Declaration

This is to certify that the work is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

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Signature of student              Date

Approved for final submission

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RN, RM, PhD
Dedication

I dedicate this dissertation to my late mother Thembi, my late brother Sithembiso, my husband Mhlengeni, my sisters Sindi, Nozipho, Mabongi and Sanelisiwe my two sons Langelihle, Lindokuhle and my only daughter Cebo.
Acknowledgements

First and foremost I would like to thank God almighty for granting me the opportunity to realize my dream as well as the strength to embark on this journey.

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Abstract

Introduction

Male circumcision refers to the surgical removal of all or parts of the prepuce of the penis. This procedure is undertaken for religious, cultural, social, hygiene or medical reasons (Maibvise and Mavundla 2013: 139). The number of people living with Human Immunodeficiency Virus (HIV) rose from approximately 8 million in the year 1990 to 33 million infections now. Sub-Saharan Africa is the region in the world most affected by HIV/AIDS with 22.4 million people living with the virus in the year ending 2008 (Naidoo et al. 2012: 2). The use of male and female condoms remains a challenge despite decades of promotion. There is evidence that medical male circumcision (MMC) is effective in preventing HIV sexual transmission. Medical male circumcision is a drive that was initiated by the National Department of Health as a strategy to curb HIV infection in South Africa in 2010.

Aim of the study

The purpose of the study was to investigate and describe knowledge, attitudes and perceptions of males with regard to medical male circumcision.

Methodology

A quantitative descriptive survey research method was used to describe the knowledge, attitudes and perceptions of males attending the community health care centers (CHCs) in eThekwini district regarding medical male circumcision.

Results

Displayed posters motivated 71.4% (n = 329) to have circumcisions. While 65.1% (n = 300) respondents had knowledge about circumcision and HIV, 27.8% (n = 280) perceived that circumcision would interfere with their sexual function and reproduction. A total of 38.8% (n = 179) of respondents indicated that it is good for children to be circumcised. There is a significant positive correlation between age and knowledge (r = 0.135, p = .004). Higher age is correlated with more knowledge.
Conclusion

This study found that knowledge plays a major role in changing attitudes and perceptions. The more knowledgeable an individual is, the more the chance is of them having a positive attitude towards MMC which could also influence a positive perception of MMC. In order to strengthen male circumcision as an HIV prevention strategy, it is imperative to provide the population that reflected low knowledge and negative attitude with information, education and counselling services. This may help them to change their attitudes and acquire a positive perception of MMC.
# Table of Contents

Declaration ................................................................................................................................. ii
Dedication ................................................................................................................................ iii
Acknowledgements ....................................................................................................................... iv
Abstract ....................................................................................................................................... v
Table of Contents ........................................................................................................................... vii
List of Tables .................................................................................................................................... xi
List of Figures ................................................................................................................................. xii
List of Appendices ......................................................................................................................... xiii
List of Acronyms ............................................................................................................................ xiv

CHAPTER 1 OVERVIEW OF THE STUDY ................................................................................. 1
  1.1 Introduction and background .............................................................................................. 1
  1.2 Problem statement ............................................................................................................... 3
  1.3 Purpose of study ................................................................................................................... 3
  1.4 Objectives of the study ........................................................................................................ 3
  1.5 Significance of the study ...................................................................................................... 4
  1.6 Operational definitions ....................................................................................................... 4
  1.7 Conclusion ........................................................................................................................... 4

CHAPTER 2 LITERATURE REVIEW ......................................................................................... 5
  2.1 Introduction ........................................................................................................................... 5
  2.2 Search strategy ..................................................................................................................... 5
  2.3 Males and circumcision ........................................................................................................ 5
  2.4 The Origins of circumcision ............................................................................................... 7
  2.5 HIV/AIDS globally ................................................................................................................. 8
  2.6 HIV/AIDS in sub-Saharan Africa ........................................................................................ 9
2.7 Circumcision and HIV/AIDS in South Africa .................................................. 11
2.8 Beliefs and circumcision ........................................................................ 14
  2.8.1 The Bible and circumcision ............................................................. 14
  2.8.2 Cultural beliefs and circumcision..................................................... 14
2.9 Medical reason for circumcision .............................................................. 16
2.10 Theoretical framework ........................................................................... 18
  2.10.1 Assumptions of the Health Belief Model ........................................... 19
  2.10.2 Perceived susceptibility to lifestyle modification ......................... 19
2.11 Components of the Health Belief Model ................................................ 19
  2.11.1 Perceived susceptibility to disease ................................................. 19
  2.11.2 Perceived severity of disease ......................................................... 19
  2.11.3 Perceived benefits of health promotion action ............................... 20
  2.11.4 Perceived barriers ........................................................................... 20
  2.11.5 Perceived threat of disease ............................................................. 20
  2.11.6 Perceived severity of HIV/AIDS .................................................... 21
2.12 Cues to action ........................................................................................ 21
  2.12.1 Self-Efficacy .................................................................................... 21
2.13 Structure of the Health Belief Model ...................................................... 22
2.14 Conclusion ............................................................................................. 23

