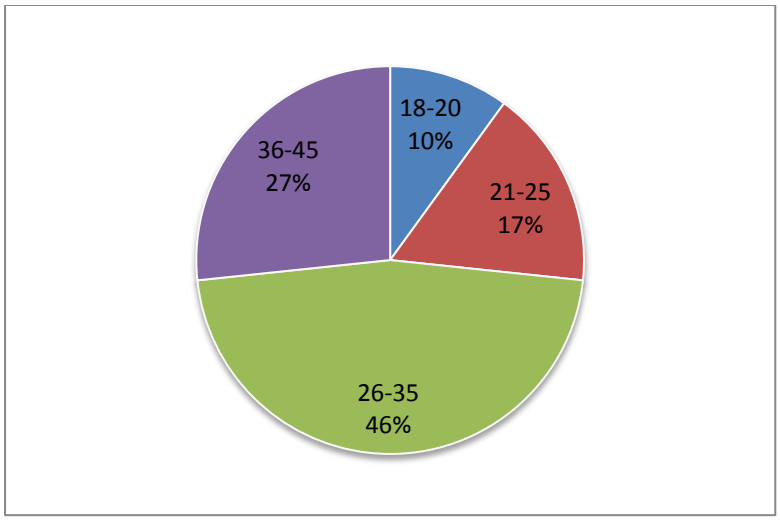
The socio-demographic data is represented below under their respective headings.

### 4.2.1 Age distribution

In this study, the representative sample was 30 male respondents in the employment of Haygrove Haven, a farm in the Overstrand sub-district. The researcher managed to get a response from all 30 employees at this rural setting. The age of the respondents ranged between 18 and 45 years. An average age could not be determined as it was not specifically requested from the participants to indicate their age. The age distribution was determined through age categories. From a total of 30 respondents who were involved in the study, the majority (46,6%) were predominantly in the age group 25 – 36 years and the minority (10%) in the age group 18 – 20 years (figure 1).

The researcher must reiterate that it is not the purpose of the study to measure the response of the participants in relation to their respective age groups.

**Figure 1: Summary of age distribution**




The majority of respondents (70%) that attended the role-play were in the age group 26 - 35, while the majority respondents (50%) that were exposed to the informational talk with poster display were in the age group 36 – 45. The respondents that attended the informational talk were equally (30%) distributed between the age group 21 – 25 and 26 – 35 (table 2).

**Table 2: Age distribution amongst the 3 groups**

| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| 18-20 | | | 2 | 20 | 1 | 10 |
| 21-25 | 1 | 10 | 3 | 30 | 1 | 10 |
| 26-35 | 4 | 40 | 3 | 30 | 7 | 70 |
| 36-45 | 5 | 50 | 2 | 20 | 1 | 10 |

### 4.2.2 Ethnic grouping

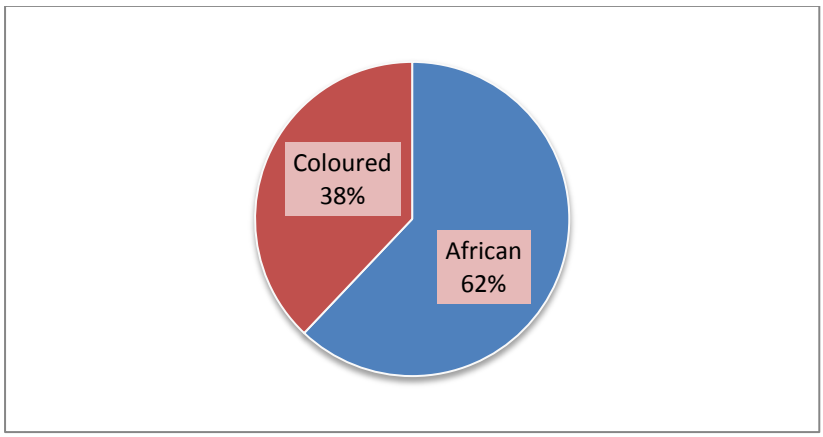
The different ethnic groups were divided into the following ethnic lines:

- African
- Coloured
- White

- Other

The African and Coloured ethnic groups were the culture that was dominantly represented in this study. The majority of respondents (62%) were represented from the African, and 38% from the Coloured ethnic group (figure 2). However, it is not the intention to split the analysis along ethnic lines. The ethnic distribution will therefore have no effect on the outcome of the study.

**Figure 2: Summary of ethnical grouping**




The African culture among the three groups represents the majority of respondents (80%) at the role-play, 70% at the informational talk with poster display, while only 30% were exposed to the informational talk. However, 70% of the attendees at the informational talk were coloured, while they were the minority respondents at the role-play (20%) and the informational talk with poster display (30%).

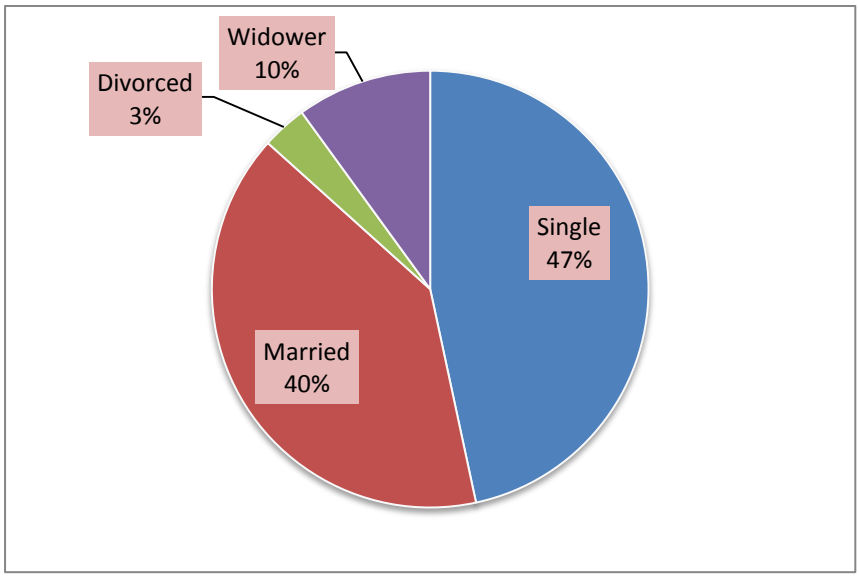
**Table 3: Ethnical distribution amongst the 3 groups**

| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| African | 7 | 70 | 3 | 30 | 8 | 80 |
| Coloured | 3 | 30 | 7 | 70 | 2 | 20 |
| White | | | | | | |
| Other | | | | | | |

### 4.2.3 Marital status

The majority (47%) of the representative sample were single, while 40% were married, 10% widowed and 3% divorced.

**Figure 3: Summary of marital status**




The majority of respondents that attended the informational talk were single (50%), while an equal distribution of married and single respondents (50%) were exposed to the role-play. The majority of respondents that attended the informational talk with poster display were single (40%).

**Table 4: Distribution of marital status amongst the 3 groups**

| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| Single | 4 | 40 | 5 | 50 | 5 | 50 |
| Married | 3 | 30 | 4 | 40 | 5 | 50 |
| Divorced | 1 | 10 | | | | |
| Widower | 2 | 20 | 1 | 10 | | |

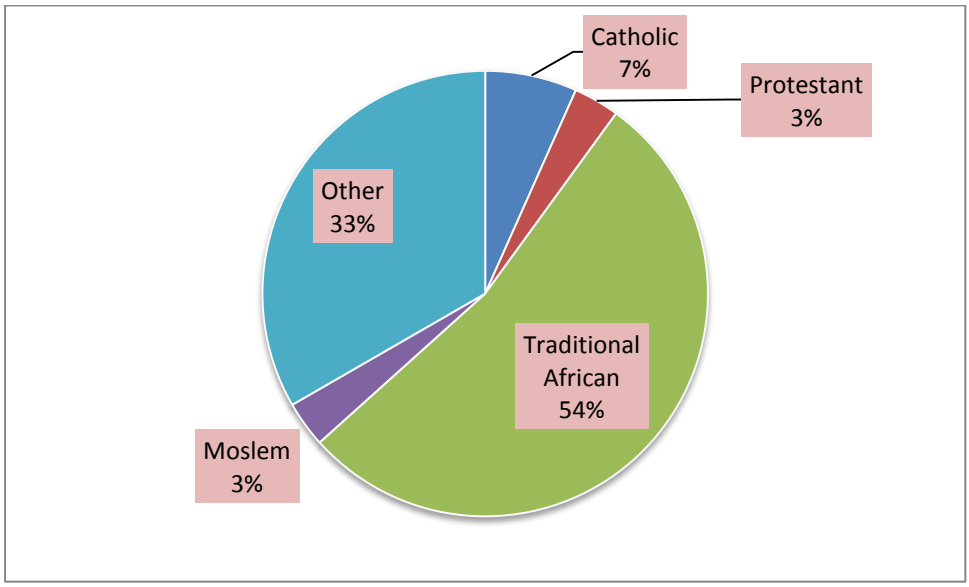
### 4.2.4 Religion

The different religions were divided into the following distribution lines:

- Traditional African
- Catholic
- Protestant
- Moslem
- Other

The majority respondents represent the Traditional African religion (54%) while 33% of the respondents had an unknown religion.

**Figure 4 Summary of respondents' religion**




There was an almost equal distribution (50 – 60%) of the Traditional African religion amongst the three groups, with 10% that belongs to the Catholic religion at the informational talk with poster display. Only one respondent (10%) exposed to the informational talk with poster display belongs to the Protestant religion. The rest of the respondents had an unknown religion, with the majority (40%) at the informational talk and role-play and the minority of respondents (20%) with an unknown religion at the informational talk with poster display.

**Table 5: Distribution of respondents' religion amongst the 3 groups**

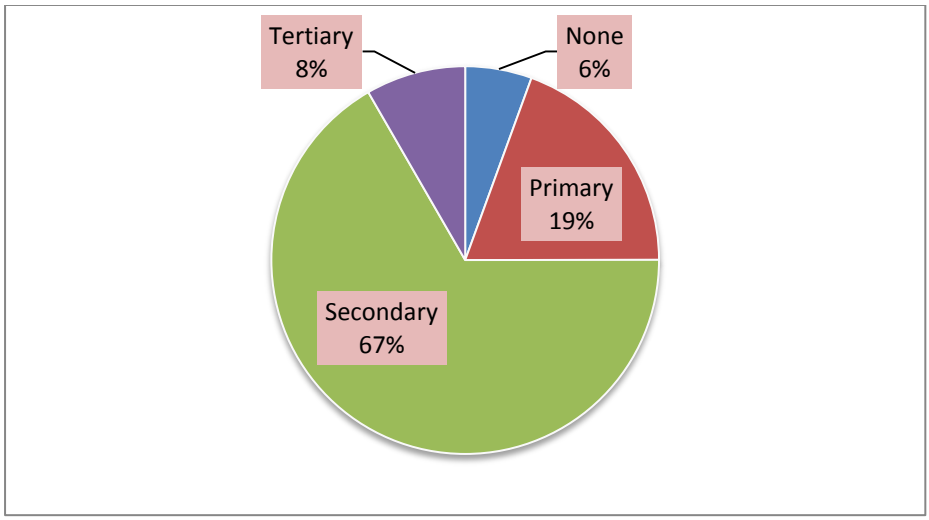
| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| Catholic | 1 | 10 | 1 | 10 | | |
| Protestant | 1 | 10 | | | | |
| Traditional Africa | 5 | 50 | 5 | 50 | 6 | 60 |
| Moslem | 1 | 10 | | | | |
| Other | 2 | 20 | 4 | 40 | 4 | 40 |

### 4.2.5 Respondents' level of education

The level of education for the group was relatively high. The majority of respondents (67%) had a secondary qualification, with only 8% that had a post matric qualification. 6% were not exposed to any level of education, while 19% of the respondents were primary drop-outs (figure 5).

