

**Cutting into Perceptions: Investigating Men's Understanding
of Protection – through Medical Male Circumcision for HIV
Prevention, in Durban, KwaZulu-Natal.**

By

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Declaration

I,, declare that

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Abstract

Three recent Randomised Controlled Trials (RCTs) have been able to deduce that Medical Male Circumcision (MMC) can reduce a heterosexual man's chances of acquiring HIV through vaginal sexual intercourse by approximately 60% (Auvert *et al.* 2005; Gray *et al.* 2007; Bailey *et al.* 2007). In 2010, based on WHO recommendations, South Africa commenced a nationwide roll-out of MMC services. However, in the wake of these findings have come concerns that decreases in men's perceived risk of contracting HIV could spark increases in risky sexual behaviour (risk compensation), in turn, driving up HIV incidence as opposed to abating it (Cassell *et al.* 2006). Accordingly, the World Health Organisation has identified social change communication as one of the ten key elements critical to the success of a wide scale MMC roll out (WHO & UNAIDS, 2010). Aside from creating demand, the role of MMC health communication efforts in crafting messages delineating the scope of MMC's protective ability is paramount; especially in South Africa, a country hamstrung by a weak public health sector that can ill afford any regression in the fight against HIV and AIDS.

This thesis provides a small-scale qualitative study that investigates both the motivating and discouraging factors impacting on men's choices to undergo MMC, as well as exploring how and what 'key messages' of Medical Male Circumcision media and information initiatives are being received. In this way, my study hopes to bring insight into not only risk compensation associated with MMC, but also to provide a glimpse into the condition of health communication for MMC in the South African context.

List of Acronyms and Abbreviations

ABC – Abstain, Be Faithful, Condomise

AMPS – All Media and Products Survey

ART – Antiretroviral Therapy

CCMS – Centre for Communication, Media and Society

HBM – Health Belief Model

HCP – HIV Communication Programme

HCT – HIV Counselling and Testing

HSV-2 – Herpes Simplex Virus 2

JHHESA – Johns Hopkins Health and Education in South Africa

KZN – KwaZulu-Natal

MC – Male Circumcision

MMC – Medical Male Circumcision

MSPs – Multiple Sexual Partners

NCS – National HIV Communications Survey

NGO – Non-Governmental Organisation

PEPFAR - United States President's Emergency Plan for AIDS Relief

RCT – Randomised Controlled Trial

SA – South Africa

SAARF – South African Advertising Research Foundation

SANAC – South African National AIDS Council

SEM – Social Ecology Model

SEMCHB – Social Ecology Model of Communication and Health Behaviour

STD – Sexually Transmitted Disease

STI – Sexually Transmitted Infection

TAC – Treatment Action Campaign

UKZN – University of KwaZulu-Natal

UNAIDS – Joint United Nations Programme on HIV/AIDS

VCT – Voluntary Counselling and HIV Testing

VMMC – Voluntary Medical Male Circumcision

WHiPT – Women’s HIV Prevention Tracking Project

WHO – World Health Organisation

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Chapter One: Introduction

The 5th of June 2011 signified the world's three decade long struggle with HIV and AIDS, a period of dire consequences yet tremendous advances. Emerging amidst the developments made over the years have been three priority areas of inquiry which now drive AIDS researchers and public health stakeholders the world over (Dieffenbach & Fauci, 2011). Two of these areas include identifying HIV+ positive individuals and commencing antiretroviral treatment, as well as developing a cure for HIV infection. However, arguably the most promising of these priority areas, and what has been said to be “the most compelling goal of the HIV research agenda in the coming years”, is more effective HIV prevention (Dieffenbach & Fauci, 2011: 3).

Within the field of HIV prevention, the procedure of medical male circumcision (MMC) is gaining momentum as a readily available and measurable form of biomedical HIV prevention. Research has shown that the risk of a medically circumcised man contracting HIV during vaginal sex is reduced by up to 60%, compared to that of an uncircumcised man (Auvert *et al.* 2005; Gray *et al.* 2007; Bailey *et al.* 2007). Since 2007, medical male circumcision has been promoted as part of a comprehensive strategy to prevent HIV, presenting advocates within the biomedical school of thought on HIV interventions with a measurable and reliable means of dispensing a long term HIV prophylaxis.

Resultantly, thirteen Eastern and Southern African countries have been identified by the World Health Organisation (WHO) as priority locations for the roll out of MMC services, and are “at various stages of programme scale-up” (WHO & UNAIDS, 2010: 3). Prioritised due to their low circumcision rates yet high HIV prevalence, these countries exemplify where MMC would potentially have the most significant impact (WHO & UNAIDS, 2010). However, accompanying the concurrent deployment of national and international MMC services, several contentious issues have emerged. Nowhere is this more evident than in Africa, where male circumcision is a “holistic concept with multiple and interconnected dimensions – religious, spiritual, social, biomedical, aesthetic and cultural” (Peltzer *et al.* 2007: 659).

Amongst the issues raised regarding MMC, and potentially the single most important question to be answered relating to the MMC ‘roll out’, centres around what has been termed

‘risk compensation’, also interchangeably referred to as ‘behavioural disinhibition’ (Mattson *et al.* 2008; Agot *et al.* 2007).

‘Risk compensation’ alludes to “increases in risky behaviour sparked by decreases in perceived risk” (Cassell *et al.* 2006: 605). Contextualised, this could include men forfeiting additional HIV prevention methods such as condom use or partner reduction on account of false perceptions held over the protective benefit of MMC. It has been proposed that risk compensation threatens to “undermine circumcision’s protective benefits” through increasing a population’s aggregate risky sexual behaviour, and in turn, potentially increasing HIV prevalence rates (Cassell *et al.* 2006: 605). To prevent such an outcome, it is argued that “MMC needs promotion within a comprehensive HIV prevention package to ensure a full understanding of the risk-reduction benefits of the procedure and also to emphasise that this is not a “silver bullet” (Scalway, 2010: 9). Currently there is no ‘silver bullet’ or infallible means of HIV prevention; similarly, MMC “is part of a comprehensive approach to prevention”, not a standalone panacea (Peltzer, 2007: 664).

The issue of ensuring full and widespread understanding of the only partially protective nature of MMC is problematised by virtue of the locale of my study, namely South Africa, a region recognised as the epicentre of the HIV and AIDS epidemic. High HIV prevalence rates and a lack of human resources means MMC in South Africa “competes for the scarce supply of trained counsellors, health educators and field personnel, who are the backbone of other HIV prevention and treatment modalities” (RHRU, 2010: 5). Such an overburdened and under resourced public health system makes counselling and educating men on the correct behaviours and perceptions to be associated with MMC a formidable task. As a result of this, a large stake in informing and educating men on MMC is left in the hands of public health communication initiatives, and as such, exploring how individuals are receiving and perceiving specific messages surrounding MMC is not only relevant, but imperative.

Motivation for the Study

The motivating factors for my research are twofold, firstly from a call to investigate ‘risk compensation’ associated with MMC, as:

It could also lead to the misconception of MC as a sort of “magic bullet” against HIV, which could have an adverse effect on other preventative methods.

(Peltzer, 2007: 659)

Secondly, as an emerging media scholar, this research is motivated by a desire to aid in the tailoring of public health communication messaging by “help[ing] inform communications campaigns that address assumptions, beliefs and desires underlying the uptake of male circumcision” (Peltzer, 2007: 663). This is a research area that has been described as “critical” in aiding communication stakeholders assist in the roll out of MMC services (*ibid.*). Having said this, the focus and primary research question of my study revolves around understanding how certain men perceive MMC, specifically the aspect of ‘partial protection’ that is afforded by the procedure. My study aims to provide some insight into the decision-making factors that encourage young men to take up MMC, as well as their exposure to, and the efficacy of public health communication initiatives on MMC, as their relevance in the roll out of MMC services is paramount.

Research Aims and Objectives

Research was conducted under the tutelage of the Centre for Communication, Media and Society’s (CCMS) public health communication track, and subscribed to a cultural studies perspective in its approach. Therefore, the aims of my dissertation have been primarily orientated around exploring men’s interpretation of public health communication, with a specific emphasis on concluding whether perceptions relevant to risk compensation exist. However, in drawing on theory that brings to light to the broader contextual factors impacting on health behaviour decision making, certain relevant interpersonal and structural variables were also explored. This has contributed toward a more holistic representation of factors currently influencing the uptake of MMC in South Africa, as well as an inquiry into the exposure and reception of unspecified MMC health communication.

To effectively articulate the objectives that propelled my research, I first draw upon the MMC communications guideline created in conjunction with the World Health Organisation,

UNAIDS, Johns Hopkins Health and Education in South Africa (JHHESA), as well as other stakeholders. The guideline identifies several ‘key messages’ to be conveyed in MMC media promotion or communication initiatives (JHHESA *et al.* 2008). The ‘key messages’ of the communications guideline are comprised of five salient points (1-5), and three additional areas of concern (6-8) namely:

1. MMC is effective at reducing the risk of HIV acquisition through vaginal intercourse by approximately 60%.
2. MMC does not replace other HIV prevention measures.
3. There is a six week healing period which requires abstinence from sexual intercourse.
4. MMC must be conducted safely by professionally trained circumcision providers.
5. Evidence based information should be made available to allow for an informed choice.
6. Distinctions must be clearly made between MMC and female genital mutilation.
7. There must be continued adherence to safe sex practices and HIV prevention methods within ongoing partnerships.
8. There is currently no evidence supporting MMC as means of preventing transmission of HIV from men who are already infected to their partners.

These key messages formed the basis for interview questions posed to young men about their knowledge of MMC. However, as female genital mutilation (Point 6) is not a practice known to occur in South Africa, I deliberately eschewed all questioning pertaining to its practice. Aside from this, these messages represented a template of what information MMC health communication efforts within SA should encourage; and therefore provided me with a means to explore whether a discrepancy existed between messages being disseminated and their reception.

In light of the above, the primary objectives of my thesis were to provide a small-scale qualitative study to address the following key areas:

1. What are the communication strategies that research participants have been exposed to?
2. What do men understand the protective capability offered by MMC to be?
 - Do men perceive the need for continued condom use and partner reduction after the procedure?

- How do their perceptions differ from ‘key messages’ delineated in the communications guideline?
3. What are the underlying factors to participants’ decisions to undergoing MMC?
- What are the perceived risks for HIV infection for men?
 - What are the perceived benefits of MMC by men?
 - How do participants’ physical environments affect MMC decision making?
 - How do interpersonal factors influence perceptions of MMC?

In order to further contextualise the conditions and rationale surrounding my study, I will now briefly highlight the proceeding chapters, so as to lay out the intended direction of my dissertation.

Thesis Structure

In chapter two of my study, focus resides on documenting the substantive literature germane to my area of inquiry. Initially, a broad overview of HIV and AIDS as well as HIV prevention is conducted; and following this, focus is directed toward the novel HIV prophylaxis of medical male circumcision. After having covered the provenance of MMC, the issue of risk compensation is identified as a confounding variable for wide scale deployment of MMC services. Both quantitative and qualitative evidence on risk compensation associated with MMC are surveyed and discussed. Following this, geographic characteristics particular to South Africa - including a weak public health sector and MMC’s strong cultural symbolism, are problematised as areas of further concern. In unison, risk compensation as well as the potential confounding variables mentioned above, are argued to warrant a strong public health communication presence alongside SA’s national MMC service implementation. Lastly, certain key messages for MMC health communication are outlined as a template to be utilised in primary data collection.

Chapter three of my inquiry is comprised of the theoretical constituents that underpin my dissertation. Acknowledging the broader influence of social and structural factors on health behaviour adoption, the *Social Ecology Model* - premised on the social ecological perspective, is the first framework to be discussed (McLeroy *et al.* 1988). Subsequent to this, the *Health Belief Model* is elaborated on, with specific emphasis on its application to exploring risk compensation (Rosenstock, 1966).

Working from a media and cultural studies perspective, the third and final theoretical construct to be discussed is Stuart Halls' (1980) *Encoding and Decoding Model*, which is put forward to explain discordant interpretations of MMC health communication.

Chapter four elucidates the epistemological assumptions and practicalities of data collection inherent to my research methodology. This covers aspects such as research setting, sampling method, means of data collection and analysis, validity, reliability, ethical considerations, and limitations.

The scope of chapter five is demarcated to cover both a presentation of, as well as a discussion of the collated data. Key research questions are addressed and considerations for MMC health communication stakeholders are outlined. Findings drawn from the data analysis form the basis of chapter six, which includes recommendations for improved health communications on MMC, as well as pointing to a need for further investigation in the field.

Chapter Two: Literature Review

A Global Summary

The relentless spread of HIV and AIDS is arguably the single greatest epidemic in the history of humankind; it has grown from only a few recorded cases in the early 1980s, to today, where 30 million people have died due to AIDS-related illnesses (UNAIDS, 2010). In spite of this, the global AIDS epidemic appears to have “stabilized”, furthermore, overall global HIV infections per annum are declining and have been doing so since the late 1990s (UNAIDS, 2010: 16). Further positive indicators for the state of the global HIV pandemic are reflected in the decline in new infections amongst children, as well as annual AIDS related deaths. Although this reflects a positive trend in the HIV pandemic, the levels of new infections are still considered high, and the total number of people living with the virus has increased to an estimated 33 million. Although global figures indicate a decline in HIV infection rates, “Sub-Saharan Africa still bears an inordinate share of the global HIV burden”, which is reflected accordingly in the data (UNAIDS, 2010: 28). In 2009 alone, there was an estimated 2.6 million new HIV infections, 1.8 million of which occurred in sub-Saharan Africa (UNAIDS, 2010). The epicentre of the pandemic within sub-Saharan Africa remains Southern Africa, a region whose epidemic constitutes “the largest in the world” (*ibid.*).

A Brief Overview of HIV Prevention in South Africa

South Africa is a multi-cultural and ethnically diverse country constituted of nine different provinces, each having varying degrees of HIV prevalence. Despite South Africa’s “relatively high” levels of HIV and AIDS awareness, there continues to be an estimated 1500 new HIV infections per day (RHRU, 2010: 3). South Africa’s high infection rate has attracted criticism “at home and abroad” over the predominantly behaviour orientated HIV prevention strategies employed by government policy makers (Butler, 2005: 591). Traditionally, South Africa has relied on an “ameliorative paradigm” of HIV prevention, whereby emphasis was placed on behaviour change, “prevention and palliative care” (Butler, 2005: 596). Strategically, this stance has relied on the Abstain, Be faithful and Condomise (ABC) approach as the mainstay of HIV prevention (Abdool Karim, 2005).

The concepts underpinning the ABC approach were popularised after Uganda’s strategic country wide drive to reduce HIV prevalence (Cohen, 2003). Since then, several definitions and outlines of the ABC approach have emerged, and have subsequently formed the

backbone of South African HIV prevention strategies (Abdool Karim, 2005). On a political level however, South Africa's inaugural stance toward HIV and AIDS prevention has largely been "characterized by a unique form of denialism in the highest echelons of political power" (Abdool Karim, 2005: 34). Resultantly, aside from condoms, biomedical modalities have been "entirely absent" for most of South Africa's early HIV and AIDS policy (Butler, 2005: 596). It was only during 2003, after sustained pressure, that Anti-retroviral treatment (ART) was finally made available within the public health sector; this marked a turning point for South Africa's HIV and AIDS strategy.

Within the global sphere, HIV prevention discourse has been divided broadly between advocates of behaviour orientated strategies, and those championing a primarily biomedical agenda. However, throughout the course of HIV prevention research it has come to be known that "neither existing behavioral interventions nor the future wave of biomedical advances [are] likely to be 100% effective" (Rotheram-Borus *et al.* 2009: 15). Thus, in more recent times, South Africa has pursued a "combination of structural, biomedical and behavioural approaches" when dealing with the prevention and treatment of HIV and AIDS (SANAC, 2011a: 39). On the biomedical front this has included the use of ART for both treatment and prevention, male and female condoms, and most relevantly the introduction of medical male circumcision (MMC).

In 2010, South Africa instituted an aggressive roll-out of a national Medical Male Circumcision (MMC) program with the goal of reaching 80% of HIV negative men aged 15-49 (approximately 4.3 million men) by 2015. As of June 2011, almost 238 000 circumcisions had been conducted. The guidance from the UN recommends at least 5 million circumcisions would be required in South Africa as a prevention strategy to impact on new HIV infections.

(Colvin, 2011: 10)

In keeping with the theme of my dissertation, I now cast my focus onto MMC, placing specific emphasis on the South African roll out of the procedure and the concomitant emergence of concerns over risk compensation.

Medical Male Circumcision

The practice of male circumcision has long been thought of as a risk reduction measure for men against the acquisition of STIs and HIV. This hypothesis has been based primarily on evidence collected through observational studies, specifically; ecological, cohort and cross sectional studies (Larke, 2010). Much of this research has highlighted a correlation between certain areas that have high circumcision rates, and in turn, lower HIV prevalence and incidence rates (Larke, 2010). However, only recently was this hypothesis validated by three randomised controlled trials (RCTs), which are widely regarded as the ‘gold standard’ of scientific inquiry into biomedical health interventions (Auvert *et al.* 2005; Gray *et al.* 2007; Bailey *et al.* 2007; Morris, 2007). The RCTs were conducted in South Africa, Kenya and Uganda between 2000 and 2006, and all succumbed to an early cessation after “a strong and statistically significant effect of circumcision was observed” (Larke, 2010: 630).

The trials successfully concluded that approximately 60% of the potential risk men faced in acquiring HIV, through penetrative vaginal sex, was averted after having their foreskin medically removed (Auvert *et al.* 2005; Gray *et al.* 2007; Bailey *et al.* 2007). Overall, there were 10 908 men between the three trials, all of whom were randomly allocated into one of two cohorts, either the intervention group, which required immediate circumcision, or the control arm of the study, which allowed for circumcision on completion of the trial (Larke, 2010). The circumcisions performed within the trials conducted in South Africa and Kenya were done so by means of the ‘forceps guided method’, an approach which is “suitable for implementation in resource limited settings”, and is currently the most widespread method of MMC in South Africa (RHRU, 2010: 36). To expand on the results uncovered in the RCTs, I will discuss the trial conducted in South Africa, and how these results have been extrapolated into real world circumstances within the country.

The South African RCT was conducted in the semi-urban area of Orange Farm; a township located within the Gauteng province. According to the Nelson Mandela/HSRC study of HIV/AIDS, HIV prevalence data gathered from women between the ages of 15 and 49 indicated that Gauteng has the highest HIV prevalence rate in the country (HSRC, 2001). Research also indicates that women are more at risk to HIV infection than men; additionally, peak levels of vulnerability differed amongst men and women.

Findings uncovered that women were most susceptible to HIV between the ages of 25 and 29, whereas men were shown to be exposed to the highest risk of HIV infection during the age bracket of 30 to 34 (HSRC, 2001).

The RCT included a total of 3274 men between the ages of 18 and 24, all of whom were willing to accommodate the trial's primary data collection process. This included inviting participants to "answer a face to face questionnaire, to provide a blood sample, and to have a genital examination and an individual counseling session" (Auvert *et al.* 2005: 1114). Follow up visits were then conducted at the one, three, 12 and 21 month marks.

The questionnaire component sought to uncover background characteristics as well as details on past sexual encounters, such as frequency of condom use and number of sexual contacts. However, efforts were made on behalf of the trial to promote the uptake of condoms as well as facilitate a proper understanding of HIV prevention. Counselling was provided in the form of a 15-20 minute session which covered proper risk reduction measures and educating men on correct post MMC behaviour (for those in the intervention group). In conjunction, participants were also advised to attend voluntary counselling and testing (VCT) services offered by a local clinic. Additionally, condoms were provided free of charge to all participants. Furthermore, if participants in the trial did not show up for their scheduled visits, then staff members would make home visits and encourage the participant to return (Auvert *et al.* 2005).

The above contingencies are indicative of the need for comprehensive, competent and continued support to augment the roll out of a novel intervention such as MMC. This very level of support, or lack thereof, will later be problematised as one of the main dilemmas faced by South Africa's public health sector, and additionally as a potential facilitator of risk compensation. For now however, I return my focus to the South African RCT and the subsequent roll out of MMC.

Upon completion of the trial it was noted that there were 69 new HIV infections, 20 of which belonged to the intervention cohort, and the remaining 49 to the control. These results concluded the existence of a 60% reduced risk of contracting HIV for men in the circumcision cohort, when compared to the control. In other words, six out of every ten potential infections were averted throughout the course of the trial due to the intervention of medical male circumcision (Auvert *et al.* 2005). Similarly, the findings from Kenya and Uganda represented a 53% and 51% reduction in risk respectively, corroborating the earlier

conclusions made upon completion of the South African RCT. The results obtained from the South African trial, as well as those of Kenya and Uganda, were taken forward to a conference held by the WHO and UNAIDS to assess the implications of the data on future policy and programming.

One of the major outcomes of the conference included advocating MMC in countries where “the prevalence of heterosexually transmitted HIV infection is high, the levels of male circumcision are low, and populations at risk of HIV are large” (WHO & UNAIDS, 2007: 8) Resultantly, thirteen Southern and Eastern African countries have been prioritised for the scale up of MMC services, one being South Africa. In conjunction to the evidence gathered during the three RCTs, stakeholders involved in the conference drew upon studies making use of mathematical modelling to demonstrate the vast potential MMC could hold for sub-Saharan Africa. A study conducted by Williams *et al.* (2006) that utilises dynamical simulation models predicts that over a 20 year period in sub-Saharan Africa, MMC has the potential to prevent 5.7 million new HIV infections and 3 million deaths, of which a quarter would be accounted for by South Africa.

South Africa’s first programme created to translate the WHO/UNAIDS guidelines on MMC into real life was the Bophelo Pele (Health First) project (Lissouba *et al.* 2010). The project was initiated in 2008 in the township of Orange Farm within the province of Gauteng, the same area utilised by the preceding RCT. The project sought to determine the feasibility of MMC implementation within low income communities characterised by low circumcision rates and high HIV prevalence. By offering free MMC services to all male residents over the age of 15, the project could determine whether MMC could be rolled out effectively and at scale in rural areas. Other key functions of the project involved, “community mobilization and outreach, as well as communication approaches aimed at both men and women incorporating broader HIV prevention strategies and promoting sexual health” (Lissouba *et al.* 2010: 1).

As of November 2009, the number of men that had undergone MMC was 14011, demonstrating an average of 740 men being circumcised per month. The study concluded that MMC “roll-out adapted to African low-income settings is feasible and can be implemented quickly and safely according to international guidelines” (Lissouba *et al.* 2010: 1).

Based on the outcomes of the Bophelo Phele project and the prior RCTs, the South African government “instituted an aggressive rollout of a national medical male circumcision (MMC)

program” (Colvin, 2011: 10). The rollout commenced in 2010 and was based on draft guidelines adapted from the World Health Organisation. KwaZulu-Natal was the first province to be targeted by the rollout, as it has the highest HIV prevalence in the country, in conjunction with relatively low rates of circumcision (Meyer *et al.* 2011). The rollout initially utilised hospitals, medical clinics, and mobile sites also referred to as ‘camps’. These non-medical settings or ‘camps’ made use of community mobilisation and the involvement of local stakeholders from where MMC serviced were to be provided. These camps and the large majority of the fixed medical sites in KwaZulu-Natal have made use of either the forceps guided method, or the Tara Klamp device to medically circumcise the men undergoing MMC. The forceps guided method has been endorsed by the WHO and was used during the Bophelo Phele project as well as the RCT conducted at Orange Farm. However, the Tara Klamp device has not been approved by the WHO, and has been used exclusively within the KwaZulu-Natal province of South Africa.

The mobile sites or camps, much like the fixed medical settings, were instructed to educate men undergoing MMC about the necessary post procedure behaviours, including a six week period of abstinence from sex, and the continued use of condoms thereafter. These measures are critical alongside the roll out of MMC in order to ensure correct understanding of all relevant issues regarding MMC, so as to avoid the potential practice of risk compensation. However, concern has been raised by the Treatment Action Campaign (TAC), a leader in the field of HIV and AIDS in South Africa, as to the quality of the counselling and education provided by these camps.

We are concerned that these camps do not provide adequate counseling or informed consent. VMMC [Voluntary Medical Male Circumcision] is necessary, but its implementation must be carried out without shortcuts to boost numbers. Human rights must be respected and VMMC programmes must be consistent with the Constitution. The Orange Farm project has shown how this is possible and yet still reached large numbers of people. The circumcision camps should be stopped.

(TAC, 2011: 3)

Notwithstanding such concerns, the rollout of MMC in South Africa has utilised “a mix of delivery approaches” to expand services “into all nine provinces” (WHO & UNAIDS, 2011: 14) Furthermore, during 2010 over 130 000 medical circumcisions were conducted across 143 sites, effectively validating MMC’s potential to be rolled out at scale.

The National Implementation Guidelines for Medical Male Circumcision drafted by SANAC as well as other key contributors, aims to “provide all stakeholders with the necessary guidance for the provision of safe, effective and accessible voluntary MMC services” (SANAC, 2011b: *i*). With regard to long-term policy, the 2012-2016 National Strategic Plan has identified South Africa’s intent to “continue with large-scale rollout of a national medical male circumcision programme” (SANAC, 2011a: 23).

On an implementations level, SA’s MMC programme statutorily requires all individuals to undergo HIV testing and counselling prior to being circumcised. The counselling session conducted beforehand is meant to educate men on correct post-operative behaviour and the continued need for other HIV prevention measures. Due to the fact that MMC is not proven to benefit HIV positive individuals; the HIV testing component helps health care providers encourage HIV positive individuals to begin antiretroviral treatment, and HIV negative patients to maintain their status and follow through with MMC (SANAC, 2011b).

To problematise SA’s MMC programme as a potential facilitator of risk compensation, I draw attention to the TAC’s concerns reflected above, as well as to the “inadequate commodities and human resources” available to the South African public health sector (WHO & UNAIDS, 2011: 14). However, first and foremost, the concept of risk compensation will be unpacked so as to provide clarity to my argument, and furthermore rationale to support why public health communication remains a critical component in the rollout of MMC services in South Africa.

Risk Compensation

The recent finding that circumcision of men substantially reduces the risk of HIV infection is one of the most exciting developments in the history of HIV prevention. Nevertheless, this finding has quickly been clouded by concerns of risk compensation – increases in risky behaviour sparked by decreases in perceived risk – could undermine circumcision’s protective benefits.

(Casell *et al.* 2006: 605)

As described above, risk compensation alludes to a situation where an individual’s perceived sense of security ushers in riskier behaviour, exposing the individual to greater overall risk, rather than being of protective benefit. The concept is largely premised on the works of Adams (1995), much of which revolves around assessing the dynamic interplay between car

seatbelts and motor vehicle accident risk. The argument put forward by Adams suggests that drivers who wear seat belts perceive themselves to be at less risk of harm, and therefore, are more inclined to drive faster or more recklessly, potentially increasing the overall accident rate. To support the hypothesis, Adams (1995) draws upon figures depicting the number of deaths amongst pedestrians, cyclists and rear seat passengers, 23 months after the introduction of the UK seat-belt law. The data reflects that after the introduction of the law, deaths among pedestrians, cyclists and rear seat passengers who were unbelted, increased by 8%, 13% and 25% respectively (Harvey and Durbin, 1986).

As described by Richens *et al.* (2000), “ When a safety device is introduced that leads to a perception of lessened risk, the rewards of risk taking become more attractive and engender a compensatory increase in risk taking (risk compensation)”. The validity of such a statement is apparent in an OECD (Organisation for Economic Co-Operation and Development) report compiled by various experts within the field of road safety.

Behavioural adaptation (to changes in the road transport system) exists, and does have an effect on safety benefits achieved through road safety programs. Results indicate that, generally, behavioral adaptation does not eliminate the safety gains obtained, but does reduce the effectiveness of road safety programs in a number of cases.

(OECD, 1990: 118)

Other data which highlight similar trends include a study which reported an association between the use of sunscreen and an increased risk of melanoma due to more frequent and prolonged sun exposure (Autier *et al.* 1998). Similarly, and of more relevance, the hypothesis of risk compensation has been extrapolated to the field of HIV prevention, specifically, to condom use and medical male circumcision (Cassell *et al.* 2006). Some researchers have attributed the low success of condoms in reducing HIV transmission amongst generalised epidemics to risk compensation (Hearst and Chen, 2004). Rationale behind the argument is founded upon the stance that perceptions of reduced HIV risk can facilitate inconsistent condom use and a neglect for partner reduction. As a potential result, “the protective effect of promoting condoms may be attenuated at the population level and could even be offset by aggregate increases in risky behavior” (Cassell *et al.* 2006: 605).

Therefore, quite understandably, coinciding with the validation of MMC as a viable means of mitigating the transmission of HIV, were concerns that risk compensation could jeopardise the integrity of the procedure’s protective benefit (Cassell *et al.* 2006). Accordingly, and in

keeping with the theme of my dissertation, I now turn my focus to exploring the evidence pertaining to risk compensation in the case of medical male circumcision.

MMC and Risk Compensation

Initial Inquiries into Circumcision and Risk Behaviour

The literature dealing with risk compensation specific to MMC is limited, and accordingly, has been identified as a priority research area for social scientists due to the pressing nature of its potential impact.

The communication of concepts such as partly effective or protection derived from combining interventions with condoms needs social scientists working together with communities to help grasp the nature of risk and protection.

(Peltzer *et al.* 2007: 663)

Some of the earliest studies to deal with the issue of risk behaviour amongst circumcised and non-circumcised men include two cross-sectional studies conducted in the late 1990s. The first of which was carried out by Seed *et al.* (1995) involving 837 men from the capital of Rwanda, Kigali. The study's main objective was to explore the risk of HIV acquisition amongst circumcised men in comparison with uncircumcised men, and thus did not necessarily focus on risk compensation specifically. However, a primary objective of the study was to investigate associations between male circumcision and behavioural variables such as 'risky' sexual practices.

A brief look at the relevant findings of the study reveals that the circumcised men within the study had a greater number of lifetime sexual partners, as well as more frequent and numerous sexual contacts with prostitutes. In conjunction to this, circumcised men reported a higher incidence of STIs, contributing to a higher overall risk profile than uncircumcised men in the study. The authors acknowledge the need for further research to determine the underlying causes of the elevated risk profile that was evident amongst many of the circumcised participants. Despite subjecting themselves to greater risk, the circumcised participants still constituted a lesser proportion of HIV positive individuals when compared against the uncircumcised individuals. Although the study corroborates the later findings of the three RCTs, it does raise cause for concern due to its findings regarding circumcised men's risky sexual behaviour.

The second study was conducted by Bailey *et al.* (1999) in Uganda, and prioritised uncovering behavioural variables associated with circumcision more so than the primarily epidemiological based study discussed previously.

The research methodology of this study involved administering structured questionnaires to 365 Ugandan men, all over the age of 17; 188 of whom were circumcised and the remaining 177 uncircumcised. The objectives of the research were to “study differences in sexual practices, hygienic behaviours, and other HIV risk factors between circumcised and uncircumcised men” (Bailey *et al.* 1999: 294). The questionnaire to be completed by participants covered variables including: “demographic and socioeconomic background, circumcision status, alcohol consumption, travel away from home, sexual history,...beliefs about circumcision and disease” (Bailey *et al.* 1999: 294). The study was carried out in the town of Mbale, Uganda, an area in which a large percentage of the population are involved in ritual circumcision practices.

The results pertaining to circumcision status and risk behaviour were largely contrary to those uncovered in the Rwandan study discussed previously. The more comprehensive look at behavioural characteristics within this study concluded that “circumcised and uncircumcised men did not differ significantly in most risk behaviors” (Bailey *et al.* 1999: 299). These risk behaviours included the consumption of alcohol, sexual intercourse the last time away from home, having used a condom during last sexual intercourse, and lastly, ever receiving or donating blood (*ibid.*). Other findings of significance involve past STD histories between the two cohorts, which were found to be of similar value. Furthermore, a look at hygienic behaviours adopted between the two groups deduced that hygienic practices such as using soap and frequency of full body bathing were of close comparison. In reference to these findings the authors asserted:

These results suggest that differences between circumcised and uncircumcised men in their sex practices and hygienic behaviours do not account for higher risk of HIV infection found among uncircumcised men. Further consideration should be given to male circumcision as a prevention strategy in areas of high prevalence of HIV and other sexually transmitted diseases.