CHAPTER 3 : RESEARCH METHODOLOGY ....................................................... 24
3.1 Introduction ............................................................................................ 24
3.2 Research design .................................................................................... 24
3.3 Study setting .......................................................................................... 25
3.4 Population ................................................................................................ 25
3.5 Sampling and sampling technique ......................................................... 25
  3.5.1 Inclusion criteria ............................................................................... 26
CHAPTER 5 DISCUSSION OF THE RESULTS................................................. 47

5.1 Introduction............................................................................................ 47

5.2 Overview of the research....................................................................... 47
  5.2.1 The aim of the study........................................................................ 47
  5.2.2 Objectives of the study.................................................................... 47

5.3 Discussion of the findings in relation to the Health Belief Model............ 47
  5.3.1 Demographic characteristics........................................................... 47
  5.3.2 Knowledge on medical male circumcision...................................... 48
  5.3.3 Attitudes of males on medical male circumcision............................ 50
  5.3.4 Perceptions of males on medical male circumcision....................... 51
  5.3.5 Cues in action ................................................................................. 53
  5.3.6 Reasons for having / not having medical male circumcision........... 54

5.4 Recommendations................................................................................. 55

5.5 Limitations of the study........................................................................ 56

5.6 Further research.................................................................................... 57

5.7 Conclusion............................................................................................. 57

REFERENCES ................................................................................................... 57

APPENDIXES..................................................................................................... 63
List of Tables

Table 4.1: Frequency of respondents and CHC sites ......................................... 33
Table 4.2: Age of Respondents ........................................................................ 35
List of Figures

Figure 2.1: Health Belief Model adapted from health promotion in the workplace .......................................................................................................................................................................................... 22
Figure 4.1: Residential area.......................................................................................................................................................................................... 33
Figure 4.2: Cultural affiliation .................................................................................................................................................................................... 34
Figure 4.3: Academic level ........................................................................................................................................................................................ 35
Figure 4.4: Knowledge on circumcision ................................................................................................................................................................. 38
Figure 4.5: Attitudes................................................................................................................................................................................................. 39
Figure 4.6: Perceptions on medical male circumcision ......................................................................................................................................... 43
Figure 4.7: Cues in action ....................................................................................................................................................................................... 45
Figure 4.8: Reason for having/ not having medical male circumcision .............................................................................................................. 46
List of Appendices

Appendix 1: IREC approval ................................................................. 63
Appendix 2: Information letter and consent form ................................. 64
Appendix 3: Incwadi yolwazi nesivumelwano ngocwaningo .................. 68
Appendix 4: Letter of validation of questionnaire ................................. 72
Appendix 5: Sample size letter .......................................................... 73
Appendix 6: Permission letter to eThekwini District .............................. 74
Appendix 7: Permission letter to the KZN Department of Health .......... 77
Appendix 8: Questionnaire (English) ................................................... 80
Appendix 9: Questionnaire (isiZulu) .................................................... 84
Appendix 10: Approval letter Medical Officer KZN DoH ...................... 89
Appendix 11: Approval letter Health Research Committee KZN DOH .... 90
Appendix 12: Letter of permission Newtown CHC ............................... 91
Appendix 13: Letter of permission Cato Manor CHC ......................... 92
Appendix 14: Letter of permission KwaMashu CHC ............................. 93
Appendix 15: Letter of permission Phoenix CHC ................................. 94
Appendix 16: Letter of permission RK Khan Hospital ......................... 95
# List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full term</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired immune deficiency syndrome</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
</tr>
<tr>
<td>EMTCT</td>
<td>Elimination of mother to child transmission</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>KAP</td>
<td>Knowledge attitude and perceptions</td>
</tr>
<tr>
<td>KZN</td>
<td>KwaZulu-Natal</td>
</tr>
<tr>
<td>MEC</td>
<td>Member of the executive committee</td>
</tr>
<tr>
<td>MMC</td>
<td>Medical male circumcision</td>
</tr>
<tr>
<td>MRC</td>
<td>Medical Research Council</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who engage in sex with other men</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>SANC</td>
<td>South African Nursing Council</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmitted infection</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>VMMC</td>
<td>Voluntary medical male circumcision</td>
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</table>
CHAPTER 1 OVERVIEW OF THE STUDY