As far as this study is concerned, it is expected that their general HIV and AIDS knowledge would be relatively high too and that they would easily grasp the medical male circumcision content. However, the researcher must reiterate that it is not the purpose of the study to measure the response of the participants in relation to their level of education.

**Figure 5: Summary of respondents' educational level**




The majority of respondents with a secondary level of education (80%) were exposed to the informational talk with poster display. The respondents with the lowest (primary) level of education or no educational levels were the ones exposed to the informational talk with role-play. There was an equal distribution of tertiary level of education (10%) amongst the three groups. However, the researcher must reiterate that it is not the intention to split the analysis along educational level, although noticed that the majority of respondents do have a secondary qualification.

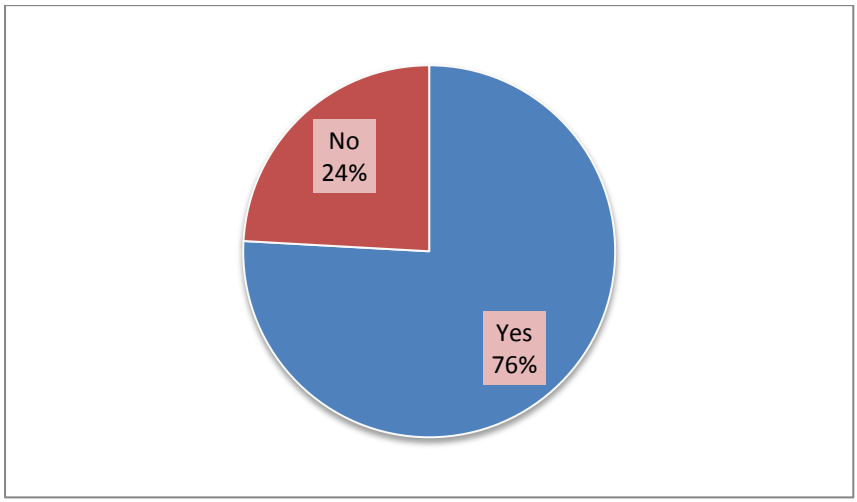
**Table 6: Distribution of respondent' educational level amongst the 3 groups**

| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| None | | | 1 | 10 | 1 | 10 |
| Primary | 1 | 10 | 3 | 30 | 3 | 30 |
| Secondary | 8 | 80 | 5 | 50 | 5 | 50 |
| Tertiary | 1 | 10 | 1 | 10 | 1 | 10 |

### 4.2.6 Knowledge of HIV Status

From background information obtained from the questionnaire it was established that the majority of respondents (76%) were knowledgeable of their HIV status with 24% of the respondents not knowing their status.

**Figure 6: Summary of respondents' HIV status**




There was an almost equal distribution (70 – 80%) amongst the three groups in respondents knowing their HIV status.

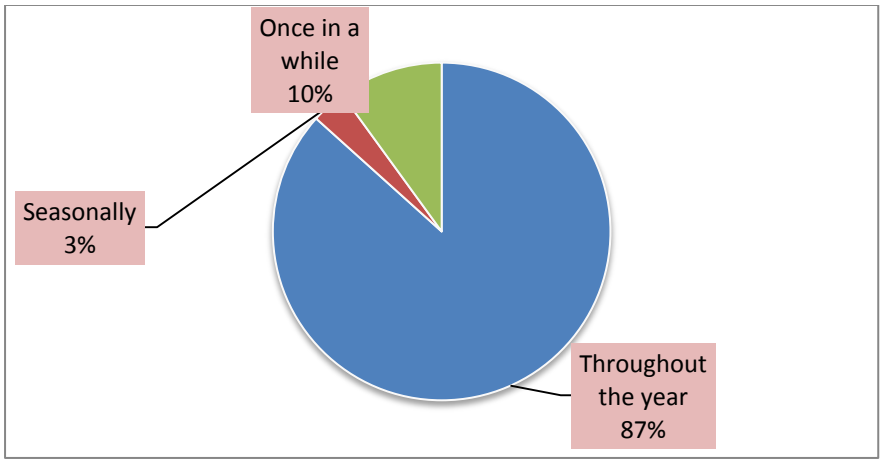
**Table 7: Distribution of respondents' HIV status amongst the 3 groups**

| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| Yes | 7 | 70 | 7 | 70 | 8 | 80 |
| No | 3 | 30 | 3 | 30 | 2 | 20 |

### 4.2.7 Working patterns

The majority of respondents (87%) were working throughout the year while the minority of the respondents (3%) was seasonal workers. Only 10% of the respondents had to work when needed as a relief.

**Figure 7: Summary of respondents' working patterns**




The majority of respondents (80-90%) in the three groups worked throughout the year. Only one respondent (10%) that attended the role-play worked seasonally, while two (20%) respondents that attended the informational talk with poster display and one respondent (10%) that attended the informational talk had to work when needed as relief.

**Table 8: Distribution of working patterns amongst the 3 groups**

| | Informational talk with Poster display | | Informational talk | | Role-play | |
|---|---|---|---|---|---|---|
| | Number of respondents | Percentage | Number of respondents | Percentage | Number of respondents | Percentage |
| Throughout the year | 8 | 80 | 9 | 90 | 9 | 90 |
| Seasonally | | | | | 1 | 10 |
| Once in a while | 2 | 20 | 1 | 10 | | |

***Discussion:***

The fact that the Traditional African religion (54%) was dominant on the farm as well as the African ethnical group (62%) and the majority of participants had attained a secondary qualification - it could be taken to mean that the same ideology, ideas or beliefs were common in most people in the study. However, it was not the intention of the study to come up with a position on whether Traditional African religion, ethnical group and high educational levels was for or against the level of transferred knowledge on medical male circumcision.

## 4.3 Findings

### 4.3.1 Communication interventions

In order to support MMC services, information was targeted to a male ethnically diverse audience by introducing three communication interventions which last for 20 minutes each. They were (i) a role-play, (ii) an informational talk, and (iii) an informational talk with poster display. All three groups in the study were exposed to the same information content. Key messages were designed to highlight critical information to meet the needs and interests of the audience throughout.

It needs to be noted that every effort was made to provide prompt and high quality services to accommodate all participants' needs of communication, both to the heart and head. The project team was fully briefed and highly motivated, experienced and approachable. All three communication interventions were culturally sensitive, conducted in English as the primary language, with the assistance of an interpreter for each group to dispel any potential misconceptions about MMC and also appealed to the male audience.

The difference between the three interventions used were that the role-play activity was introduced to help participants experience "real-world" situations and to act out key messages within a scenario to gain the immediate attention of the audience. On the other hand, the informational talk seek to use tone of voice and eye contact, to make it culturally, and educationally more understandable and acceptable. This also gave the opportunity for the audience to pose questions to the facilitator. On the contrary, the informational talk with poster display enhanced the message retention because the visual symbols were eye catching to leave long term impact on the memory of individuals.

***Discussion:***

The way in which communication has been carried over has an enormous effect in terms of how HIV and AIDS are viewed and as a consequence of that, an effect in terms of stigma and discrimination. The current messages about MMC are ineffective and there are very few communication materials available. There is also no standardized package with communication activities and none of these are translated into the major local languages which are Afrikaans, English and Xhosa. The UNAIDS, 2011, report argued that illiteracy, especially people who do not know how to read or write, or inherited languages like English can have a barrier for any health promotion message. Quite often the communication environment is such that the audience are not allowed to use communication to bring out their issues due to language or cultural limitations. As quoted by the study of Senegal et al, 2007, "To avoid this division is crucial to give voice to people and to understand how they conceptualize male circumcision within their own philosophical systems, social dynamics, gender relations, and symbolic meanings of learning and transmitting knowledge".

The strength of using the key messages targeted at a male audience aimed at providing factual information on the benefits and consequences of MMC, addressing potential issues of stigmatization and discrimination, and correcting misconceptions and misinformation. The key messages were correct, clear and relevant to the audience and the content in logical order for the audience to follow. The informational talk emphasized the difficulty of employing a "one size fits all" approach to get the participants' attention to address behavioral and sociocultural barriers and to allow participants to ask questions regarding their issues or concerns. The study from Monroe, (1945) confirmed that language and culture are related and that it could be a barrier in transferring knowledge adequately. There are many ways of co-teaching language and culture. Monroe (1945) argued that information campaign designers must include persuasion theories that attempt to raise awareness that affects positive changes in attitude and behavior to make it acceptable for the audience. In addition, Monroe (1945) suggested that the psychological ordering of information can play a vital role in behavior change such as (i) attention, (ii) need, (iii) visualization and (iv) action.

The use of visuals, such as the poster that was added to the informational talk, overcomes language barriers, especially in societies where the literacy rate is low. The poster that the respondents were exposed to at the informational talk with poster display group was clear, understandable and resonates with the intended audience and their culture, realistically. The

visuals were appealing and the language in the message that was English and easy to understand. The text were too small to read, but on the other hand not necessary for the intervention as the graphical design of the difference between a circumcised and an uncircumcised penis were relevant to the talk and it reflected the respondents' cultures, languages and literacy levels.

The role-play command immediate attention from the participants in visualising the message content through a "real-world" situation of what the audience is exposed to every day. The role-play did follow the psychological ordering of information as suggested in the study of Monroe (1945).

### 4.3.2 Pre versus post-questionnaire results

#### *4.3.2.1 Level of knowledge and understanding about MMC as an HIV preventative strategy*

The questionnaire included various questions designed to assess men's knowledge about medical male circumcision for HIV prevention. The question "What is your understanding of MMC?" was asked to get an understanding of the definition for medical male circumcision.

The majority of respondents (90%) that attended the role-play revealed a thorough understanding of the definition for medical male circumcision after the communication intervention.

*"Cutting of penis foreskin within hospital", "removal of the foreskin of penis", "removal of the foreskin of the penis in a healthcare centre".*

Only one respondent (90%) at the informational talk indicated that MMC *"is cutting of the foreskin"* while the others' opinion at pre- and post-intervention did not reveal any transfer of knowledge.

On the other hand, the respondents (80%) at the informational talk with poster displays' answer after the communication intervention were more directed towards MMC as a preventative measure to reduce the risk of HIV transmission.