(Bailey *et al.* 1999: 295)

However relevant the above studies may be, much like the next study to be discussed, the conclusion that MMC exhibits the potential to significantly reduce a man’s chances in

acquiring HIV had not yet been divulged to the public, an arguably confounding variable. The next study I will touch on is of specific importance due to its geographic relevance to my own investigation, namely, within South Africa.

The study sought to address perceptions held by men regarding the procedure of male circumcision, and was conducted by Lagarde *et al.* (2003) prior to the completion of the three randomised controlled trials assessing MMC. The cross sectional study was conducted within the Westonaria community of South Africa's Gauteng province. It included 482 men and 302 women, and sought out to assess the acceptability of male circumcision as a preventative measure against HIV. All male participants involved in the study were between the ages of 19 and 29, whereas female respondents were ages 14 to 25, furthermore, blood serum samples indicated an HIV prevalence of 11% and 30% respectively.

Questionnaires adapted from a UNAIDS template were administered by trained personnel to uncover information relating to background variables, sexual behaviour, health issues and lastly, perceptions and beliefs about male circumcision (Lagarde *et al.* 2003). The study found that acceptability for circumcision was high within the community, 72.5% of the non-circumcised men in the study declared that they would undergo the procedure if it was proven to reduce one's risk of contracting HIV. Of most interest however, were the perceptions held by certain men within the study regarding condom use and partner reduction. In relation to the former, only a relatively minor proportion of circumcised and uncircumcised men felt that condoms were no longer necessary for men who had been circumcised, 9% and 7% respectively to be exact. The latter issue of partner reduction however, suggested a rather different outcome, with 30% of circumcised men and 18% of uncircumcised men believing that medical circumcision allocated men the benefit of safely having multiple sexual partners (Lagarde *et al.* 2003). In discussing the results the authors explained:

Our results suggest that the perception of safety is the principle issue in implementing a prevention method based on MC. A false sense of security accompanies circumcision, in view of the findings that a significant proportion of men and an even higher proportion of circumcised men said that circumcised men can safely have sex with many women. Even more worrisome, circumcised men were more likely to report a high number of lifetime partners. This indicates that this feeling of security is transformed into dangerous practices.

(Lagarde *et al.* 2003: 94)

RCTs and Risk Compensation

The concerns highlighted in this early South African study have been echoed in the wake of the three randomised controlled trials that conclusively determined MMC's efficacy in partially preventing HIV acquisition amongst men. The data to be extrapolated from these trials concerning risk compensation has done little to allay apprehension over risk compensation due to several confounding factors. As discussed earlier, various contingency measures were established in order to mitigate risky sexual behaviour post circumcision, including thorough and continued counselling as well as access to free condoms. This level and quality of support is unlikely to be realised at a generalised level throughout South Africa due to the lack of resources available within the public health sector.

Furthermore, participants in the RCTs were not privy to information conclusively linking MMC to HIV prevention. It is the popularisation of this information that would likely facilitate the emergence and development of false perceptions and myths within the public sphere. These false perceptions would in turn potentially drive up risk behaviour, a factor undoubtedly meriting serious consideration. Bearing in mind these confounding factors, the RCTs did administer questionnaires regarding sexual behaviour and condom use post circumcision in an effort to monitor issues of risk compensation.

Data gathered from these questionnaires indicated that within the South African trial, men who had undergone circumcision reported a greater number of sexual contacts than the control group (Auvert *et al.* 2005). An outcome which the authors felt "should be a concern when considering implementation of circumcision as a means of preventing HIV infection" (Auvert *et al.* 2005: 1121). Conversely, those involved in the Uganda trial concluded that:

We did not find evidence that men in the intervention group adopted higher sexual risk behaviours than did those in the control group. This could have been due to the intensive health education provided during the trial to minimise risk compensation. These findings differ from those from the South African trial, which reported an increase in the mean number of sexual contacts in the intervention group.

(Gray *et al.* 2007: 665)

Finally, the Kenyan trial exhibited that circumcised participants registered more acts of unprotected sex than the control group, but less than prior to the procedure (Bailey *et al.* 2007).

This indicates that the discrepancy was due to the control group increasing safer sex practices rather than the intervention group indulging in more frequent acts of risky sexual behaviour. Thus, the issue of risk compensation was concluded to be absent from the trial conducted in Kenya.

As far as elucidating whether the practice of risk compensation may accompany MMC, the three RCTs reflected mixed results, and consequently are of limited real world use. Therefore, I will now turn my attention to various risk compensation studies which have been published subsequent to the three aforementioned RCTs.

Quantitative Studies on Risk Compensation and MMC

Soon after the completion of the Kenyan RCT in Kisumu, Westercamp *et al.* (2010) conducted a population-based survey in the area to “examine behaviors, beliefs and HIV” status’ amongst local residents. A key objective of the survey was to assess whether the positive results uncovered by the Kenyan trial had influenced any of the local population’s perceptions on circumcision and HIV prevention. The study took place “just prior to widespread availability of trial results through local media outlets” (Westercamp *et al.* 2010: 1). Hence, circulation of the trial’s results was largely limited to the general area of Kisumu where the study was to be conducted. The study sample size totaled 1655 individuals between the ages of 15 and 49, 45% of which were men and the remaining 55% being women (Westercamp *et al.* 2010). The study made use of questionnaires, genital examinations as well as blood tests for HIV and HSV-2 (Herpes Simplex Virus 2) as tools of primary data collection. By doing so, the authors were able to explore potential correlations between individual’s perceptions, reported behaviour, and HIV status.

On completion of the study the authors asserted, “We observed no difference in reported sexual risk taking behavior between circumcised and uncircumcised men suggesting that no risk compensation was occurring amongst men” (Westercamp *et al.* 2010: 2). These findings albeit positive, are acknowledged by the authors to serve as “a valuable baseline for subsequent assessments of changes in characteristics, perceptions, uptake, and impact of MC in Kisumu Kenya over the coming years” (Westercamp *et al.* 2010: 4). Admittedly, the study occurred in 2006, some time before the official endorsement of MMC as a proven HIV prevention modality by the WHO. Studies need still address the potential for emerging behavioral adaptations and misperceptions associated with MMC over time.

A similar follow up study that was conducted with participants drawn from the Ugandan RCT had sought out to assess HIV sero-conversion and incidence of risky sexual behaviour over time (Gray *et al.* 2012). Much like the initial RCT from which participants were sourced, MMC was shown to accommodate circumcised men additional resistance to HIV infection over time, furthermore, variations in risky sexual behaviours were not statistically significant. Much like many of the studies to deal with risk compensation, the authors concede certain limitations:

Trial participants received intensive health education at each trial visit, and the effect of this education may have modified their subsequent risk behaviors during the posttrial [*sic*] surveillance period.

(Gray *et al.* 2012: 614)

Similarly, a study conducted by Agot *et al.* (2007) in the Siaya and Bondo districts of Kenya acknowledged that the level of counselling and overall standard of care within clinical trial settings did not reflect that of real world contexts. Therefore, the aim of the research primarily “sought to investigate the effect of circumcision on sexual behaviors of men in a typical public health care setting” (Agot *et al.* 2007: 66). The study included 648 men in total, with 324 undergoing MMC and the remaining 324 constituting the control group. Upon commencement of the study, the participants were required to attend follow up visits at the 1, 3, 6, 9 and 12 month marks, where various questions relating to sexual behaviour were addressed.

The two main variables underpinning the questioning pertained firstly to, “having sex acts with partners other than legal wife/wives or regular girlfriends (‘risky sex’)”, and secondly, having “had unprotected sex” (Agot *et al.* 2007: 67). A summation of the findings uncovered throughout the study reveals that “at no point was there any appreciable reported excess of risky sex or risky unprotected sex among circumcised men” (Agot *et al.* 2007: 67). Notwithstanding the positive results highlighted above, the authors are quick to acknowledge the need for further enquiry into risk compensation associated with MMC.

Studies need to be replicated in other settings to assess whether potential promotion of male circumcision could lead to increased risk behaviors offsetting the potential benefit of the intervention.

(Agot *et al.* 2007: 70)

Other studies which have attempted to do just this include research carried out by Mattson *et al.* (2008), once again in the Kisumu district of Kenya. The focal point of the enquiry was to explore risk compensation associated with MMC, specifically as a follow up study amongst participants involved in the Kenyan clinical trial on MMC. In regards to the antecedent clinical trials on MMC, Mattson *et al.* (2008: 2) highlight that: “It is possible that information obtained from relatively brief questionnaires lacks sufficient breadth to comprehensively address the issue of risk compensation”. Accordingly, the authors of the study aimed to take a more comprehensive and in depth approach to investigating the topic of risk compensation associated with MMC.

The study recruited 1309 participants, all of whom had been participants in the prior clinical trial conducted in Kenya by Bailey *et al.* (2007). Of these participants, 620 had been previously randomised to undergo circumcision, and 689 had acted as the control in the parent RCT. Consequently, this yielded a ratio of 53% and 47% in favour of the control arm for this sub study. This prospective study conducted by Mattson *et al.* (2008) utilised interviews and questionnaires at baseline, the 6 and 12 month marks to assess 18 risk behaviours and sexual practices. These findings were then adapted onto an 18 item behavioural risk propensity scale as a means to rank and contrast participants behaviours. As a further measure of validity, the study recorded the incidence of sexually transmitted infections amongst participants as a second variable of risk behaviour. Some of the areas to be addressed by the in depth interviews include:

Age, gender, type of partner, dates of relationship, length of time knowing the partner prior to sex, approximate number of sexual encounters, sexual practices (vaginal, oral, anal), exchange of sex for money or gifts, condom use (ever used a condom with partner, used at first encounter, at last encounter, and at every encounter), and clients’ perception of their partners.

(Mattson *et al.* 2008: 2)

As a result of the study utilising participants’ incident STIs as a second variable, the authors could determine the construct validity of the in depth interviews, that is to say, whether the interviews were really an indicator of risky behaviour. When discussing this, the authors had said, “At both follow-up visits men diagnosed with an incident STI had higher risk scores than uninfected men, but the difference was only statistically significant at the 6 month follow up visit” (Mattson *et al.* 2008: 3).

Due to the thorough and dual pronged methodology utilised by the study, it could be argued that it is one of the foremost inquiries into risk compensation associated with MMC.

Through an evaluation of the data collected at baseline, the 6, and 12 month marks, the authors asserted, “We found no evidence to suggest that circumcised men engaged in increased risk behavior after the procedure” (Mattson *et al.* 2008: 8). Their assertion rested on the fact that circumcised and uncircumcised men reduced their HIV risk behaviour from baseline onward to the 6 and 12 month visits. Concomitantly, there was also a decline in the number “of incident infections of gonorrhoea, chlamydia and trichomoniasis [STIs] from the 6 month visit to the 12 month visit” (Mattson *et al.* 2008: 8). Despite these seemingly optimistic results, the authors do acknowledge the presence of some potentially confounding factors that could have influenced the study’s outcomes. During their participation in the previous RCT, the men received “HIV testing and counselling on risk reduction strategies” at the 1, 3, 6 and 12 month marks. In conjunction to this, all men were informed that although there was some evidence suggesting an association between circumcision and reduced HIV acquisition, at that time it was not yet “conclusive” (Mattson *et al.* 2008: 2).

Therefore, once again concerns have been raised as to whether these results are replicable within a more realistic health care scenario, as conditions are “likely to be different” (Mattson *et al.* 2008: 8). Bearing this in mind, the authors put forward, “it will be necessary to further evaluate the possibility that men increase their HIV risk behavior after circumcision is offered in more naturalistic public health and medical settings” (Mattson *et al.* 2008: 8).

To briefly recapitulate the findings of the quantitative studies presented above, one could say, although no depictions of risk compensation were necessarily proven in the findings, all authors felt the need for further investigation within a more naturalistic setting.

Another interesting piece of literature addressing an important aspect of risk compensation; namely, forfeiting condom usage, is presented by Bridges *et al.* (2010). Also contributing to the study’s relevance is the fact that the study conducted by Bridges *et al.* (2010) took place in Johannesburg, South Africa, circumstances which are more likely to be congruent with those of my dissertation. The purpose of the study was to “identify the determinants of demand for male circumcision, to examine variations by ethnicity, and to determine whether it is demanded to avoid condom use” (Bridges *et al.* 2010: 1). The mentioned variations of ethnicity within the study included 220 black participants, 202 coloured participants, and 218 white participants.

Within each demographic there were three categories of respondent; namely, mothers and fathers of uncircumcised sons between the ages of 14 and 30, and additionally, accounts from individual uncircumcised boys within this age bracket.

Of interest to the study were perceptions held by participants over seven potential determinants (motivating factors) to undergo MMC. The encompassed determinants were: reducing the risk of cervical cancer in women, reducing one's risk of STI acquisition, as a cultural rite of passage into manhood, to reduce the chance of contracting HIV, for more enjoyable sex, for superior hygiene, and finally as a means to avoid condom usage. The methodology adopted made use of conjoint analysis, which allowed for the ranking and contrasting of the identified determinants.

This was done by dividing the determinants into two separate groups, so as to provide a means to compare the aggregate benefits of each group. Participants were each presented with one such comparison by way of a card that had been divided in two, each side containing several benefits of MMC.

Participants were then asked to assess the overall benefits of either possible group of factors and then make a choice as to which side offered greater benefits. By making the participants choose one of the groups, it ensured that the determinant pertaining to the forfeiting of condoms was indirectly assessed. If through statistical analysis a certain percentage of respondents selected the category not containing the 'condom avoidance' determinant, it could be concluded that it was found "repulsive" (Bridges *et al.* 2010: 1). In this way, feedback generated from the participants would reflect the level of importance each determinant played as a potential motivating factor to undergo circumcision (Bridges *et al.* 2010: 1).

Results from the study indicated that on the whole, the benefits MMC provides against the acquisition of HIV and STIs, as well as the perceived improvement in hygiene, were concluded to be the determinants "of demand" (Bridges *et al.* 2010: 1). On the topic of condom avoidance it was found that by and large the black and coloured populations perceived condom avoidance to be "repulsive". However, for white participants the notion of being able to forfeit condom use after undergoing MMC was seen to be "attractive", "a result not explained by variations in wealth, age, or paternal circumcision status" (Bridges *et al.* 2010: 1).

Aside from the caveat that white participants found condom avoidance appealing, the authors felt positive about the study's outcomes and recommended initiating a country wide MMC initiative in South Africa as soon as possible. Nevertheless, some limitations of the study should be taken into consideration. The authors acknowledge the presence of three "significant" limitations, first of which is based on the fact that the participants were questioned on hypothetical intentions, rather than actions that had, or were going to necessarily take place (Bridges *et al.* 2010: 7). Secondly, the study was carried out in Johannesburg neighbourhoods, bringing into question the generalisability of the findings to more rural areas which undoubtedly constitute the majority of MMC's intended area of effect. Finally, the only "avenue" of risk behaviour explored was the possible neglect for condom use; all issues of partner reduction were eschewed.

The significance of the final limitation is reinforced by the results discussed earlier in the study conducted by Lagarde *et al.* (2003). As aforementioned, the 2001 study uncovered that although only a small percentage of men deemed it unnecessary to wear condoms after being circumcised, a relatively large percentage of men still felt that one could safely have sex with multiple women after the procedure. Thus, the results uncovered by Bridges *et al.* (2010) corroborate those of Lagarde *et al.* (2003) with regards to condom usage, but do not address the issue of multiple sexual partners that had been identified as a concern.

Also concentrating on the issue of condom impediment due to MMC was a cross-sectional study conducted in Botswana (Ayiga & Letamo, 2011). In this instance, correlations were explored between the use of condoms at last sex, and men's circumcision status. Results indicated that circumcised men were more likely to forfeit condoms than uncircumcised men, however, only by a fractional margin that was deemed to be statistically insignificant. In contrast to these results, the Zimbabwe Health Demographic Survey for 2010/2011 has revealed that HIV prevalence amongst circumcised men aged 15 to 49 was higher than amongst their uncircumcised cohorts (ZIMSTAT, 2012). According to certain Zimbabwean health officials:

It is a worrying development that at a time when we are promoting male circumcision as a preventative measure to combat HIV, we are recording a high prevalence rate amongst the group that has been circumcised largely due to uninformed risky compensatory behaviours.

(Mutede, 2012: n.p.)

It is evident that the literature covering risk compensation is often conflicting in nature or offers mixed results. In an attempt to provide some further clarity on the subject I will cast my attention to several qualitative investigations to be conducted on the topic.

Qualitative Studies on Risk Compensation and MMC

A pertinent issue which has not yet been addressed in the literature thus far concerns the female perspective toward sexual risk and risk compensation associated with MMC. A comprehensive study which addresses this largely eschewed issue was carried out by the Women's HIV Prevention Tracking Project (WHiPT). In describing the purpose of the research WHiPT (2010: 5) stated:

The intent of the WHiPT five-country pilot was to document and analyze women's perspectives and levels of participation in discussions and decisions about MMC for HIV prevention; and to build qualitative research capacity and knowledge of MMC among various stakeholders, particularly women in communities.

For purposes of relevance, the results gathered from the South African arm of the five pilot studies will be singled out and discussed further. Data collection took place in two separate provinces within South Africa, namely KwaZulu-Natal (KZN) and the Eastern Cape. The former has traditionally been known as a "non-circumcising" province, whereas many communities in the Eastern Cape have long been known to view "circumcision as a customary rite to manhood"; a cultural consideration that is to be discussed later in my literature review (WHiPT, 2010: 28). The methodology utilised by the inquiry made use of questionnaires and focus groups to gather qualitative data from a sample of 145 women spread between the two provinces.

The research findings generated by the study cover a multiplicity of issues regarding women's perceptions on various areas of concern associated with MMC. An initial area of interest was the perceived advantages and disadvantages of MMC. The primary 'advantage' that the authors aimed to assess was whether information about MMC's potential for HIV prevention was appropriately understood. Of the sample who answered this question, 66.72% reported that they believed there were advantages to MMC as far as HIV prevention for men was concerned.

Notwithstanding, there were still certain respondents who depicted false perceptions such as "no foreskin means there is no HIV threat" (WHiPT, 2010: 30).

Aside from this minority, most of the women understood MMC's protective benefit against HIV for men, although a large percentile still remained unconvinced that this would translate into any real protection for women. In direct reference to this, women raised concerns that men may change their sexual behaviours on account of being circumcised and potentially give them a "license for unprotected sex" (WHiPT, 2010: 33). Various women voiced their already diminished capacity to negotiate condom use in their sexual relationships, an issue that was feared to be only compounded by the introduction of MMC. Testimonies articulating this predicament suggested that women's predilection for condom usage was seen to raise suspicion amongst their male counterparts.

Moreover, 63% of women attested to experiencing gender based violence in their communities, 55% of which felt would be aggravated by the introduction of MMC. One respondent apprehensively had argued, "We will get into a fight, because now they [men] have the wrong information that circumcision prevents HIV" (WHiPT, 2010: 36). Another poignant account indicated that if women refuse to have sexual intercourse without a condom it could result in them being either beaten up or dumped by boyfriends.

These findings reiterate the need to clarify the benefits offered by MMC as well as dismiss the false attitudes and perceptions that may arise during its roll out. Amongst several recommendations, the authors highlighted the need to formulate messaging and communication strategies that emphasise the only partial efficacy MMC offers in preventing HIV for men. This serves as a valuable contribution to the body of work on risk compensation as it highlights another possible avenue whereby condom usage could potentially see a decline. The attenuated capacity many women experience when negotiating condom use could be further compounded by men's newly found conviction in their circumcision status. Such a scenario could in turn potentially drive up the incidence of STIs and HIV due to reduced condom usage within relationships.

The results uncovered in the WHiPT (2010) study add substance to the risk compensation hypothesis and corroborate the need for wide scale communication campaigns alongside MMC. In drawing this chapter to a close, I will now briefly discuss two separate studies which further substantiate many of the concerns that have been raised in literature up to this point.

A qualitative inquiry carried out by Riess *et al.* (2010) allowed for some interesting insights into risk compensation and MMC. In depth interviews administered to 30 circumcised men between the ages of 18 and 35 in 2008 aimed to elicit information on various issues, including:

Knowledge and beliefs about MC; knowledge of MC's relationship to HIV and STIs; reason for getting circumcised; changes in sexual activity after getting circumcised and/or learning of MC's protective affect against HIV;...knowledge and opinions of HIV risk reduction strategies; and condom use.

(Riess *et al.* 2010: 2)

In discussing their findings the authors delineated three separate groups as a means of comparing MMC's influence on behaviour change. These groups were: men who adopted protective behaviours after being circumcised; men who maintained the same behaviour after the procedure; and lastly, those who increased their sexual risk behaviours (Riess *et al.* 2010). As my focus is on risk compensation, the participants and findings from the third category will be considered.

Five men were identified as engaging in more acts of sexual risk behaviour after circumcision, one of whom reduced the frequency of condom use in his sexual encounters, whereas the remaining four increased the amount of sexual partners they had. The individual who maintained the same amount of partners but reduced his condom usage spoke of a 'testing' period after his procedure. The participant admitted to subjecting himself to multiple acts of unprotected sex in an attempt to explore the notion that men experience improved sexual gratification after being circumcised (Riess *et al.* 2010). During this 'trial period', the participant reportedly maintained condom usage with his two other sexual partners, but forfeited condom use with his wife.

The other four individuals attested to continuously using condoms, but increasing the amount of concurrent sexual partners they had. An account of one individual tells of how after his circumcision he was perceived by women to be a "more desirable" sexual partner (Riess *et al.* 2010: 6). This new found desirability prompted the participant to acquire two new girlfriends with whom he formed sexual relationships. Despite the individual reporting his adherence to condom use in these new sexual relationships; "concurrent partnerships have been shown to be instrumental to the spread of HIV in sub-Saharan Africa" (Riess *et al.* 2010: 8). This is

often attributed to a decline in consistent condom usage over the course of the multiple concurrent relationships.

Some of the important implications the authors point out in reference to these findings is that behaviour change is a “dynamic process” and “men may not just adopt positive behaviors or only increase risk behaviors” (Riess *et al.* 2010: 8). The majority of men in this study had indicated that the HIV test and MMC counselling provided alongside the procedure were instrumental in them adopting protective behaviours. However, other responses suggest men may increase protective behaviours only to then simultaneously engage in another form of risk behaviour, as was the case with five participants in this study.

The authors acknowledge the vital role counselling and HIV testing play alongside the roll out of any MMC intervention. They put forward that “MC and HIV counseling and testing programs should work to identify individuals who are disposed to engage in risk compensation” and emphasise the continued need for a combination of HIV prevention methods (Riess *et al.* 2010: 8).

A similar qualitative inquiry was performed by Grund and Hennink (2011) in key residential and commercial districts within Swaziland. The authors acknowledge that the greater part of their sample did not display any indications of risk compensation, however several respondents clearly did demonstrate evidence of increased sexual risk behaviour. One of the key insights the authors bring to attention relates to the MMC process itself; specifically the counselling and HIV testing component provided in conjunction to the medical procedure. The participants who exhibited a clear understanding of the benefits that MMC afforded them as well as continued adherence to HIV risk prevention measures were those who had emphasised the importance of the MMC counselling. Conversely, men who had engaged in riskier sexual behaviours “were often those who had reported receiving more limited counseling about circumcision” (Grund & Hennink, 2011: 6).

By demonstrating a correlation between counselling and not only positive sexual health behaviours, but a reduced incidence of risk compensation, the findings gathered by the study accentuate the importance of HIV counselling alongside the provision of MMC (Grund & Hennink, 2011).

In summary, the quantitative studies have by and large found no statistically significant indications of risk compensation. The qualitative studies however, do in fact indicate some level of risk compensation taking place. Nevertheless, a pertinent recurring theme emerging throughout all of the studies is the importance of MMC counselling. Correlations between high levels of counselling and reduced incidence of HIV risk behaviour post procedure are made reference to in both the quantitative and qualitative investigations discussed. The recurring emphasis on thorough counselling alongside MMC is an issue I will now argue to be somewhat problematic in the South African context, and in doing so, underscore the importance of public health communication efforts.

The Public Health Sector in South Africa

South Africa (SA) is regarded as one of the economic powerhouses of Africa and spends about 8.6% of gross domestic product (GDP) on health. However, SA does not have the health outcomes that would be expected from such investment, and some countries that spend less of their GDP on health have better health outcomes. SA's poor showing has been attributed to the rapid escalation of HIV and AIDS and tuberculosis together with a weak primary health care (PHC) system.

(Naledi *et al.* 2011: 17)

More than 80% of the South African population relies on the public sector for healthcare; similarly, the roll out of MMC relies heavily on the infrastructure available within this sector to not only perform the procedure, but discourage risk compensation through in depth counselling and education. Since the advent of democracy in South Africa in 1994, the public health care system has undergone a “significant expansion in the number of primary care facilities”; however, this has not been matched by an increase in human resources and health care workers (Wilson and Fairall, 2005: 483).

The majority of health care professionals have been discouraged from working in the public sector due to “poor remuneration, lack of acknowledgement and poor working conditions”, and in turn have been lost to the private sector or foreign countries (Wilson and Fairall, 2005: 484). The rollout of MMC “competes for the scarce supply of trained counselors, and field personnel who are the backbone of other HIV and treatment modalities”, bringing into question the extent to which resources can be effectively allocated into thorough education and counselling to curb potential acts of risk compensation (RHRU, 2010: 5).

Despite significant investment in South Africa's public health sector, the integrity of primary health care infrastructure remains encumbered by "major deficiencies" (Naledi *et al.* 2011: 21). The scaling up of various HIV and AIDS prevention and treatment efforts has "exposed the inadequate infrastructural design of many facilities" (Naledi *et al.* 2011: 21). In addition, the caliber and maintenance of medical facilities as well as equipment in South Africa has said to be "insufficient in most provinces", an issue which makes service delivery and staff retention increasingly difficult (Naledi *et al.* 2011: 21).

As a result of this, the recruitment of skilled staff in rural areas is "one of the most significant constraints to improving access to health care" (Barron *et al.* 2009: 69). The limitations of South Africa's public health sector, on not only an infrastructural level, but from a human resources perspective, arguably problematise the notion of providing thorough and wide scale MMC counselling. It is this very level of counselling that has been identified by the WHO, as well as various risk compensation studies, to be paramount in the deployment of any large scale MMC programme. Having said this, it could be argued that SA's dearth of human resources brings into question the integrity and comprehensiveness of counselling being provided alongside the MMC procedure. Consequentially, the "need to address the misperception prevalent amongst South African young men that circumcision renders one completely safe from HIV infection" is arguably jeopardised (RHRU, 2010: 7).

This issue was highlighted and corroborated by Dr. Irwin Friedman (2011), a public health physician who has worked closely with the monitoring and evaluation of various government run MMC projects within SA. During a personal interview with Dr. Friedman (2011), the nature of MMC counselling within public health facilities was discussed. It was said by Dr. Friedman that "it is entirely possible for someone to get circumcised without being told much at all", an issue he felt was a "huge weakness". In conjunction to Dr. Friedman's concerns, and of similar relevance, were findings presented at the 5th South African Aids Conference by Milford *et al.* (2011). The authors put forward findings from a study they had recently conducted on "Health care providers' knowledge of medical male circumcision and understanding of partial efficacy" (Milford *et al.* 2011: 453).

The study involved in-depth interviews conducted with 25 health care personnel from three urban and three rural clinics in the KwaZulu-Natal province. Some of the key findings uncovered that although the majority of participants had heard of an association between MMC and HIV, most of them did not have "accurate scientific understandings" of how the

procedure achieved this (Milford *et al.* 2011: 453). More importantly however, was the fact that many respondents did not understand the concept of partial efficacy and felt the men from local communities wouldn't either. The authors conclude that there was confusion and misunderstanding over MMC amongst participants in the study, highlighting the need for training of health care providers.

Admittedly, the study was conducted prior to the initiation of SA's national MMC campaign, and could be said to have questioned health care providers prematurely. However, the study exhibits the complexity of conveying MMC's only partial protective benefit for HIV prevention purposes. If individuals who work within the health sector encounter problems understanding this concept, then arguably laypersons receiving limited counselling would be even more likely to formulate incorrect perceptions and beliefs on the topic. To shed light on how things may unfold in a public health sector offering what may be inadequate MMC counselling; I cast my attention to a mathematical modelling based study that explores the potential for deleterious population level outcomes of MMC programmes.

The simulation authored by Andersson *et al.* (2011) aimed to provide insight into how gender disparities and changes in condom use may possibly impact HIV prevalence. The model was based on data extrapolated from the township of Soweto within the Gauteng province of South Africa. Elaborating on the purpose of the research, the authors had said:

We developed a model to estimate the potential impact of male circumcision programs for men and women in sub-Saharan Africa and examined the dynamic interaction between reduced susceptibility to HIV infection and sub-sequent behavioral disinhibition in the use of condoms by circumcised males.

(Andersson *et al.* 2011: 943)

The study analysed a number of different scenarios, each of which was characterised by diverse potential variables and outcomes. The majority of the study's simulated outcomes displayed the vast potential of MMC to prevent future HIV infections within a generalised heterosexual epidemic like that of South Africa. However, the model also "showed substantial gender disparities in program outcomes for some scenarios in which condom use decreased, which addresses concerns that an increase in risky sexual behavior by circumcised HIV-positive men might cause an increase in HIV prevalence in women, which could then increase the risk to men in a cyclical fashion" (Andersson *et al.* 2011: 945). The projections in the mathematical modelling done by Andersson *et al.* (2011) serve as a reinforcement that

in the event of widespread acts of risk compensation, the benefits afforded to men through MMC could not only be nullified, but in fact drive up HIV incidence rates.

By shedding light on the inadequacies of South Africa's public health sector and consequently, the questionable integrity of MMC counselling; I hope to highlight the importance of public health communication as a contingency measure for risk compensation. Despite the relative infancy of South Africa's national MMC campaign, the health sector is "already struggling to cope with the increased demand for circumcision" (Andersson *et al.* 2011: 946). A circumstantial consequence of this is that public health communication efforts now hold a significant stake in the MMC education process, for men undergoing the procedure, as well as society at large.

Before elaborating on public health communication and its role in the scaling up of MMC in South Africa, I will discuss an issue pertinent and relevant to all endeavors advocating MMC; namely, "remain[ing] sensitive to the cultural practices of different populations" (Andersson *et al.* 2011: 946).

Cultural Considerations for MMC in South Africa

All over the world male circumcision has its roots deep in the structure of society. Far from being a simple technical act, even when performed in medical settings, it is a practice which carries with it a whole host of social meanings.

(Aggleton, 2007: 15)

The practice of circumcision within South Africa has long been viewed by various cultural groups as a momentous occasion for young boys who are marking their transition into manhood (Ewing *et al.* 2011). Historically, the initiation of young men into 'manhood' by way of circumcision has been practiced by the Tswana, Northern Sotho, Southern Sotho, Pedi, Xhosa, Ndebele and Shangaan cultures of South Africa (Ewing *et al.* 2011). The Zulu culture however, abolished the practice of traditional circumcision in the 19th century under the rule of King Shaka Zulu (Ewing *et al.* 2011).

In 2010 however, the Zulu King, his majesty Goodwill Zwelethini, was lauded for his decision to officially revive the practice of circumcision within the Zulu culture. The King's declaration was based on the preventative benefit of MMC against HIV as evidenced in the three RCTs, and was hoped to enhance the uptake of the procedure amongst Zulu men.

In 2009, prior to the announcement by the King, only 26 358 men were medically circumcised in KwaZulu-Natal. In 2010, following the King's statement, this number increased to 70 914 and in 2011, 83 690 men decided to get medically circumcised.