1.1 Introduction and background

Male circumcision refers to the surgical removal of all or parts of the prepuce of the penis. This procedure is undertaken for religious, cultural, social, hygiene or medical reasons (Maibvise and Mavundla 2013: 139). Globally 30% of men are circumcised, mostly for religious reasons. An estimated 68% of circumcised males are Moslem and 1% is Jewish with coverage in the Middle East, North Africa, Pakistan, Bangladesh and Indonesia (Weiss et al. 2008: 567). In many African societies, male circumcision is carried out for cultural reasons as an initiation ritual and rite of passage into manhood. Traditionally, male circumcision is mainly performed on adolescents or young men and it is done in a non-clinical setting by a traditional provider with no formal medical training (Wilcken et al. 2010: 907). This is supported by a survey that was conducted by the medical research council (MRC) for the South African National Department of Health which found that 44.7% of adult males reported that they were circumcised and that the province with the highest rate of circumcised males was the Western Cape with 67.5% and the lowest, 26.8%, being KwaZulu-Natal (KZN) (Milford et al. 2012: 496). This is understandable as circumcision is a traditional cultural practice within the Xhosa nation which is located in the Western Cape and not within the Zulus located in KZN.

The growing number of HIV infections in South Africa has resulted in new preventative strategies to curb its transmission rate. These methods include elimination of mother to child transmission (EMTCT), AIDS awareness campaigns, condom use and distribution, promotion of abstinence, being faithful to one partner and medical male circumcision (MMC).

According to Dickson et al. (2011: 2), evidence demonstrating the effectiveness of voluntary MMC in preventing HIV sexual transmission was first released in
2005 from the South African randomized controlled trials conducted in Orange Farm. This was followed in 2006 by Uganda and Kenya. The three randomized control trials confirmed that male circumcision performed by well-trained and equipped medical providers is safe and reduces the risk of heterosexual acquisition of HIV infection by 60%. Brito et al. (2009: 1) asserts that randomized clinical trials have shown that male circumcision reduces the risk of HIV infection by 50-60% in heterosexual men, hence the need for safe MMC services in areas of moderate to high prevalence where the procedure is not yet being performed to prevent HIV transmission.

South Africa has nine provinces and KZN is the province with the highest number of HIV infected people. According to a study conducted by Milford et al. (2012: 496), the HIV prevalence in South Africa in 15 - 49 year olds is one of the highest in the world. In 2010, 30.2% of all pregnant women who attended public sector health care facilities in South Africa were infected with HIV hence the introduction of MMC which is aimed at reducing the transmission of HIV to unborn babies because if the father and mother have not contracted HIV, the mother will remain HIV negative which will eventually result in an HIV free generation (Barron et al. 2013: 70). Verguet (2013: 1) states that 173 000 new infections per year could be prevented in South Africa with MMC. Wang, Duke and Schmid (2009: 595) assert that 67% of the 33 million people in the world living with HIV reside in Sub-Saharan Africa and 65% of uncircumcised men are willing to be circumcised. The authors posit that there is an urgent need to intensify and expand HIV prevention.

Medical male circumcision is a drive that was initiated by the National Department of Health as a strategy to curb HIV infection in South Africa in 2010, since the country has 5.2 million people living with HIV (Naidoo et al. 2012: 13).

His Majesty King Goodwill Zwelithini KaBhekuZulu, king of the Zulu nation made a call to revive the tradition of circumcision for all males, which the Member of Executive Committee (MEC) for health, Dr. Sibongiseni Dhlomo
under the leadership of KZN Premier Dr. Zweli Mkhize welcomed. Dr. Dhlomo then took over the programme with the help of health care professionals and embarked on massive MMC campaigns (Naidoo et al. 2012: 13).

The KZN Department of Health is currently performing at least 5 000 circumcisions per month and has circumcised 78 500 males from 2010 (Naidoo et al. 2012: 3).

1.2 Problem statement

Prevention and control of HIV and AIDS remains a challenge for policy makers and health care provider’s worldwide (Castro et al. 2010: 370). Studies have shown that countries in Sub-Saharan Africa with the highest HIV prevalence are those in which medical circumcision is practiced on a small scale (Castro et al. 2010: 367). Promoting effective interventions that prevent new infections and controlling the epidemic is a priority. Male circumcision is proposed to be an effective intervention for HIV prevention in men. In Africa when MMC was introduced, it was not universally accepted (Castro et al. 2010: 370). Despite strong evidence that male circumcision decreases HIV infection, few studies have been conducted to assess the knowledge, attitudes and perceptions (KAP) of males with regard to MMC especially if offered as HIV prevention measure (Castro et al. 2010: 370).