*"Protect himself in not getting AIDS", "reduces chance of getting AIDS or sexual diseases".*

There was also reference made by one respondent (10%) to falsely belief that *"it is safe when it comes to HIV",* while not 100% safe. Only one respondent (10%) indicated after the intervention an understanding as *"cutting of the foreskin".*

Only one respondent (10%) that attended the role-play indicated that it "*was to go to the bush to be cut a real man",* while 30% of the respondents at the informational talk indicate that *"it is a man's right to be circumcised", "it is a right to be a man".*

To get an understanding of possible factors that might act as facilitators to the uptake of MMC services, the question was asked: "What are the most important reasons for carrying out medical male circumcision?" which was similarly answered by 50% of all respondents before the communication interventions.

- *"Prevent sexually transmitted infections"*
- *"Enhance sexual pleasure"*
- *"Cultural"*
- *"Religion"*

However, after the communication interventions 50% of the three groups similarly revealed a thorough understanding as *"prevent sexually transmitted infections and HIV".* 50% of all respondents did not give any answer before the communication intervention and indicated post intervention that the reason for carrying out medical male circumcision as *"cultural".*

Elaborating on the link between the data on respondents' newly informed knowledge of medical male circumcision and the noticeable tensions between traditional and medical male circumcision practices, the following question was posed: "Medical male circumcision is best undertaken (i) at a government approved health facility, (ii) the local herbalist doctor, (iii) the market place?"

Of the 60% that did not complete the pre-questionnaire at the role-play, 50% indicate that MMC must be undertaken at a government approved health facility after the communication intervention. The majority of respondents (90%) that attended the role-play recognized after the communication intervention that MMC is safer at a government approved health facility than traditional male circumcision.

60% of the respondents that attended the informational talk with poster display indicated in pre-and-post communication intervention that the suitable place for medical male circumcision to take place will be at a government approved health facility. 30% of the respondents that attended the informational talk with poster display still feel that the procedure had to be undertaken at a local herbalist and 10% at the *"market place".*

Of the 50% that did not complete the pre-questionnaire at the informational talk, only 10% indicate that MMC must be undertaken at a government approved health facility, whilst the other 40% did not complete the question after the communication intervention. 10% changed their pre-answer of "local herbalist" to "government approved health facility" after the communication intervention. 40% of the respondents indicated in pre-and-post communication intervention that the recommended place for medical male circumcision to be done, will be at a government approved health facility.

The data arguably suggest a link between the knowledge obtained through the role-play in practising safe male circumcision.

**Table 9 Summary of respondents' knowledge on practicing safe MMC**

| **PRE-INTERVENTION** | | | | **POST-INTERVENTION** | | | |
|---|---|---|---|---|---|---|---|
| RESPONDENTS ANSWER | Role-play | talk | talk with poster display | RESPONDENTS ANSWER | Role-play | talk | talk with poster display |
| At a government approved health facility | 40% | 40% | 60% | At a government approved health facility | 40% | 40% | 60% |
| At a local herbalist | | 10% | 30% | At a government approved health facility | | 10% | |
| | | | | At a local herbalist | | | 30% |
| No answer | 60% | 50% | | At a government approved health facility | 50% | 10% | |
| | | | | No answer | | 40% | |
| | | | | At a local herbalist | 10% | | |
| At a market place | | | 10% | At a market place | | | 10% |

Information from the groups presented a communication concern around the proposed question on post-operative follow-up: "How long does a man have to wait before the dressing is removed?"

It can be noted, from Table 10, that the response rate showed marked differences between the three samples, in that a much higher percentage of respondents (30%) that attended the informational talk with poster display reveal the correct answer after the communication intervention as compared to the 10% of respondents that attended the role-play and none that attended the informational talk.

**Table 10: Summary of the respondents' knowledge on post-operative follow-up**

| **PRE-INTERVENTION** | | | | **POST-INTERVENTION** | | | |
|---|---|---|---|---|---|---|---|
| RESPONDENTS ANSWER | Role-play | Informational talk with poster display | | RESPONDENTS ANSWER | Role-play | Informational talk with poster display | |
| No answer | 80% | 40% | | No answer | 20% | 40% | |
| | | | | 6 weeks | 50% | | |
| | | | | 3 days | 10% | | |
| 1 week | 20% | 20% | 40% | 6 weeks | 20% | 20% | 30% |
| | | | | 1 week | | | 10% |
| 6 weeks | | 40% | 60% | 3 days | | 30% | 30% |
| | | | | 6 weeks | | 10% | 30% |

To further assess knowledge and perception of MMC for HIV prevention, respondents were specifically asked if there is any benefit for women if men get circumcised. 70% of respondents that attended the role-play did not complete the pre-questionnaire; however 50% indicated after the communication intervention that MMC reduces the chance of cervical cancer for women. The remaining 30% changed their opinion from *"reduce chances of getting HIV"* to *"reduce chances of cervical cancer"*.

The second highest response code to the proposed question were the informational talk with poster display respondents (60%) that indicated after the communication intervention that

MMC can reduce the risk of cervical cancer. However, respondents were uncertain between the reduced risk of HIV or cervical cancer and pregnancy.

Of the 50% of respondents that attended the informational talk revealed incorrectly that MMC reduces women's risk to get HIV, however changed their opinion after the communication intervention to *"reduce the risk of cervical cancer"*. 50% of the respondents revealed a lack of knowledge of the advantages of MMC for women after the communication intervention.

More importantly, these perceived benefits were mentioned more frequently by the group of respondents that attended the role-play as noted in Table 11.

**Table 11: Summary of the respondents' knowledge on benefits of MMC for women**

| **PRE-INTERVENTION** | | | | **POST-INTERVENTION** | | | |
|---|---|---|---|---|---|---|---|
| RESPONDENTS ANSWER | Role-play | talk | talk with poster display | RESPONDENTS ANSWER | Role-play | talk | talk with poster display |
| No answer | 70% | 50% | | Reduce chances of cervical cancer | 50% | 10% | |
| | | | | Reduce chances of getting HIV | 20% | | |
| | | | | No answer | | 40% | |
| Reduce chances of getting HIV | 30% | 50% | 60% | Reduce chances of cervical cancer | 30% | 40% | 60% |
| | | | | Reduce chances of getting HIV | | 10% | |
| Reduce chances of getting cervical cancer | | | 20% | Reduce chances of getting HIV | | | 20% |
| Reduce pregnancy | | | 20% | Reduce chances of getting HIV | | | 10% |
| | | | | Reduce pregnancy | | | 10% |

***Discussion:***

From the results of the study, the greatest number of participants (90%) that referred to the biologic plausibility of medical male circumcision as an HIV preventative strategy were the ones that attended the role-play.

Given the existence of traditional male circumcision practices the study further revealed a lack of understanding of the differences between MMC and traditional circumcision from the group that attended the informational talk. Cultural and religious factors play a great role in the awareness and attitude of adults towards male circumcision as a preventive strategy in reducing the risk of acquiring HIV infection. However, the study of Rian-Taljaard, Lagarde & Taljaard (2003) concluded that circumcision was increasingly an issue of personal choice rather than ethnic identity. On the contrary Scot et al (2005) appealed that urbanization, ethnic mixing and exposure to other cultures and religions are conducive to higher acceptability of circumcision in traditionally non-circumcising ethnic groups.

According to the study, only 50% of all the participants had an understanding after the communication interventions that the main reason for MMC is that it could reduce the risk of acquiring HIV and AIDS. This suggests that most of the respondents (50%) did not know about the protective effects of MMC against HIV transmission after the communication interventions and indicate that cultural roles are the major reason as to why one would carry out MMC. It has already been indicated that MMC does reduce incidence of HIV infection in men by more than 60% and Bailey et al, (2008), concluded that the protective effect was sustained over 42 months, reducing men's changes of becoming infected with HIV by 64%. The study of Patterson et al (2002), provide substantial evidence that the removal of the foreskin reduces the risk of male heterosexual HIV acquisition.

Medical circumcision is a surgical procedure and should therefore be provided as a safe medical service conforming to national quality standards with a reduction in chances of complications. The respondents that attended the role-play (90%) revealed a thorough understanding that surgery should be delivered in an appropriate clinical setting by trained health care providers. Interesting enough was that the majority that attended the role-play was African (80%). Compared to the respondents that attended the informational talk with poster display and informational talk whom still believed that the traditional circumcision practices are more preferable. The data further suggest that there is no link between transfer of

knowledge and cultural factors as the majority of respondents (70%) that attended the informational talk were also African.

Participants in this study were informed that there is a recommended period of abstinence following MMC; however there was confusion about the duration of the period of abstinence and post-operative care. Only 30% of respondents that attended the informational with poster display intervention could reveal a low level of knowledge transfer, with 10% that attended the role-play and none of the informational talk attendees. These percentages are quite significant and arguably an indication of inadequate and unclear information on the post-operative care of the procedure.

The respondents that attended the role-play showed a transfer in knowledge with regards to the benefits of MMC for women. On the contrary, the other two groups indicated confusion between the advantage for MMC to reduce the risk of HIV or reduce the risk of cervical cancer. These results were also confirmed by the study of Tobian et al (2010) that provide substantial evidence that male circumcision is not primarily a male issue as there are also derivative benefits for the female partner, such as the reduced risk of cervical cancer, risk of bacterial vaginosis and trichomonias.

The data and quotes concluded that the role-play activity was the most effective in transferring knowledge of the definition and biologic plausibility of MMC, practising of the surgical procedure at a health facility and the benefits of MMC for women. On the contrary, the data clearly highlight the sociocultural tensions at the groups that attended the informational talk and informational talk with poster display. Moreover the data similarly conclude a low level of knowledge transfer on post-operative care and that MMC can reduce the risk of acquiring HIV.

#### *4.3.2.2 Perception about MMC as an HIV preventative strategy*

Information from the groups present a number of communication concerns around the proposed question “What is the first thing that comes into people’s minds when they hear the term “medical male circumcision”?, linked with the questions posed in the previous heading in order to determine the audiences’ perceived advantages and disadvantages of the procedure.

Of the 20 respondents (66,6% of the total sample) who completed the question, the majority of the participants reveal myths and wrongly-held beliefs about MMC.

"*cannot erect", "no sex for 6 weeks" "no good", "black", "pain", "men must go cut", "getting sick", "tradition and religion"* and *"stop HIV and AIDS"*

After the communication intervention the majority of respondents (80%) that attended the role-play changed their perception.

*"going to hospital", "penis will be cut", "going to government facilities for cutting penis foreskin" and "cutting of foreskin of penis", "to reduce risk of HIV transmitted infections in men".*

Only 40% of the respondents that attended the informational talk with poster display perceive medical male circumcision in a positive view.

*"to help people not having damage of AIDS", "at a hospital it should be done", "removal of the foreskin hospital".*

None of the participants that attended the informational talk could indicate their understanding of medical male circumcision as an HIV preventative strategy after the communication intervention.

***Discussion:***

The findings clearly indicate an understanding and change in perception of medical male circumcision as an HIV and AIDS preventative strategy amongst the role-play participants after the communication intervention was conducted. Male circumcision is traditionally a practice with a host of social meanings. The studies of Rizvi et al (1999) and Steinberg et al (2002) conclude that it is a rite of passage into adulthood with religious connotations. The factors that influence perception may be directly related to an individual or to broader social and gender norms and collective practices.