(JHHESA et al. 2012: 4)

It is important to note that there may be a difference between medical male circumcision and traditional forms of circumcision. In more traditional or ritual forms of 'circumcision', the procedure itself can in some cases entail only an incision or partial removal of the foreskin, as opposed to MMC where the entire prepuce (foreskin) is removed. In addition to the physical act of circumcision itself, the traditional initiation process also involves passing on cultural traditions and social norms associated with the transition into manhood.

It has been argued that SA's national MMC campaign cannot be "detached from these cultural practices", an argument no doubt raising an assortment of contentious issues for policymakers as well as custodians of the respective cultures alike (Ewing *et al.* 2011: 10). However, in keeping with the theme of my argument I will briefly identify and limit my discussion to concerns of risk compensation stemming from traditional circumcision.

Ritual cutting of the foreskin in several cultural communities is central to the process of transition to manhood. Different rituals are described as circumcision but not all equate to the medical definition of MMC for HIV risk reduction evidenced by the RCTs. Some practices may provide similar risk reduction to MMC but this has not been shown and the way some ritual cutting is carried out may even heighten risk for HIV infection.

(Ewing et al. 2011: 4)

The above excerpt is taken from recently conducted research by the AIDS Foundation of South Africa's Culture and Health Programme (CHP), and provides valuable insight into some of the implications traditional circumcision may have on MMC and risk compensation. One of the focal points driving the research was to understand how traditionally circumcised boys perceived their own risk of HIV infection subsequent to undergoing the ritual. Using focus groups, community surveys and key informant interviews, the CHP were able to assess a number of variables pertaining to risk behaviour and perceptions of traditionally circumcised boys.

Out of a sample of 240 boys from three separate provinces (Free State, Limpopo, Eastern Cape) who had undergone traditional circumcision, 35% felt they were no longer at risk of

HIV infection and 21 % reported that they believed their risk was reduced. Participants from the three areas were of various cultural orientations; those from the Eastern Cape belonged to the Xhosa culture, whereas those from Limpopo and Free State belonged to the Venda and Sotho cultures respectively (Ewing *et al.* 2011). Boys of Venda culture typically undergo traditional circumcision at the age of 12, during the winter months of June and July. Whereas Xhosa and Sotho pre-initiates usually undergo the ritual between the ages of 17 to 20, and occur during the summer as well as winter months (Ewing *et al.* 2011).

Findings uncovered from these demographics that were of more concern to the study detailed condom usage behaviour prior and subsequent to the respondents having undergone traditional circumcision. The research found that 168 of the 240 boys in the sample attested to using condoms prior to being traditionally circumcised, however, of these 168 only 72 respondents expressed continued condom usage after having been through initiation (Ewing *et al.* 2011). The dramatic decrease in condom usage by various respondents was said to be an issue that “certainly indicates risk compensation” (Ewing *et al.* 2011: 11). Although reasons for this drop in condom usage would warrant further investigation, a possible factor could be attributed to traditionally circumcised individuals equating the benefits of traditional circumcision to those of MMC. Such a comparison would likely be erroneous and even potentially detrimental to individuals who engaged in risk behaviour on this basis.

Other evidence giving prominence to a correlation between perceived HIV risk reduction and traditional circumcision was displayed in a study by Karl Peltzer (2008). The inquiry explored perceptions held by 350 Xhosa “preinitiates towards traditional male circumcision in the context of HIV” (Peltzer, 2008: 1023). A brief overview of the study reveals that one of the “major reasons” for traditional circumcision was for HIV prevention purposes, an outcome which reinforces the need to clarify the difference between MMC and traditional circumcision (Peltzer, 2008: 1031). The associations made between traditional circumcision and HIV prevention documented in the above literature depict a relatively new phenomenon within South Africa. Ritual circumcision practices significantly predate the emergence of HIV in the SA, thus, the assimilation of concepts like ‘HIV prevention’ by preinitiates of traditional circumcision underscores of the dynamic and permeable nature of culture. In any event, “information and education materials are needed to distinguish between medical MC” and traditional circumcision to ensure the HIV prevention benefits of the former are not perceived as synonymous with the latter (Sithole *et al.* 2009: 648).

By problematising the inadequacies of SA's public health sector as well as drawing attention to the cultural nuances existing alongside the provision of MMC services, I hope to have emphasised the importance of wide scale MMC based education. To expand on the concept of 'wide scale education', I will turn my attention to discussing the concept and utility of public health communication, furthermore, its role within South Africa's national MMC drive.

Public Health Communication

A succinct working definition of what exactly the field of health communication entails is described by Schiavo (2007: 7) to be:

A multifaceted and multidisciplinary approach to reach different audiences and share health-related information with the goal of influencing, engaging and supporting individuals, communities, health professional, special groups, policy makers and the public to champion, introduce, adopt, or sustain a behavior, practice or policy that will ultimately improve health outcomes.

The field of health communication has been developing since the 1970s and is increasingly being "recognised as a necessary part of efforts to improve personal and public health" (Rensburg and Krige, 2011: 77). Similarly, the World Health Organisation has identified health communication as one of the key elements "critical to male circumcision programme scale-up" (WHO & UNAIDS, 2010: 3). The WHO have insisted that, "Global, regional, and national level communication strategies need to ensure that clear and consistent messages are disseminated and that male circumcision is promoted within the context of comprehensive HIV prevention strategies" (WHO & UNAIDS, 2007: 5).

During the formative years of health communication, strategies were premised on individual behaviour change and by and large ignored the larger structural, cultural and societal boundaries that impacted on the adoption of certain recommended health behaviours (Govender, 2011). In more recent times, health communication has pursued a social change agenda, taking into consideration the broader social issues that were largely eschewed by the antecedent strategies (Govender, 2011). Consequently, "health promotion efforts increasingly rely on multidimensional interventions", such as improving service delivery and advancing policy change in conjunction to health communication (Rensburg and Krige, 2011: 95). The focus on social context now emphasised in health communication efforts has directed

criticism to many of the conceptual approaches toward behaviour change within the field of HIV prevention.

Synonymous with early behaviour change communication, a large extent of health communication strategies aiming to reduce HIV transmission rates have focused on changing individual's knowledge, attitudes and perceptions (Govender, 2011). Criticism has been raised against such a linear focus, which inherently assumes that sexual risk behaviour is predicated on logical and rational thought, when in reality, sex can be "quite volatile and extends beyond cognitive reasoning" (Govender, 2011: 68).

Therefore, my study acknowledges the various factors involved in the realisation of behaviour change; however, it also recognises the valuable role health communication can play within this process. Having said this, I will now discuss evidence highlighting some of the success health communication efforts have had within the field of HIV prevention in South Africa. In doing this I hope to further clarify why health communication is well warranted in the context of SA's MMC scale-up, and furthermore, why it is imperative to uncover how the said communication is being received by men intending to undergo the procedure.

A Brief Look at South African HIV Health Communication

Public health communication efforts whether for MMC or otherwise rely largely on mass media formats to be able to reach the programmes' intended audiences. Due to the critical role mass media plays as a facilitator of health communication efforts I will briefly outline the mediated context currently existing within South Africa.

The South African Advertising Research Foundation's (SAARF) *All Media and Products Survey* (AMPS) for 2011 is the collection of the latest and most comprehensive statistics detailing South African media trends and usage. According to the survey, print media including newspapers and magazines are read by 64.9% of the population, a trend which has remained relatively stable over the past few years (SAARF, 2011). The most widespread and accessed media however, remain radio and television; the former being accessed by 91.9% of South African's and the latter being viewed by 90.3% of the population.

An area of increasingly significant growth is that of internet usage; although according to the survey, 75% of the population does not use a computer at home or at work, access to the internet by means of cellular telephone is an increasing trend (SAARF, 2011). The statistics

highlight that 79.5% of the population now have access to cellular telephones within South Africa, 12.2% of which utilise their phones for purposes of downloading internet content (SAARF, 2011). Therefore it can be said that traditional media forms like print, radio and television are widely consumed formats of media within South Africa, and although internet usage is growing rapidly, it currently is not utilised by the majority of South Africans.

From 1999 to 2009 there was a significant decrease in the number of new HIV infections in South Africa and this period coincides with the most acute health communication programming in the country.

(Scalway, 2010: 9)

The 2009 and 2012 National HIV Communication Surveys (NCS) represent some of the most comprehensive evaluations of their kind; the quantitative health communications inquiries gathered data from thousands of respondents throughout all nine provinces within SA. The main focus of the 2009 NCS was to examine “the impact of HIV communication programmes in South Africa” in terms of HIV prevention and treatment (Johnson *et al.* 2010: 5). The 2009 NCS sought out to assess the efficacy of 11 different HIV Communication Programmes (HCPs) pertaining various areas of impact such as multiple sexual partners and condom use.

In reviewing the findings, the 2009 NCS deduced that within the age bracket of 16-55 which characterised their sample, 90% of respondents had been exposed to at least one or more HCP. Amongst those exposed to HCPs, correlations were noted between participants who had experienced greater levels of exposure and a subsequent display of certain desired outcomes or ‘areas of impact’.

On the topic of multiple sexual partners the 2009 NCS concluded, “Since 2006 there has been an *increase in knowledge about faithfulness and partner reduction* as a means of reducing HIV infection risk as well as a decline in the number of people reporting multiple sexual partners (MSPs) in the past year” (Johnson *et al.* 2010: 5). The survey does acknowledge the infancy of health communication dealing with MSPs, and recommends continued focus on this area so as to provide more gradual and substantial behaviour change over time.

On the other hand, health communication efforts promoting condom usage have been running within SA for around 20 years and have had a more pronounced effect. The 2009 NCS uncovered a correlation between participants exposed to HCPs and a higher incidence of condom use than those who encountered limited or no exposure. HCPs were especially

effective in promoting condom usage within stable as well as inconsistent sexual relationships but were not limited to those in relationships. The data concluded that “condom use increased uniformly from 34% among those with no exposure to HCPs to 50% for those exposed to 9-11 programmes” (Scalway, 2010: 10).

Another successful area of impact for health communication efforts has been in encouraging individuals to undergo HIV counselling and testing (HCT). Evidence gathered by the 2009 NCS details how specific public health communication programmes are shown to “directly influence levels of HIV counselling and testing” (Scalway, 2010: 11).

Similarly, key findings from the latest NCS conducted in 2012 demonstrate further positive trends for the state of HIV communication programmes. Evidence suggests that since 2009, the percentage of people ever tested for HIV has increased from 55% to 64%, reflecting a total of 17.4 million South Africans (JHHESA *et al.* 2012). Also, condom usage at first sex was recorded at 66%, a 48% increase since 1992 (*ibid.*). With reference to MMC, the 2012 NCS indicates that knowledge that MMC reduces the risk of HIV infection has grown from just 8% in 2009, to 47% in 2012. Moreover, “85% of both men and women know that a man who is circumcised still needs to use a condom” (JHHESA *et al.* 2012: 4).

Although only touched on briefly, these findings demonstrate that “communication programmes have had a positive and measurable effect on the knowledge, attitudes and beliefs that are contributory to HIV prevention” (Scalway, 2010: 9). Up to this point my argument has presented literature documenting concern for risk compensation associated with MMC, compounded by South Africa’s weak public health sector and the existence of nuanced cultural issues that need to be negotiated. In moving forward, I will now discuss South Africa’s approach toward health communication for MMC, and will then go on to discuss the theoretical concepts underpinning my investigation of these communication efforts.

Public Health Communication for MMC

The South African National AIDS Council’s (SANAC) National Strategic Plan 2012 – 2016 identifies the importance of social and behaviour change communication for MMC, as well as other HIV prevention measures. In addition to formulating South Africa’s MMC implementations guideline, SANAC has also drafted an official MMC health communication strategy. SANAC is currently working alongside various Non- Governmental Organisations,

such as Johns Hopkins Health and Education in South Africa (JHHESA) to promote of MMC service delivery and health communication alike. As a result of this, MMC health communication initiatives are being championed by various NGOs and campaigns throughout the country (SANAC, 2011b).

Offering additional assistance in promoting comprehensive MMC communication, JHHESA has aided in creating a communications guideline for “Male circumcision & HIV prevention in Eastern and Southern Africa” (JHHESA *et al.* 2008: 1). The guideline endorses a holistic approach to health promotion that includes acknowledging the larger social context impacting on men’s choices to adopt recommended health behaviours (JHHESA *et al.* 2008).

The strategic communication component of the guideline advocates that various “key messages” be incorporated within local MMC health communication efforts (JHHESA *et al.* 2008: 9). The guideline encourages the inclusion of five core messages in MMC health communications efforts, and also identifies three additional areas of concern that may need addressing.

The five core messages identified by the guideline are:

1. MMC is effective at reducing the risk of HIV acquisition through vaginal intercourse by approximately 60%.
2. MMC does not replace other HIV prevention measures.
3. There is a six week healing period which requires abstinence from sexual intercourse.
4. MMC must be conducted safely by professionally trained circumcision providers.
5. Evidence based information should be made available to allow for an informed choice.

These messages represent a template of what information MMC health communication efforts within SA should encourage; and therefore were used as a guide for this study, and provided me with a means to explore whether a discrepancy existed between messages being disseminated and their reception.

In addition to these five key messages are three additional areas of concern, namely that:

6. Distinctions must be clearly made between MMC and female genital mutilation.
7. There must be continued adherence to safe sex practices and HIV prevention methods within ongoing partnerships.

8. There is currently no evidence supporting MMC as means of preventing transmission of HIV from men who are already infected to their partners.

As female genital mutilation is not a practice known to occur in South Africa, I deliberately eschewed all questioning pertaining to its practice. Aside from this superfluous area, the communications guideline provided me with a means to review if and what incongruities existed between the messages being disseminated, and the way they were subsequently being perceived by men intending to undergo MMC. In this way, the communications guideline has served to guide my study and inform my questioning so that I may to some extent explore the condition of health communication for MMC in SA.

Summary of Literature Review

In the preceding chapters I have argued the importance of public health communication for MMC, especially within the South African context. In presenting literature on risk compensation and MMC, South Africa's weak public health sector, the cultural factors complicating the implementation of MMC in SA, I hope to have underscored the importance of the wide scale education attainable through public health communication. Moreover, I hope to have emphasised why it is paramount to investigate whether the information on MMC that is relayed by an assortment of health communication efforts is being received as intended, that is to say, as per the communications guideline.

The following chapter will focus on extrapolating the theoretical framework not only informing my study but serving to explain my data as well.

Chapter Three: Theoretical Framework

In a country as diverse as South Africa, trying to understand the complex relationship between public health communication initiatives and their target audiences is a notably difficult task. A single theory cannot act as a descriptive or prescriptive panacea for understanding health behaviour. Accordingly, the theoretical approach I have adopted draws upon several sources in an attempt to acknowledge the complexities involved in the process of behaviour change. In this chapter I will expand on three seminal works underpinning my inquiry, so as to ground my study within a sound theoretical and conceptual foundation. The first to be discussed is the Social Ecology Model (SEM), which can be explained as an “overarching framework, or set of theoretical principles, for understanding the interrelations among diverse personal and environmental factors in human health and illness” (McLeroy *et al.* 1988; Stokols, 1996: 283).

Thereafter, I discuss the Health Belief Model (HBM), a predicative psychological formula designed to help articulate the cognitive variables involved in facilitating health behaviour (Rosenstock, 1966). I demonstrate the HBM’s applicability as an apparatus for interrogating the ‘individual’ level of SEM, as well as highlight how the model has informed my participant questioning. Finally, my theoretical framework draws on the work of Stuart Hall’s (1980) Encoding and Decoding Model. Emphasising the potentially discordant nature of health communication interpretation, the model locates my study within a media and cultural studies approach. And additionally, substantiates the rationale behind investigating the reception of MMC health communication.

The Social Ecological Perspective

Despite the Social Ecology Model itself being a relatively recent development, the ecological perspectives on which it is based are well-established. Much of what informs the perspective is largely premised on nineteenth century ecological concepts devised by Charles Darwin (Green *et al.* 2010). Stemming from Darwin’s view of the ecosystem as a “web of life”, ecology has come to represent the “investigation of relationships between individuals and their environments” (Richard *et al.* 2011: 309).

The interrelated principles of ecology’s ecosystems were adapted into public health contexts, and later informed the design of social ecological perspectives and models (McLeroy *et al.* 1988).

Based on this metaphor, 1960s public health researchers began championing concepts “designed to draw attention to individual and environmental determinants of behaviour” (McLaren & Hawe, 2005: 9). This was largely in opposition to the narrow and linear focus of epidemiology practices of the time, which had tended to focus on exclusively “physical, chemical and biological environments” (Green, 1996: 271). Although largely predicated on the principles of ecology, the refinement of conceptual models based on social ecological principles was influenced by numerous disciplines. The likes of “public health, sociology, biology, education and psychology” were all contributory to the development of consummate frameworks like the SEM (Richard *et al.* 2011: 308).

The “historical heterogeneity” of social ecology has meant that the perspective has garnered support from numerous academic fields (McLaren & Hawe, 2005: 6). As a consequence, since the 1980s social ecology has seen increasing popularity, especially within the fields of health promotion and public health (McLaren & Hawe, 2005: 6). The resurgence of social ecological perspectives has been attributed not only to the “qualitative shift” from individualistic to socially orientated health promotion strategies, but the fundamental revision of what characterised one’s personal health (Stokols, 1996: 282). The dominant conception of ‘health’ throughout the 1970s and 80s was portrayed as a physical disposition devoid of illness, whereas in more recent times, the definition has grown to include the “complete physical, emotional, and social well-being” of individuals” (Stokols, 1996: 283).

One of the initial social ecological proponents to formulate a tangible model encapsulating the principles of the perspective was McLeroy *et al.* (1988). Since then, numerous adaptations of the model have emerged and have come to be recognised as variations of the SEM. For the purposes of my study, one such variation, the ‘SEM of communication and health behaviour’ (SEMCHB), will serve as the foundation upon which the remainder of my theoretical argument rests (Kincaid *et al.* 2007). To be discussed first however, is the original model on which the SEMCHB is founded upon, namely that of McLeroy *et al.* (1988).

The Social Ecology Model

Described as having “tackled the problem of complexity by dividing the environment into four levels beyond the individual”, the SEM has accommodated the determinants of health behaviour by adopting a multi-leveled approach (Green *et al.* 1996: 278). The SEM takes into account: the intrapersonal factors, interpersonal processes and primary groups, the institutional factors, community factors, and finally, public policy, associated with a given individual. The stratified approach of the SEM notably distinguishes itself from the other somewhat controversial individually orientated health behaviour change theories (McLeroy *et al.* 1988; Green, 1996). Having specified the five levels said to determine behaviour, I will now briefly outline the target variables inculcated at each respective level.

At the *intrapersonal level*, factors include: knowledge, attitudes, behaviour, skills and one’s perceived self-concept (McLeroy *et al.* 1988). These factors are recognised as being the focal points of more linear behaviour change models. In a similar fashion to these linear, psychologically derived theories, the SEM does advocate individual behaviour change strategies. However, unlike the theories emerging from psychology, the SEM acknowledges that it “may also incorporate techniques to modify the nature and extent of social influences” (McLeroy *et al.* 1988: 356). Some of the strategic interventions endorsed by the SEM for intrapersonal affect are “mass media, support groups, organizational incentives, or peer counseling” (McLeroy *et al.* 1988: 356).

The *interpersonal processes and primary groups* represent “formal and informal social network[s] and social support systems”, which refer to the influential relationships in an individual’s life, such as family, friends and work colleagues (McLeroy *et al.* 1988: 355). These significant social relationships are “essential aspects of social identity”, and play a large role in influencing the health behaviours of individuals (McLeroy *et al.* 1988: 357). In conjunction to the social actors existing in an individual’s life, this level of the SEM also acknowledges the social norms and groups an individual actively subscribes to.

The *institutional factors* constitute the characteristics of, as well as the formal and informal rules of operation for an individual’s relevant social organisations, primarily, their place of employment or study. Organisations can be the source of positive as well as deleterious effects as far as health is concerned. By assessing the organisational context of individuals the SEM posits that interventions can be instrumental in “creating healthier environments in addition to creating healthier employees” (McLeroy *et al.* 1988: 360).

Community factors are the fourth level to be identified by the SEM, and comprise of three distinct elements. A discussion of the SEM's conception of the three elements of 'community' is given by McLeroy *et al.* (1988: 363):

First, community refers to mediating structures, or face-to-face primary groups to which individuals belong. This view of community embraces families, personal friendship networks, and neighborhoods...Second, community can be thought of as the relationships among organizations and groups within a defined area...Third, community is defined in geographical and political terms, such that a community refers to a population which is coterminous with a political entity, and is characterized by one or more power structures.

Evident in the comprehensive scope of the definition of community, the SEM proposes that community not be seen merely as "aggregates of individuals sharing common demographic or geographic characteristics" (McLeroy *et al.* 1988: 363). Rather, the notion of community is a holistic appreciation of the various inter-connected relationships that impact on individuals' lives and health.

The final category to be delineated by the SEM is defined as *public policy*. Accounting for the broader legislation and policies active within an individual's given milieu, *public policy* refers to the larger societal factors underpinning one's health.

An amalgamation of the above levels constitute the core principles underpinning the SEM, a model designed to "focus attention on the environmental causes of behavior and to identify environmental interventions" (McLeroy *et al.* 1988: 366). The foundations laid by McLeroy *et al.* (1988) have been well utilised as a blueprint for other SEM variations; one of which, the SEM of communication and health behaviour (SEMCHB), will now be expanded upon (Kincaid *et al.* 2007).

The Social Ecology Model of Communication and Health Behaviour

From a design perspective, the SEMCHB is much like the original SEM on which it's premised. However, instead of a five-tiered approach, the model outlines four ascending levels of influence that impact on health behaviour adoption. In addition, the model outlines the communication approach to be taken at the according level in order to stimulate change and facilitate health behaviour. Visually represented by four concentric circles, the *individual*, *social networks*, *community*, and *societal* levels present a multitude of influential variables which can be decisive in a person's health behaviours.

The two key features of this model are the assumptions of *embeddedness*, a state in which one system is nested in a hierarchy of other systems at different levels of analysis, and *emergence*, in which the system at each level is greater than the sum of its parts.

(Storey & Figueroa, 2012: 76)

The implications that these assumptions hold for health behaviour suggest that if barriers to the adoption of health behaviours existing at higher levels are insurmountable, then health behaviour cannot be expected to be adopted. Synonymous with the SEM's intrapersonal factors, the *individual* level of the SEMCHB refers to the knowledge, beliefs, self-efficacy and all round cognitive dispositions an individual has toward a given issue. Informed by personal experience and mediated information, factors in this level relate to how individuals perceive a certain health practice or issue, as well as how it relates to them. According to the SEMCHB, communication channels targeting this level are engagement with mass media, dialogue, counselling, and peer education (Kincaid *et al.* 2007).

Social networks, on the other hand, symbolise the social forces that surround and influence an individual. These can include family and friends, as well as the aggregate normative social influence that individuals are subjected to.

Much like the community level factors of the SEM, the *community level* of the SEMCHB refers to the physical as well as social community of an individual. This can include factors such as access to resources, the level of participation, and overall power dynamics pervasive throughout one's 'community' (Kincaid *et al.* 2007).

Lastly is the *societal* level - being the outer most circle, this layer reflects the broader national determinants that ultimately influence health behaviour. Factors within this cluster are varied

but can be inclusive of relevant policies and programming, governmental leadership, religious and cultural environments, as well as prevailing power relations (Kincaid *et al.* 2007).

The significance attributed to these four levels is tempered by the SEMCHB's recognition that an individual's physical environment and infrastructure largely dictate that extent to which any health communication effort can be successful. If health orientated infrastructure is inadequate, then health communication addressing the four aforementioned levels will likely be ineffectual in prompting the recommended health behaviour's uptake (Kincaid *et al.* 2007).

Recognising the dynamic interplay between multiple factors and infrastructure, the SEMCHB advocates an approach whereby communication efforts are stratified so as to address each level appropriately, whilst concomitantly acknowledging potential physical barriers. Mass media and dialogue initiatives aim to impact on the individual and social levels, whilst participatory development and advocacy programmes seek to mobilise action and inform policy changes at the community and societal levels respectively (Kincaid *et al.* 2007). This multi-levelled approach seeks not only to achieve individual and social change, but promote structural change by influencing policy-makers and infrastructural custodians.

The extensiveness of the SEM and variations like the SEMCHB have made up for limitations of past individual behaviour change theories, however; they have also evoked "certain practical limitations" due to their exhaustive ambit (Stokols, 1996: 287). The SEMCHB "incorporates multiple levels of analysis and diverse methodologies" (Stokols, 1996: 286). If utilised in their entirety, this analysis would extend far beyond the scope of my master's dissertation. Therefore, the focus of my inquiry rests primarily at the individual level of the SEM, that is to say, exploring the cognitions, perceptions and beliefs of individuals toward MMC. Insights into the remaining levels of influence will be to a certain extent ascertained through research questions investigating basic social, community, and infrastructural circumstances. However, as the crux of my study is based within the individual level of the SEMCHB, my findings should be viewed accordingly; specifically, as contributory factors in the behavioural decision making process as opposed to direct precursors of it.

Through my discussion of the SEMCHB thus far I have identified the escalating levels of influence and briefly touched on the communication channels for the respective categories. However, the manner in which communication enables change is not well defined within the

model. This is a result of the SEMCHB being a model as well as a “*metatheory*” – meaning that each level of the SEMCHB requires the application of other relevant health behaviour theories to be ‘operationalised’ (Storey & Figueroa, 2012: 76).

Having delineated the boundaries of my study to the individual level of the SEMCHB, I now move on to discussing the second seminal work guiding the theoretical framework of my dissertation. The Health Belief Model (HBM), a value-expectancy theory of health behaviour, will serve as the ‘operational’ component of my research (Rosenstock, 1966). The employment of the HBM will help interrogate and explain the interaction between communication strategies and the *individual* level variables highlighted in the SEMCHB.

The Health Belief Model

The Health Belief Model (HBM) is based on the premise that “health behaviour is determined by personal beliefs or perceptions about a disease and the strategies available to decrease its occurrence” (Hayden, 2009: 31). Accordingly, the HBM as employed in my study allows me to interrogate some of the individual level factors circumscribed in my discussion of the SEMCHB. In this way I have been able to investigate perceptions and cognitions pertaining to MMC, and furthermore, risk compensation.

Originally predicated on the research of 1950s social psychologists, but later revised by Irwin Rosenstock (1966), the Health Belief Model has remained a firmly-established and well utilised research tool within the field of health communication. As “by far the most commonly used” theory in health communication, the HBM is supported by extensive empirical evidence demonstrating its utility as a predictor of health related behaviours (Hayden, 2009: 31). Since its inception, the HBM has undergone several revisions to its framework; initially only comprising of four central tenets, the model has come to incorporate an additional two factors in its current state.

In its initial format as a social-psychological theory, the HBM posited that health related behaviour could be largely attributed to a person’s perceptions within four key areas: susceptibility, severity, benefits and barriers. When confronted by behaviour change initiatives, individuals would carry out cognitive appraisals within these four critical spheres to determine the risks and benefits associated with the recommended behaviour’s adoption. Firstly, perceptions were formulated around the personal *perceived susceptibility* to a threat that was faced by the individual.

This “refers to one’s subjective perception of the risk of contracting a condition”, which can often be perceived discordantly amongst an aggregate group of individuals (Janz & Becker, 1984: 2).

The second dimension identified by the HBM is the *perceived severity* an individual associates with a given threat. This can include the medical consequences such as death or illness, or social repercussions, such as stigma and loss of employment, that an individual feels will accompany the condition (*ibid.*).

The two determinants discussed thus far have related to the threat faced by an individual, however, the third and fourth tenets proposed by the HBM pertain the modality or intervention recommended to help counteract or nullify this threat. A modality’s *perceived benefits* are deemed by the HBM to be a critical agent in carrying out health behaviour. These ‘benefits’ relate broadly to the “value or usefulness” a new behaviour is deemed to possess against a threat (Hayden, 2009: 32).

The fourth cognitive variable instrumental in health behaviour identified in the HBM is identified as the *perceived barriers*. This construct encapsulates the existing antagonistic variables facing the adoption of behaviour. These can include physical barriers such as expense and inconvenience, as well as personal barriers, such as pain or anxiety over negative outcomes. Simply put, perceived barriers describe any negative associations that may curtail the adoption of a recommended course of action (Rosenstock, 1966).

Through a cognitive assessment of these variables, individuals could weigh up the cost-benefit ratio attributed to either adopting or discarding the recommended behaviour.

In other words, the HBM predicts that people will take action to prevent, control, or test for negative health conditions if they perceive themselves as susceptible to the condition, believe the condition is serious, believe the said course of action is available and beneficial in reducing the susceptibility or severity of the condition, and believe that the perceived benefits to taking action outweigh the barriers to taking action.

(Tedesco & Ivory, 2007: 584)

This formula was later amended to include two additional constructs, namely *cues to action* and *self-efficacy* (Janz & Becker, 1984; Rosenstock *et al.* 1988). Defined as, “the specific stimuli necessary to trigger appropriate health behaviour”, the *cues to action* represent the internal or external prompts that create awareness and aid in facilitating action (Mattson,

1999: 243). Internal *cues to action* are suggestive of intrapersonal stimuli, such as pain or anxiety, whereas external *cues* allude to interactions or communication strategies that advocate a certain intervention or behaviour.

Lastly, the concept of *self-efficacy* was affixed to the HBM. Derived from Albert Bandura's (1977) Social Cognitive Theory, *self-efficacy* reflects an individual's confidence in their own ability to carry out the recommended behaviour(s), that is to say, whether the individual perceives themselves as competent enough to actualise the recommended course of action (Rosenstock *et al.* 1988). According to Bandura, developing self-efficacy is reliant on four possible avenues, namely: enactive attainments; vicarious experience; verbal persuasion; and one's psychological state (Bandura, 1986). *Enactive attainments* "are the most influential sources of efficacy information because they are based on personal mastery experience" (Rosenstock *et al.* 1988: 180). *Vicarious experience* is said to be the next most important source of self-efficacy; being witness to successful or unsuccessful accounts of behaviour can develop or hinder self-efficacy depending on the outcome. *Verbal persuasion* accounts for health education by means of mass media or interpersonal dialogue, and is ranked third in its capability to enhance *self-efficacy*. Lastly, an individual's *psychological state* can dictate their levels of *self-efficacy*; for example, when individuals are in depressive states they are less likely to have a high degree of confidence in their own ability to carry out health behaviour.

These six psychological constructs comprise the HBM, and together have been adapted to a wide variety of situations as a means to explain and predict health related behaviour. Having overviewed the structure of the HBM, I will now clarify how the model fits within my own study.

Exploring MMC and Risk Compensation with the HBM

According to the HBM, the motivating factors for individuals to subscribe to a recommended health intervention are dependent on six key constructs. By acknowledging this process, my study utilises the predicative nature of the HBM as a guiding framework for my interview questioning. At the heart of my research, the fundamental theme propelling my study seeks to address what these 'motivating factors' are for men choosing to undergo MMC. Understanding these catalytic variables means gaining insight into how MMC health communication has shaped men's perceptions, and thereby to some extent evaluating its reception.

More poignantly, this will allow me to simultaneously explore the potential for risk compensation practices amongst SA's MMC rollout. Having employed the HBM as the apparatus to conduct such an exploration, I will now discuss how each tenet of the model has come to inform my interview questioning. In keeping with the sequence of the HBM, *perceived susceptibility* will be discussed first.

“Prior to 1974, it appeared that ‘perceived susceptibility was the most powerful dimension of the HBM’, however later evidence has suggested otherwise (Edberg, 2010: 64). In the context of my thesis, the dimension of *perceived susceptibility* would refer to an individual's own subjective appreciation of their risk of HIV acquisition. By questioning participants about how they perceive their own level of risk to HIV within their geographic and social environments, the dimension of *perceived susceptibility* can be interrogated. Upon completion of this assessment, my participant questioning would undertake to determine the *perceived severity* attributed to HIV. By asking participants to explain how the issue of HIV has affected their respective locales; I can begin to grade the severity with which HIV is seen and perceived by the individual.