1.3 Purpose of study

The purpose of the study is to explore the knowledge, attitudes and perceptions of males with regard to medical male circumcision.

1.4 Objectives of the study

• Assess the knowledge of males regarding male medical circumcision.
• Describe the attitudes of males regarding male medical circumcision.

• Describe perceptions of males regarding male medical circumcision

1.5 **Significance of the study**

The results of the study may help health care providers to understand and acknowledge the attitudes of health care users towards medical male circumcision. MMC reduces the risk of HIV infection by 60%, the results of the study may assist health care providers with how they approach the subject of male circumcision when they are aware of knowledge, attitudes and perceptions of males on circumcision. Furthermore, once it is understood how males perceive MMC, strategies to encourage them may be devised in order to increase the number of males that come forward for the procedure.

1.6 **Operational definitions**

**Client:** A person to whom a nursing service is supplied. For the purpose of this study medical circumcised male is person who uses health care services for the purpose of circumcision.

**Primary health care:** Primary health care is the first level of care that is available to the community and it is mostly within approximately five kilometers radius within a walking distance. It includes all components that can be accessed by clients. Primary health care provides a one stop system. Primary health is made available to the community at no cost.

**Users:** All people whether sick or well, who visit the PHC clinic.

**Health care providers:** All categories of nursing personnel working in the PHC clinic.

1.7 **Conclusion**

This chapter presented the introduction to the study. It outlined and discussed the global and Sub-Saharan Africa regional trends in HIV/AIDS, the statement of the problem, the purpose of the study, the aims and objectives of the study.
CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature relevant to MMC. Literature review is a process that involves understanding of what is known about a particular situation or phenomenon in order to identify the knowledge gap that exists so that the researcher can draw a conclusion on the topic being researched (Grove, Burns and Gray 2013: 40). A literature review provides the in depth knowledge needed to study a selected problem enabling the researcher to build on the works of others. The literature review directs the researcher in designing the study and interpreting the outcomes (Grove, Burns and Gray 2013: 40).

2.2 Literature search strategy

To search literature, the following electronic databases were used namely; EBSCO Host, Pub Med, Google Scholar, CINHAL, Medline and Science Direct. Only articles published in English and were not older than five years were included in the review.

2.3 Males and circumcision

Males have a concern about the age at which circumcision is done, stating that they prefer circumcision during early childhood because young boys experience less pain than adult men because men have mature blood vessels which make them experience more pain (Tarimo et al. 2012: 3). Furthermore, men experience sexual arousal that leads to an erection and this may impair the healing process of the circumcised penis (Tarimo et al. 2012: 3). There are men who are born without the foreskin, these men are ridiculed by other men, and hence men liken circumcision to physical castration. There is also a perception that circumcised men are incapable of producing sperm (Khumalo-Sakutukwa et al. 2013: 6).
Limited knowledge of HIV increases vulnerability as well as negative social attitudes and services that are not culturally sensitive. In addition, insufficient knowledge of HIV transmission and prevention contributes to risky sexual behaviour that increase the risk of infection (Kouta, Phellas and Charis 2013: 258).

There are strong negative feelings about the significance of male circumcision and limited knowledge on circumcision practices among men (Khumalo-Sakutukwa et al. 2013: 6). According to these authors the majority of males felt that they could be stigmatized as a result of choosing medical circumcision. Khumalo-Sakutukwa et al. (2013: 3) found that only 18% of men had the correct knowledge of the circumcision procedure while 22% indicated that they required more information. Both the older and younger men associated circumcision with the shame of being emasculated from the loss of the foreskin (Khumalo-Sakutukwa et al. 2013: 6). A traditional community in KZN preferred traditional male circumcision for reasons of cultural identity rather than medical reasons (Khumalo-Sakutukwa et al. 2013: 6). Men acknowledged that there were health and sexual benefits to MMC. However, they were concerned about potential local barriers to accessing circumcision services as well as technical expertise since it was performed by doctors from KZN and they believed that only Xhosa medical doctors could perform safe circumcision as it was part of their culture (Khumalo-Sakutukwa et al. 2013: 8).

Similarly older men felt that the young generation has brought HIV and they are the ones most at risk; only they should go for circumcision (Macintyre et al. 2014: 4). Although circumcision was viewed as a key HIV prevention strategy, there were several factors that hindered implementation including the diversity of cultures, traditions and tribal identity. Other men felt that circumcision was not meaningful to them (Macintyre et al. 2014: 1).