66,6% of the respondents had a negative view of medical male circumcision before the communication interventions. Most of them viewed it as sexual dysfunction, cultural and religious reasons, painful and illness which could have contributed to low acceptability of the procedure. These findings are similar than the study of Aggleton (2007) which argued that medical male circumcision is a cultural act with social, individual and physical consequences. The negative perceptions in the respondents that attended the informational talk and informational talk with poster display could have been due to a lack of knowledge or limited knowledge of medical benefits of medical male circumcision.

A significant change in respondents' perception after the role-play activity revealed that 80% of the respondents received a proper level of knowledge that can build on a positive perception of the procedure. Only 40% of the respondents that attended the informational talk with poster display revealed some knowledge after the communication intervention while none of the participants that attended the informational talk could indicate a proper answer of how they perceive MMC. It is difficult for people to have a positive perception when they are not fully informed about the benefits of the procedure.

The study found that to increase one's knowledge on the medical benefits of the procedure it is paramount to create a positive perception of medical male circumcision. This is similar to what was found by Shapiro et al (2001) when some 81% of respondents changed their perception and accepted to be circumcised after the informational session.

#### *4.3.2.3 Acceptability of MMC as an HIV preventative strategy*

This section included questions designed to assess respondents' acceptability of medical male circumcision. The same questions were posed as an open-ended question and then as a close-ended question. Although MMC is growing in popularity, the main reasons to the question on perceived benefits, "What would encourage men to be circumcised?" were cited *"cultural", "right to be a man", "hygiene"* and *"to prevent HIV infection".*

50% of the respondents that attended the role-play did not complete the pre-questionnaire. After the communication intervention they could respond to the question.*"Reducing risk of HIV"; "reduce changes of getting HIV / STI"; "you can stay well without HIV"*.One respondent (10%) indicated before the communication intervention that *"respect could encourage men to be circumcised"*, moreover after the role-play significantly mentioned that *"education about the importance"* of MMC could encourage uptake of the surgical procedure. The same questions were posed to the groups as a close-ended question. Only one of the respondent's (10%) that attended the informational talk with poster display mention *"prevent of getting HIV"* and one changed his pre-answer of *"social pressure by families*" to *"reduce infections".* It can be noted, from Table 12, that a good portion of the respondents that attended the informational talk with poster display indicated other perceived advantages of medical male circumcision.

**Table 12: Respondents' perception of MMC benefits: Informational talk with Poster display**

| PRE-INTERVENTION | | POST-INTERVENTION | |
|---|---|---|---|
| No answer | 30% | Culture | 20% |
| For better health | 10% | For better health | 10% |
| Social pressure by families | 10% | Reduce infections | 10% |
| Believe | 10% | Hygiene | 10% |
| Prevent of getting HIV | 30% | Prevent of getting HIV | 30% |
| Respect | 10% | Respect | 10% |

At this stage of the questionnaire, common misconceptions emerged between the respondents that attended the informational talk. Some respondents noted advantages of MMC as *"learning", "longer sex", "reward", "to enjoy sex"* before the communication intervention. 50% did not complete the questionnaire. Only 10% revealed some knowledge transfer after the communication intervention and indicated that MMC is a prevention option for males in reducing STI's and other infections. 40% that did not complete the pre-questionnaire indicated for cultural reasons (Table 13).

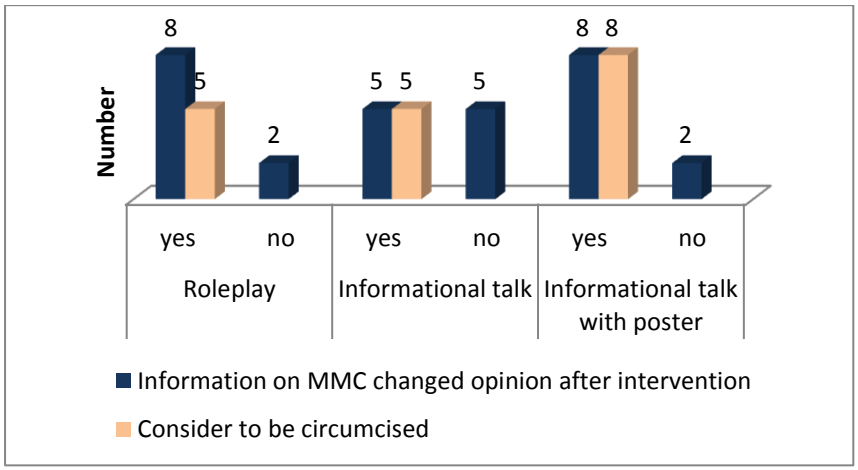
**Table 13: Respondents' perception on MMC benefits: Informational talk**

| PRE-INTERVENTION | | POST-INTERVENTION | |
|---|---|---|---|
| Longer sex, to enjoy sex | 30% | Good advice | 20% |
| | | Prevent spread of STI's / infections | 10% |
| Learning | 10% | Learning | 10% |
| Reward | 10% | Proper info | 10% |
| No answer | 50% | No answer | 10% |
| | | Culture | 30% |
| | | Right to be a man | 10% |

Respondents were further asked "Has this information changed your opinion about medical male circumcision?" The vast majority of respondents that attended the role-play and

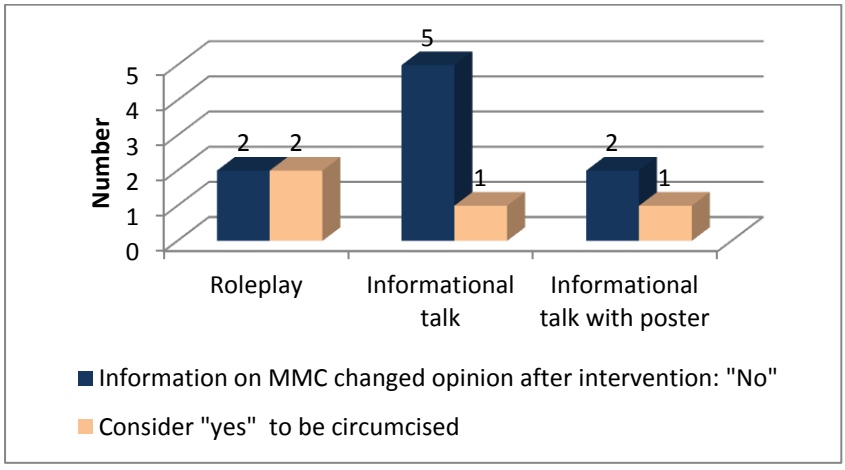
informational talk with poster display (80%) confirmed that the information from both interventions changed their opinion about medical male circumcision. 50% of the respondents that attended the role-play considered getting circumcised, while 80% of the respondents that attended the informational talk with poster display considered to be circumcised. On the contrary, the respondents (50%) that attended the informational talk indicated that their opinion of medical male circumcision did not change but they considered getting circumcised (figure 8).

**Figure 8: Respondents' level of acceptability to get circumcised**



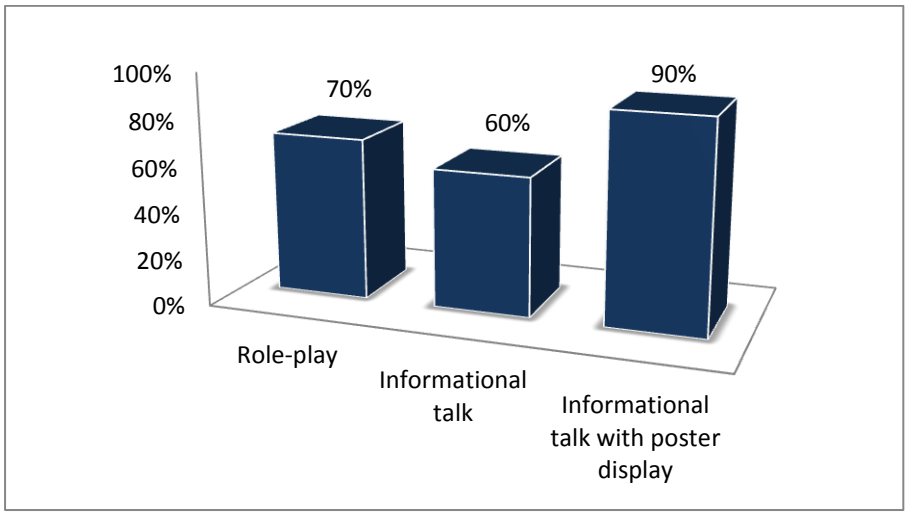

The data clearly highlight the findings that respondents at the role-play indicated that the information did not change their opinion (20%) and were considering circumcision after the communication intervention (figure 9).

**Figure 9 Distribution amongst 3 groups considering MMC**



Looking across the findings after the three communication interventions, respondents at the informational talk with poster display (90%) recognized medical male circumcision as a promising intervention for HIV prevention (figure 10).

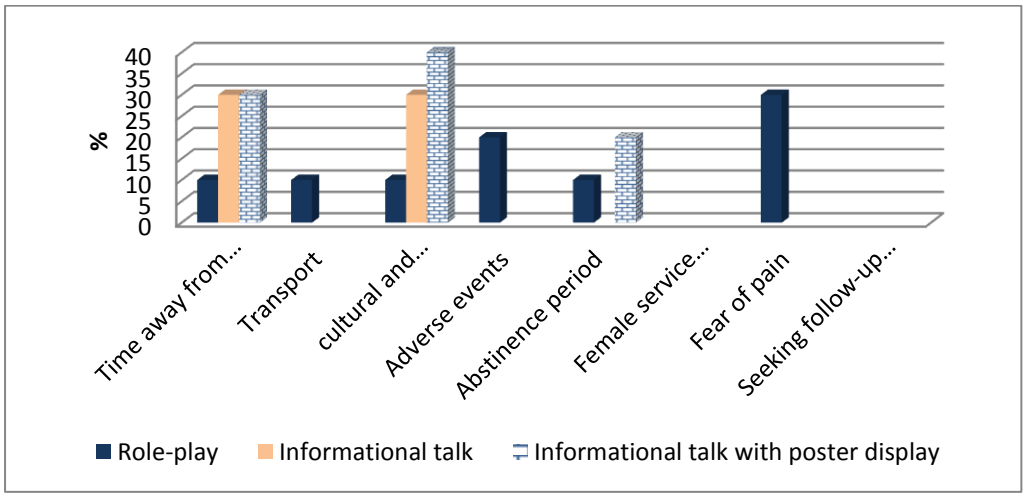
**Figure 10: Acceptability of MMC post 3 communication interventions**




The majority of respondents that attended the informational talk (30%) and informational talk with poster display (40%) revealed before the communication intervention that time away from work (30%) and cultural and religious values (40%) could be barriers for MMC uptake.

The majority of respondents that attended the role-play were concerned about the adverse events (20%) and fear of pain (30%).

**Figure 11: Barriers for MMC uptake**



To compare the close-ended question about barriers, the open-ended question was posed in "Why might some men not be interested in MMC?" The data clearly indicate that the respondents (50%) that attended the informational talk strongly feel that MMC is not acceptable for cultural and religious reasons. The further findings revealed a lack of understanding of the question. Five respondents that attended the role-play did not answer the pre-questionnaire. Four respondents completed the post-questionnaire with answers that do not relate to the question.