A central focus of my study is uncovering participants' *perceived benefits*, or their beliefs concerning “the value or usefulness” of MMC in decreasing their risk of HIV (Hayden, 2009: 33). Through questioning participants about these variables I am able to explore men's perceptions concerning the health benefits attributed to MMC, and in so doing, assess whether perceptions instrumental in facilitating acts of risk compensation exist. By contrasting participants' answers against the MMC communications guideline discussed earlier, I can assess whether the *perceived benefits* of participants are in-line with the actual benefits of the procedure.

Research into the HBM dimensions subsequent to 1974 has demonstrated that the concept of perceived barriers is “consistently” prioritised as the most important variable by individuals contemplating health behaviour (Edberg, 2010: 64). Similarly, my questioning aims to understand what factors, if any, served as physical or psychological obstacles to undergoing MMC.

A discussion of the participants' *cues to action* may also shed light on the communication avenues impacting on the formulation of men's perceptions of MMC. This may not only aid in understanding the galvanising factors contributory to undergoing circumcision, but the channels instrumental in constructing either accurate or erroneous perceptions of MMC.

To this end, my findings aim to help explore how health communication initiatives are being received for the purposes of SA's MMC roll-out.

The last of the HBM's contributions to my participant questioning relates to the concept of *self-efficacy*. Due to the fact that the participants involved in my study are questioned prior to undergoing MMC, one can safely establish that they possess the requisite *self-efficacy*. However, by asking participants to recall their initial feelings toward undergoing MMC, I may probe whether '*verbal persuasion*' (Health Communication) was involved in fostering the 'confidence' necessary to undergo the procedure.

Despite these dimensions being invaluable contributions to my research, I must preface my findings by acknowledging that the HBM's individualistic focus has been the subject of some critique (Fisher, 2008). However, as I have located my study within the SEM, I am conscious of other social factors influencing health behaviours; and accordingly, have taken these limitations into account throughout my research.

Other concerns relating to the HBM stem from issues which question whether rational cognitive thought as is posited in the model, is involved in acts like sexual risk behaviour (Harari & Legge, 2001). However, in the scenario of MMC, decisions to undergo the procedure would presumably be informed by rational thought, as opposed to more impulsive choices that likely precede sexual intercourse. This to some extent mitigates the relevance of such a critique against my study, and allows the HBM to serve as a viable theoretical framework.

Having said this, the relevance of my findings would serve to help understand influences on health behaviour stemming primarily from the individual level, and not provide a comprehensive outline of the myriad factors that influence performing health behaviour. However, research into the perceptions and beliefs surrounding MMC and risk compensation is extremely limited; therefore, despite the possibility of critique of the chosen theoretical framework, and any other limitations of the study, there is still strong rationale to support its validity.

The theoretical component of the study rests on two seminal frameworks that detail the catalysts and factors implicit in health behaviour change. This has entailed highlighting the various elements contributory to the uptake of recommended behaviours. However, working from a media and cultural studies perspective, my investigation also recognises the principal

role that the audience plays in receiving health behaviour messages and in the negotiation of meaning. As I have mentioned, with the exception of the HBM's *cues to action*, the remaining constructs are reliant on psychological variables formulated by a targeted audience. In the case of MMC, individuals undergoing the procedure would have encountered formal health communication (such as television or radio programmes) or some form of interpersonal dialogue (*external cues to action*) that has allowed them to formulate these relevant perceptions. However, the actual process whereby these perceptions are constructed is not extrapolated upon. Therefore, to expand on the role of the audience within this the communication process I now draw upon Stuart Hall's (1980) influential theory of Encoding and Decoding.

Stuart Hall's Encoding and Decoding Model

The theoretical model of Encoding and Decoding has been cultural studies' "most important" contribution to audience research, and has been seen as a "paradigmatic break" from previous, more linear communication theories (Hagen & Wasko, 2000: 6). At its core, Hall's (1980) Encoding and Decoding Model rests on the notion that the communication process encompasses three autonomous, yet corresponding stages. The *production*, *distribution* and *consumption* of discursively constructed semiotic and linguistic texts represent a two way circuit of communication where audiences are active participants in the negotiation of meaning.

In this framework, socio-political discourse informs the production of messages, which are then 'encoded' with certain connotations and denotations, and conveyed via a specified medium. With relevance to my own study, this medium could refer to mediated public health communication avenues such as television, radio or posters. This medium is actively engaged with by the receiver, whose own socio-political milieu informs an independent interpretation, or 'decoding' of the transmitted message (Hall, 1980). In this way, messages remain polysemic in nature, allowing for multiple and disparate interpretations of the same message. Despite this polysemy, there are three types of audience decoding that have been identified by Hall (1980). These are known as the *dominant-hegemonic position*, the *negotiated position*, and finally the *oppositional position*. A discussion of these three discordant interpretations can to some extent explain how incongruent perceptions of MMC can emerge from a single health communication text.

Decoding MMC Health Communication

As I have noted in my discussion of the HBM, there are five cognitive variables actively involved in deciding whether to embrace a novel health intervention. The sixth, the HBM's *cues to action (external)*, would characterise the *production* and *distribution* phase of Hall's model. This is based on the fact that the *cues to action* refer to the communication prompts involved in informing as well as influencing the five aforementioned psychological aspects. These five remaining constructs are characteristic of Hall's *consumption* phase, as they require an engagement with distributed information in order to be discursively constructed.

The *production* phase espoused by Hall's model, or in relative terms, the creation of *external cues to action* like MMC health communication, occurs through a normalisation of mediated semiotic and linguistic texts. By drawing on normative discourse, producers of MMC health communication can utilise these linguistic and semiotic representations to re-create a desired meaning. By making use of MMC health communication channels, these constructed texts can be *distributed* to an intended audience. At which point the constructed text, with all its connotations and denotations is actively decoded by the audience. The five remaining HBM constructs are influenced by how this process of decoding, or interpretation, is realised by the individual.

According to Hall (1980), the interpretation process itself is a subjective act, differing from individual to individual; however, three broadly defined categories have been identified by Hall as potential interpretational perspectives. These three types of audience decoding classify the level of congruity an interpreter's decoding has with the original producer's intended meaning. Similarly, these perspectives would relate to the accuracy with which a MMC health communication text was understood.

The *dominant-hegemonic* position discussed in Hall's (1980) model refers to when an individual 'decodes' a message in the way that was intended by those responsible for its creation. This is to say, the message's 'preferred reading' or interpretation, which in this case would be synonymous with the points highlighted in the MMC communications guideline.

The *negotiated* form of decoding is of greater interest for my study however. It suggests that certain elements of a message's 'preferred reading', or more normative definition, will be acknowledged, whilst other aspects are interpreted in an aberrant fashion. For example, men may interpret MMC as a viable means of reducing the spread of HIV, but 'misinterpret' its

only partially protective benefit. Evidence of erroneous perceptions attributed to MMC have been highlighted throughout parts of my literature review, and in certain cases, have been documented as being “transformed into dangerous practices” (Lagarde *et al.* 2003: 94). Reasons for this misinterpretation stem from the decoder’s own personal milieu shaping their individual frameworks of knowledge. This to some extent serves as a theoretical explanation as to why possible misconceptions may develop in the presence of MMC health communication.

The final possible ‘reading’ highlighted by Hall (1980) is known as the *oppositional* position. This accounts for individuals who interpret the message in a fashion directly contrary to the intended meaning. Hall describes this position as not merely a misunderstanding; within the *oppositional code* individuals will understand the “literal and connotative” meanings, but actively choose to interpret the information in a contradictory fashion (Hall, 1980: 49). This would be on account of the individual’s frameworks of knowledge being at odds with the disseminated information.

For instance, men could understand MMC related media as intended, yet still perceive the procedure to be of no protective benefit against HIV. Reasons for such an interpretation could be based on cynical opinions of public health initiatives, possibly informed by negative past experiences or other trusted information. The development of myths around MMC could be a possible outcome of discordant interpretations such as those described by the *negotiated* and *oppositional* positions, once again emphasising the need to explore men’s perceptions of MMC.

The manner in which an individual interprets/decodes health related information (*external cues*) will inform how their perceptions regarding a threat’s *severity* and *susceptibility*, as well as an intervention’s *benefits* and *barriers* are constructed. The manner with which these constructs were decoded, as well as an individual’s own psychological characteristics, would influence the levels of *self-efficacy* of a given audience member. And finally, these factors in unison would contribute to the ultimate outcome of whether health behaviour is adopted or neglected.

Theoretical Framework: A Consolidated Outline

Friedrich Nietzsche wrote:

There is *only* a perspective “seeing”, only a perspective “knowing”; and the *more* affects we allow to speak about one thing, the more complete will our “concept” of this thing, our “objectivity,” be.

(in Gigi Durham & Kellner, 2001: 2)

In a similar vein, my theoretical framework has attempted to incorporate several constructs with the aim of contributing toward a more holistic understanding of health communication and behaviour change. Through my initial discussion of the Social Ecology Model of Communication and Health Behaviour, I have clarified the complex interactions involved in health behaviour change. Outlining the level at which cognitions and beliefs operate within the model, my study has delineated its intended area of research. To interrogate the relevant perceptions present at this level, the Health Belief Model was employed. As a final adjunct, the theoretical framework informing my study includes Hall’s (1980) Encoding and Decoding theory, which emphasises the role of the audience within the interpretation process. Demonstrating the potentially discordant nature of health communication understanding, the Encoding and Decoding Model has reinforced the importance of exploring how men have interpreted MMC related health information.

Through a conflation of the three models and theories discussed above, I hope to have supplied sufficient theoretical and conceptual rationale to validate my study’s design, and to have highlighted the theoretical constructs underpinning the analysis of my collected data. However, before discussing my findings, the following chapter will outline the practicalities of my primary research, namely, my methodological approach to data gathering.

Chapter Four: Methodology

The purpose and scope of one's research methodology is said to encompass:

The overall design of the inquiry which serves to relate the constituent methods of data gathering and data analysis, further justifying their selection and the interpretation of the data with reference to the theoretical frameworks employed.

(Jensen, 1991: 5)

Similarly, this chapter aims to expand on the research paradigm employed - that being the "basic set of beliefs that guide action"; as well as clarify the research design of my inquiry, which concerns the "plan for collecting and analyzing" data within my study (Guba, 1990: 17; Ragin, 1994: 191). A discussion of this 'plan' includes addressing the setting where my research was conducted, namely a MMC clinic in Durban, KwaZulu-Natal. Furthermore, the sampling arrangement utilised to generate participants for my study, and subsequently, the methods of data collection and data analysis. Lastly, issues of research and data validity are examined, and the ethical considerations for my research are explored.

Research Paradigm and Design

The subject matter of my inquiry, to a large extent, revolves around understanding if, and how men undergoing MMC have interpreted/decoded various unspecified media (MMC health communication). Broadly, this approach could be classified as a 'reception analysis' based on its employment of Hall's (1980) seminal contribution to audience research, namely, the encoding/decoding model. However, my research does not identify one specific health communication text, and furthermore, does not offer a 'preferred reading' of any said text. My study has presented an exemplar of MMC health messaging in the form of the MMC communications guideline, and has attempted to explore the manner in which numerous and disparate forms of health communication (mediated or otherwise), have shaped men's perceptions in relation to this guideline. Acknowledging influences on behaviour change beyond the 'individual' level; my study has also sought out to determine basic social and environmental variables impacting on men's choices to undergo MMC.

Thus, a more accurate and holistic conception of my methodology would be to say that it relies on a descriptive research design. One of the "fundamental" types of questions asked by social researchers relates to "What is going on?" (De Vaus, 2001: 1).

A descriptive research design is ideally suited to explore the dynamics of such a question, and ultimately provoke “the ‘why’ questions of explanatory research” (De Vaus, 2001: 2).

Another definition of a descriptive research design is, “to describe systematically the facts and characteristics of a given population or area of interest, factually and accurately” (Isaac, 1971: 18). Based on the social and cultural phenomena inherent in such an undertaking, the nature of my research has been exclusively qualitative (Myers, 2008: 8). Qualitative research has been defined by Shank (2002: 5) as, “a form of systematic empirical inquiry into meaning”. A more exhaustive working definition has been outlined by Jankowski and Wester (1991: 44):

Qualitative research is a form of long-term first hand observation conducted in close proximity to the phenomena under study. The research is, ideally, performed in a naturalistic setting with emphasis on everyday behaviour and is often descriptive in nature. Participant observation and case studies are primary methods of qualitative empirical studies.

In my research I deal with subjective accounts and feelings, which prompted me to work from the perspective of an interpretive paradigm and take into account the social construction of knowledge. An interpretive approach means that “qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2005: 3). Thus, my study acknowledges the absence of one single objective reality, and works from the perspective that individuals construct their own subjective realities. To explore how individuals valorised various relevant issues I made use of ‘semi-structured’ interviews as the primary mode of data collection.

Setting

Between December 2011 and February 2012, I commenced the primary data gathering component of my thesis. This entailed conducting twenty semi-structured interviews with men undergoing MMC. The participants in my study were drawn from a newly established MMC programme run by a well-known medical hospital located in Durban, KwaZulu-Natal. For ethical purposes, the hospital requested that I not mention its name in this dissertation, and it is therefore simply referred to as ‘the hospital’. The hospital provides health services to the greater Durban area, and averages an outpatient ratio of 15 000 people per month. Being ‘state aided’, the hospital is only partially subsidised by the Government. Therefore, patients

frequenting its service typically find private hospitals too financially taxing, but can opt for better treatment than that offered by public health care institutions

Funded by the United States President's Emergency Plan for AIDS Relief (PEPFAR), and operational since February 2011, the programme has offered free MMC to men between the ages of 15 and 49. Operating from a clinic in the nearby vicinity, the MMC programme has been explicitly dedicated to up-scaling MMC services and has functioned largely independently of the main hospital itself. On account of being a reputable hospital, as well as the procedure being free of charge, the catchment sample for my investigation derived from the greater Durban area as opposed to only the immediate surrounding areas.

Durban is the most populous city within the province of KwaZulu-Natal, with the metropolitan area being home to three and a half million people (Jacobs *et al.* 2009). Amongst the majority population of KwaZulu-Natal, the predominant language spoken is isiZulu, with English and isiXhosa being second and third respectively (Statistics SA, 2004). Being comprised primarily of individuals that are from the Zulu culture, the majority demographic of KZN have traditionally been a non-circumcising community. In conjunction to this, KZN has the highest HIV prevalence rate in the country (39.5%), which makes it an ideal location for MMC programmes like that which accommodated my research (Department of Health, 2010). Having briefly outlined the setting of my inquiry, I will now explore how participants for my research were selected.

Sampling

The participants within my study were generated through a non-probability sampling method known as *convenience sampling*. Convenience sampling refers to a sample that is "restricted to a part of the population that is readily accessible" (Singh & Mangat, 1996: 7). Being a non-probability technique, my findings cannot be generalised to the population at large, but still reveal insight into the area of question. My sample size included twenty men undergoing MMC, and is characteristic of an "information-rich" sample style arrangement; that is to say, smaller in size but yielding thorough and informative findings (Bertrand & Hughes, 2005: 65). The sample size was based on the argument that smaller cohorts can "facilitate the researcher's close association with the respondents, and enhance the validity of fine-grained, in-depth inquiry in naturalistic settings" (Crouch & McKenzie, 2006: 483). Furthermore, the scope of my dissertation limits the extent to which qualitative data can be analysed and represented when in excess of my current sample.

The target demographic of my study sample was narrowed down to men over 18 years of age who could communicate in either English or isiZulu. This reflected the greater majority of potential candidates for MMC services in KwaZulu-Natal. Rationale behind these criteria was twofold: firstly, men under the age of 18 are classified as minors, and would therefore for ethical purposes, require parental consent prior to engaging in research. Secondly, as isiZulu and English are the predominate languages in KZN, circumscribing my sample around these two primary languages would not only be more representative of the majority population, but remain conducive to the resources at the disposal of the researcher.

Participant selection was reliant on the clinic's reception to initially direct individuals to the researcher. Individuals were then selected in a sequential order of their consent to participate and research was conducted over six non-consecutive days until saturation point. To help the reader understand the participant selection method employed, I will briefly outline the clinic's functional procedure for men seeking MMC.

Firstly, men entering the reception area of the clinic would be identified as either new or returning patients by means of a yellow or white coloured sticker. Typically, the procedure for new patients would be to submit their identification documents for data capture.

After their details had been collected, new patients would be escorted to the main building where they would undergo group counselling on MMC. Men would then be booked in to undergo MMC, which could be on the same day or at a later date based on the number of patients to be circumcised. As my investigation seeks to explore men's perceptions shaped by public health communication, I needed to conduct my research prior to men undergoing group or individual counselling, so as not to influence their responses and thus contaminate my results. This would help to ensure that their perceptions had not been influenced by a quality of counselling unlikely to be replicated at health clinics that lack the funding and human resources of this particular hospital. South Africa's dearth of human resources within the public health sector potentially curtails the extent to which government health clinics can provide quality MMC counselling like that of the hospital accommodating my research.

Having worked in co-operation with the clinic staff, I was able to secure an arrangement whereby on the days of my research, new patients over the age of 18 would be informed of my study, and subsequently, kindly asked about the possibility of a brief conversation with the researcher. At this point, if the individual was interested in discussing the possibility

further, either myself as the primary researcher, or my translator, Ndabenhle Tobo, would ascertain whether the individual would prefer to communicate in either English or isiZulu.

The details and implications of the research and semi-structured interview were explained in the language of the individual's preference. This ensured the individual was comfortable and well acquainted with the objectives and requirements of my study. At this juncture, individuals would declare whether they were interested in being a participant of the study, or not. If individuals agreed to participate, then they were welcomed to follow Ndabenhle and I to a pre-arranged room near the back of the clinic. Being comfortable, well-furnished and secluded, the venue was an ideal environment to conduct research away from other disturbances. Upon completion of the interview, the participant would proceed to collect their documentation from reception and wait to be escorted to the main building for group MMC counselling and booking.

To expand on the semi-structured interview, I will now focus my attention onto the methods employed in my primary data gathering.

Methods of Data Collection

The data gathering portion of my study was reliant on semi-structured interviews as a means of driving my research. The format of the semi-structured interview “falls somewhere between the standardised open-ended interview and the informal conversation”; thereby allowing me to potentially probe and investigate issues that came to the fore during participant interviews (Bertrand & Hughes, 2005: 79).

The semi-structured interview relies on certain questions to guide the conversation, but allows the latitude and freedom necessary for the participant to discuss what is important to them (Hesse-Biber & Leavy, 2010: 102). By doing so, this gives agency to the participant to guide and shape data, and maintains less interference on the part of the researcher.

The questionnaire that served as a guiding framework for the interview process was compiled by myself, in collaboration with my research supervisor and the hospital's own social science researcher (See Appendix 4 & 5). Working in collusion with my supervisor and the hospital's researcher allowed me to design an interview template that was suitable for gathering all relevant data, as well as clearly demarcating the limits of my research to the hospital's ethical committee. This was a necessary prerequisite to commence research, and demonstrated the ethical integrity and relevance of my proposed interview questioning.

Questions were based on constructs of the Health Belief Model, key messages of the MMC communications guideline, and basic social and environmental variables that are explored in the Social Ecology Model of Communication and Health Behaviour. In this way, although developed inductively, the emerging themes could draw on the predictive nature of the HBM, to some extent the social influences espoused by the SEMCHB, and the comparative measure of the communications guideline as points of reference.

Questions were specifically worded and constructed to be open-ended, so as to provide the most detailed accounts possible; whilst at the same time attempting to avoid presuppositions that may influence participant responses. This ensured the least possible influence on the part of the researcher for the outcome of participant answers.

Pre-testing of the interview questionnaire was conducted with two individuals to undergo MMC; the individuals were sourced through a social contact of the researcher, and aided in assessing the utility of the questionnaire as a data yielding tool. Findings from pre-testing interviews concluded that the interview template served as a viable means of data generation and would therefore be used amongst actual participants.

Twenty five carefully designed questions comprised my interview template; beginning with basic social and environmental variables, then moving on to exploring perceptions of HIV risk, MMC benefits, and other key messages. The interview template (collaboratively compiled with the research supervisor and the hospital research director) served as a comprehensive research tool for uncovering the necessary data.

Once individuals had consented to participate in the study and signed the requisite ethical documentation, the data gathering process was commenced. Questions were read out to the participant in their language of preference, thereby ensuring a clear understanding of what was being asked. I was responsible for conducting interviews in English, whilst Ndabenhle would interview isiZulu speaking participants. Both myself and Ndabenhle were present during interviewing, however only one researcher would address questioning to the participant during a given session, so as to not interfere with the rapport or cadence of the interviewer.

A certain amount of freedom is allotted when employing the semi-structured interview as one's research apparatus; therefore relevant issues were probed and unraveled if having emerged during participant responses. By doing so, Ndabenhle or I, were able to explore

men's perceptions without guiding their responses in any pre-determined direction. On completion of any one question, the understanding as Ndabehle or I were privy to, was then repeated back to the participant to ensure accuracy.

Interviews were approximately thirty minutes each, and were conducted in a quiet and comfortable venue that had been allocated during preplanning discussions. All interviews were audio-recorded on a recording device after securing permission from the participant to do so. When a participant's interview was concluded they were presented with the 'Brothers For Life' MMC information pamphlet, which is a Johns Hopkins Health and Education in South Africa initiative (See Appendix 6). Brochures in both English and isiZulu were acquired and offered after interviews had come to an end. Information in the brochure covered important aspects of MMC and served to rectify any misperceptions that may have existed. Upon completion of a day's research, all audio recordings were digitally transcribed with Microsoft Word; English interviews were typed out verbatim, and isiZulu recordings were first translated back into English by Ndabehle, and then transcribed.

Data Analysis

The procedure of analysing qualitative data is said to be a "process of resolving data into its constituent components, to reveal its characteristic elements and structure" (Dey, 1993: 31). Various methods can be utilised in the endeavour to achieve such an outcome; for the purposes of my study, an approach known as thematic data analysis was employed.

Thematic analysis "is a search for themes that emerge as being important to the description of phenomenon" (Fereday & Muir-Cochrane, 2006: 3). Through the meticulous reading of the data, emerging themes can "become categories for analysis" (*ibid.*). A 'theme' can be described as a subject that "captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data" (Braun & Clarke, 2006: 82). Themes can be developed in two differing manners: either inductively or deductively. When adhering to an inductive technique, themes are generated by a thorough reading and re-reading of the data, and are therefore data-driven, as opposed to being based on any pre-existing or preconceived frameworks. Conversely, using a deductive approach would be driven by "the researcher's theoretical or analytic interest in the area", and would therefore impose a pre-defined thematic structure on the data (Braun & Clarke, 2006: 84).

My study addressed the issue of theme generation from an inductive perspective. By searching through interview transcripts I was able to code ‘chunks’ of related data, and then arrange and classify these chunks under the relevant themes. Themes were created in collaboration with my research supervisor. After separate individual analyses of the data were performed, a consensus was reached as to what themes emerged within the data. Despite being a ‘bottom-up’ means of theme development, during an inductive approach the researcher inevitably has certain “theoretical commitments” which cannot be entirely divorced from the process (Braun & Clarke, 2006: 81). Thus, the majority of the themes emerging during my own, as well as my supervisor’s analysis of the data, were in fact theoretically linked.

The predictive nature of the Health Belief Model that informed my questioning and the interpretative paradigm housing my inquiry has meant that the themes in my thematic analysis function at the *latent level* (Braun & Clarke, 2006). The *latent level* describes themes that do not merely categorise and present semantic content, but rather, try to explore and “identify the features” that gave rise to certain outcomes (Braun & Clarke, 2006: 84).

Nine themes were identified as a framework for data analysis, these constituted of: *demographic variables, social influences, cues to action, perceived benefits of MMC, perceived barriers to MMC, perceived severity of HIV, perceived susceptibility to HIV, self-efficacy*, and finally, *cultural issues*. After identifying these nine themes, transcripts were dismantled and rearranged so that all information was categorised by theme in nine different documents. In this way, all data was displayed so that I could contrast participant answers within the context of that specific theme, allowing for a superior discussion of my findings.

Having outlined the specifics of my data analysis I will now explore the validity of my data gathering and furthermore, my findings.

Validity

Stemming from positivist discourse, the concept of validity refers to “whether the research truly measures that which it was intended to measure or how truthful the research results are” (Joppe, 2000: 1). Validity has been a problematic concept to articulate within qualitative research practices, and as a result “many researchers have developed their own concepts of validity ... such as, quality, rigor, and trustworthiness” (Golafshani, 2003: 602). However, traditionally within quantitative inquiry, validity has consisted of two contributory

components, namely internal and external validity. Keeping in mind the interpretative perspective adopted in my study, I will discuss measures taken to ensure the internal and external validity of my inquiry.

Broadly, internal validity refers to “the degree to which the results can be attributed to treatment”, which essentially addresses the credibility of a researcher’s given approach to drawing conclusions from gathered data (Ali & Yusof, 2011: 30).

There are no explicit rules on how to evaluate the internal validity or credibility of a given qualitative inquiry, other than to explore the researcher’s efforts into ensuring academic rigour and credibility during research and the discussion of data (Golafshani, 2003). A point of departure for such an endeavour would be to inquire whether the right research question is being asked. In the context of my study I have demonstrated that “research that tests how messages are received and interpreted” by men undergoing MMC “is also important” (JHHESA *et al.* 2008: 12).

In conjunction to this, the research methods chosen for my thesis are well established and documented, drawing on long standing theory to underpin my interview questioning and data analysis. Central to my investigation is the Health Belief Model, which historically, has been one of the most influential theories in the development of HIV health interventions and predicting health behaviour, thereby providing a large measure of validity for my thesis (Mathews, 2005).

Questions guiding the interview were carefully constructed and designed through collaboration with my research supervisor and an external social science researcher appointed by the hospital accommodating my research. The inclusion of “several investigators” during the process of refining my interview template is indicative of investigator triangulation, a process whereby validity is augmented through the inclusion of other researchers’ perspectives (Golafshani, 2003: 604).

Questions were tested prior to the commencement of official research with two individuals seeking out MMC; the answers elicited demonstrated the utility of the guiding questions to yield data relevant to my research question. A well-versed isiZulu translator, high quality digital audio recordings, as well as same-day transcriptions ensured the most accurate accounts of participants’ answers for data analysis. Finally, what has been termed a “foundational method for qualitative analysis”, namely thematic analysis, was used to

categorise and present my findings; thereby ensuring a relevant and comprehensive review of my data (Braun & Clarke, 2006: 78).

I will now briefly touch on the concept of external validity, otherwise defined as the “generalizability of the results” (Ali & Yusof, 2011: 30). ‘Generalizability’ or what is commonly referred to as transferability within qualitative research, describes “the extent to which the findings of one study can be applied to other situations” (Merriam, 1998: 207). The concept of external validity within qualitative research is a similarly contested topic:

Since the findings of a qualitative project are specific to a small number of particular environments and individuals, it is impossible to demonstrate that the findings and conclusions are applicable to other situations and populations.

(Shenton, 2004: 69)

However, by revealing the context and process by which data were generated and conclusions reached, the researcher can clarify the environment giving rise to such outcomes. Therefore, by elucidating the manner in which data were gathered, and reflexively articulating my role in the construction of findings, other researchers that feel their studies are of similar design and purpose can to some extent draw generalisations from my findings, albeit cautiously (Lincoln & Guba, 1985).

Reliability

Another ill-defined concept in qualitative research is reliability, which refers to whether, given the same environment and participants, the same findings would be reproduced by other researchers. According to Morgan and Drury (2003: 6):

This can be achieved by explaining the methodological framework and the range of strategies that have been used within the study. The rationale for the way in which participants were selected to take part should also be described, as should the researcher’s role and their perceived relationship to those participants. It will be necessary to document analytic constructs and meanings, which derive from data, alongside the methodological approach and procedures that were used for producing data.

Having thoroughly covered the theoretical and methodological pathways inculcated in the above description I have been able to reinforce the potential replicability, and thus reliability of my approach.

Ethical Considerations

By its very nature qualitative research tends to perpetuate certain power dynamics; namely the researcher-participant relationship that often renders an unequal distribution of power in favour of former (Orb *et al.* 2000). Addressing the ethics within qualitative research seeks out to acknowledge the measures that strive to protect the wellbeing of participants and aim at “doing good” overall (Orb *et al.* 2000: 93). Ethics within my study were of utmost importance; ethical clearance was obtained from both the UKZN Ethics Committee (See Appendix 1) as well as the hospital’s own independent ethics board. Prior to clearance I was asked to present my research proposal to various stakeholders involved in both the hospital’s ethics board, as well as the MMC clinic itself. Emphasised in my presentation was the paramount importance of participants’ wellbeing and the functioning of the MMC clinic. After reviewing my proposal and presentation, ethical clearance was granted on account of my intended research being not only to be valid, but ethically sound.

Ethical considerations included presenting all participants with a clearly articulated and refined participant consent form that spelled out the purpose, requirements as well as the optional and publically confidential nature of my investigation (See Appendix 2 & 3). Consent forms were comprehensive and explicitly stated that individuals did not have to participate in my study, and if they did indeed choose to participate, then they could opt out at any point in time. Participants were also made aware that they did not have to divulge any information or answer any question they were not comfortable with. Ethics forms were meticulously designed to reiterate the completely voluntary nature of my study, and furthermore, that individual’s MMC procedures would be unaffected by whether or not they chose to participate.

It was explained that if men should participate their names would remain hidden by means of a pseudonym; in the event of my findings being published, this measure would ensure the protection of participant identities. Participants were also made aware that no manner of compensation would be dispensed for their participation in my study; however, their contribution could be of value to understanding how men perceive MMC for future communication efforts. Printed in both English and isiZulu, my informed consent document requested that individuals formally declare whether they were comfortable with the conditions of my study, and in addition, with the interview process being audio recorded.

The interview process was commenced subsequent to individuals formally consenting to participate. During this time, Ndabenhle or I strived to continuously remain cognisant of the respondent's emotional wellbeing, allowing them to dictate what information they were comfortable revealing. Respondent's answers were repeated back after each question to ensure their position was accurately understood by the researcher guiding questioning. In this way, represented answers resembled participants' beliefs as closely as possible, providing for more ethical and valid findings. Upon completion of the interview, an educational brochure covering relevant aspects of the MMC procedure and the protective benefits was given to each individual. Ethically, this measure served to rectify any false perceptions or clarify any areas of uncertainty or doubt the individual may have had.

Limitations

The limitations of my study that are worth mentioning relate broadly to three areas of my dissertation. Firstly, due to the non-probability sampling method employed in my study, the findings and conclusions deduced through my research are not necessarily generalisable. That is to say, they are not intended to be a reflection of the general public necessarily, but are more a glimpse into the concerns motivating my research question. The second limitation of my study relates to the sensitive and personal nature of circumcision, and the manner in which this may have affected my data collection. Men may have deliberately withheld information on account of it being deeply personal and perceived as something not to be discussed with others. Finally, the findings depicted in my research are based on men's perceptions; as specified in the theoretical component of my dissertation, the occurrence of behaviour is attributed to more than just perceptions. Therefore, my findings do not (and have not claimed to) represent direct causal relationships between perceptions and subsequent risk behaviour; more accurately, my findings depict perceptions that would ultimately influence, rather than dictate, sexual risk behaviour subsequent to undergoing MMC.

Future studies could potentially address these limitations by incorporating more participants through a probability sampling method, and in conjunction, monitor behaviour as well as perceptions of participants over a longer period of time.