Older men in rural areas often doubted that they would go for circumcision because they are old or because they were married and thus felt that it was no longer necessary. They were not in favor of medical circumcision as it was associated with initiation to manhood and circumcision inferred stigma because
it allows the penis to be naked (Macintyre et al. 2014: 5). Some men felt that an
uncircumcised penis looks more attractive and offers protection and the
foreskin helps to create a heightened orgasm in women (Figueroa and Cooper
2010: 353).

Mshana et al. (2011: 1111) found that some males have a positive attitude
towards circumcision because they associate uncircumcised men as having
sexually transmitted infections and causing discomfort during sexual
intercourse due to the presence of the foreskin. Other males felt that the
foreskin makes semen remain in in the penis hence making them dirty.

2.4 The Origins of circumcision

Circumcision began over 12 000 years ago from the operation that was
performed by a Mohel or physician. During those days a stone knife was used
to circumcise and it was conducted in regions like Australia, New Guinea, North
America, Middle East and Africa (Zampieri, Pianezzola and Zampieri 2008:
1305). During the ancient times circumcision was performed to honor the
forefathers and follow their tradition. The most widely mentioned reason given
in ancient history for the initiation of male circumcision was that of “phymosis”,
which is difficulty in retracting the foreskin of the penis which hinders
fertilization. Circumcision began as a way of purifying individuals and society
by reducing sexual pleasure (Zampieri, Pianezzola and Zampieri 2008: 1305).
In Egypt circumcision was conducted for cleanliness. Circumcision was
revealed as a sacrifice of sinful human enjoyment for the sake of holiness in the
afterlife. According to Zampieri, Pianezzola and Zampieri (2008: 1304) among
the Hebrews during ancient time’s circumcision were performed to honor their
forefathers. The Bible (Old Testament) states that Hebrews believed that
circumcision was a covenant between God and Abraham and his descendants
because the penis is the source from which the perpetuation of the species
emanates.
Abraham circumcised himself over 3 800 years ago at the age of 99 years. After the circumcision he became fit to father the Hebrew nation. The following verse is cited by Zampieri, Planezzola and Zampieri (2008: 1306) in this regard:

- “This is my covenant with you and your descendants after you, the covenant you are to keep: every male among you shall be circumcised. You are to undergo circumcision, and it will be the sign of the covenant between me and you” Genesis 17: verses 10-14.
- For the generations to come every male among you, who is eight days old must be circumcised, including those born in your household or bought with money from a foreigner those who are not your offspring. Whether born in your household or bought with your money, they must be circumcised.
- My covenant in your flesh is to be an everlasting covenant. Circumcision became the means of identification of the Hebrews as special people.

2.5 HIV/AIDS globally

The World Health Organization (WHO) and the Joint United Programme of HIV and AIDS made a recommendation in 2007 that MMC be implemented as a comprehensive HIV prevention strategy in countries with a high prevalence of HIV, and where the mode of transmission is heterosexual (Herman-Rollof et al. 2011: 1). The WHO and the Joint United Program of HIV and AIDS identified 13 countries in Southern and Eastern Africa as high priority countries for the implementation and rapid scale up of voluntary MMC programs, including Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe (Dickson et al. 2011: 2). In 2009, 2.6 million people have become infected with HIV and AIDS and it is estimated that 33.3 million people are living with HIV worldwide (Dickson et al. 2011: 2). According to Prem Kumar et al. (2013: 1062) truck drivers and helpers are known to be at an increased risk for HIV and other sexually transmitted infections in India, of whom approximately 3.5 million are long distance truckers. At the population level truckers are 2.5 times more likely to be HIV infected than men in other professions.
In settings with high HIV prevalence and low circumcision prevalence, one new HIV infection could be prevented for every 5 to 15 circumcisions performed (Dickson et al. 2011: 2). It is estimated that scaling up circumcision programs to reach 80% of adult uncircumcised men within 5 years in 13 priority countries would require a total of 20.3 million circumcisions to be performed and a further 8.4 million between 2016 and 2025, preventing an estimated 3.4 million new HIV infections and 386 000 AIDS death (Dickson et al. 2011: 2). The promotion of the use of condoms and abstinence has had little effect on lowering HIV and AIDS. There is proven evidence that MMC is effective in reducing HIV and AIDS.

The other priority countries such as Nyanga Province in Kenya and the Iringa region in Tanzania are progressing slowly in expanding MMC services (Njeuhmel et al. 2011: 2). According to Adler (2012: 1) the American Academy of Pediatrics issued a new circumcision policy statement stating that circumcision protects against penile cancer and HIV and that the health benefits outweigh the risks which are very low. The policy recommends that parents should make the decision weighing the health benefits and risks in light of their own religious, cultural and personal beliefs. According to van Loggerenberg et al. (2012: 1) studies that were conducted in the United States and other developed countries have demonstrated successful reduction in HIV infections rates with education campaigns.