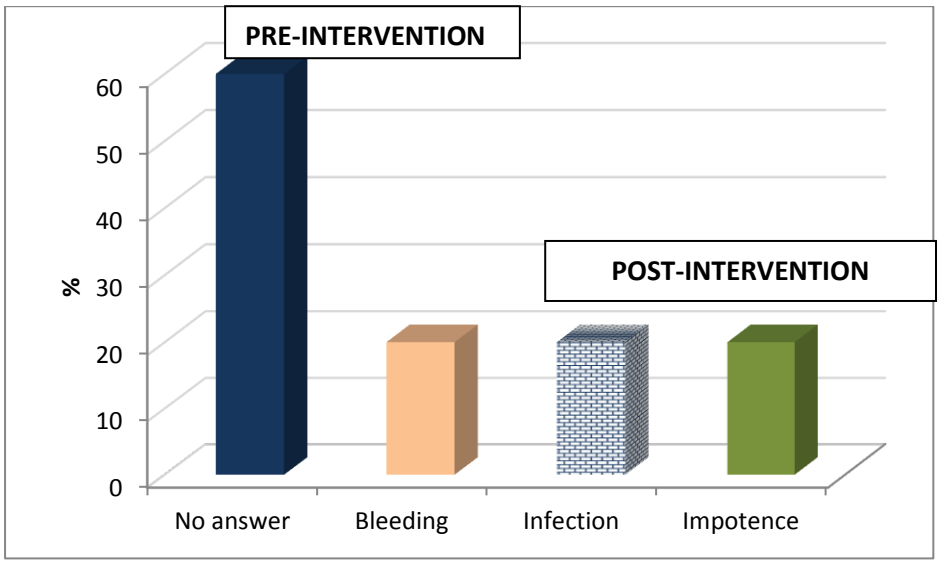
*"Cutting of penis foreskin"; "cutting of foreskin penis hospital"; "to reduce the risk of HIV transmitted infections"; "going to government facilities in cutting penis foreskin"*
Three respondents that attended the informational talk did not answer the pre-or post-questionnaire.

Three respondents at the informational talk with poster display did not answer the pre-questionnaire. The answers in post communication interventions revealed the following:
*"good to be a man", "want to be smart", "woman choose not"*

The most common adverse events discussed at the interventions were bleeding during- and post MMC, and delayed healing caused by infection. The open-ended question of "Why some men might not be circumcised" was compared with the close-ended question: "What do you think the problems or negative consequences of medical male circumcision might be?"

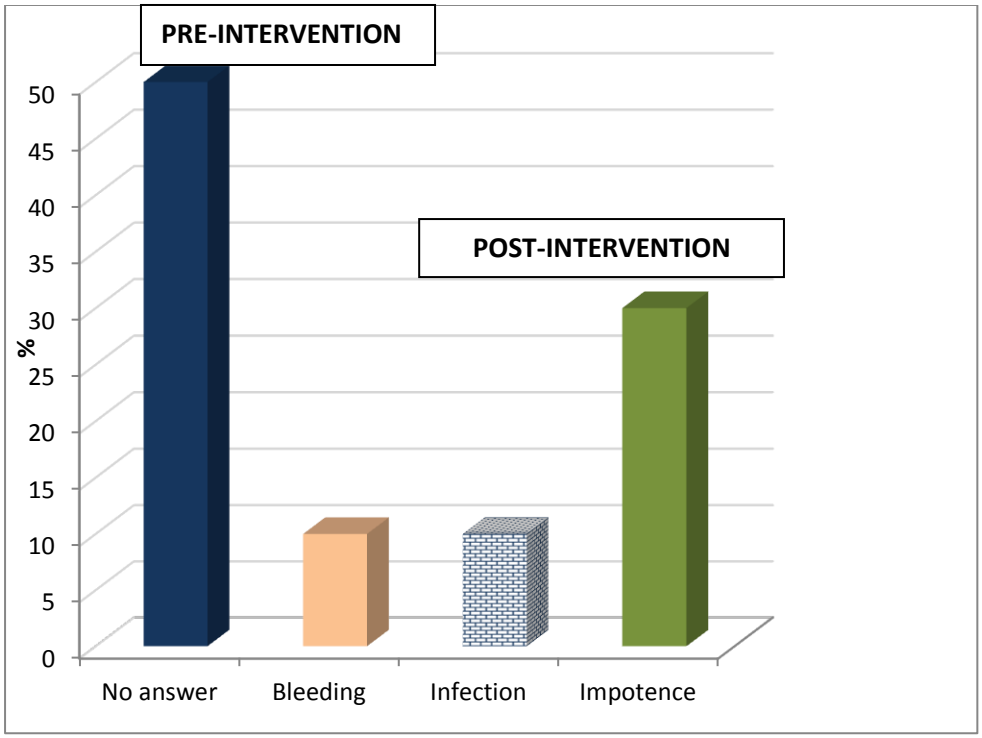
60% of the respondents' that attended the role-play did not complete the pre-questionnaire. Their opinion changed after the communication intervention when 20% indicated bleeding, 20% infections and 20% impotence as a negative consequence of MMC. 40% of the respondents indicated pre and post intervention that bleeding can be a possible reason for men not willing to get circumcised.

**Figure 12: Respondents' perception of MMC complications: Role-play**



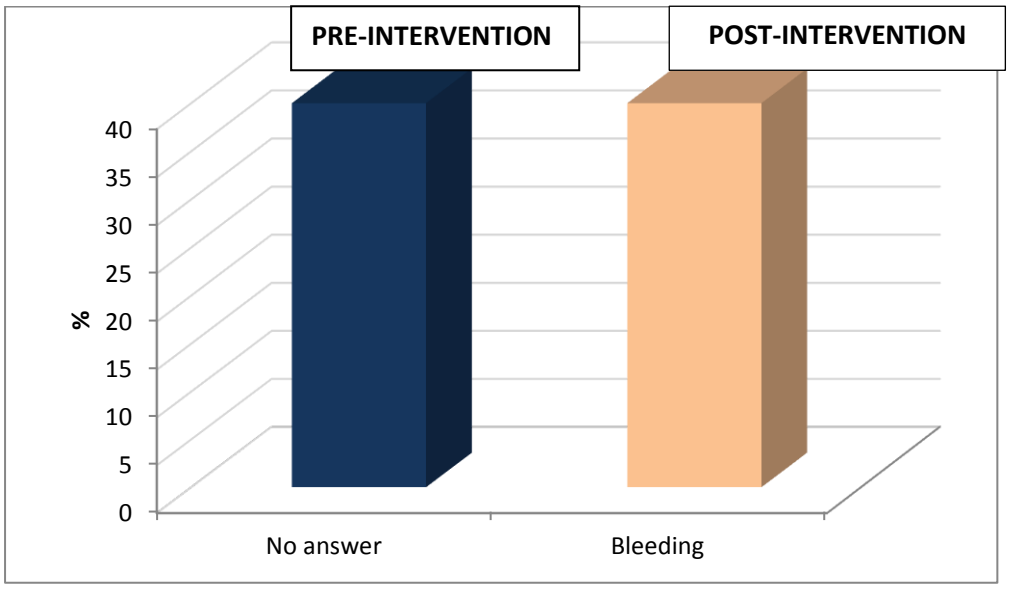

50% of the respondents that attended the informational talk did not indicate any pre-intervention answer. After the informational talk, 10% indicated bleeding, 10% indicated infection and 30% indicated that impotence could be a complication or the reason for slow uptake of MMC as an HIV prevention strategy. 50% of the respondents revealed that bleeding can be a possible negative consequence.

**Figure 13: Respondents' perception of MMC complications: Informational Talk**




The majority of respondents (60%) at the informational talk with poster display indicated in the pre-questionnaire bleeding as the biggest concern for men not willing to get circumcised. 40% of the respondents were not sure of their answer when completing the pre-questionnaire. All revealed after the communication intervention that bleeding can be perceived as a negative consequence or complication for MMC as an HIV preventative strategy.

**Figure 14: Respondents' perception of MMC complications: Informational talk with Poster display**




***Discussion:***

It is important to know people's beliefs and understanding about circumcision and to be aware of the potential stigmatization associated with the procedure in the historical context, the sociocultural determinants and that practice of MMC in each community widely vary. The non-circumcising communities form the key target group for communication initiatives to break the barrier created by misinformation and myths around MMC.

Circumcision is gaining strength as a preventive measure towards HIV transmission. Conversely not the main reason why men are willing to get circumcised when looking at the primary reasons stated by the study participants such as cosmetic, sexual satisfaction and cultural reasons. Information from the groups presented a number of communication concerns around the barriers of medical male circumcision. There are two distinct groups identifiable such as men with no interest and men who desire MMC but who faced a variety of relatively small barriers that prevented them from assessing the service.

The study found that although participants viewed the main reason for circumcision as cosmetic, sexual satisfaction and cultural reasons - it did not contribute to low acceptability of the procedure after the communication interventions. The vast majority of respondents that attended the role-play and informational talk with poster display (80%) confirmed that

the information from both communication interventions changed their opinion about medical male circumcision. 50% of the respondents that attended the role-play considered getting circumcised, while 80% of the respondents that attended the informational talk with poster display considered MMC.

From the results of the study it was noted that 90% of the respondents that attended the informational talk and role play were considering MMC after the communication intervention. However, given the barrier for MMC uptake as cultural and religious reason, the majority of respondents were from the Traditional African religion and African ethnic group. Although the researcher did reiterate that the purpose of the study is not to measure the response of the participants in relation to their respective age groups, it was noticed that the majority of respondents were in the 36 – 45 age category. They also revealed a much better understanding of possible adverse events.

On the contrary, 50% of the respondents that attended the informational talk who initially had a negative perception changed their perception to be willing to be circumcised after being supplied with information on the protective effects of male circumcision.

Some misinformation on complications was noticed after the communication intervention as 10% of the respondents believed that impotence is an adverse event. The most common complication with MMC is bleeding. 50% of the total sample falsely believed that impotence was a complication. Thus, the finding gives justification why circumcision is not well accepted as an HIV and AIDS preventative method.

The data arguably suggest a link between the answers on complications of MMC and barriers for MMC uptake from the respondents that attended the role-play. The majority of respondents that attended the role-play were concerned about the adverse events and fear of pain and 40% indicated during pre-intervention that bleeding is a complication. However, the post-intervention data did not change significantly, which is of concern. Thus, the data arguably highlight the shortcomings of information given because men who do have particular beliefs regarding health or sexual aspects of MMC are least likely to be circumcised. In comparison, the respondents' preference (90%) of medically performed circumcisions must be noticed. Accurate information on the circumcision process could address the barriers by increasing the emphasis on the expertise and professionalism of the people conducting the procedure with a reduction of chances of complications.

There was a significant association between willingness to be circumcised and consideration of the procedure as a benefit to the respondents. This is similar to what was found by Shapiro et al (2001) when some respondents changed their perception and accepted to be circumcised. The study also seem to suggest that innovative communication providing factual information is critical to prevent myths from circulating and to ensure people adhere to the correct advice.