Chapter Five: Results and Discussion

The purpose of this chapter is to summarise and present results derived from my data collection, as well as discuss the relevance of said data within the context of my guiding research questions. As described in the methodology chapter, during data analysis, nine emergent themes were identified as categories for discussion. These were recognised as the *demographic variables*, *social influences*, *cultural issues*, *cues to action*, *perceived severity of HIV*, *perceived susceptibility to HIV*, *perceived benefits of MMC*, *perceived barriers to MMC*, and finally *self-efficacy*. Each theme will now be extrapolated upon by not only referencing key excerpts and findings, but by contrasting participant knowledge against health communication's advocated key messages. An examination of these characteristics aims to help contribute toward a more holistic framework of data representation.

Demographic Variables

Out of the nine thematic categories identified for data analysis within my methodology chapter, the first to be expanded upon is the *demographic variables*; this component details an area of interest that was specific to the individuals and their broader structural context. Comprised within this theme were the participants' age, the location of their day to day living environment, and whether they were aware of any healthcare institutions in the nearby vicinity of their residence. In addition to exploring the participants' age, questioning also aimed to shed light on the physical conditions that men live under, as well as each individual's access to health care facilities.

Age

Out of a total of 20 participants, the mean age of individuals was 27, with the youngest participant being 19, and the oldest being 39. The department of health stratifies HIV prevalence amongst men into differing age brackets. I have utilised these brackets to provide a further breakdown of my sample. Only one participant fell within the 15-19 category, eight participants corresponded with the 20-24 age bracket, five individuals were part of the 25-29 year old collective, four belonged to the 30-34 assortment, and lastly, two remained in the 35-39 age group. A priority demographic for MMC services in SA is the 30-34 age group, as it is estimated that HIV prevalence within this age bracket is 25.8%, the highest across all male age groups (Department of Health, 2010; HSRC, 2001).

By allocating participants into these categories the sample's overall age breakdown can be more accurately represented, in turn, aiding accessibility and transferability of research findings.

Living Environment

When looking at participants' areas of residence, eight individuals attested to living in what could be defined as developed urban or suburban areas. Four of whom were residents of suburban areas throughout Durban, including Morningside, Musgrave, Durban North and Amamzintoti. One of the eight individuals living in developed areas resided in a suburb of Pietermaritzburg, which lies approximately 77 kilometres outside of Durban. Pietermaritzburg is known not only for its role as an industrial hub, but as being the second largest metropolitan area within the province of KwaZulu-Natal (KZN). The remaining participants residing in developed areas lived in Durban's inner city or CBD. Although once a relatively affluent area, the income brackets of residents living within Durban's inner city have declined. The exodus of middle class residents to the suburbs has seen an increase in working class residents within Durban's CBD.

The resultant influx of residents into the inner city as well as a lack of infrastructural maintenance has given risen to 'urban decay' and dilapidation (S4, n.d). Therefore, when comparing average household incomes, suburban areas like that of Durban North and Pietermaritzburg are characteristically more inclined to represent higher income demographics than urban residents of Durban's CBD itself (NAB, 2010; Robins & Hadingham, 2005).

Despite South Africa being an "upper-middle income country", the economic and geographic landscape of the nation is characterised by "sharp dualisms" (Carter & May, 1997: 1). Evidence of this economic dichotomy was similarly present in my sample, as among the remaining twelve individuals, eleven had stated their residences were located in established townships, otherwise known as 'locations'. In addition to these individuals, one participant had declared himself as from a rural community in Kwamakosi, which is approximately 90 kilometres south of Durban. South Africa's townships, or 'locations', can be defined as "areas that were designated under apartheid legislation for exclusive occupation by people classified as Africans, Coloureds and Indians" (Lester *et al.* 2009: 6). Research shows that forty percent of all South African households are located in townships, and conditions within these underdeveloped urban areas have "remained uncomfortable" despite the advent of

democracy and end of apartheid in 1994 (Bond, 2008: 406; Lester *et al.* 2009). Infrastructural conditions within many of SA's townships still struggle to adequately provide basic municipal services such as electricity, running water, sanitation, and public transport.

In addition to South Africa's township population, a large majority of people – like that of the respondent 'Vusi' from KwaMakosi, live in rural communities. In the context of my thesis, rural refers to “sparsely populated areas in which people farm or depend on natural resources, including villages and small towns that are dispersed through these areas” (National Treasury, 2011: 192). Rural areas have the highest backlogs of municipal service delivery in terms of sanitation, electricity and water within SA, and also are “less likely than their urban counterparts to have school qualifications” (National Treasury, 2011: 194).

To provide some basic context as far as health related education is concerned, I refer back to the 2009 National Communications Survey. One of the key findings derived from the NCS' survey related to the population reached by HIV communication programmes (HCPs) per province. According to research, within KZN, 89% of the population is estimated to have been exposed to at least one form of HIV communication programme (Johnson *et al.* 2010). Residents of developed urban areas that had encountered some measure of poverty were most likely to have encountered health communication programmes, whereas other settlements - with emphasis on rural communities, were less likely to have witnessed any health or HIV communication campaign.

The preliminary findings for the 2012 National Communications Survey have recently been made available; on a National level, 83% of the population is said to have engaged with at least one form of health communication initiative (JHHESA *et al.* 2012). A third of this figure reported knowledge of at least six health communication programmes, however on average, individuals were likely to have been exposed to approximately four HCPs on a national level. In terms of MMC, the 2012 NCS found that 47% of men and women knew that MMC reduces one's chance of contracting HIV, as opposed to only 8% in 2009. The almost six fold increase is indicative of the wide scale drive to upscale MMC services by means of education and health related media programmes.

Access to Health Care

Looking closer at the aspect of health education brings to light another important physical feature, namely, access to health care facilities. Ease of access to clinics and hospitals can influence the extent to which individuals can come into contact with health related information on MMC as well as other issues. Henceforth, the key driver explored within this section of the *demographic variables* theme was related to individuals' perceived access to healthcare in their residential environments. The respondents living in township areas all indicated that at least one or more health care provider was located within a relatively close proximity:

Each section in Umlazi has a clinic and there is one main hospital called Prince Mshiyeni.

(Lincoln, 2012)

The solitary rural resident had remarked, "There is only one, the Kwamakosi clinic" (Vusi, 2011). Similarly, amongst participants living in developed areas, seven of the eight respondents declared knowledge of nearby health facilities. The single individual having expressed no acquaintance with any local clinics or hospitals was a resident of Morningside, a relatively affluent suburb of Durban. In analysing the data, this respondent's answer should be rooted within context; research questioning aimed to assess whether access to healthcare within the 'general area' of one's residence was possible. The interpretation of what constitutes 'general area' was arguably translated in a number of ways, as individuals in townships, although likely further away from healthcare facilities, still associated these providers as being nearby. Siphso (2011) of Morningside however, likely perceived 'general area' as referring explicitly to the demarcated boundaries of the suburb itself. Thus, it should be noted that although his response did not identify any healthcare providers nearby his local residence, living in a developed suburb of Durban, distance between various hospitals is limited.

By addressing the various components within the *demographic variables* theme, I have highlighted the contrasting physical features akin to my sample. To summarise, individuals were between the ages of 19 and 39, lived in rural, township, urban or suburban areas, and all - with the exception of one, had nearby access to local clinics or health facilities.

The rationale behind briefly exploring the structural and healthcare related environments of participants draws upon the premise enshrined by the Social Ecology Model of Communication and Health Behaviour – namely, that one’s environment affects health related decision making. By taking this into consideration, I hope to have silhouetted the broader structural context impacting on some of my study’s respondents. In doing so, I will be able to utilise these characteristics as points of reference when discussing patterns that emerge in subsequent themes. Having addressed both the ages of participants as well as their areas of residence, for purposes of easier reading and contextual understanding, participant names will be followed by parentheses containing their respective ages and living areas.

Data were collected between December 2011 and February 2012; precise dates of participant interviews will be correlated respectively within the final references chapter.

Social Influences

Emerging from my analysis of participants’ social contexts, or specifically, the vectors shaping perceptions at a primarily interpersonal level, comes the theme of *social influences*. Discussion within this theme aims to explore the social interactions and perceived community outlooks impacting on individuals’ choices to undergo MMC, as well as their own perceptions of the procedure itself. By bringing these factors into focus, I hope to contextualise my research into public health communication and highlight some of the non-mediated channels shaping men’s choices and perceptions regarding MMC.

Family

Family members, alongside with the opinions of partners, were the most frequently cited social actor involved in the MMC decision making process throughout the study. Fifteen (75%) of the twenty participants noted having spoken to, or been encouraged by family members:

I spoke to my mum, I told her I’m doing the medical circumcision and she never said anything to make me think that she has other views about circumcision besides the health benefits that it has (Sbongiseni, 24, Township).

A further participant, Spesihle (20, Urban), echoed this sentiment, “My family think it’s a good thing because they’ve heard about it on the radio and all over, so they’re very

supportive”. This suggests that family support, against a backdrop of mass media, may be strong indicator of men’s willingness to undergo MMC.

Contrary to the accounts of the aforementioned individuals, five participants felt that the choice to undergo MMC was a personal one, and thus, had omitted to involve any family members in their decision to pursue MMC. However, a caveat in need of mention is that amongst the five participants who did not speak to family members, three (60%) came from either suburban or inner city areas. The Human Sciences Research Council’s (HSRC, 2004: X) insights into family structure may provide some clarity on why this trend was noted:

Social supports, through kin, neighbourhood and faith-based networks, are the mainstay of support for people living in poverty.

Therefore, the urban and suburban participants’ financial emancipation could have affected the levels of autonomy felt by men, and thereby reduced the need for family based support during MMC decision making. Interestingly, seven out of the fifteen individuals having spoken to their kin (47%), spoke exclusively to male members of their family. When asked whether his family were aware of his intention to undergo MMC, Siphon (24, Suburban) jovially remarked:

No, no, nobody, I will tell them afterwards. Oh ya ya ya [*sic*], my cousin, he’s the one who referred me here, he’s the only one who knows. [When asked how he thought his family would feel about him undergoing MMC, the participant added] But you know, you kind of feel embarrassed - ya, especially because my siblings are female, so ya, ay, you can’t talk about these kinds of things.

The above excerpt brings to light the gender dynamics involved in MMC decision making – some individuals felt the topic was too sensitive or embarrassing to be discussed with female family members. It was noted that amongst those who spoke only to male family members, a preference for relatives of similar age groups existed, such as brothers or cousins, and less commonly, participants’ uncles.

Although fifteen participants reported speaking to family about MMC, two participants admitted that certain family members were not as receptive to the idea as others. Sthe (24, Township) had said, “The older members of my family don’t understand it because it’s not part of Zulu culture, but family members closer to my age are more understanding”.

The fact that a preference was shown for family members of similar age when discussing MMC, in addition to Sthe's acknowledgment that the older members of his family did not support MMC, suggests that younger generations may be more receptive to MMC. Based on Sthe's account, the resistance stems from cultural clashes between what is perceived to be traditional Zulu practices, and Xhosa culture, which is a contentious issue soon to be discussed.

A differing family objection was recalled by a participant going by the name of Lincoln (22, Township). Lincoln had voiced that his mother thought the procedure would be too painful, and she had cautioned him against undergoing the operation. In spite of the fact that only one participant reported to have encountered this problem, reinforcement through media and education should be considered for mothers of young men, as there is some indication that the safe and relatively painless nature of modern day medical circumcision is not comprehensively understood amongst this demographic.

Partners

Another strong inter-personal influence on MMC decision making stemmed from the participants' partners. Nineteen individuals (95%) described themselves as either being married or in a committed relationship with a female partner. Just one individual had declared that he was single at the time of data collection. Seventeen (89%) of the nineteen men in relationships specified that they had spoken with their partner about MMC prior to arriving, however, only fourteen were supported in their choice to follow through with the operation.

Some 53% of the participants in relationships who had been encouraged by their partners described their companion's responses as being generally supportive, with little reference to the health benefits of the procedure. Sbongiseni's (24, Township) partner is one such example; he maintained, "She's ok with it, she's ok with it, I just told her that I'm going to go for it and she said, 'No that's fine, go for it'". This type of response is more indicative of positive reinforcement, as opposed to encouragement premised on delineated motives of some description. Partner support predicated on a more specific basis was documented within 29% of the fourteen participant responses.

On describing how his partner felt about MMC, Malusi (38, Township) said, "My partner thinks it's a good thing because it gives her peace of mind knowing that there is a reduced risk of me getting infested by any sexually transmitted diseases that are out there besides

HIV”. In a similar vein, Buthelezi answered: “My partner thinks that if I’m circumcised it will decrease our chances of HIV infection”. The two aforementioned responses provide evidence that on some level, female counterparts are concerned over their partner’s and their own risk of contracting HIV or other STDs as a result of male initiated infidelity. Thus, the HIV benefits afforded to men through MMC were a driving variable behind partner encouragement amongst some participants’ partners.

Another possible driver of why female partners played a large role in encouraging men to undergo MMC is touched on by Simphiwe’s (29, Suburban) account:

She’s always tried to make me do it, she’s always said, “Just go do it”. For the same reasons I’ve stated before, it’s better, it’s cleaner, there’s less chance of anything happening, and based on that, she’s always said I must do it - but obviously she wants me to get better [referring to sex], but she’d never tell me that.

Although not definitive, Simphiwe’s perception that his partner’s reasons for encouraging MMC were sexually motivated, translated into actualised incentive to undergo MMC. Simphiwe’s response was the only instance in which a partner alluded to sexual motives as being their reason for encouraging circumcision; henceforth, improved sexual performance can’t be considered a significant factor in galvanising support for MMC amongst partners. Although, one should take into account the sensitive nature of discussing sexual performance with a partner, an area that would warrant further research to definitively conclude the above finding.

Having said this, the primary determinants behind partners’ approval and encouragement of MMC - as perceived by respondents, can be classified as: primarily, general support for partners’ choices, and secondly, as active motivation to help minimise the risk of HIV and STD infections.

Two other individuals stated that their girlfriends were unaware of them undergoing the procedure, as it was a personal choice. Both of these individuals had reported earlier that they had only spoken to male members of their families, which could suggest that the topic of MMC was perceived to be too sensitive to be discussed with women. One other participant had tried to describe the procedure to his girlfriend but felt she did not grasp the concept properly:

She hasn't had someone to talk to her about it, she doesn't know the difference. But, I've showed her the difference, I've showed her how it's going to look afterwards, but ya, she doesn't really know about it. I tried to explain to her about bacteria, but I think she needs to read more about it and hear more about it, maybe after this month she might.

(Kwazi, 19, Township)

The fact that many participants' partners did not make reference to the health benefits of MMC, but just simply encouraged it, in conjunction with the account described by Kwazi, could mean that a large proportion of female partners do not fully understand the medical advantages associated with MMC. Educational initiatives could help simplify the mechanism of action through which MMC operates, as well as highlight its medical benefits from a women's perspective.

In contrast to the previous responses, two participants had indicated that their partners were against them undergoing MMC. The first participant, Vusi (26, Rural), spoke of how his girlfriend was suspicious over his reasons for being circumcised, as she felt it was merely an excuse for him to sleep with other women. This example points out that perceptions of MMC as a prophylactic are in some cases perceived to be a 'natural condom' – or in other words, it may allow men to be promiscuous without risk of infection. This once again reinforces the argument that MMC communication strategies should continue to encourage condom use amongst women in relationships, even subsequent to their partner undergoing MMC. Freedom (28, Township) on the other hand, described his wife's response somewhat differently:

“Have you ever heard me complaining, I like the way it's bent you know, [Referring to penile shape] the way it touches me inside, now it's going to be straight! I mean, who's going to scratch me there now?” I laughed and said just let me do it [Undergo MMC].

The above response suggests that Freedom's partner believes MMC will change his penile shape, which is an erroneous assumption, as the procedure affects only the foreskin itself, not the structure of the penis. By contrasting the above excerpt against the earlier instance described by participant Simphiwe (29, Suburban), some interesting inferences could be deduced. In Simphiwe's case, MMC was perceivably seen as a vehicle to improve sexual satisfaction for his partner, whereas in Freedom's case, sexual satisfaction was ideal despite not being medically circumcised, and his partner was anxious that MMC might change this. The apparent contradiction that MMC would somehow alter each female partner's sexual experience in opposing ways is indicative of the presence of myth and conjecture surrounding the topic within suburbs and townships alike.

Despite this however, overall, out of the individuals either married or in committed relationships, 74% confirmed that their partners supported their choice to undergo MMC. No patterns emerged between variables of age or location and partner responses; henceforth, continued deployment of widespread education programmes targeting female partners and women are well warranted in order to further leverage men in the uptake of MMC.

Perceived Female Opinion

Aside from the encouragement of partners, the opinions of women in general also seemed to be an influential social factor within this theme. Eleven participants described encounters whereby women had voiced preference for men who were circumcised. Siphon (24, Suburban) recounted one such experience:

I always get those questions, "have you done this thing? Have you done that thing?" [MMC] Uhm, they say it gives them more pleasure and the guy lasts longer, in fact, if you get in a relationship that's the first thing they ask you when you're talking about sex and stuff – "are you circumcised?" I tell them I'm going to do that thing later.

Similarly, the other respondents having described encounters with women had also maintained a belief that women's preference for circumcised men was predicated on a sexual basis; Freedom (28, Township) elaborated:

I went out with a Xhosa chick right, uhm, she told me to do this thing [MMC], and I said "Why?" So she said "No man, it's the right thing to do you know, infections and stuff". So I said "Ok cool, what else?" She didn't want to tell me, but you know when I looked at her, I felt that maybe there might be a difference sexually. I seriously had a feeling it might be a difference somehow, because why would she bring that up? My man, let me tell you, we had just done doing it [sexual intercourse] and we just sat for a while, pillow talk and stuff, and ya she mentioned it. I was kind of surprised and that was just one of the files that got stored in my mind, and now I'm here today.

The openly candid nature of Freedom's response allows for a glimpse into the intimate environment that gave rise to his own perceived notion of how women view circumcision. The fact that inception of this belief occurred post-coitus, only emphasises the gravity of the statement – as one can appreciate the sensitivity to feedback in such circumstances. With other respondents alluding to similar feedback, there is reason to believe that this determinant could be a powerful variable in the demand for MMC. With just over 50% of the sample affirming that tacit or explicit female opinion toward MMC had influenced their own decision making, it is evident that the role of women, both as partners, as well as opinion makers within the public sphere, can play a significant role in MMC uptake.

Friends

Continuing in a descending order of occurrence, the data collected from the interview transcripts reflected that 'friends' played a role in ten individuals' choices to undergo MMC (50% of the sample). Participants were distributed throughout urban, suburban and township areas and did not follow any distinctive age related pattern. For the purposes of this discussion, I have differentiated between friends and community influences. Although some of the individuals identified as 'friends' are indeed members of the community, they are defined as having a close personal relationship with the participant, and not merely regarded as general community members, as are some of the individuals in the category to follow.

Sandile's (33, Suburban) testimony emphasises the prominence attributed to word of mouth experience amongst friendship circles:

A friend of mine, actually two friends of mine recently, I think in August, came here for circumcision. I was always interested in it, but you know the fear that goes along with it, and if you hear it from a person, you also get the added benefit of the actual experience and how the clinic does it, how painful is it, which you cannot get from the advertisement.

Sandile's comment suggests that individuals can develop or augment their own sense of self-efficacy through the vicarious experiences of friends' accounts. Interestingly however, after scrutinising the data set, it was noted that there was no correlation between individuals who had been encouraged by friends, and those individuals who felt they had sufficient information from other sources regarding MMC. Only three individuals stated that they had adequate information on MMC and did not need further clarity on at least some aspects of the procedure, and amongst these three, only one individual had spoken to a friend prior. Therefore, although half of the sample group had spoken to friends about MMC, one can deduce that this aided primarily in bolstering confidence to undergo MMC as opposed to illuminating technical details of the procedure itself.

From the above it could be argued that nine of the ten participants in the study who discussed MMC with friends did so and encountered primarily positive reinforcement; however, one individual described his friends' consensus on MMC as antagonistic to his own aim of being circumcised.

Simphiwe (29, Suburban) had nervously explained:

To tell you the honest truth, even right now bro I'm still scared, and I'm actually chatting to my one mate on Facebook right now, and he's like, "dude you're gonna [*sic*] be screwed for six weeks". He's actually basically scaring me, and the one guy, the one friend of mine that I wanted to bring yesterday, I went to him yesterday and said, "Dude it's for free, let's go?" And he said, "No ways, the one guy went and did it in hospital and he got infected and he almost died, and he was just sick".

The conversation depicted above reinforces how social modelling can enhance or undermine one's own self-efficacy; when individuals received positive feedback from friends, as many did, they expressed far less hesitancy and anxiety than in cases where friends discouraged the

procedure, as in Simphiwe's scenario. Therefore, the data suggests that friends can play an important role in fostering or eroding the self-efficacy of individuals toward MMC.

Community Influences

This section on the 'community influence' aspect aims to direct some attention toward the *community* level of the SEMCHB. This has already in part been touched on in the *demographic variables* theme, in so far as the physical environment and access to health facilities have been overviewed. This section aims to account for social forces acting on individuals within their residential communities, and furthermore, the perceived community consensus on MMC as understood by each individual.

Out of the twenty participants, six men acknowledged there had been some direct community involvement in their decision to follow through with MMC. Three of these men said this had been through Church involvement; Bandile (34, Township) was one such individual:

There have been those who told me before that it's important to be circumcised, especially in my congregation. I still had that fear but then someone told me that there have been improvements and that it was safe and painless.

The remaining three individuals specified that community involvement had been through either contact with general community members, or youth meetings, with two participants specifying the former, and one the latter. The majority of participants (60%) having been influenced by community facilitated variables resided in townships; this is likely due to the fact that townships have been described as "places where a real sense of community exists" (Lester *et al.* 2009: 6). Shared financial and infrastructural circumstances foster social interaction and communal support within many impoverished township communities, a likely explanation for why community interaction was less documented in more affluent areas.

Therefore, direct involvement from the community was not a commonly mentioned interpersonal factor according to participants of the study. The indirect community influence, although not precisely measurable, was documented by discussing how participants described their respective communities' perceptions toward MMC. These reported community beliefs are not an objective reflection of the total population, but a judgement based on an individual's interaction within his community, and therefore, should be seen as the participant's subjective account.

Participants living within inner city communities felt that MMC was “definitely gaining popularity”, although some community members were deemed to be “set in their ways” (Selwyn, 29; Spesihle, 20). The inner city respondents all felt that MMC was on an increasing trend in terms of demand and acceptance. Amongst township communities, sentiment toward MMC was split primarily into two separate factions; those who felt their community encouraged it, and those who maintained it was a Xhosa only tradition that would not be adopted by Zulu communities. Discordant responses emerged from participants living in the same townships; reasoning behind this could be due to spatial distribution of populations, or simply subjective interactivity. The comments of those that felt their communities generally encouraged MMC are contrasted with those of individuals who said:

They understand the importance of MMC, but many of them don't want to go and do it, because many of them have negative beliefs toward it, they think maybe you're a Xhosa, and some Xhosa guys disrespect us [Zulu men], they say you going to a hospital to do something we do in the mountains, there is a lot of negative stigma toward it. Some Zulu guys say “I'm not Xhosa, I'm not going to do that”

(Lincoln, 22, Township)

Another poignant issue that was raised by a township resident related to a potential obstruction to MMC as seen by community residents; Luzuko (22, Township) elaborated:

People would love to do it, but they too scared, too scared to know the check-ups for the HIV, that's the turn off part. Before they even do the circumcision, they're going to be tested and be discouraged because they have HIV. They just wanna [*sic*] circumcise and not get the test done.

The excerpt draws strong parallels with the position espoused by the Health Belief Model, that if barriers to any recommended health action are perceived as insurmountable, or too daunting, then the action will not be pursued. With the majority of South Africa's poor living in townships, these areas have become focal points of the HIV and AIDS pandemic. Within township areas the threat of HIV acquisition is very real, and the prospect of being diagnosed with a life changing illness is one not taken lightly. The account of some township dwellers point out that the mere thought of finding out one's HIV status is more discouraging than the potential benefits afforded by MMC. This finding should be taken into serious consideration if the maximum throughput of MMC candidates is to be achieved in SA.

In summary, 55% of the township dwelling participants in the study felt there were still obstacles in the way of MMC being ingratiated within their areas; this was primarily due to a conflict between Zulu and Xhosa traditional practices, and secondly, due to the mandatory HIV test prior to undergoing MMC. These beliefs were not limited exclusively to township areas, as the one rural participant in the study corroborated what has been mentioned above, that community members were “scared” of the HIV test accompanying MMC (Vusi, 26, Rural).

Lastly, those participants from developed suburban areas unanimously felt that MMC was something that was encouraged and rapidly gaining popularity and momentum within their communities. The omission of any HIV testing related fear may suggest that more urban communities possibly abide by a more proactive approach to HIV, such as knowing one’s status and commencing treatment if necessary.

Overall, the community sentiment toward MMC was, according to thirteen participants, primarily in favour of the procedure, with a veritable increasing trend being noted in many instances. However, there were also accounts detailing what can be described as obstacles to MMC uptake, these were documented within certain township communities as well as the single rural area. The obstacles in question were twofold, firstly, cultural stigma associated with MMC deterred Zulu men from undergoing what was perceived to be a Xhosa tradition, and secondly, individuals were fearful of HIV status disclosure during mandatory HIV testing. The barriers highlighted here should be considered for further research as well as taken into account by public health communication designers and MMC related stakeholders in order to increase potential MMC uptake.

By discussing the various interpersonal elements that emerged within my data analysis I hope to have adequately emphasised some of the *social influences* acting on participants, and in so doing, give prominence to the ‘social networks’ and ‘community’ levels of the SEMCHB.

Cultural Issues

Intertwined with the practice of circumcision are numerous cultural and religious motifs, nowhere is this more apparent than South Africa, a country of many disparate cultures and beliefs. Having been armed with this knowledge prior to data collection, questions were phrased specifically to explore existing cultural discourse, and how this may impact on MMC decision making. Findings hoped to inform communications programmes of any peripheral variables that may be influencing the acceptance and uptake of MMC.

Within the sample there was one participant of Xhosa background, and one participant who was of Muslim faith; the remaining eighteen participants (90%) however, attested to belonging to the Zulu culture. The Xhosa participant, Sizo, a 26 year old suburban resident, had said that in terms of cultural relevance, MMC “is the same” to him – referring to the traditional need for Xhosa men to undergo ritual circumcision. The fact that Sizo is from a suburban area suggests he is likely more urbanised than many of his traditional counterparts, and consequently, may be more progressive in his approach to health matters like MMC. Although acknowledging the procedure and safety standards between traditional and medical circumcision are different, Sizo believed the cultural difference between the two was negligible. The Muslim participant, Selwyn (29, Urban) aside from his own religious beliefs, was unaware of any cultural issues MMC may present within the South African context. However, eight participants of Zulu ethnicity (44% of the Zulu participants) took issue with certain cultural stereotypes and occurrences that were apparent within their communities.

One of these eight participants was a young Zulu man named Lincoln (22, Township), who spoke of how some Zulu men were reluctant to undergo MMC for cultural reasons:

Many of them [Zulu men] don't want to go and do it, because many of them have negative beliefs toward it, they think maybe you're a Xhosa, and some Xhosa guys disrespect us, they say you going to a hospital to do something we do in the mountains, there is a lot of negative stigma toward it. Some Zulu guys say “I'm not Xhosa I'm not going to do that”.

Commenting along the same lines as Lincoln was Sbongiseni (24, Township), who explained:

The community is ignorant in the way that they think this is a Xhosa thing, it's not for us as Zulus, so you do get Xhosas saying that, "you circumcised but you never went to the mountain so you're not a man". But it's not every culture that needs to go to the mountain to be circumcised to be a man. To them it's a procedure of manhood, but to all the other cultures it's not about manhood you know. As I said previously, circumcision was all about knowing that it's only the Xhosa's that do it and it's for their manhood you know, from a boy to a man, but now as it's being generalised, it's about the health risk and all that. I think the Zulus will always see it as a procedure, especially the generation of now, the youth of now - because most kids which are born now, their parents do circumcision to them when they two years, three years old. So it's becoming more a procedure of, "I need to take care of my child". They say it's better when you're a kid, like the pain, and the healing takes faster, so I think to the Zulus it will always be a medical health procedure.

Delving deeper into aspects of Lincoln and Sbongiseni's comments helps reveal that a proportion of the Zulu community are sceptical of undergoing circumcision – ostensibly the older Zulu generations. By referring back to the social influences chapter - specifically the aspect of family influences, we witness indications that older Zulu generations are often reluctant to approve of MMC. In addition to this, Sbongiseni points out that "the generation of now" are more inclined to view the medical benefits of the procedure, as opposed to being tied up in issues of cultural conflict.

Sbongiseni's response also indicates that factors contributing toward contention over MMC may stem from both Zulu and Xhosa cultures alike. Within Zulu tradition, the act of circumcision is a non-customary practice, and accordingly, the provenance of circumcision is perceived to be fundamentally affiliated with Xhosa lineage. Hence, stigma generated by some Zulu men seems to relate to the notion that circumcision is steeped in Xhosa symbolism, and represents something distinctly foreign or contrary to being Zulu. On the other hand, and further compounding the issue, are the reported incidences of Xhosa men undermining the cultural authenticity of medical circumcision. In this scenario, Xhosa men likely feel that their tradition of ritual circumcision that was once both shrouded in mystery and privileged to a limited few, may now somehow be jeopardised by circumcision being generalised throughout the population. Therefore, by taking the stance that if you are circumcised within a clinic 'you are not a real man', Xhosa men may be trying to guard the

integrity and sanctity of traditional Xhosa customs. Further research dedicated to the cultural ramifications of MMC would be required to validate such a hypothesis. However, what is evident is that some Xhosa men reportedly direct stigma toward those undergoing MMC, arguing that circumcisions conducted in a clinic do not confer the status of manhood, unlike the tougher traditional version long practiced by Xhosa pre-initiates.

Both factors seem to contribute toward abating uptake of MMC within certain Zulu populations. In spite of this, Sbongiseni believes many younger Zulu men are still aware of the practical health benefits of MMC, and don't see it as detracting from Zulu tradition, rather as being a novel way of reducing the risk of HIV and STIs for themselves as well as their children.

However, a younger Zulu man by the name of Freedom (28, Township) who was clearly affected by Xhosa stigma had vociferously explained:

How can some Xhosa guy come tell me I'm not a man because I'm not circumcised, or I did it at a clinic or a hospital and they did it in the mountain. They say I'm not a man and they're a man, I'm working, I'm feeding my kids, I've got a wife, what do you have? You stay at home but you say you're a man? You don't even work but you say you're a man? What do you have in your name? Nothing! And you say you're a man? That's why I'm saying man, Xhosa people and Zulu people will never get along. We grew up learning that you're really a man when you got to work, you've got to have a family, you've got to get married, you've got to take care of your family and stuff, then you're a man, you're a father. Then comes a Xhosa man to tell me, "I'm not a man", what do you have? It always bugs me my man, I don't understand how they came up with these things. Zulus will look at this [MMC] as a procedure, that's all.

Touching on themes of culture, masculinity and its representation, Freedom's response signifies the multifaceted nature of circumcision; and is testament to the obstacles MMC faces in its navigation of cultural symbolism.

Contrary to Freedom's viewpoint, one Zulu participant perceived MMC as more than simply a procedure; Moses (32, Township) went on to explain:

I'm a Zulu man, so far what I think this is going to do is help the majority in the culture, because when you visit Cape Town, Eastern Cape, the Ndebeles and Xhosas call you a boy, you have to circumcise, if you don't circumcise, you're nothing to them, so now even the Zulus will feel proud that they've got no skin. Ya, Xhosa guys say that we not a man for not going to the mountains, I've encountered it so many times because I grew up in Pretoria. You know what I've seen also now? Most of my friends - because they Ndebeles, before they going to go to the mountain, to the initiation school, they run straight to the clinics because there [initiation school] they use a knife to cut them. So it's safer for them [at the clinic].