2.6 HIV/AIDS in Sub-Saharan Africa

The number of people living with Human Immunodeficiency (HIV) had risen to approximately 33. million in the world in 2005. Sub-Saharan Africa is the region in the world that is most affected by HIV (Dickson et al. 2011: 2). The HIV/AIDS pandemic is one of the threats facing the welfare of the present generation; the pandemic is not only increasing in prevalence and mortality but also spreading. AIDS first appeared in Uganda and Tanzania in 1978-1979. HIV appeared to have been present first in the population of Zaire Molecular biology and molecular epidemiology has clarified that the origin of HIV-1 and HIV-2 were in central Africa (Mayer 2005: 8). In an early stage of its development the epidemic
was most intense in the Democratic Republic of Congo (DRC) and Uganda. The epidemic intensified rapidly in East Africa in the 1990s. A Seroprevalence rate of 35% has been reported in Kampala and Lusaka and 40% in the southern parts of Africa (Mayer 2005: 8).

In sub-Saharan Africa, migration patterns have contributed to the spread of HIV. In many countries males travel from rural areas to more urban areas as wage laborers and then return temporarily to their homes. In many cases they would have had unprotected sex in the urban areas and contracted HIV, introducing it to their partners and thereby increasing the incidence of HIV (Mayer 2005: 9). Truckers are also instrumental in the spread of HIV/AIDS. Sub-Saharan Africa is the region in the world most severely affected by HIV/AIDS. While 95% of the HIV cases are in developing countries, 25 million of the 38 million people who are currently living with HIV are in sub-Saharan Africa. The estimated worldwide deaths due to HIV are 2.2 million and 75% of this number is estimated to be in sub-Saharan Africa (Mayer 2005: 9).

Kenya started performing MMC in 2008 and they were on track to achieve 80% of all males circumcised by 2015, which was the target set by the World Health Organization (Dickson et al. 2011: 20). According to the survey that was conducted in 2007 in Kenya, AIDS indicators reported that 85% of Kenyan men were circumcised and 7.4% of the population was HIV positive. This had improved slightly in 2009 as the Kenya Demographic and Health Survey reported that 86% of Kenyan men were circumcised and 6.3% of the population was HIV positive (Herman-Rollof et al. 2011: 1), proving that medical circumcision is effective in reducing HIV transmission. There will be a decrease 0.5 million deaths over the next ten years in sub-Saharan Africa if circumcision is promoted (Verguet 2013: 3).

The three randomized clinical trials in South Africa, Kenya and Uganda in 2005 to 2007 proved that MMC performed by trained medical professional reduces the risk of HIV transmission by at least 60% in heterosexual men, this resulted in the inclusion of other African countries implementing MMC (Njeuhmeli et al. 2011: 2).
According to the Swaziland Demographic and Health Survey conducted from 2006 to 2007, only 8.2% of men aged 15-49 years were circumcised to curb HIV. Subsequently the Government of Swaziland introduced a policy on male circumcision with the goal of reducing the spread of HIV and to achieve an HIV free generation, after which circumcision was integrated into the already existing health care facilities. New circumcision centers were established, personnel were trained and awareness campaigns were conducted (Maibvise and Mavundla 2013: 30).

2.7 Circumcision and HIV/AIDS in South Africa

South Africa is made up of nine provinces, Western Cape, Eastern Cape, Northern Cape, Free State, KZN, North West, Gauteng, Mpumalanga and Limpopo and it has the largest HIV epidemic in the world. In 2009, 5 600 000 people were HIV positive with a prevalence rate of 18% among adults (Verguet 2013: 1).

It is estimated that 11% South Africans are HIV positive (Pelzer et al. 2011: 336), and 25% of all people living in the province of KZN aged between 15-49 years are HIV positive. This province carries the highest number of HIV-infected persons in the world; HIV is predominantly spread through heterosexual sex, with young women being the country’s most vulnerable population (van Loggerenberg et al. 2012: 1). The South African Government’s planned strategies for HIV/AIDS which are enforced by the South African Pharmacy Council compels pharmacists to play an active role in the prevention, treatment, care and support of HIV patients. It stipulates that pharmacists should play a greater role in distributing AIDS related information to the public, educating the public on MMC promotion and therapy for sexually transmitted disease and promoting an understanding of the disease among members of the public. The pharmacists would be greatly involved in male circumcision programs, informing the members of the public about the procedure and providing treatment, care and support to male patients. In order for circumcision to be implemented successfully as part of South Africa’s HIV prevention strategy it is important that the health care providers believe in the efficacy of the procedure
and possess positive attitude towards it, only then will they be able to promote circumcision (Naidoo et al. 2012: 5).