The data further suggest that the high level of secondary qualifications amongst the three groups could cause the higher preference for MMC. This suggests that appropriate educational messages might further increase levels of acceptability in this community.

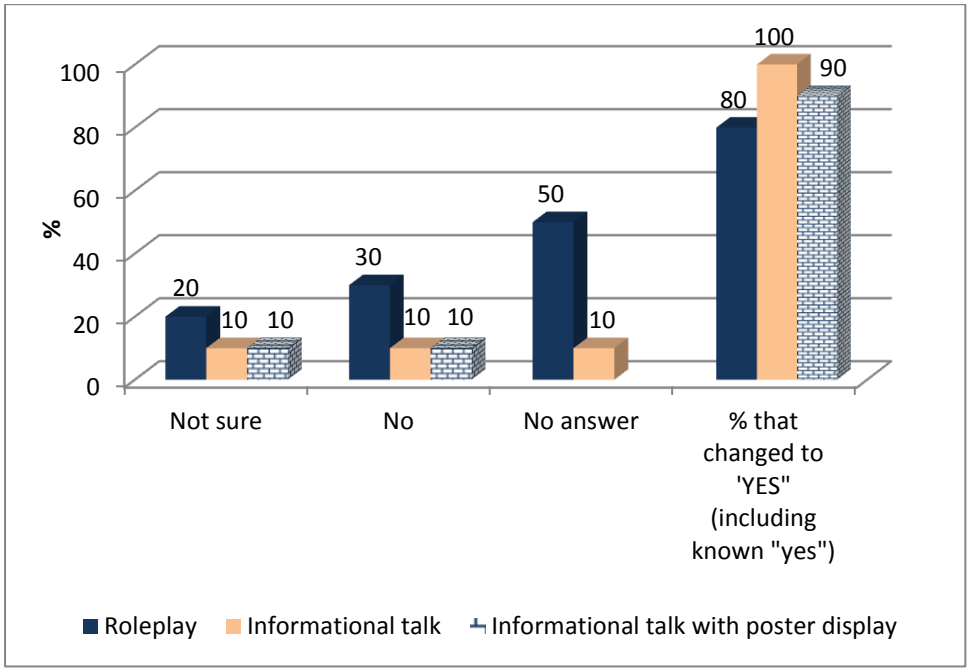
#### *4.3.2.4 Level of awareness about MMC as an HIV preventative strategy*

The key message emphasized that MMC does not replace other methods of HIV prevention and that it reduces the risk of HIV infection in men by about 60%.

The question asked on whether participants agree that "Male circumcision has been pointed out as an HIV and AIDS prevention strategy" were similarly answered between 40% of all the respondents before the communication interventions as "no", "not sure" while 10% did not give any answer. During post communication intervention the majority of respondents revealed an understanding by indicating "yes", medical male circumcision is pointed out as an HIV and AIDS prevention strategy (figure 15).

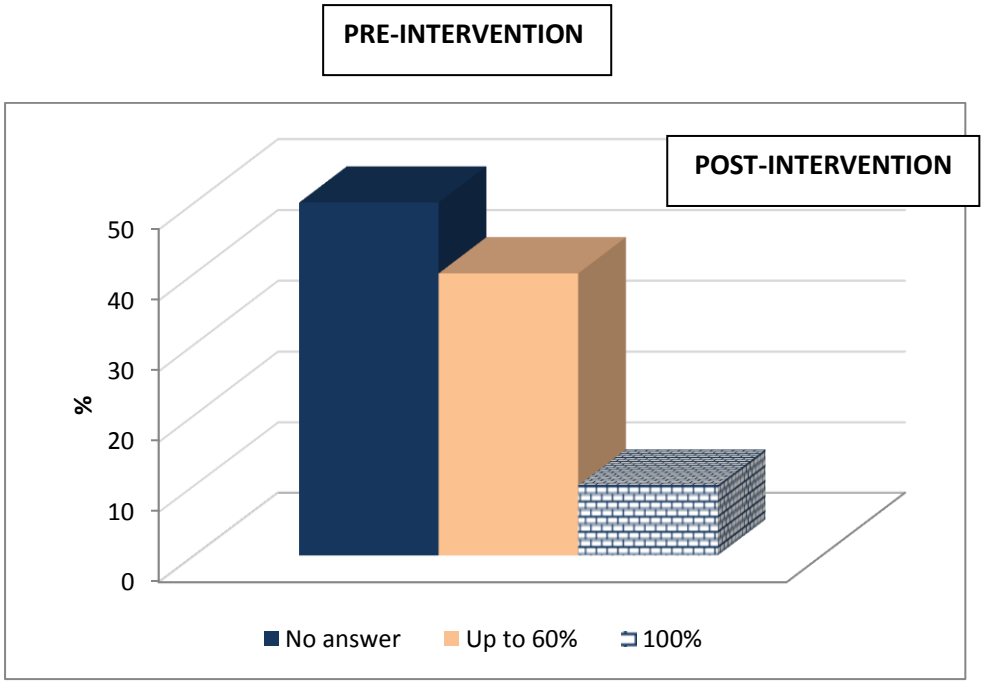
On the contrary, 20% of the respondents that attended the role-play still indicated a "no" and "not sure" after the communication intervention. It was worrisome that the respondents that attended the informational talk with poster display changed their pre-intervention answer of "yes" to "no" after the communication intervention.

**Figure 15: Respondents' level of awareness about MMC as an HIV preventative strategy**




Likewise, and noted in figure 16, when asked what level of protection does medical male circumcision give, 50% of the respondents at the role-play were aware that MMC reduces the risk of HIV infection in men up to 60%, while the other 50% did not answer the pre-intervention question. After the communication intervention, 10% still indicated that MMC reduce the risk by 100%. 40% of the respondents did reveal a transfer of knowledge adequately.

**Figure 16: Risk reduction and MMC: Role-play**




All the respondents (100%) at the informational talk (table 14) and informational talk with poster display (table 15) revealed thorough knowledge and understanding that scientific evidence show MMC reduces the risk of HIV infection in men by about 60%, after the communication interventions.

**Table 14: Risk reduction and MMC: Informational talk**

| Pre-intervention response | Percentage of respondents | Post-intervention response | Percentage of respondents |
|---|---|---|---|
| No answer | 30% | Up to 60% | 30% |
| 100% | 30% | Up to 60% | 30% |
| Up to 10% | 10% | Up to 60% | 10% |
| Up to 60% | 30% | Up to 60% | 30% |

**Table 15: Risk reduction and MMC: Informational talk with Poster display**

| Pre-intervention response | Percentage of respondents | Post-intervention response | Percentage of respondents |
|---|---|---|---|
| Up to 60% | 40% | Up to 60% | 40% |
| 100% | 40% | Up to 60% | 40% |
| Up to 10% | 20% | Up to 60% | 20% |

To further assess knowledge and perception of MMC for HIV prevention, respondents were asked whether it is necessary to have protected sexual intercourse after being circumcised.

- 40% of the role-play respondents knew that they must practice safe sex before the communication intervention and the 60% that did not answer the pre-questionnaire indicated a thorough understanding of the importance of practising safe sex after MMC, after the role-play was conducted.
- 50% of the respondents at the informational talk knew to have protected sexual intercourse before the communication intervention, 20% changed their pre-communication answer to "yes" and the 30% that did not answer, also agreed that it is necessary to have protected sex after medical male circumcision.
- 80% of the respondents at the informational talk with poster display were aware of having protected sexual intercourse during pre-communication intervention and the remaining 20% that was unaware ("no") revealed an understanding after the communication intervention.

At this stage of the questionnaire, common misconceptions emerged between the two questions: "Medical male circumcision (i) reduces, (ii) stop, or (iii) fully protect the risk of becoming HIV infected", and "Circumcised men must: (i) continue to practice HIV prevention; (ii) eat more; (iii) have more sexual partners?" The response rate showed clearly marked differences between the two questions for the respondents that attended the role-play and informational talk.

60% of the respondents at the role-play indicated when answering the pre-questionnaire that they have heard that MMC reduces the risk of HIV infection and did not change their opinion after the communication intervention. 10% indicated that it did "stop the risk of becoming infected", while 10% of the respondents falsely believed it "fully protect the risk of becoming HIV infected". However, their opinion changed after the role-play that MMC reduces the risk of becoming HIV infected. In comparison with the question on risk compensation the role-play respondents indicated that:

- 80% *"practicing HIV prevention",* which arguably linked the data as mentioned in the previous question about risk reduction
- 20% indicated *to "eat more",* and "*having more sexual partners"*

The data from the respondents that attended the informational talk with poster display revealed a proper understanding of risk reduction and the continuation of practicing other preventative measures. 20% of the respondents were not sure when completing the pre-questionnaire whether it "stops the risk of HIV infection", but after the communication intervention it changed to "reduces the risk of HIV infection".

50% of the respondents that attended the informational talk, correctly indicated the need to "continue the practice of HIV prevention". While 40% did not reveal any understanding or transfer of knowledge after the communication intervention. Only 10% did indicate the need to "continue to practice HIV prevention". On the contrary 40% of respondents that did not answer the post-questionnaire of the previous question indicated that MMC reduces the risk of HIV infection. 90% of the respondents specified that they have heard that MMC reduces the risk of HIV after the communication intervention.

**Table 16: Summary of MMC and HIV prevention**

| **PRE-INTERVENTION** | | | | **POST INTERVENTION** | | | |
|---|---|---|---|---|---|---|---|
| RESPONDENTS ANSWER | Role-play | Informational talk | poster display | RESPONDENTS ANSWER | Role-play | Informational talk | Informational talk with poster display |
| No Answer | 40% | 50% | | Eat more | 10% | | |
| | | | | Have more sexual partners | 10% | | |
| | | | | Continue to practice HIV prevention | 20% | 10% | |
| | | | | No answer | | 40% | |
| Continue to Practice HIV prevention | 60% | 50% | 10% | Continue to practice HIV prevention | 60% | 50% | 10% |

Moreover, when asked whether or not respondents are aware that men need to abstain from sex for 6 weeks after the procedure, all respondents (total sample) revealed an excellent understanding and knowledge that the increased risk of HIV transmission can occur before complete wound healing. Adequate factual information was provided throughout all three communication interventions.

To measure the perceived impact of introducing MMC for HIV prevention, respondents were asked if they have to get tested for HIV before medical male circumcision. The pre-intervention outcome indicated a "yes", with the majority of respondents (90%) attending the informational talk with poster display, 40% that attended the informational talk and the minority of respondents (30%) attending the role-play.

70% of the respondents that attended the role-play did not answer the question or that indicated "no, but it is a good idea to". Thereafter 40% changed their opinion after the communication intervention in agreement to HIV testing. The one respondent (10%) that indicated an HIV test is not compulsory did not change their opinion after the communication intervention.

Concern was raised that 20% of the respondents attending the informational talk was not willing to get tested, or "no, but it is a good idea to". 40% did not answer the question.