Amongst the eight participants to identify this form of inter-cultural conflict, Moses was the only Zulu individual to prioritise MMC as a means of actually ingratiating the Zulu culture with other traditionally circumcising groups. Despite acknowledging critique over the medical nature of MMC by Xhosa and Ndebele groups, Moses felt that being circumcised could allow him to blend in amongst traditionally circumcising cultures when visiting areas where this was customary. In this way, he believed that he could be perceived by others to be a man, and avoid the negative stigma of still being considered a boy. Moses' comments suggests that like his Ndebele friends, he too values the safety and professionalism of MMC over traditional circumcision, however he still holds the symbolism of traditional circumcision in high regard. One could deduce that once again, like his Ndebele friends, Moses hopes that the medical nature of his circumcision will not be divulged, but rather fulfill his ambition to finally be recognised as a man.

In contrast, 39% of the Zulu participants - as can be seen in the accounts of Lincoln, Sbongiseni and Freedom, regarded the stigma associated with MMC as being offensive, as well as being a divisive issue within their communities. Participants once again reported that older generations were more reluctant to pursue MMC as a result of deeply entrenched traditional values. However, it was also stated that younger generations were more inclined to see the health benefits of MMC in spite of the associated criticism from Xhosa men and the non-customary nature of the procedure. It was noted that out of the eight participants who had made reference to the Xhosa-Zulu circumcision controversy, seven were township residents.

The high concentration of different cultures that is typical of township life is likely a factor behind, or at least contributory to the ostensible cultural feud over circumcision's significance.

The ten remaining participants, who included 84% of the Zulu men residing in developed urban and suburban areas, made no mention of the Xhosa-Zulu conflict, but had maintained that the Zulu culture would see MMC purely as a procedure. A response typifying the general stance within this group was put forward by Simphiwe (29, Suburban):

I'm Zulu, and in the Zulu culture there is basically nothing wrong or right with circumcision, it's not something that's discouraged or encouraged.

When informed of some of the issues brought up by other participants relating to Xhosa stigma, Simphiwe had replied:

I don't really care because this is my health at the end of the day, and I can't take that chance. I don't want the next guy to call me a man and I get my thing [penis] chopped off. I don't really care what they say in terms of that, as long as I've done it properly and I'm safe then I'm good.

Others replied in a similar manner; "It's no longer believed that it's something that only Xhosa people can do" (Vusi, 26, Rural). Ultimately revealing that amongst Zulu participants there were discordant cultural perceptions which seemed to be influenced by residential area. One township resident felt that MMC could eventually break down cultural barriers; six believed the act of circumcision was heavily stigmatised, causing resistance to uptake, especially amongst older generations. Lastly, ten participants - the majority of whom lived in developed areas, perceived MMC as of no cultural significance, rather they saw it as a medical procedure that could benefit individuals and their families. Further evidence suggesting residents of developed areas might be less susceptible to this form of stigma comes from the single Xhosa participant in the study. This participant opted for MMC over traditional circumcision, despite the cultural significance of the procedure within the Xhosa culture.

The evidence points toward two tangible cultural dilemmas for MMC uptake, firstly, certain Zulu men believe circumcision is something foreign to their culture, and should remain disassociated from Zulu tradition. This revelation comes in spite of the call to action dispensed by the Zulu King Goodwill Zwelethini in 2010.

Secondly, some Xhosa men reportedly debase the integrity of MMC – arguing that it does not represent a transition into manhood like the ritual circumcision undergone by Xhosa boys. Overcoming issues steeped in cultural symbolism are likely to be onerous tasks for all MMC stakeholders alike. Further research into the cultural dynamics only briefly touched on here is certainly well warranted. Recommendations could only begin to suggest that engagement with local cultural and community representatives might prove insightful for the purposes of future conjoint strategies.

Cues To Action

Defined in the theoretical framework as the internal or external prompts that are responsible for raising awareness and facilitating action, the *cues to action* theme represents an important facet of my inquiry's purpose. In this segment the mediated cues, or prompts, that informed and triggered action amongst the participants will be explored, and thereby allow for a glimpse into public health communication's reach and exposure. However, before this facet can be elaborated upon, the few instances documenting internal cues - those cues stemming from an individual's own perception of their body's state, will now be touched on.

Internal Cues To Action

Due to the fact that MMC is not typically conducted in order to relieve symptoms of a certain ailment or condition, the internal stimuli to undergo the operation are arguably limited. However, several participants did in fact account for cues that could be described as being predicated on internal motives. One such instance was by a 24 year old participant, Sthe (Township), who told of his struggle with genital boils, and his hope that MMC would aid in rectifying his condition.

A similar reason was given by Malusi (38, Township), who experienced sharp pains in his genitals after sexual intercourse, and had hoped that MMC could in some way help relieve his discomfort. Without a proper medical diagnosis no comment can be made as to the accuracy of Malusi and Sthe's beliefs that MMC could aid in their respective health conditions. However, it is likely that information of this nature would not have been received through mediated conduits, as these channels focus on primary health benefits of MMC such as HIV and STI prevention. Therefore, the aforementioned individuals likely made these deductions themselves or were informed, or misinformed, by other individuals.

Another interesting account was provided by Freedom (28, Township):

I saw this thing [MMC] when I was a kid man, my mates went to the hospital and they had this, then they showed me right, I was like “oh ok, damn”. So I went to my mom, I asked her, and she blatantly refused, so I did it to myself man, I’m serious, but I was unsuccessful. I won’t tell you how I did it, but it’s kind of scary. The first time I actually read about it [MMC] was when I was taking my kids to the clinic, that’s when I actually noticed that I didn’t do it properly, and that was last year, I saw the difference between myself and what was on the pamphlet, I didn’t completely finish doing it.

According to Freedom’s response, his previously failed attempt to circumcise himself left his penis in a semi-circumcised condition, and upon becoming aware of this, he felt it necessary to complete the operation. The excerpt contains several interesting points, firstly, that Freedom’s choice as a young boy was solely based on social modelling, in that he tried to replicate what his friends had done. This serves as further testament to the role friends can play in the determining how MMC is perceived. A second relevant issue is how Freedom’s mother refused to consider his request for circumcision, a dynamic that reveals where authority may lie in the MMC decision making for younger men, likely between the ages of 15 and 18. Lastly, the use of images depicting fully, partially and uncircumcised penises on mediated formats should continue to utilise this approach, and those who have no such comparison, should possibly consider its incorporation.

The fourth and final instance of an internal cue to action was alluded to by Selwyn, a 29 year old Muslim man living in Durban’s inner city. Selwyn explained, “I’m Muslim you see, so we have to do it from birth, I’m very late in my life, so I’m doing it for religious reasons”. Selwyn had mentioned that he was a convert to Islam, and therefore was not circumcised at birth; he went on to explain the significance his faith placed on circumcision, and that it had been something he wanted to do since becoming a Muslim.

Within the data set, the four internal stimuli mentioned above were the only non-external prompts to be raised during interviewing - and having covered the interpersonal forces during the social influences theme, I will now elucidate the mediated channels acting as external prompts to MMC.

External Cues To Action

Aimed at grading the exposure of MMC related public health communication, questioning investigated the mediated channels through which participants recalled encountering MMC information. According to the vast majority (80%) of participants, reception of MMC related media were most notably encountered through traditional formats such as TV, newspapers, and radio. The most commonly mentioned traditional media format encountered by participants was television, with 60% of the cohort recalling messages received through this medium. Newspapers and radio were second and third respectively, the former being mentioned by 50% of the participants, and the latter by 40% of the individuals within this group.

However, two participants, Lincoln (22, Township) and Sbongiseni (24, Township), had utilised the internet in their proactive search for MMC related information. Another participant, Freedom (28, Township), whose account was touched on earlier, had only briefly made contact through a pamphlet available at a health clinic. In addition, three participants (15%) who were all residents of township areas, described having no contact whatsoever with mediated MMC information of any sort. When asked where he had encountered information on MMC, one such resident Nthando (24, township) had remarked, “Nowhere, unless you go to a clinic - I don’t usually hear about it”.

Newspapers and internet browsing were the only mediated channels to have directly cued participants to the specific MMC clinic where research was conducted, but most individuals still maintained that their discovery of the clinic was through friends, family, referrals or happenstance. With regards to general MMC information, television was the most commonly referenced media amongst participants in developed urban and suburban areas, as well as one of two channels mentioned by the solitary rural resident. However, township residents were more likely to be exposed to MMC messaging via radio and newspaper. Interestingly, the fact that the only participants within the study that encountered MMC health communication or information online were residents of townships, suggests access to internet based forms of MMC health communication may be similarly applicable in resource limited areas.

Having said this, the findings here still echo the trends occurring within SA’s mediated landscape; although internet access is on the rise thanks to the use of cellular telephones, traditional formats still dominate public media consumption within the country (SAARF,

2011). Furthermore, there is some evidence to suggest that certain township residents have not been exposed to MMC communication efforts.

Many participants struggled to recall the precise content creators of the respective MMC messaging initiatives; however, certain televised cues were alluded to. This is not to say that the examples below were the only messages to be encountered, but are more accurately a brief depiction of some of the televised events that were most readily recalled.

Lincoln (22, Township) was one such individual to draw attention to one of the more mentioned televised events:

I've seen a lot of exposure in the media, especially on SABC 1, where I saw the MEC [Member of executive Council] Mr. [Sibongiseni] Dhlomo tell the general public that MMC can help you avoid HIV, but it's not the primary contraceptive available.

The title 'MEC', or Member of Executive Council, refers to a provincially appointed minister designated to oversee the functioning of a certain portfolio. The MEC alluded to in the above excerpt, Dr. Sibongiseni Dhlomo, is the incumbent MEC of Health in KwaZulu-Natal. Dr. Dhlomo is the primary custodian for health related policy and programming decision making within the province of KZN, this includes overseeing MMC planning and implementation. Lincoln, as well as several other respondents, recalled seeing a televised address by the MEC concerning MMC and its role as a preventative measure for HIV.

Another relatively frequent televised cue was elaborated on by Moses (32, Township):

Ya, I've heard about it in the newspaper, on radio, and on TV. I remember the adverts for Men's Clinic on T.V, on SABC 1. They were telling us that it [MMC] is not curing HIV, it's just reducing the chances, and the uh, STIs, STD's. That's all I remember.

Men's Clinic is an independent company dealing with men's sexual health as well as similar related issues. The advertisements aired on behalf of the Men's Clinic were mentioned by several participants, making it one of the more commonly highlighted TV prompts.

Aside from those specifying the aforementioned televised prompts, other participants that witnessed MMC health communication on TV went on to describe encounters with unspecified MMC messaging; Kwazi (19, Township) explained:

I've seen it on TV, some programmes they will have it where they basically explain that it's cleaner, it slims the chances of you getting HIV, it doesn't prevent you from getting it, but ya things like that. I forgot what programme it was, where they had like guys going to the mountain. I'm sure I have seen it elsewhere, I just don't remember exactly where, I know I've seen it in the paper to, it's been advertised a lot now these days.

Participants who discussed their interaction with newspaper and radio forms of MMC health communication were similarly nonspecific about details of who were responsible for the said communication, but reinforced that they had indeed heard or read and understood mediated MMC messaging. The acknowledged exposure to MMC communication infers that a comparison can be made between the MMC 'key messages' previously highlighted and participant perceptions. In cases where MMC focused media was not encountered, discussion will relate to the difference in perceptions between those who were exposed to said media, and those who were not. However, before delving into men's perceptions, participants were asked to describe if and what additional information they would have valued prior to coming for MMC. This line of questioning aimed to explore the possible areas that health communications efforts could either strengthen or incorporate to further augment their current strategies.

Participant Concerns

Data presented in this section details the specific areas men feel are in need of elaboration or clarity with regard to MMC communication. Amongst participants, an overwhelming 85% of men identified issues they felt had not been adequately addressed by the media or sources of information they had encountered. Significantly, the individuals who felt they did not need any further information were predominantly those who had not encountered public health communication, but relied on the testimonies of friends and family. This suggests that the information gleaned from inter-personal communication and vicarious experience has a significant impact on MMC decision-making.

Malusi (38, Township) was one such participant, and said, "I'm satisfied with the information I had received from my friend through his experience".

In spite of this minority that felt comfortable with the knowledge they had accrued, many men felt strongly that communication campaigns did not cover the practicalities of the procedure adequately:

The media does not give you the information that you really need, because the fear actually concerns the pain, not what happens after everything has healed. It's not like they selling some product they selling in millions, almost everybody is not afraid as to what will happen after everything has healed. They're concerned about, as I am, being cut, how will it feel, and how long will it heal, and as it heals what may the complications be. Every now and then, especially in winter, you see on the news boys dying or getting amputated in the hospital due to some complication. That information must be made available.

(Sandile, 33, Suburban)

Looking firstly at Sandile's concern over penile amputation; like any operation the potential for medical complications during MMC exists, however according to research, "The available data are inadequate to obtain a reasonable assessment of the prevalence of complications of MC in sub-Saharan Africa" (Muula *et al.* 2007: 1). The literature does highlight that complications of serious magnitude, like that described by Sandile, are very rarely reported. Referring back to Sandile's response – he states "especially in winter", something that evidently points out confusion over MMC and traditional circumcision, as the former is unaffected by seasonal climate. This will be elaborated upon in a later discussion covering participants' notions of safety.

Sandile's account also touches on some of the key issues that were brought up by a number of participants. The first of which is pain; Kwazi (19, Township) had corroborated, "I think it's basically the pain hey, I think I know enough, I don't know, maybe there's more but I think I know enough. I'd like to know what's going to happen, how it's going to feel".

The data reflects that 45% of the cohort expressed that they felt the issue of pain had not been adequately described – individuals were vocal about the need for more descriptive information on how the procedure feels, and whether an anaesthetic would be administered to reduce discomfort. Also, some of the participants were eager to find out the practicalities of the procedure itself, such as what tools were used to conduct the circumcision procedure.

This desire for information also extended to the preoperative component of the operation, as Simphiwe (29, Suburban) explained:

I'd like to know exactly what can I do for myself to make sure everything goes smoothly. I even asked the guys yesterday when I phoned and I said, do I need to eat anything? Do I not need to eat? Or things like that. Sometimes when you go for an op they always tell you like, eat light foods, or don't eat for the next so many hours.

Although a quick and relatively painless procedure, the gravity of MMC as felt by men is clearly not something to be underestimated. Simphiwe's concern over what pre-operative precautions should be taken prior to his procedure suggests that some men may consider MMC to be a large scale operation requiring general anaesthetic. Whilst focusing on maximising MMC throughput, communications specialists should not overlook the magnitude of undergoing circumcision as felt by the average man. Data highlights that some men perceive the procedure to be far more invasive than it actually is; specifics of the procedure itself should be illuminated to avoid confusion and apprehension.

Another commonly mentioned concern related to the healing process and the ability to resume normal functioning subsequent to circumcision. There was a particular concern about going back to work. Freedom (28, Township) touched on this:

I've got to work, you know what I'm saying. But now it's easier, that's why I'm doing it today [Friday] cause I've got the whole weekend and stuff. I just want to know how long the pain will last before I can resume working. Got to feed my family.

Many men felt that the physical limitations occurring post procedure were not explained to their satisfaction, and hoped for a more in-depth clarification so as to allow for more effective planning. This finding suggests that fear associated with being rendered unable to work, and unable to support one's family, may be a factor determining MMC candidacy amongst certain men.

It appeared that most men perceived themselves as being aware of the health benefits of MMC. Only two participants felt they needed further clarity on how MMC could potentially benefit men, one of whom suffered from genital boils and had hoped that information would be made available detailing whether MMC could help this condition. The other participant, Lincoln (22, Township) simply wanted to know some of the other health benefits MMC could provide men, aside from assistance with HIV and STD prevention.

The fact that only two individuals appealed for more information on MMC's benefits points out that although understanding the advantages of the procedure are of priority; other issues like those identified in this discussion clearly need equal representation.

The findings discussed here call for health communication initiatives to prepare men more thoroughly for the operation itself – that is to say, focus not only on the preoperative precautions that one should take (or lack there-of), but make provision for a detailed account of how the procedure will take place, and furthermore, the necessary time needed off work or physical activity. Although the health benefits of MMC are enticing, the lack of clear details about the procedure itself can cause anxiety amongst men, an issue which could potentially slow down the uptake of MMC.

This sub-section has explored the social influences as well as the mediated cues to action with relation to MMC. The perceptions held by men toward HIV will constitute the focus of the next theme. Due to the fact that the primary motivating factor behind promoting MMC is to aid in HIV prevention; understanding participants' perceived severity of, and susceptibility to the virus are paramount to a more holistic perspective on the topic of MMC uptake.

Perceived Severity of HIV

South Africa's HIV pandemic is known the world over for its sheer severity, unsurprisingly then, 90% of the participants in my study felt that HIV posed a grave threat to the wellbeing of their communities. The personal and honest accounts of participants on many occasions reflected the loss of family and loved ones. A participant going by the name of Kwazi (19, Township), had been one such individual, "My sister passed away from it last year, so there is a large problem of HIV in the community". Loss of family and friends to HIV was not isolated to Kwazi's response however, others like Phelelani (22, Township) had expressed that, "It [HIV] is a problem everywhere; it's just one big problem. I'm aware of it, I've seen people die of HIV before me".

Comparatively, Buthelezi (39, Township) acknowledged that "HIV is an unbelievable problem. I know people who have been on ARVs, and they lose the shape of their bodies, they become forgetful". The severity with which HIV was perceived was abundantly clear throughout the majority of participants' responses. Despite this, there were two individuals who did not recognise the impact of HIV with the same sense of severity and anguish as did

the other respondents living in similar township conditions. Bandile's (34, Township) account painted a rather different portrait of how HIV was perceived:

I've never heard of anyone in my community admit that they are HIV+, even though there are people who are infected, and I've never heard anyone say how many people are infected in my community or anything like that.

In a similar vein, Nthando (24, Township) had explained, "I'd be lying if I said there were people in my community whom I knew were HIV+. It may be that they are there but I don't know them". Before analysing the two above responses, I draw my attention to another participant's take on the impact of HIV in his community, one which is particularly germane to the interpretation of the two excerpts mentioned prior.

When asked about the problem of HIV in his community, Simphiwe (29, Suburban) replied:

It is a widespread problem, but because people aren't really, I don't know how to put it, but they don't really realise how bad it is, so a lot of people don't see it as a problem because they don't really see how bad it is until they read stats. Because I mean you don't see somebody walking down the street with HIV printed on their forehead, so that way you don't really get to see it, but they say 8 in 10 people, that's a very high stat. I've had a friend of mine that died from HIV.

Simphiwe's response reiterates that HIV prevalence is very often not something that is easily identifiable within a community - unless personal experience and health related information have influenced the shaping of a particular perception, one can be oblivious to the seriousness or extent of the problem.

In the case of the two individuals who did not have a sense of distress in how they perceived the problem of HIV in their respective communities, it was also noted these individuals were amongst the few participants not exposed to MMC health communication. Admittedly, MMC health communication would not typically deal with HIV prevalence issues; however, the non-encounter of MMC-related information could also be indicative of media consumption habits that inhibit health communication exposure. In which case, the only perception of HIV prevalence and severity within one's community would come from an individual's own independent appraisal of their apparent surroundings. The subjective nature of this interpretation, as well as the discordant lived experiences of each individual, could potentially lend reason to the discrepancy amongst some participants' perceptions within township areas.

Discussing how many members within township communities either remain silent or account HIV symptoms to witchcraft, Moses (32, Township) had said:

It's [HIV] a big problem, people are still scared to come out; I've seen it, ya I've seen it, people when they're sick, they always believe that they must go to the 'Nyanga', to the witchdoctors, instead of going for check-up.

Accounted for in Moses' testimony are the trends of silence and superstition that accompany HIV infection within some township communities. Occurrences which could likely alter the way HIV severity is perceived by other individuals living within these very communities.

Overall, it could be said that perceived HIV severity was high throughout all age groups and living environments, with two exceptions being noted in township areas. Possible explanations for these two inconsistencies could be due to lack of health communication exposure, or inaccurate severity appraisals due to HIV stigma and its associated consequences of silence and superstition.

Perceived Susceptibility to HIV

To investigate how participants appreciated their own susceptibility to HIV, interview questioning revolved around understanding what measures individuals took to protect themselves from HIV infection within their own sexual relationships. Regular condom use and more frequent HIV testing equated to a higher perceived susceptibility than intermittent or infrequent condom use and HIV testing. Hence, if participants ascribed to regular condom use or HIV check-ups, then they were classified as having a high perceived susceptibility. The more frequently cited measure was taken as an index of an individual's perceived susceptibility, for example, if a participant described occasional condom use but very rare HIV testing, condom use would be identified as the measure by which HIV susceptibility was judged. Regular condom use or HIV testing was said to equate to a high perceived susceptibility, occasional or intermittent frequency was graded as moderate susceptibility. Finally, if condom use and HIV testing was infrequent or completely absent, the participant was thought to constitute a low sense of perceived susceptibility. Interview transcripts were also analysed for any additional data that may be suggestive of how individuals appraised their own susceptibility to HIV infection.

It should be noted however, 19 of the 20 participants attested to being in committed relationships, therefore preventative measures or lengths to which individuals went to ensure

the consistency of these measures, is likely to be different during sexual relations with casual or non-primary partners. In addition, condom usage as a means of preventing unwanted pregnancies cannot be overlooked as a motivating factor behind use. Therefore, findings should not be viewed as an absolute or definitive reflection of participants' approach to HIV prevention, but a glimpse into how the issue of HIV is currently perceived and dealt with amongst committed relationships.

The single participant within the study not to be in a committed relationship, Bandile (34, Township), had explained, "I don't engage in sexual activity. I'm a religious person and in my religion we abstain. We don't have sex before marriage". Exploring the perceived benefits of MMC is a theme which will later be covered in the results chapter, however, a brief look at Bandile's motivating factors for undergoing MMC allow for an interesting discussion. Despite being abstinent, Bandile had said, "I believe it will help protect me from easy infection as well as protecting the person I shall marry, even though I wouldn't be involved in any outside relationship". Although in some ways contradictory, Bandile's concerns highlight that despite having an actual, as well as perceived low susceptibility to HIV infection, MMC is still seen as an attractive long term health strategy. Suggesting the benefits of HIV and STD prevention might not only be appealing to those with who practice high risk behaviours, but possibly individuals with lower perceived risk as well.

Amongst the 19 sexually active participants in committed relationships, 74% could be classified as having a high perceived susceptibility to HIV infection. This means that 14 participants admitted to either frequent condom usage or HIV testing, or a combination of both. Of the 14 individuals constituting this 74%, three participants declared that condoms were used during every instance of sexual intercourse, and a further eight expressed frequent but not entirely consistent usage. The group consisting of frequent condom users included Sizo (26, Suburban), who said:

I condomise most of the time, I'm in a relationship. *laughs* Sometimes a condom can break, that's why I'm here for circumcision. Ya, sometimes without a condom with my girlfriend, but 80% I'm using condoms. It's just that sometimes the whole night you're using the condom, you know, you're not enjoying it *laughs*.

One could surmise that Sizo looks at MMC as additional protection to condom usage; in the event of condom rupture, or inconsistent use, the perceived protection conferred by MMC could still offer Sizo peace of mind.

Whether MMC would act as an additional support during such times, or in fact facilitate more frequent and recurrent condom avoidance would require further long term behavioural research.

A similar testimony was given by Sbongiseni (24, Township):

Basically, me and partner, we talk about it, we use protection all the time, I would say 90% of the time and we get tested every three months for the past one and a half years. Most of the time when we don't use a condom is because it's just not around, even if alcohol is involved, if there is a condom around we will use protection.

In this instance, condom availability was the underscored issue. The utility of MMC to in some ways substitute for condom use was potentially highlighted in Sbongiseni's account. Being previously subjected to situations where condoms were inaccessible, Sbongiseni may feel that bolstering his own protection against HIV is a wise choice. Men who are more wary of their inconsistent access to condoms may feel more compelled to bolster their chances of preventing HIV or STI infection. Hence, individual's perceived access to condoms may to some extent be a factor influencing the decision to undergo MMC.

Looking further at those participants who fell into the 'high' perceived susceptibility category, it can be seen that eight individuals (42%) admitted to undergoing HIV testing on a regular basis. A combination of HIV testing and condom usage was noted in four of the eight men who frequently used condoms. Similarly, two of the three men who reportedly always used condoms also announced frequent HIV testing. Comparing the incidence of frequent condom usage and HIV testing uncovered here, against the findings of the 2012 National HIV Communications Survey (NCS), brings to light a clear correlation between the two.

According to the NCS, condom usage was affected by the nature of one's sexual relationship; when looking at the frequency of condom use with main partners, results indicated that 65% of the participants used a condom "at last sex" (JHHESA *et al.* 2012: 3). Data on HIV testing within the NCS found that within the population 32% had gone for HIV testing within the last 12 months. Admittedly, the questioning employed in my study made no reference to 'last sex', nor did it include female participants. However, when looking at the ratio of men who were most likely to have used a condom during their last sexual encounter, we arrive at similar figure of 58%.

Likewise, data concerning HIV testing in my study shows that 42% of men went for regular HIV testing with their partners, as compared to the 32% concluded in the NCS. The close mirroring of these two variables within my study is a positive indicator (albeit minor) for the validity of data collection as well as the state of HIV prevention in SA.

The demographic characteristics of the participants depicting 'high' perceived susceptibility can be broken down as 57% township residents, 22% suburban, 14% urban and 7% rural, with varying ages throughout.

On the other hand, individuals displaying what has been identified as 'moderate' perceived susceptibility to HIV constituted 15% of the 19 individuals in committed relationships, and were spread equally between suburban and township areas.

As touched on by the NCS, the nature of a sexual relationship influences the precautionary measures adopted. On discussing how he handles the issue of HIV within his relationship, Kwazi (19, Township) had said:

I'll be honest because you know when you trust someone and you've been with someone for quite a long time, most of the time you don't use protection, but I try my best to use protection, maybe 20 or 30 % of the time. It's not because we don't have access to condoms, it's that we both trust each other, she's got two children already, I don't know, I can't use that as an excuse for her but she's got a family, I trust her. Also, the sexual pleasure is better without a condom. We tested [HIV test] once last year, I think it was March, but it's not something we do regularly, that was say nine or eight months into the relationship.

Kwazi's account demonstrates that although aware of his own risk to HIV, the curtailed sexual satisfaction accompanying condom usage was enough to offset any perceived risk of HIV infection. His comment also spotlights the belief younger people often adopt, that is, 'it won't happen to me' (Krenn & Limaye, 2009). Despite not knowing the finer details of Kwazi's relationship, one could still describe his approach to HIV prevention as lacking in caution. It can be seen how the idea of MMC might be attractive to individuals like Kwazi, who have some concern over HIV infection, but not to the extent whereby consistent condom use is warranted. For such individuals, MMC could aid in mitigating HIV contraction whilst not interfering with sexual satisfaction.

The remaining participants in committed relationships (11% of the sample) acted in accordance with what I have identified as a 'low' perceived susceptibility to HIV.

One participant to display a low perceived risk to HIV infection was Selwyn (Urban), a 29 year old Muslim man who was briefly referred to earlier. In Selwyn's case the reasoning behind circumcision was purely religious, therefore when discussing how he managed the issue of HIV within his relationship, he had said:

You have to be faithful, I use condoms when she [Wife] don't take a tablet or miss couple things, then I use a condom, when she's got no time to go the clinic. It's more for birth control. We don't test, only when the children gets born, that's the test we get [*sic*].

The affirmation provided by Selwyn points out that he only uses condoms as a birth control measure, and despite perceiving HIV as severe within his community, he believes that maintenance of a faithful and monogamous relationship is protection enough from HIV infection. Islamic teachings prioritise circumcision for its religious significance and association with cleanliness within the Qur'an. The procedure requires a complete removal of the foreskin, in the same manner that MMC is performed.

Not quite as confident in his decision to neglect condoms was Freedom, a 28 year old resident of a local township area who had reflected on the handling of HIV within his relationship:

Well I'm married, but I don't use condoms, you just don't do that. If I introduce a condom now she [his wife] will be suspicious man, can't do such a thing. Eish, this whole HIV thing, it's a hard thing to deal with. She goes for testing, but I've only gone once in my life, last year. So I tend to just not think about it, I'm going to be honest, because if I start thinking about those things I'll go crazy, yea, I just pray, she's a Christian lady man, she don't play like that, she better not play like that. Once you married man, condoms are away, that's just the way it is.

In Freedom's scenario, condoms are perceived as a sign of infidelity by his wife, which acts as a deterrent to their usage. Freedom's willingness to accept these conditions is based on the fact that he believes her not to be the adulterous type due to her Christian faith. With this in mind, Freedom's account suggests that he chooses to believe he has a low risk of contracting HIV within the boundaries of his marriage.

Freedom's statement brings to light how long term formalised commitments like marriage can often diminish cautionary measures; echoing the NCS finding that the nature of one's sexual relationship influences condom use.

Having covered both participants' perceived severity of, and susceptibility to HIV, it can be put forward that almost all participants admitted the pandemic of HIV was severe, and a further 74%, of the study population took frequent precautions to protect themselves from infection within their sexual relationships. By drawing on some of the responses, one can deduce that perceived susceptibility may be a motivator behind MMC uptake, however individuals who were less circumspect in their approach to HIV prevention still followed through with the procedure. Proposing that the notion of MMC as a contingency plan for condom inconsistency or breakage, might also be a factor influencing men's choices to undergo MMC. It was concluded that no demographic trends were evident in how men perceived their own risk to HIV acquisition.

The findings uncovered here to some extent address one of the key messages within the MMC communications guideline; that is the "Importance of continued adherence to HIV prevention" methods (JHHESA *et al.* 2008: 10). Despite many participants adhering to relatively strict HIV prevention measures, several participants showed diminished circumspection within their relationships. In these cases, MMC was surmised to act as a 'back-up' plan for instances such as condom fatigue (attenuated sexual pleasure) or inconsistent use (condom availability). Although my findings cannot deduce the likelihood of any prospective behaviour, one could argue that within relationships already experiences some of the identified issues, the added benefit afforded by MMC could potentially make these types of events more permissive. Having said this, further behavioural research would be warranted in order to conclude whether MMC affects the HIV prevention strategy of partners within committed relationships over time. To delve further into how men perceived the actual benefits of MMC, I turn my attention to the following theme.

Perceived Benefits of MMC

Housed within this section are participant responses that address if and how, many of the other key messages identified in the MMC communication guidelines were received.

The first key message addressed here relates to whether participants understood that MMC is a practice offered by trained medical staff within a safe operating environment. The research aimed to explore whether the term MMC was not loosely interpreted to include traditional or non-medical variations of circumcision, but purely those instances whereby the procedure was conducted by trained service providers. It should be acknowledged that the SA government is working in tandem with traditional circumcision practitioners in order to improve safety and efficacy of cultural circumcision - although cultural barriers make this somewhat problematic. Thus, for the purposes of investigating if men understood that MMC was a procedure only carried about by trained medical staff, the distinction was made between medical circumcision (in clinics or hospitals) and traditional circumcision, unless the latter was specified as being conducted by a medically trained practitioner. Henceforth, if men equated traditional circumcision to medical circumcision, then the prerequisite for safety and professionalism during medical circumcision would have arguably been misunderstood.

Notions of Safety

By asking participants if there was anywhere else they could undergo safe medical circumcision - aside from hospitals and clinics, it was possible to see whether men deemed other forms of circumcision as equally safe, beneficial and appealing.

Findings revealed that participants unanimously identified clinics and hospitals as the only service providers of MMC; certain individuals brought up traditional circumcision, but made explicit distinction between the two forms. When asked whether MMC was offered elsewhere, rural area resident Vusi (26) had responded:

I don't think so because some people have died, like when the Xhosa people go to the mountain. It should be done by professionals in a clinic or a hospital.

Moses (32, Township) reiterated this:

These are professionals [clinics and hospitals], they know what they doing, they know what they dealing with, they know at the end of the day it's going to be healed. They always telling these people on T.V, these people going to the mountain, Xhosas, Ndebeles, they must go to the doctor's clinic.