Naidoo et al. (2012: 3) conducted a study on knowledge of HIV at the University of KwaZulu-Natal on male circumcision. The results indicated that over 92% of respondents knew that male circumcision is not as effective as condom use alone at preventing HIV transmission and that one must still use a condom during sexual intercourse even if one was circumcised, 45% of the respondents were aware that it is easier for uncircumcised men to acquire HIV and 42% knew that HIV can survive longer in the foreskin of the penis (Naidoo et al. 2012: 3). Castro et al. (2010: 367) conducted a study that proved that HIV infections are highest in traditionally non-circumcising areas of sub-Saharan Africa and infection rates have been less significant amongst populations that traditionally practice male circumcision than in communities where the procedure is rare.

Male circumcision is performed for a variety of reasons in South Africa, with most males being circumcised for cultural or religious reasons, and a few for medical reasons. The scaling up of MMC to reach 80% of all adults and new born babies in South Africa by 2015 would reduce the number of new adult HIV infections by more than 1.2 million (Brito 2009: 3). The most recent South African demographics indicate that 44.7% of South African adult males self-reported that they are circumcised, which will result in the decrease of HIV and AIDS in the country (Milford et al. 2012: 496). Condom use is integral in comprehensive HIV prevention programs and must be available to individuals with the desire and knowledge to use them correctly in an environment that supports negotiated use.

Behavioral intervention for HIV education involves a hierarchy of safer sex strategies (Milford 2012: 496). Abstinence is seen as the preferred choice among several prevention options, including condoms. Youth should prioritize abstinence from sex until they are older, more mature and better able to understand and deal with involvement in a loving, trusting, mutually respectful and equitable relationship preferably within marriage (Nixon et al. 2011: 214).
Traditional prevention efforts have focused on behaviour change as well as education campaigns but there is still a rise in HIV and AIDS. Male medical circumcision can prevent this pandemic (Van Loggerenberg et al. 2012: 1). The province of KZN in South Africa has the highest prevalence rate of HIV as indicated in the antenatal clinic records. South Africa has various preventative strategies devised to curb the transmission of HIV such as awareness campaigns, elimination of mother to child transmission (EMTCT), condom use, abstinence and male circumcision.

There must be scaling up of access to male circumcision services as a priority for adolescent young men and older men who are at risk for HIV infection. There is no cure for HIV and AIDS and no vaccine as yet, the global efforts to combat HIV and AIDS are focusing on evidence based prevention strategies such as voluntary MMC (Dickson et al. 2011: 2). Because of this high pandemic, in January 2010 the MEC for health in KZN embarked on a massive male circumcision program with the help of health care professionals. According to the scope of practice for nurses in South Africa as set out by the South African Nursing Council (SANC), nurses are involved in the following acts, the prevention of diseases and the promotion of health, teaching and counselling of individuals and group of persons, and assistance with operative, diagnostic and therapeutic acts for patients. Therefore, nurses are expected to be involved in male circumcision programme MCC (Naidoo et al. 2012: 2). An increase in unsafe sex may occur if a man believes they are completely protected from HIV infection after surgery, health information should be given to these men before they go for circumcision.

Men who are HIV positive and who resume sexual activity early might be more likely to transmit HIV to their female partners in the first six months after surgery than those who wait until complete wound healing (Larke 2010: 632).
2.8 Beliefs and circumcision

2.8.1 The Bible and circumcision

Globally 30-40% of men are circumcised with most circumcisions being performed for cultural or religious reasons during adolescence. However, in the Jewish religion Jewish boys are typically circumcised in a religious ceremony on the eighth day of after birth and Muslim boys are circumcised within seven days of birth (Larke 2010: 629). Muslim circumcision contributes to the reduction of HIV and AIDS (Rosen 2010: 3). Religious circumcision is an ancient tradition that is mostly practiced by Judaism (Mark et al. 2012:3). The Jews believed circumcision is a condition for salvation, and Jews believed that a man who is circumcised is clean and belongs to God (Larke 2010: 620).

2.8.2 Cultural beliefs and circumcision

Circumcision is performed for cultural reasons during adolescence outside formal health care settings without anesthesia in challenging traditional settings (Schmid* and Dick 2008: 659). According to Wilcken, Kiel and Dick (2010: 907), cultural circumcision is typically practiced as a rite of passage as the adolescent moves from childhood to manhood. Male circumcision was carried out in the Zulu culture in the province of KZN but was suspended more than 200 years ago by the Zulu King, Shaka, because septic wounds from the circumcision procedure had left many men unable to participate in war (Naidoo et al. 2012: 2).