**Table 17: Respondents' perceived impact of HIV testing before MMC procedure**

| **PRE-INTERVENTION** | | | | **POST INTERVENTION** | | | |
|---|---|---|---|---|---|---|---|
| RESPONDENTS ANSWER | Role-play | Informational talk | with poster display | RESPONDENTS ANSWER | Role-play | Informational talk | with poster display |
| No answer | 60% | 40% | | No answer | 20% | 40% | |
| | | | | Yes | 30% | | |
| | | | | No, but it is a good idea to | 10% | | |
| No | | 10% | | Yes | | 10% | |
| Yes | 30% | 40% | 90% | Yes | 30% | 40% | 90% |
| No but it is a good idea to | 10% | 10% | 10% | No but it is a good idea to | | 10% | 10% |
| | | | | Yes | 10% | | |

***Discussion:***

The abovementioned data and research indicate an inadequate and / or "unclear" message and / or information on MMC for HIV prevention being broadcast. The percentage changes are insightful and an indication of adequate and clear "messaging" and / or information on MMC for HIV prevention provided by the three communication interventions.

The impact of HIV prevention has been slow, resulting in people still dying despite the long lasting presence of the prevention method to "abstain, be faithful and condomise" (ABC's).

Therefore, taking to account the primary communication message attached to MMC for HIV prevention need to be linked to the known combination prevention methods as well as the fact that MMC does not provide 100% protection from HIV transmission.

The informational talk and informational talk with poster display respondents revealed proper understanding that MMC reduces the risk of HIV infection with 60%, as scientific evidence shown by the study of Berer (2007). All respondents revealed a proper understanding of the importance of protected sexual intercourse after being circumcised. The data highlight adequate information on MMC for HIV prevention provided by the three communication interventions.

In comparison, the respondents that attended the role-play and informational talk revealed wrongly-held beliefs about MMC after the communication interventions that it protects fully against HIV when it does not, that other prevention methods are not necessary when they are and that it allows men to have more sexual partners without increased risk. However, with percentages significantly low, the data therefore highlight the misconception and / or misunderstanding of the questions of the respondents that attended the role-play and informational talk. The respondents that attended the informational talk with poster display revealed a proper understanding and awareness of MMC as an HIV preventative strategy.

Data from the UNAIDS, 2011 report stated "HIV positive men who are circumcised and resume sex prior to complete wound healing have a decreased risk of transmitting HIV to their partners compared to uncircumcised HIV-positive men. Circumcised partners may or may not have their HIV status known because testing is recommended but not required for surgery".

The study of Gollaher (2000) specifically refers to medical male circumcision services that must be accessible, within a framework of informed consent with the emphasis on including the partially protective effect of MMC. It must include the practise of safer sex after the procedure when counselling the client. If people become too confident about the protective benefits of circumcision, they may engage in more high-risk sexual behaviour. Several studies from Auvert et al (2005), Grey et al (2007) and Bailey et al (2007) confirmed that circumcised men reported more frequent unprotected sexual behaviour or inconsistent condom use than their uncircumcised counterparts.

Thus, the data and research arguably emphasize a need for proper education, awareness and training to raise the difference of knowledge between risk reduction and HIV prevention.

## 4.4 Limitations of the study

Main factors that have contributed to the success of the study include the support, and active involvement of management on the farm. The research team was already familiar with the farm surroundings and known to the participants.

Some respondents were suspicious of the intentions of the researcher. To ease their concern, the researcher assured them that the information is treated with the highest trust and confidentiality and that their names will not be accessible to any third party. They then continued to respond without hesitation or fear.

Translation also posed a challenge as some respondents had difficulty answering the questionnaire, due to their illiterate levels and poor command of the English language. The researcher trained research assistants to help complete the questionnaire. Three translators were available throughout. Although most respondents managed to complete the questionnaire, the language barrier might have compromised the quality of the study findings.

Notwithstanding the lack of having a standardised package for the communication activities, the researcher at all times ensured that the content of the different communication interventions were exactly the same. The researcher developed a few key messages and provided it to the three groups responsible for the communication interventions a month prior to when the research commenced.

Although a small population size with a small study sample randomly selected, the researcher had a 100% positive response rate to the request to participate.

## 4.5 Summary

This chapter presented results of the research study and therefore looked at the effectiveness of three communication interventions to increase the level of knowledge, perception, attitude and awareness of the participants about medical male circumcision as an HIV prevention strategy. In conclusion the study and data highlight that the respondents attending the role-play revealed the highest level of knowledge transfer compared to attendees of the informational talk and informational talk with poster display.

# Chapter 5: Conclusion and recommendations

This chapter focuses on the recommendation and conclusion of the study. Comments are made regarding plausibility of future studies.

## 5.1 Conclusion

The researcher would like to state that it was not the intention of this particular study to conclude a specific position on whether religion, ethical groups or educational levels was for or against any level of knowledge transfer regarding medical male circumcision as most of the respondents considered medical male circumcision regardless of their orientation.

As a part of the comprehensive strategy for HIV prevention, the researcher determined that medical male circumcision should be included with the current focus of health promotion programmes. These programmes currently do not provide for the inclusion of traditional cultures, religions, rituals, lifestyles and LSM profiles of people.

While the data suggest overall trends in the total sample, it is important to note the distinct differences between the three interventions; role-play, informational talk and informational talk with poster display. In summary then, the data highlight that the role-play activity was the most effective in transferring knowledge of the definition and biologic plausibility of MMC, practising of the surgical procedure at a health facility and the benefits of MMC for women. On the contrary, the data also clearly point to the sociocultural tensions that the groups displayed whilst attending the informational talk and informational talk with poster display.

It was also clear that the respondents attending the informational talk with poster display revealed the most proper understanding and awareness of MMC as an HIV preventative strategy. The research pointed to a concern that a low level of understanding of MMC with a preventative health benefit resided from the respondents that attended the role-play.

The study data similarly from all three communication interventions point out that to increase knowledge of medical benefits for the procedure it should be paramount in creating a positive perception of male circumcision. The analysis of the data of the informational talk and informational talk with poster display samples, given the barrier for MMC uptake with regards to cultural and religious reasons, clearly demonstrate the cause of negative perceptions on the willingness to get circumcised. Moreover, these perceptions' acceptability changed when the right information was provided.

In summary, the data highlight that knowledge and acceptance of male circumcision can be improved with appropriate information provision and supply. The saying goes "knowledge is power" and a lack there-of can be a primary barrier as it influences one's perception that can cause a negative impact to the scale-up of MMC programmes. The lack of information on certain aspects is often attributable to a language and / or cultural barrier. However, there are ways to overcome this barrier.

The findings from this study highlight the importance when providing information, whether interpersonal or formal informational session, technical information must be correct, compelling with appropriate material at the right literacy level of the target audience. The communication intervention must obtain audience attention at all times, convince the audience that a need or problem does or can exist, suggest solutions that can satisfy or provide to the need, assist the audience in visualizing the future with or without solutions, and outline specific steps of action.

Whilst not very significant in actual numbers, the study revealed that the role-play activity was the most effective in the transfer of over-all knowledge with regards to MMC, and thus acceptable to the rural audience – as used in the study. However, misconceptions about the efficacy of MMC as an HIV prevention method can arguably be linked to the dissemination of an unclear and / or confusing question or message about MMC for HIV prevention.

Therefore, one needs to find a communication method suitable for the particular audience and understand how they prefer to be communicated to. Consideration should be made to the traditional norms and perceptions in order to address any myths and misconceptions to improve acceptability of the procedure. Tailoring the demand creation to the specific context increases its effectiveness and makes it the most cost-efficient.

## 5.2 Recommendations

Recognising the multiplicity of challenges highlighted in this study, the following recommendations apply:

- Communication messages, whether interpersonal communication or formal informational sessions need to be specific, clear, consistent and effective on the following points: (a) Clear distinction between traditional and medical male circumcision. (b) Whether the use of male and female condoms is still necessary as male circumcision is only partially protective and do not replace other prevention

measures. (c) Men cannot resume sexual relations before complete wound healing has occurred as they may increase their risk of contracting HIV. (d) A six week period of abstinence after the operation need to be communicated. (e) Women are not protected against HIV if they have unprotected sexual relations with circumcised men

- Conduct a situation analysis to determine the key audience and their preferred method of communication before the intervention
- Communication needs to be specifically tailored towards primary and secondary audiences
- An impact survey through focus group discussions and / or interviews are advised to assess the behavioural change of participants

## 5.3 Comments

The sociocultural aspects of MMC, particularly those surrounding any current or historical traditional circumcision practice, are important in determining effective strategies for any attempt to modify the practice or for taking advantage of them. A recommendation for further study is made to compare the demographics of this study population to urban populations. The outcome of this study design allows the researcher to do a qualitative focus group study approach on the current as well as and including the secondary audience (the partners and spouses) to gain a deeper understanding of participants' knowledge and their perceived impact of MMC for HIV prevention.

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**Appendices 1: PRE- AND- POST-QUESTIONNAIRE**

**A PRE-QUESTIONNAIRE TO DETERMINE THE KNOWLEDGE OF MEN ON MALE CIRCUMCISION AS A PREVENTATIVE STRATEGY FOR HIV/AIDS ON HAYGROVE HAVEN IN THE OVERSTRAND SUB-DISTRICT**

**Introduction**

This questionnaire is to assess the pre-knowledge of men on male circumcision as an HIV / AIDS prevention strategy. The information collected will be treated with utmost confidentiality. Your name will not be used in relation to the answers you give. If you don't understand a question, please inform the supervisor. Return the questionnaire to the person who gave it to you. Thank you for your co-operation.

**Instructions**

***Please put a tick (√) in the box corresponding to your answer.***

**SOCIAL DEMOGRAPHIC CHARACTERISTICS**

| | | |
|---|---|---|
| **Sex** | Male | |
| | Female | |
| **Age** | 18 -20 | |
| | 21 – 25 | |
| | 26 – 35 | |
| | 36 - 45 | |
| **Religion** | Catholic | |
| | Protestant | |
| | Traditional African | |
| | Moslem | |
| | Other | |
| **Population group** | African | |
| | Coloured | |
| | White | |
| | Other | |
| **Level of education** | None | |

| | | |
|---|---|---|
| | Primary | |
| | Secondary | |
| | Tertiary | |
| **Aware of your HIV status** | Yes | |
| | No | |
| **Marital status** | Single | |
| | Married | |
| | Divorced | |
| | Widowed | |
| **Do you usually work:** | Throughout the year | |
| | Seasonally | |
| | Once in a while | |

**OPEN-ENDED QUESTIONS**

***Please fill in the blank spaces as applicable.***

1. What is your understanding of medical male circumcision?
   ……
   ……
   ……
   ……

2. What are the first thing that comes into people's minds when they hear the term "medical male circumcision"?
   ……
   ……
   ……
   ……

3. Who are the people who are circumcised?
   ……
   ……

4. Why might some men not be circumcised?

   ……

   ……

5. What would encourage men to be circumcised?

   ……

   ……

**CLOSE-ENDED QUESTIONS**

***Please put a tick (√) corresponding to your answer of choice.***

6. What are the most important reason for carrying out medical male circumcision?
   a. Religion
   b. Cultural roles
   c. Prevent sexually transmitted infections / HIV
   d. To look smart (cosmetics)
   e. Enhance sexual pleasure (perceived sexual benefits)
   f. Influenced by social pressure
   g. Medical reasons