Others like Bandile (34, Township) spoke of personal encounters:

I know people in my community who have gone to the mountain to get circumcised, some of them have come back with no problems, but I have heard that some of them have died there. Most of the people I know who have come back with no problems were circumcised at a clinic, and that helped me to decide to come and get circumcised at a clinic too.

It should be noted that even those participants who had not come into contact with public health communication held the perception that traditional circumcision generally did not come with the same level of safety and professionalism that clinics or hospitals would offer. This indicates a diffusion of information through social interaction, as is the case in the above account. In addition to the aspect of safety, participants such as Mduduzi (20, Urban) were quick to point out the procedural ramifications of not undergoing MMC at a clinic:

I don't see how that could be right [undergoing MMC anywhere else] because you have to get tested for HIV and other things and you don't receive treatment unless you do it at a clinic or a hospital.

The fact that Mduduzi recognised HIV testing as something intrinsic to the MMC process is a positive indicator for both men's notions of safety and general knowledge. General sentiment amongst those who mentioned traditional circumcision was that "it's not as safe as a hospital" (Nthando, 24, Township). One participant made reference to another form of circumcision, but spoke of it as something he remembered from his youth, and did not vouch for the efficacy of the procedure:

When we grow up, you see you get the vein [referring to acquiring an erection and the subsequent veins] they say you take a what you call it, a tail, a horse tail and you put it on and then you cut it after. That's what the African usually does, but at that stage I was young, I don't know anyone who has done it.

However, there was one individual within sample who had inadvertently exposed his own erroneous perception of MMC's safety whilst discussing how health communication stakeholders could improve MMC messaging. The account, as according to Sandile (33, Suburban) had read:

Every now and then, especially in winter, you see on the news boys dying or getting amputated in the hospital due to some complication. That information must be made available.

What is made evident by Sandile's comment is that he confuses the seasonal influence experienced by traditional circumcision with MMC; a correspondence that clearly impacts negatively on his own perception of MMC. Research into traditional circumcision and its associated complications has shown winter months to be correlated with higher levels of mortality (Meel, 2010). MMC on the other hand, as mentioned earlier, has an extremely high safety profile, only noting serious complications on very infrequent and isolated occasions.

Overall, the findings uncovered here highlight the cohort's collective perception that MMC should be conducted under safe conditions by professional medical staff. Data pointed out that there may be a minor proportion of individuals who confuse fatalities occurring as a result of traditional circumcision, as in fact stemming from MMC. Data reflecting the extremely rare occurrence of adverse events associated with MMC should be considered as a means of counterbalancing concerns like that identified. Having said this, the results are still a positive indicator for health communication, as well as for the population's general attitude towards safety and MMC.

Participants' Reported Benefits of MMC

Having established that one of the benefits of MMC was the added safety accompanying professional health care, further open ended questioning sought out to determine the advantages MMC held for each individual as according to their own testimonies.

The most commonly reported reason for, or advantage of, undergoing MMC was said to be the lessened risk of contracting HIV and other sexually transmitted infections. In fact, all 20 participants alluded to the prophylactic capability of MMC, however, this only played a strong role in 19 participants' choices to undergo the operation. The Muslim man identified in the 'internal cues to action' theme, Selwyn (29, Urban), had acknowledged he was aware of these benefits, but they played no role in his choice.

The second most (55%) cited benefit MMC was perceived to inculcate concerned improved sexual satisfaction for the female partner. Comments resembled Siya's (32, Suburban) perception, "I think she will benefit when we having sex, I think she'll be better [female partner's pleasure] than before, before I'm circumcised". Other reported benefits included: added cleanliness (40%), prolonging or inhibiting premature ejaculation (15%), and improved cosmetic appearance (10%).

More detailed analysis showed that although all 20 participants were aware of the preventative benefits of MMC, only 8 could specify the 60% reduction in risk to HIV publicised by MMC health communication. Amongst the participants who had not been exposed to health communication, as well as the individual who had only encountered a pamphlet, 3 of the 4 could not specify the aforementioned percentage, and the single individual who could identify the percentage had indicated that his sister was a nurse. Participants devoid of any mediated health communication exposure tended to make rather vague statements such as, "There's not much I know for sure, just what I've heard people say so I don't know how true it is" (Malusi, 38, Township). Similarly reliant on interpersonal information was Bandile (34, Township), who had mentioned, "I've heard people say that MMC helps in preventing HIV". However, a reliance on interpersonal information is shown to be problematic by Freedom's (28, Township) account:

Ay you know what, I'm going to be honest man, you know with this whole "if you're circumcised, there's lesser HIV whatever whatever" - I don't believe that man. If you willing to take this risk man, it's yours, do it, but you going to carry the consequences. Condoms my man, to me, it's just safer, that's what I believe. I mean from what I've heard they say If your circumcised you won't get it, I've heard that a lot of times, a lot of times, I'm honest man, especially men, they say stupid things sometimes, but you just don't want to argue with them you know. I mean if a man can say, "I'm HIV positive so I'm going to rape an infant, if I do that then...", ay stupid things man.

The above illustration shows the unreliability of relying solely on interpersonal information; Freedom's description emphasises that many individuals he had come into contact with felt that MMC completely protected men for contracting HIV. It also shows that Freedom's lack of interaction with MMC health communication has left him in a situation where he is unsure of the precise benefits the procedure offers. As to be discussed later, Freedom's motives for undergoing MMC are based on the idea that MMC will serve as a 'back-up' plan for the extramarital sexual relationships he has.

Although using condoms when engaging in these types of sexual engagements, Freedom's concern over condom breakage or inconsistency of use had been strong motives behind his choice to follow through with MMC; this however, will be discussed in more detail later on.

Unlike Freedom, participants who had been exposed to public health communication on the other hand, were divided into two groups, representing 56% and 44% of the sample. The former representing those who couldn't specify the exact figure that MMC reduced one's chances of contracting HIV by, and the latter exhibiting the participants who could indeed recall the correct preventative percentage. Despite many participants who had encountered public health communication admitting they were unaware as to what extent exactly MMC could protect one from HIV, their answers maintained a greater sense of conviction in the efficacy of MMC than those who had not encountered any mediated health communication on the procedure. One such example was taken from Sbongiseni's (24, Township) testimony:

Ya, I've heard and read that it's not a 100% prevention; just that in some circumstances you might be able to be safer than someone who's not circumcised. I've done some couple of researches on the internet, reading about circumcision [*sic*].

Quite similarly, Sthe's (24, Township) recollection of his encounter with radio had been, "I've heard about it but I'm not sure about what the percentages are. I've heard that it decreases the risk of HIV infection but I don't exactly know how it works". A third example can be seen in Simphiwe's (29, Suburban) testimony, which spoke of his interaction with health communication:

Every, every, every time you hear about it they always say it's cleaner, you get less chances of contracting any STDs, it's better for your health, it's better for your partner and things like that.

Data analysis indicated that those who had been exposed to public health communication had a more accurate reflection of the HIV and STI related benefits offered by MMC. Participants who had not been exposed to mediated health information were more reliant on interpersonally derived knowledge that was in some cases dubious and inaccurate. Implying that mediated information may be a better vehicle for representing detailed medical knowledge, but interpersonal communication and vicarious experience may be more effective at convincing individuals, as well as allaying potential fear and apprehension.

The central theme of my study revolves around understanding whether men perceive the risk reduction benefits of MMC as intended, as the concerns of risk compensation associated with MMC bear conflicting evidence. In keeping with this theme, I will now explore if and how men's perceptions on condom usage and multiple partners were affected by their interpretation of MMC's prophylactic benefits.

Assessing the Potential for Risk Compensation: Condom Usage

As described in my literature review, risk compensation alludes to a situation where an individual's perceived sense of security ushers in riskier behaviour; exposing the individual to greater overall risk, rather than being of protective benefit. Accordingly, interview questioning was tailored not to uncover whether participants would use condoms after being circumcised, but rather aimed to investigate whether men understood **why** such a need existed. If participants acknowledged that condom use was indeed required in order to render them fully protected from sexually transmitted infections and HIV, then evidence of accurate decoding of MMC communication was said to be present. If individuals had not encountered formal MMC communication, then the information that they had encountered was appraised for accuracy.

After careful analysis of the data, evidence indicated that 19 of the 20 participants (95%) understood that consistent condom usage should be maintained or adopted in order to ensure complete protection from HIV infection. This characterises a predominantly dominant-hegemonic form of decoding, that is to say, the majority of participants interpreted the relevant information (continued condom use post MMC) as intended.

Examples of participant responses that were indicative of this belief included Sbongiseni (24, Township), who had said:

Circumcision is not 100% prevention, so it's still important. You still have to wear a condom all the time according to my understanding.

By and large, men were confident in their belief that condoms were still an essential feature in their own HIV prevention strategy. When asked whether the use of condoms was needed subsequent to MMC, Kwazi (19, Township) had responded, "Of course, nothing changes, nothing changes".

When posed with the same question, Selwyn (29, Urban) had exclaimed:

Definitely, he still has to wear it, if you sleeping around, you still have to, because the rate things are going now where every 5th, 6th person maybe got AIDS.

Moses' (32, Township) account demonstrated similar conviction in his stance:

To circumcise won't prevent HIV, you have to wear a condom; it's just reducing the risk. Some other people they think that, they say no, once they've done it they will never get HIV. I've heard a lot of *ous* [men], I've heard many guys say that.

Despite the fact the Moses displayed a *dominant-hegemonic* interpretation of how MMC assists HIV prevention measures like condoms, rather than replaces them – he did point out that many men feel invulnerable to HIV infection after being circumcised. This corroborates concerns raised earlier during a discussion of how erroneous myths regarding MMC were encountered by Freedom (28, Township). The fact that both men resided in township communities expresses that the presence of myths and untruths relating to MMC may be most pervasive within these areas.

Within this study however, there was only one individual who displayed a *negotiated* interpretation (not directly as intended) of how MMC affects condom use, or more specifically, how it should not affect condom use. The participant, Luzuko (22, Township), had been exposed to both newspaper and radio communications about MMC, however, when asked whether condoms should still be used consistently post-MMC, he said:

Not as much, but then I will check every day to check I'm clean, and check my partner to see if she's clean, so then you can use condoms a bit less then.

This suggests that Luzuko believes that individuals can always determine the presence of HIV or STIs by physical examination - and therefore, can afford to rely more heavily on the partial risk reduction benefits provided through MMC. Professionals within the health care field can in some instances diagnose STIs through physical examination; however, this is not always the case, some STIs may be 'invisible' to the naked eye, or asymptomatic, in biological terms (Bradford, 2008). Furthermore, HIV infection would require blood-work to be examined in order to conclude serostatus. There is some truth to Luzuko's perception that MMC may reduce the incidence of STIs (and associated HIV infection), but in reality his perception represents a misunderstanding of certain MMC health communication, as well as HIV related information. Luzuko's over-appreciation of what 60% protection translates to in

real terms shows a lack of understanding of how MMC affects other HIV prevention measures.

Information delivered through mediated channels needs to ensure that the popularised 60% reduction in risk for HIV infection is comprehensively explained with reference to real life contexts. More emphasis should fall on the remaining risk as opposed to the offered protection, so that individuals do not end up discounting the remaining 40% possibility of HIV acquisition as negligible. The audience's active role in the interpretation process means that no one can ever guarantee a 100% consistent interpretation of MMC messaging, but steps taken to accentuate the residual risk may prove helpful in avoiding cases like Luzuko's.

When looking at media exposure vis-à-vis attitudes of condom usage post-circumcision, the data has reflected that 94% of the participants exposed to health communication felt that consistent condom usage was still necessary. Interestingly, all of the participants who did not encounter health communication also maintained that consistent condom usage was an imperative for a medically circumcised man. The fact that many men understood the need for continued condom use yet still chose to undergo MMC suggests that the majority of participants saw MMC as a means of enacting 'dual-protection'. In light of participants' perceived severity of HIV, one can understand men's desire to be as cautious and circumspect over matters of sexual health as possible.

In summary, risk compensation by means of condom forfeiture, or at least perceptions that would be instrumental in underpinning such behaviour, were found to be primarily absent amongst this study population. However, one case did suggest a potential link between MMC and reduced condom usage, corroborating earlier research conducted by Grund and Hennink (2011) as well as Riess *et al.* (2010) that highlights instances where some men relied on MMC as a 'back-up' plan in the event of condom forfeiture or failure. With this said, investigating condom usage was not the only avenue that aimed to explore the possibility of risk compensation associated with MMC, another vital area of inquiry pertained to multiple sexual partners post-circumcision.

Assessing the Potential for Risk Compensation: Multiple Sexual Partnerships

A similarly poignant area accounted for in risk compensation research is the potential for an increase in sexual partners, either concurrently or sequentially. Rationale for this concern is predicated on a scenario whereby men perceive their own resistance to HIV infection as being fortified, and resultantly, feel more comfortable to increase the number of sexual partners they have, either concurrently or over time. Data collection within this section aimed to determine whether participants believed that MMC could safely afford men the benefit of having more sexual partners than prior to the procedure.

Questioning revealed that 18 of the 20 participants (85%) believed that having multiple sexual partners was not 'safe', irrespective of their circumcision status. The majority of participants were aware of the dangers of having multiple sexual partners; Selwyn (29, Urban) expanded on this:

I don't think it's safer 'cause you can't trust their faithfulness too, you know what I'm saying? You now skip a couple nights and she gets tired of you, or something like that, she might be tempted do something with someone else, you don't know where that *ou* [man] was before.

In his response, Selwyn highlights how one's risk of HIV infection can quickly be compounded by having multiple partners, considering the aggregate number of past sexual encounters that an individual is indirectly exposed to during unprotected sexual intercourse. Sentiment on these lines was reaffirmed by various other participants; Lincoln (22, Township) was one to echo Selwyn's comments, "It's not safe, it's obvious it's not safe". Sbongiseni (24, Township) was another, and had answered:

No [it is not safer], according to my understanding circumcision is not done to change your sexual lifestyle, maybe some have more partners because they feel that you less at risk of getting STIs and HIV.

Acknowledging the fact that men will knowingly engage in risky sexual behaviour in spite of this risk, Siya (32, Suburban) commented, "No I don't think that it's safe, whether we do it or not... but it's not safe". Scrutinising Siya's response, it appears from his disclaimer that he may be an individual who has more than one concurrent sexual partner, yet is still conscientious enough to realise his own risk, prior and subsequent to MMC.

It is well documented that some individuals will engage in risky behaviour whilst remaining fully aware of these risks; and the choice ultimately lies with the individual (Kalichman *et al.* 1997; Adedimeji *et al.* 2007). In Siya's case, risk compensation would not be the underlying motivation behind multiple concurrent sexual partners, as this risky sexual behaviour would have been existent prior to MMC, as opposed to commencing after or being exacerbated as a result of perceived safety from HIV.

However, not all participant responses were devoid of risk compensation characteristics, Freedom's (28, Township) account was one of primary concern:

Oh eish, *laughs* I kind of knew that question was coming, eish, eish man. You know what man, I'll break it down like this, I'm a man, we got needs, we never satisfied, my man, that's the truth, I tell it like it is, we never satisfied, for some reason, I do not know why. I think it was the way we were created, I'm talking about Black people, I'm not talking about White people, Indian people or Coloureds. Cause we talk, I mean I've spoken to a lot of people and my man, eish, married or unmarried, young or old my man, we will have multiple partners, it's the truth. Bring any guy to sit here and he will tell you the same thing, if he's honest he will tell you the same thing, ask him how many girlfriends he got, he can tell you one, then ask him, "do you eat on the side?" [do you have more than one girlfriend?]. My man, you will get the same answer, "Yes". I hope and pray to God that it [MMC] will help a bit with that [HIV], because condoms burst.

Freedom's testimony clearly depicts his inclination for multiple concurrent sexual partners, and furthermore, maintains that amongst African men, this form of behaviour is commonplace. Additionally, Freedom reminds us that qualitative research findings are dependent on the honesty of participants; it is quite possible that other men within this study may have not been as candid and open as Freedom - in that they too have multiple sexual partners. Collated data may not always be an accurate depiction of reality, this unfortunately is one of the many limitations qualitative researchers encounter whilst working with the subjective accounts of individuals.

Admittedly, Freedom's choice to engage in multiple concurrent partnerships is not as a direct outcome of MMC's perceived benefits; however, the procedure is seen as something that can further enable him to indulge in his potentially risky sexual lifestyle. In essence, MMC could be seen by certain men who currently have multiple sexual partners as a contingency plan against HIV infection.

Freedom does state that he uses condoms during these sexual encounters; however, research has shown that an increase in sexual partners will offset the aggregate benefit of condom usage in the long term, and in fact drive up HIV susceptibility (Kajubi *et al.* 2005). Unlike Siya, Freedom feels that he will be safer in his risky sexual endeavours than he was prior to being circumcised, which is arguably evidence of risk compensation. As far as formal MMC health communication goes, Freedom only briefly encountered a pamphlet, and had no real interaction with mediated information, and so may not have had the benefits of more detailed MMC information.

Although having been privy to some mediated MMC messaging by means of newspaper and radio, Luzuko's (22, Township) response was still in opposition to the key message that 'MMC does not replace other HIV prevention methods'. Leaving little to interpretation, Luzuko had said, "I would feel more comfortable having more sexual partners after being circumcised". Of further concern is the fact that Luzuko was the same participant who felt that condom reduction could also be enacted after being circumcised. Having been one of the few individuals to attest to 100% consistent condom usage within his relationship, as well as being able to identify the 60% reduction in risk MMC offers against HIV, it is likely that Luzuko is not an individual blatantly predisposed to risky sexual behaviour.

A possible explanation then as to why Luzuko might feel more secure in his choice to engage in acts of risky sexual behaviour may lie in his exposure to MMC information. In interrogating Luzuko's comments it can be noted that his exposure to newspaper mediated MMC information was principally as a cue to the specific clinic where research was conducted, as opposed to general informational about the continued need for prevention measures. Furthermore, according to his own admission, "I've heard it [MMC information] on radio, but then I don't listen to it that much"; possibly suggesting that knowledge on MMC gleaned from radio may also have been limited.

Luzuko's perception that the notions of condom usage as well as multiple concurrent partners are influenced by MMC is evidence that some degree of risk compensation (albeit a minor proportion of the sample) may take place as a result of medical male circumcision.

Data and correlations found here are once again comparable to the findings uncovered by Grund and Hennink (2011: 6). Conclusions made in their study maintained:

Men described an increase in sexual partners and unprotected sex during a brief period of sexual experimentation shortly after circumcision. They also described that circumcision was “back-up” protection for failing to use condoms. These men were often those who reported receiving more limited counseling about circumcision.

Trends apparent in the data gathered within my own study highlight that in both Freedom and Luzuko’s cases, limited MMC information was received; paralleling Grund and Hennink’s (2011) finding that men who received less counselling were more inclined to ‘risk compensate’. Cultivation of dominant or accurate interpretations of MMC information are likely contingent to some extent on exposure over time; as both individuals within this study had only brief encounters with differing formats of MMC information. Resultantly, both individuals perceived MMC in ways that could be described as a “back-up” plan to HIV prevention, rather than an additional support (Grund & Hennink, 2011: 6). Framing MMC health communication in such a way that attention is focused toward underscoring the remaining 40% risk of HIV infection, as opposed to primarily spotlighting the negated 60%, may help bring about a more judicious appreciation of risk. Admittedly, striking the right balance between enticing men to undergo the procedure, as well as keeping in mind their remaining risk to HIV, will be a difficult task.

Accurate interpretation of MMC health communication is obviously conditional on exposure to messaging in the first place. Data collected within this study has demonstrated not only through second hand accounts, but by correlating the residing locations of participants with erroneous perceptions, that township communities should be of key focus for MMC health communication. If not already doing so, MMC communication stakeholders should aim to work in tandem with community radio stations or other media channels that have direct access to township communities.

To summarise, when contrasting the key message – ‘MMC does not replace established HIV prevention measures’, against participant perceptions, the overall result has been promising. The vast majority of participants have vehemently defended the need for continued condom usage, and expressed that having multiple partners is a distinctly risky behaviour, regardless of circumcision status.

Within the sample there were two participants who exhibited perceptions indicative of risk compensatory behaviours. The evidence in this research suggests that some uncircumcised men who are involved in multiple concurrent partnerships may see MMC as an appealing contingency plan against HIV infection in the event of condom breakage or inconsistent usage. Among certain men, this belief could foster more frequent instances of risk taking behaviour and possibly drive up HIV susceptibility.

Another potential area of concern for MMC health communication experts relates to a decrease in condom usage stemming from decoding or interpreting MMC messaging in such a way that one's appreciation of the residual risk of HIV infection is undermined by an over-valorisation of the allotted 60% protective benefit. Brief encounters with health communication may play a role in this type of interpretation, as the 60% efficacy of MMC might not be fully contextualised in terms of real world application. Although primarily in agreement with studies showing a lack of risk compensation evidence (Agot *et al.* 2007; Westercamp *et al.* 2010; Bailey *et al.* 2007), my investigation has not been totally devoid of these characteristics. Ultimately, findings uncovered within this study are more aligned with research highlighting the limited, yet still existent nature of risk compensation - or at least the potential for such an outcome, following MMC (Riess *et al.* 2010; Grund & Hennink, 2011).

In order to explore another key message identified in the communications guideline, I now turn my attention to exploring whether men perceived MMC as beneficial in preventing the transmission of HIV from already infected men, to their female partners.

MMC and Perceived Capability of Male to Female Transmission of HIV

A twofold approach was taken toward examining if men felt that that HIV transmission from males to females was within the scope of MMC's preventative capabilities. Firstly, participants were questioned about the benefits MMC held for HIV positive men, and secondly, by determining whether participants felt MMC could in any way help protect women from HIV infection.

Analysing data derived from these two angles of questioning revealed that seven participants (35%) were under the impression that MMC could reduce the chances of an HIV infected man transmitting the virus to a female partner during sexual intercourse.

Sandile (33, Suburban) had put forward:

Even though I don't understand the whole mechanics pertaining the transmission of the disease, but if it reduces the risk of contracting it, like technically, it must reduce the risk of HIV positive men spreading it.

Similarly, Kwazi (19, Township) had paralleled, "You, yourself, a man, can also give STDs and things like that, so I think it reduces the chances of giving a woman HIV as well". Accompanying these misperceptions was Freedom's (28, Township) account, which had read:

I think it [MMC] does reduce the chance of transmitting HIV to women, cause where would the dirt stay?

Others to make similar statements included Sthe (24, Township) and Mduzuzi (20, Township), who had respectively exclaimed:

There can be benefits, in that they [women] are not as easily infected if a man has been circumcised.

If the man is circumcised he's less likely to infect a woman with HIV.

Having brought to light some of the participant responses, it is evident that misperceptions exist within the sample group. In Freedom's account the presence of HIV is thought to be localised to the end of the penis, as opposed to circulating within bodily fluids as is the reality. Other participants seemed to rely simply on their own flawed logic, much of which was based on the notion that if MMC reduced HIV infection susceptibility from female to male, then surely it will be similarly effective in reverse fashion.

A feature worth noting is that amongst the seven participants championing these misperceptions, six had been exposed to some form of mediated health communication. Close to half (38%) of the participants exposed to mediated MMC communication were of the belief that male circumcision could help protect a female partner from HIV infection. Therefore, evidence would suggest that the concept of HIV transmission from males to females is inadequately represented or improperly decoded in health communication. Although not a perception that would be of primary concern for risk compensation purposes, the misunderstanding is still capable of driving up incidence of HIV infection, and should be of concern to MMC health communication stakeholders.

Illuminating the specifics of how HIV transmission occurs, and how the MMC procedure works could begin to address some of these misperceptions and uniformed beliefs.

Having covered the relevant perceived benefits of MMC as identified by participants, I now intend to discuss the perceived barriers to undergoing the procedure.

Perceived Barriers to Undergoing MMC

Research into the Health Belief Model has shown that the obstacles or perceived barriers to a recommended course of action are the most significant factors in determining behaviour change (Janz & Becker, 1984). By investigating the hurdles men associate with undergoing MMC, feedback can be generated and incorporated into further improving uptake of the procedure. In conjunction, as a potential barrier, the key message concerning the six week abstinence period post-MMC can be reviewed for accuracy.

Apprehension or anxiety before any surgical procedure is something considered as normal or to be expected. However, excessive fear to the point whereby it influences the decision to proceed can be considered an obstacle. Not surprisingly, fear of pain and medical complications were the most frequently identified barrier to MMC. Thirty percent of the sample declared that overcoming the fear of physical harm and pain was a significant challenge in their decision. Participants like Sipho (24, Suburban) spoke of his persisting anxiety:

Ya, there was a fear of pain, when I came here yesterday I was ok cause I thought I was going to do the booking and they were going to give me a date. Then they said I must come back this morning, and then when I came this morning and I was at the gate, my heart started pounding, ya so, just that fear you know? Of getting cut.

Mduduzi (20, Urban) was another to corroborate Sipho's concerns: "The only thing that made it challenging for me was the fear of the pain". Quite interestingly, all four individuals who had no formal contact with mediated information on MMC felt there were no barriers to undergoing the operation. The collected data suggests that interpersonal encouragement and vicarious experience were enough to allay concerns; Malusi (38, Township) expanded:

There were no challenges; it was easy to make the decision because I had seen my friend do it.

Whereas, those who were apprehensive of pain and injury often referenced news media in their testimonies; Simphiwe (29, Suburban) went on to explain:

I've heard of the things you see on the news bru, the things they do in the Eastern Cape and what not [traditional circumcision], and that's actually one of the main reasons I was scared., I mean I read a story about a young boy, they chopped his dick in half, and he couldn't do anything for life. He was actually in hospital; it was on the news, so it was definitely a true story. That's exactly...I ask the guys here, do these guys know what they're doing? Cause you can't take a chance like that, that's your life gone bru.

Mediated information actively searched out by Lincoln (22, Township) also exacerbated his anxiety: "The number one thing I'm afraid of is penile amputation, because I've read up on it and they say it's rare but it does happen, also the pain and the recovery period". The relevance of this pattern exhibits how access to media can also be detrimental to MMC decision making; consuming media that tells of botched medical and traditional circumcisions can diminish one's confidence in the procedure. Sensationalised news reporting stands to undermine some of the progress strategically designed media initiatives may have achieved in promoting MMC. Therefore, purposively designed health communication should reinforce the high safety profile and relatively painless nature of the operation, so as to reassure men who have either read, heard, or viewed other media content that may have raised alarm.

The only other barrier to be mentioned, which was raised by only one individual, was the mandatory HIV test accompanying MMC, an issue that was highlighted as a hindrance to some township community members' uptake. Having touched on this earlier, I will now proceed on to explore whether participants believed in the need for abstinence following circumcision, and if so, for how long.

Medical guidelines dictate that men undergoing MMC should not engage in sexual intercourse for at least six weeks following their operation. Failure to adhere to these parameters could result in heightened risk to HIV and STI infection, as well as wound complications. Thus, it is quite understandable why this has been identified as a key message to be circulated by health communication initiatives. In questioning participants about this period of abstinence, it was noted that 40% could recall the recommended six week abstinence period. An additional 15% felt that this period was longer than six weeks; however, there were participants who had truncated this critical phase in their responses.

This included a 25% proportion of participants noting that they thought that four weeks was sufficient, a further 10% was divided between answers of one week and three weeks, and finally, the remaining 10% felt unsure of the exact duration of this recovery period.

An analysis of these results points out that 45% of the sample had inadequate knowledge as to the length of time needed after the procedure, prior to recommencing sexual intercourse; something that could prove problematic when faced with the largely inadequate MMC counselling of the South African public health sector. Of this 45 %, the vast majority were township residents (67%), with the remainder being divided between urban (22%) and suburban (11%) residents. Erroneous perceptions or uncertainty over the six week healing period were noted in both those exposed to MMC health communication, and those with no formal mediated exposure alike.

MMC communication specialists should consider further underscoring the six week abstinence period, as results indicate limited participant knowledge within this area, and this could have negative health consequences for men championing these erroneous beliefs.

Self-Efficacy

Being a central tenet of the Health Belief Model, self-efficacy was an area of research that was important to my data collection. Exploring how men perceived MMC after their initial contact with information documenting the procedure, versus how they currently view the operation, helped to uncover trends in self-efficacy cultivation. As formerly discussed, self-efficacy development is reliant on four different channels; in descending order of influence these are enactive attainments, vicarious experience, verbal persuasion, and one's psychological state. In this scenario of my study, verbal persuasion and vicarious experience were of specific interest, as they facilitated inquiry into health communication and social interaction's influence on self-efficacy.

Looking at the findings, it can be noted that eleven participants (55% of the total sample) felt that MMC was something they were confident in pursuing from the outset. All four participants who had no formal interaction with mediated health communication were included in this group. Furthermore, only one of these eleven was among the participants who had identified pain as a potential barrier to MMC; however, on the basis of his Muslim faith, Selwyn (29, Urban) had exclaimed, "It's something I had to do". Within this group, vicarious experience was seen to be a powerful cultivator of self-efficacy; three individuals who had

felt confident to pursue MMC from the beginning had relied on family and friends' experiences to allay their own concerns. Discussing his own vicarious experience, Sphehile (20, Urban) had said, "My older brother went through the procedure so I knew that it was safe".

The remaining nine participants (the other 45% of the sample) were either vehemently against the operation initially (30%), or were somewhat hesitant (15%). However, in order to pursue MMC, all were in need of bolstered self-efficacy. Amongst these nine individuals, 67% were under the age of 24, suggesting reluctance or hesitancy could also be attributed to the 'psychological state' of younger men. One individual to account for his initial resistance to MMC was Lincoln (22, Township):

When I first heard it, [MMC] I honestly thought I wouldn't do it, I thought God made me like this, why would I want to take it [foreskin] away, but after doing some research you know, I trusted research, so I thought I must go. Some of my uncles also told me you should go and do it.

Lincoln was also one of the few individuals to utilise the internet in his search for MMC related information. Despite also encountering reports of penile amputation, health information sourced online and encouragement from his uncles ultimately bolstered Lincoln's self-efficacy toward undergoing MMC. This is a positive indicator that purposively crafted MMC health communication and interpersonal encouragement can successfully overcome latent health and safety concerns amongst individuals.

Another participant whose self-efficacy developed as a result of health communication and social interaction was Siya (32, Suburban). Initially subjected to sensationalised news reporting of Xhosa boys dying during traditional circumcision, Siya had recalled:

One thing that came to my mind was that picture that I always see on the TV, especially the guys from the Eastern Cape. Some of them they – they won't make it, so all this thing is come ringing on my mind, what if I do it? What if I die?

Despite at first being opposed to MMC for above reason, encouragement issued by a church minister as well as newspaper mediated information was enough for Siya to overcome his fears and opt to undergo MMC.

Displaying similar concerns, Sthe (24, Township) had said:

When I first heard about it I heard that one could die and I'd tell myself that I wouldn't do that to myself. But now I see that you can lead a normal life if you have it done at a clinic.

In Sthe's case, developing his self-efficacy was reliant on health communication (radio) as well as discussing the procedure with staff at the clinic itself. Whilst walking in the nearby area, Sthe had come across the clinic where research was conducted and decided to discuss the procedure with clinic employees. Thus, his self-efficacy was boosted both through interpersonal discussion as well as MMC health communication.

A final example can be drawn from Sandile's (33, Suburban) response:

I heard about it when it wasn't publicised, a long while ago, more than 8 years ago, but at that time I wasn't willing to do it. Actually when I first heard about it, I heard about the cultural one, and the benefits were not clearly stated, as in, what you gain or what are the benefits. As time went on and the information became available, and more of my friends do it, that's when I got attracted to it.

The above expert highlights how both the vicarious experiences of friends as well as the informative nature of health communication, acted as catalysts in developing Sandile's own self-efficacy. The manner in which health communication has facilitated the development of self-efficacy in many of the above cases is not only by reiterating safety, but by influencing individuals' "outcome expectation[s] or incentives" (Rosenstock *et al.* 1988: 180). In this way, purposively designed MMC health communication media, in conjunction to contact with friends and family or people of influence, was able to incentivise as well as encourage the need for MMC, furthermore, make the procedure all the more appealing and perceivably accessible.

One of the most apparent indications of health communications role in the process of self-efficacy development was mentioned by Sbongiseni (24, Township). In his account, Sbongiseni had spoken about his perception toward MMC prior to encountering TV, radio and internet public health communication:

It's been a long time since I've heard about circumcision, but I didn't think it was something I needed to do because at that time, from the people I was hearing it from, there was no particular benefits, it was just to be initiated into manhood, not for health reasons. It was never explained in that way, that it can actually help me, within my community it's not something that's important to be circumcised so I didn't see the need.

Sbongiseni had discussed MMC with his mother, girlfriend as well as a close personal friend; however, encouragement to undergo the procedure came principally from his exposure to strategically designed health communication. The relevance of Sbongiseni's illustration is that in the absence of interpersonal 'verbal persuasion' and vicarious experience, health communication can still effectively develop self-efficacy.

In light of all of the above and as per self-efficacy research, vicarious experience was the most powerful cultivator of self-efficacy, as even individuals devoid of MMC health communication exposure were comfortable undergoing MMC from the outset (Bandura, 1986). The data also confirmed that health communication against the backdrop of interpersonal encouragement was an effective means of developing self-efficacy. Furthermore, the data suggests that continued exposure to health communication on its own is capable of cultivating the requisite self-efficacy to further uptake of MMC. This could be of specific benefit to laggard demographics that lack the necessary confidence or incentive, such as some younger men below the age of 24 deprived of either the 'role-models' or interpersonal encouragement necessary to build their self-efficacy.

Summary of Findings

The examination of data illustrated in the above chapter has covered diverse and disparate aspects of my dissertation. Coming to the fore have been findings detailing the social influences impacting on men's decisions to undergo MMC, moreover, pressing matters such as men's exposure to MMC health communication, as well as the potential for risk compensation have also been interrogated. Additionally, prescribed key messages for MMC health communication have been contrasted against participant perceptions, yielding some insight into the current efficacy of health communication. Certain theoretical constructs have also been discussed with reference to the uncovered data; implications and recommendations for the areas of interest highlighted here will be taken further in the concluding chapter that follows.

Chapter Six: Conclusion and Recommendations

In my attempt to explore both the potential for risk compensation practices, as well as factors instrumental in the uptake of, or resistance to, MMC services in South Africa, I have drawn on theory and literature alike to inform the approach toward data collection. An important contribution to this end has been the communications guideline issued by the WHO, UNAIDS and JHHESA, dictating the advocated ‘key messages’ for purposively designed MMC health communications programmes. Focusing on twenty men undergoing MMC, questioning aimed to uncover perceptions corresponding with the identified key messages; in this way, facilitating simultaneous inquiry into risk compensation, as well as factors implicit in men’s choices to be circumcised.

The inclusion of relevant health communication theory also dictated the direction and objectives behind data collection and representation. Therefore, certain contextual and cognitive variables germane to MMC health communication theory that are not represented in the key message’s guideline were also illuminated. By utilising this approach, a more comprehensive and holistic appreciation for the factors weighing in on men’s decisions to undergo MMC could be achieved. Furthermore, conclusions as to the presence or absence of perceptions instrumental to risk compensation practices could be reached.

In this concluding chapter, discussion will follow a format whereby each key message defined by the guideline on MMC communication is addressed, in relation to the conclusions deduced during data analysis. Due to the fact that data collection was informed by more than just the key messages, findings that are non-specific to said messages will be examined under the heading of ‘Further Considerations and Directions for Future Research’. Recommendations and implications for MMC health communication are touched on where relevant.

MMC is effective at reducing the risk of HIV acquisition through vaginal intercourse by approximately 60%

Findings uncovered during data analysis highlighted that the precise extent to which MMC protects one from HIV infection was something not readily recalled. Although all participants were aware that MMC did not confer complete protection, less than half of the sample was able to recite the correct percentage (60%) by which MMC reduced one's chances of contracting HIV. In spite of this, overall evidence demonstrated that those exposed to MMC health communication provided more informed answers than those who had not. Despite indications of mediated MMC information exposure being high, findings conclude that the frequency of messaging should be increased, so as to cultivate more specific understandings of the approximately 60% efficacy of MMC as an HIV prevention modality.

MMC does not replace other HIV prevention measures

The principal avenue of inquiry into risk compensation, investigating whether men understood that 'MMC does not replace other HIV prevention measures' was paramount to my research objectives. Data revealed that the overwhelming majority of men maintained accurate perceptions over the continued necessity for condom usage subsequent to MMC. However, some evidence of risk compensation was present. The data suggests that a minority proportion of men may perceive the remaining risk following MMC as somewhat negligible, potentially leading to diminished condom usage. Data uncovered by means of second hand accounts also pointed out that perceptions of complete protection from HIV after MMC may be more prevalent within township communities. It is difficult to determine the reason for this, but perhaps access to reliable health information in these areas is limited, and the high density population profile of township areas is more conducive to the spread of misinformation than more segmented urban and suburban areas.

When looking at the aspect of multiple sexual partners and MMC, data once again reflected that perceptions indicative of future risk compensation practices were limited. The vast majority of participants felt circumcision in no way allotted men the benefit of safely engaging in multiple sexual partnerships. However, indications of erroneous perceptions were not totally absent; as a minority percentage of the sample declared that they would feel more comfortable engaging in multiple sexual partnerships if they were circumcised.

Although there were individuals who had no mediated MMC information exposure and still omitted any evidence of risk compensation, those who did indeed display some degree of risk compensatory perceptions had encountered limited exposure to health communication. Both individuals within this study to demonstrate perceptions associated with risk compensatory behaviours, had only brief encounters with differing formats of MMC information. Hence, the cultivation of dominant or accurate interpretations of MMC information is contingent to some extent on exposure to mediated information over time.

Due to the fact that township areas were seen to be the most at-risk locations for potential risk compensatory behaviours, health communication experts should consider both intensifying existing, and up-scaling future MMC communication programmes within these areas.

There is a six week healing period which requires abstinence from sexual intercourse

Resuming sexual intercourse prior to complete wound healing not only potentially drives up risk of septicity, but also increases an individual's susceptibility to HIV and STIs. Research gathered in this study found that just over half of the sample believed sexual abstinence was required for a period of at least six weeks or more. Hence, a large proportion of men felt that recommencing sexual activity post-MMC was something that could be done prior to the advised six week abstinence period. Erroneous perceptions or responses were noted amongst certain men who had encountered MMC health communication, as well as some of those who had not. Findings suggest that many men are either unaware, or maintain inaccurate perceptions over how long one should wait before resuming sexual intercourse. MMC health communication stakeholders should therefore consider this a priority area, and future programmes should further accentuate the mandatory six week abstinence period following medical male circumcision.

MMC must be conducted safely by professionally trained circumcision providers

Data reflected that participants within the sample unanimously agreed that in order to ensure the safety of MMC, one would need to undergo the procedure within a medical setting by trained professionals. Some participants made mention of traditional circumcision practices, but were overt in their skepticism of issues pertaining to safety and efficacy in this regard. Hence, results show that men are aware of the need to adhere to stringent safety measures when pursuing MMC. However, some men did display confusion over fatalities arising from traditional circumcision complications, and adverse outcomes that were due to MMC.

Health communication experts should clearly distinguish between the potential health risks of traditional circumcision, and the high safety profile of MMC when conducted by trained providers. This may help to resolve any existing apprehension or confusion sparked by exposure to sensationalised news media.

Evidence-based information should be made available to allow for an informed choice

More of a recommendation in itself than a ‘key message’ per se; the extent to which evidence-based information has been made available can in part be measured by participants’ exposure to mediated information. Findings identify that 80% of the research participants were exposed to MMC health communication by means of mass media, which is a positive indicator for the availability of evidence based information on MMC. Men who had not encountered MMC health communication were found to reside exclusively in township areas. This suggests that township areas should be made priority locations for intensified MMC health communication initiatives.

Data also showed that throughout the sample, there had been a pronounced call from participants for more detailed information regarding the practicalities of how MMC is conducted, as well as the requisite time needed off work and physical activity post-procedure.

Another useful barometer for gauging exposure to evidence based information comes from an assessment of partner and family opinions toward MMC, as accounted for by participants. It should be noted that not all participants included either family or partners in their decision to undergo MMC, but amongst those that did, there were certain implications that were noted. Despite most participants acknowledging support from female partners in their choice to undergo MMC, there is some evidence to suggest that a proportion of women in committed

relationships may not be as familiar with the specific benefits of the procedure when compared to their male companions.

Furthermore, when looking at family related findings, data highlights that some mothers may not be acquainted with the relatively safe and painless nature of MMC, a factor that could influence decision making capability amongst younger men. Both findings call for MMC health communication stakeholders to consider strengthening evidence based information programmes targeting female partners and mothers alike.

There must be continued adherence to safe sex practices and HIV prevention methods within ongoing partnerships

Inquiry into men's perceived susceptibility to HIV revealed that many participants upheld stringent HIV prevention regimens within their relationships, using condoms and having regular HCT. It was ascertained however, that several men were less circumspect in their approach to HIV prevention, revealing inconsistent condom use and infrequent HIV testing. Amongst these individuals, MMC was surmised to act as a 'back-up' plan for instances such as condom fatigue (attenuated sexual pleasure) or inconsistent use (condom availability). Although an assessment of participant perceptions cannot definitively predict the outcome of risk behaviour - the predilection toward condom forfeiture as reported by some men is of concern. Although likely confined to the boundaries of committed relationships, decreases in perceived risk afforded through MMC could further relax the current leniency with which some men employ condom usage.

There is currently no evidence supporting MMC as means of preventing transmission of HIV from men who are already infected to their partners

In spite of the fact that there is currently no evidence to suggest that MMC reduces transmission of HIV from males to females in any way, many participants in this study were of the belief that it in fact does. Of concern is that most of the men who held this belief had attested to being exposed to mediated MMC health communication. The collected data indicates that the concept of HIV transmission from males to females is either inadequately represented or improperly decoded in MMC health communication. Although this perception is not of primary concern for risk compensation purposes, the misunderstanding may still be capable of driving up incidence of HIV infection. This is therefore an issue that MMC health communication stakeholders should address.

Clarifying the specifics of how HIV transmission occurs, and how the MMC procedure works on a biological level, could begin to address some of these misperceptions.

Further Considerations and Directions for Future Research

Aside from the areas that have been identified and discussed above, much of what underpinned my research has been primarily theoretical in nature. As a result, findings relevant to the theoretical constructs employed in my study have emerged; the implications of which hold value for further MMC research that may utilise any of the same theoretical tools of inquiry used here.

In addition, peripheral areas of concern that warrant both further investigation as well as MMC stakeholder consideration have emerged through research conducted in this study. A tangible inter-cultural conflict over symbolic meaning and relevance was found to exist between Zulu and Xhosa men within township areas, an issue which could influence how MMC is perceived and ultimately embraced or rejected. Moreover, there are reports of community members avoiding MMC on the principal basis that a mandatory HIV test is required. Further research should seek out to determine the extent of this sentiment, and whether it would be wise to consider amending current implementation guidelines for the sake of further MMC uptake.

Whilst the findings within this study have disclosed that perceptions associated with risk compensation were not widespread, acts of risky behaviour sparked by MMC should not be altogether overlooked. Erroneous beliefs that are left unchecked on account of a weak public health sector could result in sporadic instances of risk compensatory behaviour. MMC communication stakeholders should continue to remain vigilant over the concerns raised here. On the basis of this study's findings as well as the apparent dearth of literature, prospective studies focusing on MMC and risk compensation in SA are well warranted. Of specific recommendation would be a more robust interrogation of how MMC affects condom usage within ongoing relationships over time – as progressing leniency toward unprotected sex may be a consequential outcome of MMC within certain partnerships.

Admittedly limited in its scope, research carried out in this study has uncovered numerous motivating factors for men undergoing MMC, as well as having spotlighted several areas of concern regarding men's perceptions about the procedure and its benefits, as well as the quality of and access to mediated health communication in this regard.

Hopefully this research lays the foundations for further inquiry into other key areas of MMC scale-up within the South African context.

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Appendices

Appendix 1: UKZN Ethical Clearance Form



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7 October 2011

Mr W C Mathew (207509146)
School of Literary Studies, Media & Creative Arts

Dear Mr Mathew

PROTOCOL REFERENCE NUMBER: HSS/0956/011M

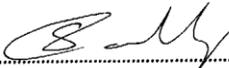
PROJECT TITLE: Cutting into Perceptions: Investigating men's understanding of protection – through medical male circumcision for HIV prevention at McCord Hospital in Durban, KwaZulu-Natal.

In response to your application dated 4 October 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.
PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully


.....
Professor Steven Collings (Chair)
Humanities & Social Science Research Ethics Committee

cc Supervisor – Dr E Durden
cc Professor K Tomaselli
cc Mrs. S van der Westhuizen

Appendix 2: Document of Formal Consent (English)

What is this about?

I am Wesley, a Masters' student at the University of KwaZulu-Natal. I am currently doing research into how men understand Medical Male Circumcision. I am going to provide you with information about my research and invite you to participate. If this form contains words or ideas you don't understand, please feel free to ask me about these at any time.

Medical Male Circumcision is a procedure that many men choose to have done, for many different reasons. The purpose of my study is to understand the reasons behind men seeking out medical male circumcision and what men believe the benefits to be. This knowledge may help me understand how men view medical male circumcision and inform health communication projects promoting this procedure. This research will involve you being interviewed which will take between thirty to forty-five minutes. You are being invited to take part in this research because you are here at the clinic today and you intend to be medically circumcised. I am asking 20 men to talk to me here. You are not chosen for any particular reason, I am approaching different men at random.

What is needed of you?

Your participation in my research is entirely voluntary. If you don't choose to participate, this will not affect the care available to you at the Hospital. You may choose to discontinue participating at any time and this will not affect the care and services available to you at the Hospital.

If you decide to be part of my study then you will be asked to take part in a short interview with myself. The questions in this interview seek to understand what you know about medical male circumcision, what made you decide to have it done, if your community influenced you to have it done, and what MMC for HIV prevention means to you. The information you provide will be kept private and it will not be shown to anyone outside of the research team. Although we have recorded your name on this questionnaire, we will remove all names when we write up the research findings. Your name will not appear in any report or public document. The interview will be recorded by a voice recorder, which will also be treated confidentially and stored by the University of KwaZulu-Natal.

How long will this take?

The interview will take between thirty and forty five minutes, and if at any point you wish to withdraw you may do so without any problems at all. You may choose to not answer a specific question if you are not comfortable with it without penalty.

What will I get out of this?

There will be no direct benefit to you by participating in the study, but your participation will help us find out more about how local men understand MMC. This could help others see if there are issues regarding MMC needing clarification amongst local men. If you choose to participate in my study and would like to see the results of this interview, a completed report will be stored with the clinic upon finalisation of the research, which is anticipated to be December of 2012. Would you like to ask me any questions you might have before starting the research? Finally, are you comfortable having this conversation voice recorded, so that I don't miss anything important you may say in the interview? None of what is audio recorded will be made available to anyone in the public, it will only be used by the researcher to recollect what has been said here.

I agree to being voice recorded _____

I do not wish to be recorded, but still wish to be interviewed _____

Part II: Certificate of Consent

I have read the information above, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study and have specified whether I am comfortable or not being voice recorded.

Print Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

If illiterate:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness _____

Mark of Consent

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent:

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

Print name of Researcher _____

Signature of Researcher _____

Date _____

Day/month/year

If you would like to discuss your rights as a research participant, discuss problems, concerns and questions or obtain information, you may contact the Ethics Committee Coordinator, Dr Claire Kerry on (031) 268 5903, or myself (Wesley Mathew) at the CCMS department of UKZN on: (031) 2602505.

Appendix 3: Document of Formal Consent (isiZulu)

Lumayelana nani ucwa?

Igama lami ngingu Wesley. Ngiwumfundi wonyaka wesihlanu enyuvesi yaKwaZulu-Natali. Okwamanje ngenza ucwaningo olumayelana nokusoka kwabesilisa. Ngizokwazisa mayelana nocwaningo lwami ngikucele nawe ukuthi ube ingxenye ocwaningeni lami. Uma kukhona amagama ongawaqondi noma ongawezwa kahle, ngifisa wazi ukuthi ukhululekile ukungibuza nomayini nomayinini.

Ukusoka kwabesilisa into abantu abaniningi abakhetha ukuyenza. Inhloso yocwaningo lwami ukuthola ulwazi olumayelana nokusoka okwempilo kwabesilisa kubantu besilisa abazobe benza ukusoka. Futhi ngizobe ngifuna ukuthola ulwazi mayelana nezizathu eziholela abeseilisa bakhethe ukusoka. Lolulwazi luzongisiza nami ukuthi ngazi kabanzi izonkolelo zabesilisa bakuleli mayelana nokusoka kwabesilisa, nokuthi ukusoka okwempilo kungakhuthazwa kanjani kuleli. Kulolucwaningo ngizobe ngikubuza imibuzo. Uceliwe ukuthi ube ingxenye kulolucwaningo ngoba ukulesisibhedlela futhi unqume ukusoka. Ngizobe ngicela abesilisa abayishumi nanhlanu ukuthi babambe yingxenye kulolucwaningo. Asikho esinye isizathu esithile okhethelwe sona.

Yini ezobe idingeka kuwena?

Uzozikhethela wena ukuthi ungathanda yini ukubayingxenye yalolucwaningo. Uma ungavumelani nokuba yingxenye yalolucwaningo ungakhetha ukungabi ingxenye. Angeke kubenemithelelo emibi ephathelene nesibhedlela noma nalolucwaningo. Yonke into izoqhubeka njengoba. Ungakhetha ukuyeka noma yinini futhi angeke Angeke kubenemithelelo emibi ephathelene nesibhedlela noma nalolucwaningo. Lokhu angeke kube nemphumelo mayelana nezinto ezenziwa kulesisibhedlela isibhedlela.

Uma ukhetha ukubayingxenye yalolucwaningo ngizobe sizobesixoxisana ngikubuza imibuzo kanye nepheshana elinemibuzo. Imibuzo izobe imayelana nokusoka, ukuthi unolwazi olungakanani mayelana nokusoka, izizathu eziholele ekutheni ukhetha ukusoka, ukuthi uvela kephi nokuthi umphakathi ovela kuwona ubeyingxenye kangakanani ukuthatheni kwakho kwalesisinqumo kanye nokuthi ukusoka okwempilo kusho ukuthini kuwena ekuvikeleni kwe HIV nengculaza. Imininingwane ozobe unginike yona izoba imfihlo engeke ikhonjiswe muntu ongaphandle kweqembu locwaningo. Igama lakho angeke livele ndawo lapho kuzobe kubhalwa khona ngalolucwaningo.

Ingxoxo yethu izorekhodwa, bese ihanjiswa isiwe eNyuvesi lapho izofihlwa khona. Umasengibhala imiphumelo yocwaningo igama lakho angeke lisentsheziswe, lizobayimfihlo.

Kuzothatha isikhathi esingakanani?

Ingxoxo nemibuzo kuzothatha isikhathi esingangemizuzu ewu30 noma ewu45. Uma usufisa ukuyeka singayeka, angeke kubenenkinga. Uma ukhetha ukubamba iqhaza kodwa kukhona umbuzo ongafisi ukuwuphendula nalokho akunankinga futhi awudingi ukuchaza isizathu.

Yini engizoyizuzisa kulolucwaningo?

Akukho zuzo ozolithola kulolucwaningo ngokwakho, kodwa lingasisiza ukuthi sazi kangcona mayelana neMMC nokutha abesilisa bacabangani ngayo. Lokhu kungasiza abanye baboni ukuthi ngabe zikhona yini izinto ezidinga ukuthi zicaciswe kubantu besilisa abakuleli mayelana neMMC. Uma ukhetha ukuba ingxenye yalolucwaningo uthanda ukubona imiphumelo yalo i-rephothi ephelele izobe ikhona kulomtholampilo elizobe seliqediwe mhlakufika uDecember 2012. Ngabe ikhona imibuzo ongathanda ukungibuza yona na? Ngabe ukhululekile nokuthi ingxoxo yethu ngiyirekhode ukwenzela ukuthi ngikwazi ukuqopha yonke into esemqoka? Yonke into erokhodiwe izobe isetshenziswa umcwaningi kuphela.

Ngiyavuma ukuthi ngirekhodwe.....

Angifisi ukurekhodwa, kodwa ngiyavuma ukuphendula imibuzo.....

Part II: Isitifiketi semvumo

- Leliphepha elokungimema ukuthi ngibe ingxenye yalolucwaningo elimayelana nokusoka kwabesilisa okwempilo.

Sengilifunde kabanzi lelifomu noma ukhona osengifundele lona . Sengibuze nemibuzo, imibuzo yami yaphendulwa ngendlela enethezekayo. Nginika imvumo yokuthi ngibe ingxenye yalolucwaningo nokuthi lengxoxo irekhodwe.

Print Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

Uma ungathanda ukwazi kabanzi ngamalungelo akho njengoyingxenye lwocwaningo noma ukuxoxa ngezinkinga nokubuza imibuzo noma imiphi eminye imininingwane ungathinta isibhedlela Ethics Committee Coordinator, Dr Claire Kerry ku (031) 268 5903, noma mina (Wesley Mathew) CCMS department of UKZN ku (031) 2602505.

If illiterate:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness _____

Mark of Consent

Signature of witness _____

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

Print name of Researcher _____

Signature of Researcher _____

Date _____

Day/month/year

Appendix 4: Interview Schedule (English)

1.	What is your age?
2.	In which general area do you live on a day to day basis?
3.	How many healthcare facilities are available to you in this area? (List them)
4.	Where have you come across information on MMC? (Home area, workplace, etc)
5.	Can you briefly tell me how you found out about the Hospital's MMC programme?
6.	What has prompted you to come here today to be medically circumcised?
7.	What do you understand the benefits of MMC to be? (Probe: HIV prevention, sexual satisfaction, cosmetic etc)
8.	Were there any challenges in planning to have this procedure done?
9.	What is your understanding of the relationship between MMC and HIV prevention?
10.	Please could you briefly tell me about the problem of HIV in your community?
11.	What are your views on HIV and how do you handle the issue of HIV within your sexual relationships?
12.	When you first heard about MMC, what did you think about going for the procedure?
13.	What other information would you have liked to have had before deciding to be circumcised?
14.	Was there any involvement from the community in your decision to be medically circumcised?
15.	To your knowledge, is there anywhere else you can go for medical circumcision, other than a hospital or clinic?
16.	Do you think that you have to abstain from sex after you have been circumcised? If so, for how long?
17.	According to your understanding of the issue and what you have been told, do you believe it is necessary for a man to wear a condom during sex with a woman after he has been medically circumcised?
18.	Would you say that it is safe for a man to have more than one female sexual partner if he has been medically circumcised?
19.	What do you understand are the benefits of male circumcision for HIV positive men?
20.	What do understand are the benefits of male circumcision for HIV negative men?
21.	Can you tell me whether you believe male circumcision has any benefits for Women?
22.	If you have a partner, what does he/she think about MMC?
23.	What does your family think about MMC?
24.	What does your community think about MMC?
25.	What do you think are the existing cultural beliefs about MMC?

Appendix 5: Interview Schedule (isiZulu)

1.	Uneminyaka emingaki?
2.	Uhlala kuphi, usuku nosuku?
3.	Ngabe miningi imtholampilo endaweni ohlala kuyona? (Washo)
4.	Ikuphi la uthola khona ulwazi mayelana ne MMC la uhlala khona? (Ekhaya, emsebenzini etc)
5.	Waze kanjani ngaloluhlelo lweMMC?
6.	Yini eyenze ufune ukusoka?
7.	Yini ocabanga ukuthi ungayizuzwa ngeMMC ? (Mayelana neHIV, ucansi, ubuhle)
8.	Ngabe bukhona ubunzima ohlangabezane nabo ngesikhathi uhlela ukuzosoka na?
9.	Ngabe kukhona okwaziyo ngeMMC ekuvikeleni kweHIV?
10.	Ngicela ungichazele kabanzi mayelana nenkinga yeHIV emphakathini wakho?
11.	Ngabe ucabangani ngeHIV, futhi uziphatha kanjani izinkinga ezimayelana neHIV kubantu ozwana nabo ngokocansi?
12.	Ukuzwa kwakho ngeMMC okokuqala, ngabe ubenayo inkololelo yokuthi ungakwazi ukuyoyenza na?
13.	Ngabe lukhona ulwazi ufisa engabe ulitholile mayelana nokusoka ngaphambi kokuthi unqume ukusoka?
14.	Ngabe lukhona ubambiswano olukhona elivela emphakathini mayelane nesinqumo osithathile sokuyosoka?
15.	Ngabe ukusoka kungenziwa yini ngaphandle komtholampilo nesibhedlela?
16.	Ngabe ucabanga ukuthi kumele uluyeke ucansi uma ususokile? Uma uvuma, isikhathi esingakanani na?
17.	Ngokwazi kwakho kanye nalokhu osuke wakuzwa mayelana naloludaba, ngabe uyakholelwa yini ukuthi umunti wesilisa asebenzise i-condom ocansini emuva kokuba esesokile?
18.	Ngokwazi kwakho kanye nalokhu osuke wakuzwa mayelana naloludaba, ngabe umuntu wesilisa engalala nabesifazane abangaphezulu koyedwa uma esokile?
19.	Ngabe ucabanga ukuthi iyinin inzuzo yokusoka kubesilisa abane HIV?
20.	Ngabe ucabanga ukuthi iyinin inzuzo yokusoka kubesilisa abangenayo iHIV.
21.	Ngabe ikhona inzuzo yokusoka kwabantu besilisa besifazane?
22.	Uma unomuntu wakho, ngabe ucabangani yena ngeMMC?
23.	Ngabe umndeni wakho ucabangani ngeMMC?
24.	Ngabe umphakathi wakho ucabangani ngeMMC?
25.	Ngabe ucabanga ukuthi kukhona ziphi izinkolelo zesiko mayelana neMMC?

Appendix 6: MMC Brochure Given to Participants Subsequent to Interview

WHAT IS THE MALE CIRCUMCISION PROCESS?

You have the right to safe medical circumcision in a hygienic and clean medical facility

Medical circumcision is the most hygienic, safest way to be circumcised, and the only way to ensure that you get the full sexual and health benefits. Medical circumcisions are performed at health facilities throughout South Africa, such as community health centres and district hospitals.

You have the right to counselling and HIV testing before undergoing circumcision

When you arrive at the clinic or hospital, you will receive group counselling and you can voluntarily undergo counselling and testing for HIV, before undergoing circumcision. You will also be examined for sexually transmitted infections and foreskin abnormalities.

Your circumcision will be performed by a trained health provider and it's painless and quick

The circumcision will be done by a trained health care provider (doctor or nurse) who is specially trained to perform this kind of procedure. It is done under local anaesthetic, so besides a small injection, there is no pain and it takes only about 30 minutes.

The wound is then stitched and dressed, and you are given painkillers to help manage any mild pain or discomfort you may have when the anaesthetic wears off. You are also given instructions on how to keep the wound clean while it heals, as well as a medical certificate should you require time off from work or studies while you recover.

And then you can go home.

You must not have sex until the wound has fully healed

The healing process takes six weeks, during which time you may not have sex or masturbate. If you do, the wound will take longer to heal completely – and you run a higher risk of HIV transmission.

For the first few days, you must keep the dressing on and dry. You will then return to the health care provider for a follow-up visit and to have the dressing removed. After this, you should gently wash your penis with soap and water, using a soft cloth. The stitches will also fall out after 10 to 14 days.

If you have concerns, speak to your clinic or doctor

Like with any surgical procedure, there can be problems after a circumcision, but in most cases these are slight, such as reaction to the pain injection, minor bleeding, or some swelling and pain. With proper care, these issues are easily treated. Should you have any concerns, go to your clinic or doctor.

WHAT MALE CIRCUMCISION DOES NOT DO

Male circumcision:

- does not prevent pregnancy
- offers only partial protection against HIV infection
- does not benefit the partner of an HIV-positive man
- does not reduce the risk of HIV infection during anal sex

Getting circumcised does not prevent pregnancy and ONLY REDUCES the risk of HIV infection. This means that you cannot let your guard down. If you are circumcised, you should still use a condom every time you have sex, keep to one sexual partner and test for HIV to know your status so that you can make the best decision for your health.

If you are HIV-positive, you may also be circumcised, but this does not protect your partner from HIV. If you test positive for HIV you should have your CD-4 cell count taken to determine the strength of your immune system and you will be referred to care and support services. HIV-positive men who choose to be circumcised should continue to use condoms at all times to protect their partners from HIV and themselves and their partner from re-infection if both are HIV-positive.

Circumcision does not reduce your risk of HIV infection if you have anal sex.

Medical male circumcision is the best option for your sexual and reproductive health. Circumcision offers a lifetime of benefits including better hygiene, reduced

risk of sexually transmitted infections and HIV. It reduces your risk of penile cancer and your partner's risk of cervical cancer.

Quite simply, getting a medical circumcision is the right thing to do.

For more information contact:

The AIDS Hotline
0800 012 322

The Department of Health
www.doh.gov.za

Brother's Site
www.brothersforlife.org

Gender Justice Institute
www.genderjustice.org.za

GET CIRCUMCISED. KNOW THE FACTS.

SMS "MMC" TO 43740

Standard SMS rates apply.



WHAT IS CIRCUMCISION?

Medical circumcision is the full removal of the foreskin, fully exposing the head of the penis. Getting circumcised is the right thing to do for your health as it:

- improves your hygiene as it is easier to keep the head of the penis clean
- reduces your risk of sexually transmitted infections (STIs) such as chancroid, syphilis, genital warts and herpes
- reduces your risk of HIV infection as it decreases the risk of tearing and bruising that can be an entry point for HIV
- removes certain cells within the foreskin that act as an entry point for HIV
- lowers the risk of penile cancer
- reduces your partner's risk of cervical cancer

All men have the right to safe and hygienic medical male circumcision services.

In South Africa these are available at community health centres and district hospitals all over the country.

In some cases, you may have been circumcised for religious or cultural reasons. Certain religions circumcise their boys soon after birth. Some cultures circumcise their young men as part of an initiation process that marks the passage from boyhood to manhood. Men who are circumcised for religious or cultural reasons need to make sure that they are fully circumcised if they are to take advantage of the health benefits.

If you are to get the full health benefits of male circumcision it is important for you to know whether you are:

- uncircumcised
- partially circumcised - where only a part of the foreskin has been removed or a slit has been cut in the foreskin
- fully circumcised - where the entire foreskin has been removed



Circumcised penis

- Full health benefits:**
- ✓ the foreskin has been completely removed, under medical conditions, from the head of the penis
 - ✓ it is easier to keep clean
 - ✓ eliminates tearing and bruising during sex
 - ✓ cells that attract HIV have been removed
 - ✓ reduces the risk of HIV infection by eliminating tearing and bruising
 - ✓ lower risk of STIs and diseases
 - ✓ reduces your partner's risk of cervical cancer



Uncircumcised penis

- No health benefits:**
- the foreskin covers the head of the penis and it's more difficult to keep clean
 - the skin inside the foreskin is soft, and prone to tearing and bruising during sex that allows an entry point for HIV and can cause discomfort during sex
 - the foreskin contains cells that act as an entry point for HIV
 - there is a higher risk of HIV infection
 - higher risk of STIs and diseases that affect uncircumcised men
 - men are more likely to get the Human Papilloma Virus which they transmit to their partner, which increases their partner's risk of cervical cancer



Partially circumcised penis

I AM CIRCUMCISED BUT I STILL USE A CONDOM.

TO PREVENT UNWANTED PREGNANCIES
TO ENSURE MAXIMUM PROTECTION FROM HIV AND STIs



SMS "MMC" TO 43740

Standard SMS rates apply.