7. What level of protection does medical male circumcision gives?
   a. Up to 10%
   b. Up to 60%
   c. 100%

8. What benefits does medical male circumcision have for women?
   a. Reduces risk of cervical cancer
   b. Reduces pregnancy
   c. Reduces changes of getting HIV

9. What do you think the problems or negative consequences of medical male circumcision might be?
   a. Infections

b. Impotence
c. Bleeding

10. Male circumcision has been pointed out as an HIV / AIDS prevention strategy. Do you agree to this?
    a. Yes
    b. No
    c. Not sure

11. Medical male circumcision:
    a. fully protect against HIV
    b. reduces the risk of HIV infection
    c. stops the risk of HIV infection

12. After medical male circumcision, men have to delay having sex for how long?
    a. 3 days
    b. 5 days
    c. 6 weeks

13. Once circumcised is it necessary to have protected sexual intercourse?
    a. Yes
    b. No

14. Circumcised men must:
    b. Continue to practice HIV prevention
    c. Eat more
    d. Have more sexual partners

15. How long does a man have to wait before the dressing is removed?
    a. 1 week
    b. 3 days
    c. 6 weeks

16. Medical male circumcision is best undertaken:

a. At a government approved health facility
b. The local herbalist doctor
c. The market place

17. Do you have to get tested for HIV before circumcision?
    a. Yes
    b. No
    c. No, but it is a good idea to do so

***THE END OF THE PRE-TEST QUESTIONNAIRE.***

***ENJOY THE INFORMATIONAL SESSION ON MEDICAL MALE CIRCUMCISION***

**A POST-QUESTIONNAIRE TO DETERMINE INCREASE OF KNOWLEDGE OF MEN ON HAYGROVE HAVEN IN THE OVERSTRAND SUB-DISTRICT, AFTER INFORMATION BEEN PROVIDED ON MEDICAL MALE CIRCUMCISION AS PREVENTATIVE STRATEGY FOR HIV/ AIDS**

**Introduction**

This questionnaire is to assess the post-knowledge of men on male circumcision as an HIV / AIDS prevention strategy. The information collected will be treated with utmost confidentiality. Your name will not be used in relation to the answers you give. If you don't understand a question, please inform the supervisor. Return the questionnaire to the person who gave it to you. Thank you for your co-operation.

**Instructions**

***Please fill in the blank spaces as applicable.***

1. What is your understanding of medical male circumcision?
   ……
   ……
   ……
   ……

2. What are the first thing that comes into people's minds when they hear the term "medical male circumcision"?

   ……
   ……
   ……
   ……

3. Who are the people who are circumcised?

   ……
   ……..

4. Why might some men not be circumcised?

……

……

5. What would encourage men to be circumcised?

……

……

**CLOSE-ENDED QUESTIONS**

***Please put a tick (√) corresponding to your answer of choice.***

6. What resources did you get information concerning medical male circumcision and HIV prevention?
   a. Informational talk
   b. Role play
   c. Informational talk with poster demonstration

7. What are the reasons for carrying out medical male circumcision?
   a. Religion
   b. Cultural roles
   c. Prevent sexually transmitted infections / HIV
   d. To look smart (cosmetics)
   e. Enhance sexual pleasure (perceived sexual benefits)
   f. Influenced by social pressure
   g. Medical reasons Religion

8. What level of protection does medical male circumcision gives?
   a. Up to 10%
   b. Up to 60%
   c. 100%

9. What benefits does medical male circumcision have for women?
   a. Reduces risk of cervical cancer
   b. Reduces pregnancy
   c. Reduces changes of getting HIV

10. What do you think the problems or negative consequences of medical male circumcision might be?
    a. Infections
    b. Impotence
    c. Bleeding

11. Male circumcision has been pointed out as an HIV / AIDS prevention strategy. Do you agree to this?
    a. Yes
    b. No
    c. Not sure

12. Medical male circumcision
    a. fully protect against HIV
    b. reduces the risk of HIV infection
    c. stops the risk of HIV infection

13. After medical male circumcision, men have to delay having sex for how long?
    a. 3 days
    b. 5 days
    c. 6 weeks
14. Once circumcised is it necessary to have protected sexual intercourse?
    a. Yes
    b. No

15. Circumcised men must:
    a. Continue to practice HIV prevention
    b. Eat more
    c. Have more sexual partners

16. How long does a man have to wait before the dressing is removed?
    a. 1 week
    b. 3 days
    c. 6 weeks

17. Medical male circumcision is best undertaken:
    a. At a government approved health facility
    b. The local herbalist doctor
    c. The market place

18. Do you have to get tested for HIV before circumcision?
    a. Yes
    b. No
    c. No, but it is a good idea to do so

19. Has this information changed your opinion about medical male circumcision?
    a. Yes
    b. No
    c. Don't know

20. Would you consider being circumcised?
    a. No
    b. Strongly no
    c. Yes
    d. Strongly yes
    e. Not sure

21. What would be the barriers to male circumcision uptake?
    a. time away from work
    b. transport
    c. cultural and religious values
    d. adverse events
    e. abstinence period
    f. female service providers at the facility
    g. fear of pain
    h. seeking follow-up care

***THE END***

***THANK YOU FOR YOUR TIME AND INFORMATION!!***

**Appendice 2: CONSENT TO PARTICIPATE IN THE RESEARCH STUDY**

UNIVERSITEIT•STELLENBOSCH•UNIVERSITY
jou kennisvennoot • your knowledge partner

**STELLENBOSCH UNIVERSITY**
**CONSENT TO PARTICIPATE IN RESEARCH**

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**A COMPARATIVE STUDY INTO THE EFFECTIVENESS OF COMMUNICATION TOOLS USED IN THE MEDICAL MALE CIRCUMCISION PROGRAMME IN A RURAL SETTING**

You are asked to participate in a research study conducted by Malinda Karsten from The Africa Centre for HIV / AIDS Management in the Faculty of Economic and Management Sciences at Stellenbosch University. The results will contribute to a dissertation. You are selected as a possible participant in this study because you are a male, 18 years and older, without prior knowledge of medical male circumcision and a possible beneficiary of the positive outcome of the research.

**1. PURPOSE OF THE STUDY**

The purpose of this study is to determine which communication intervention has the greatest effect in improving knowledge about medical male circumcision in order to decrease the concerns, myths and misconceptions in the rural population surrounding medical male circumcision.

**2. PROCEDURES**

If you volunteer to participate in this study, we would ask you to do the following:

- Provide the researcher with demographical information about yourself (age, literacy level, culture, marital status, religion)
- Fill in a self-administered questionnaire before the informational session
- Attend an informational session about medical male circumcision
- Fill in the same self-administered questionnaire after the informational session
- Take your time to answer questions
- Feel free to ask whatever you do not understand
- If you feel you no longer want to go through with the questionnaire, you are free to stop.
- Feel free to choose a place where you feel comfortable about when you are filling the form.

All participants to the study will be divided into 3 groups of 10 at a venue suitable and not disturbing. Your participation to this study can be estimated at a hour and a half and divided as follow:

- Demographical information: 10 minutes
- Pre-design questionnaire: 20 minutes
- Communication intervention: 20 minutes
- Post-design questionnaire: 20 minutes

## 3. POTENTIAL RISKS AND DISCOMFORTS

Individuals who are willing to sign a consent form to be pre-interviewed as well as post-interviewed after the communication intervention, will be included in this evaluation. The study has minimal risk as all data will be kept strictly confidential and all patient identifiers will be removed before data analysis. A possible risk of discomfort can be experienced during the questionnaire phase. Should there be any unforeseeable severe reaction to the interview, all possible actions will be put in place to refer you immediately to Hermanus Hospital (028 312 1168), for counselling services in the language of preference. Privacy should at all times be respected, and confidentiality effected.

## 4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The study seek to establish the level of knowledge by using three different communication interventions. The study findings and recommendation will be to define the loopholes and supplement to the already available information programmes on medical male circumcision at the work in an effort to reduce the transmission of HIV.

The benefits will be operationalized so as to meet the following objectives:

- To establish which communication tools are currently used to distribute information about MMC to male farm residents.
- To establish the existing knowledge of male farm residents about MMC before intervention
- To establish the knowledge of male farm residents about MMC after the intervention with different communication tools
- To determine which one of the tools has the greatest impact on knowledge related to medical male circumcision
- To make suggestions for improvement of medical male circumcision community mobilisation programmes

## 5. PAYMENT FOR PARTICIPATION

There will be no payment for participating to this study.

## 6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of anonymous self-administered questionnaires. All staff collecting and collating the data will have a good understanding of the protocol, study methodology and are subject to confidentiality agreement as part of their employment contracts. The questionnaires will be store in a locked file cabinet with restrict access at the office in Hermanus and the informed consent forms will be stored in a similar fashion yet in a separate cabinet. The electronic database will contain anonymous responses

and will be password protected to limit access. The information can only be released to the Supervisor or the Research Department of the University if they need to see it.

## 7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study.

The investigator may withdraw you from this research if circumstances arise which warrant doing so.

## 8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact:

Principal Investigator: Malinda Karsten
Department: Economic and Management Science
Telephone: 082 059 3383 / 028 316 2450
Email: Malinda.karsten@righttocare.org

Supervisor: Dr Thozamile Qubuda
Department: Economic and Management Science
Telephone: +2721 808 3999
Email: tqubuda@sun.ac.za

## 9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

**SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE**

The information above was described to me……..by Malinda Karsten in English. I am in command of this language. I was also offered the assistance of a translator (Afrikaans / Xhosa) in case of illiteracy or poor English. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I,…….. hereby consent voluntarily to participate in this study. I have been given a copy of this form.

_____

**Name of Subject/Participant**

_____ _____

**Signature of Subject/Participant** **Date**

**SIGNATURE OF INVESTIGATOR**

I declare that I explained the information given in this document to _____.

He was encouraged and given ample time to ask me any questions. This conversation was conducted in English. The participant requested a translator and this conversation was translated into_____ by _____.

_____

**Signature of Investigator** **Date**

## Appendice 3: LETTER OF APPROVAL TO CONDUCT THE STUDY

Haygrove Heaven

(PTY) LTD

P O BOX 938 HERMANUS 7200 TEL: (027) 028 312 3403 FAX: (027) 028 312 3232

Reg Nr: 1997/001058/07 VAT: 4820199422

Malinda Karsten
C/o Malinda.Karsten@righttocare.org

8th August 2012

Dear Malinda,

Re: "A comparative study into the effectiveness of communication tools used in the male medical circumcision programme in a rural setting"

With respect to your request for conduction the above research at Haygrove Heaven, Hermanus I hereby confirm that permission is granted. Would you kindly co-ordinate your activities with Ntombomzi Tolobisa or directly with myself in order to facilitate the effective distribution of information and requirements.

We wish you all the best with your project and we are happy to be associated with such research.

Yours sincerely,

Pauline Burrows

PAULINE BURROWS
HR Manager and Project Co-ordinator

Directors: *S Tager, A J Davison**
**British*

*www.haygrove.co.uk*