Cultural circumcision in Southern Africa is important in the context of current efforts to scale up MMC services for HIV prevention. Male circumcision provides partial protection for men against acquiring HIV infection through heterosexual sex, with 60% effectiveness.

Sub-Saharan Africa is developing strategies to make MMC part of the comprehensive strategies for HIV prevention and it is likely to make an important contribution for HIV prevention by providing male circumcision in a clinical facility and at the same time supporting traditional activities surrounding
circumcision (Schmid and Dick 2008: 659). It is believed that the fathers who do not believe in male circumcision and who are not circumcised would not circumcise their children, and that will put these young boys in greater risk of contracting HIV and AIDS (Castro et al. 2010: 369). In African traditional societies such as Xhosa, Ndebele, Pedi South Sotho and Venda, circumcision is a common practice associated with rites of passage that serve the needs of society and individuals. Xhosas are circumcised during manhood initiation rituals, the ritual consisting of various stages such as pre-ritual preparation, circumcision, and seclusion in the lodge and re-integration into society (Pelzer et al. 2008: 1024). Male circumcision is perceived as the gateway to manhood. Xhosa males share full privileges and duties of the community and are entitled to get married. Thus, circumcision can reduce HIV infection (Vincent 2008: 1). However, major problems can occur as a result of incorrect performance of circumcision, such using one blade more than once, which puts the initiates at risk of contracting HIV. In 2011 the Eastern Cape legislature made recommendations that each boys should be examined by a doctor and boys at schools who had been circumcised should be inspected to ensure that the boys were safe (Pelzer et al. 2008: 1024).

The recommendations for policy guidelines for MMC as a safe and sustainable HIV prevention are:

- Respect for human rights
  - Adherence to medical ethics and human rights principles in the delivery of voluntary MMC is essential.

- Gender equity:
  - Circumcision may provide a false sense of protection resulting in the adoption of unsafe sexual practices such as decreased condom use and multiple partners.

- Integrated package of HIV prevention:
  - The integration of voluntary MMC with other services to ensure that it has long effect in the provision of care.

- Provision of safe male circumcision:
Government should ensure that health facilities are equipped to provide safe MMC according to the World Health Organization.

- Human resources:
  - There must be sufficient financial resources to support the health system with trained staff.

- Information and communication:
  - Information concerning MMC, its advantages and disadvantages and risks for both men and woman should be available on policies.

- Cultural sensitivity and collaboration:
  - Government should ensure that there are policies for traditional circumcision.

- Strategic partnership for voluntary MMC
  - Partnership is important in Africa to meet the targets of MMC (KZN Department of Health 2010).

### 2.9 Medical reason for circumcision

The presence of a foreskin may increase a man’s risk of acquiring HIV and other STI’s in several ways. The inner mucosal surface of the foreskin is thinly keratinized and therefore more susceptible to abrasions facilitating entry of infectious agents. Furthermore, a high concentration of Langerhans cells and CD4 cells which are the target of HIV-1 virions are found close to the epithelium of the foreskin (Larke 2010: 629).

There is now ample scientific evidence that male circumcision reduces the risk of acquiring HIV through heterosexual intercourse in males by approximately 51-60%. Male circumcision has been associated with decreased risk of acquiring syphilis, human papilloma virus infection, penile and cervical cancer and urinary tract infection (Castro et al. 2010: 367; Lyons 2013:96). There is lower HIV infection by at least 20% in females whose partners are circumcised (Dickson et al. 2011: 2). According to Dickson et al. (2011: 2) male circumcision
has strong protective effects against other sexually transmitted infections in men and woman.

Medical male circumcision should be recognized as an efficacious intervention for the prevention of heterosexually acquired HIV infection in men (Castro et al. 2010: 370). According to a study conducted by Mshana et al. (2011: 111) in Uganda, female partners of circumcised males are less likely to have genital ulcer disease. Pelzer (2011: 337) commented that circumcised males engage in more risky behaviour because they feel that they are protected. Health information needs to be provided to the people before they undergo circumcision to avoid this kind of behaviour.

Circumcision of males represents a surgical vaccine against a wide variety of infections, adverse medical conditions and potentially fatal diseases over their lifetime, and also protects their sexual life partners (Lyons 2013: 91). In the United States of America although circumcision has declined in general, MMC has been practiced as American males consider the low risk of serious problems, the overall medical advantages and spiritual benefits for Jews, Muslims and Christians (Lyons 2013: 96).

South Africa shows a low rate of male circumcision with 45% of the population (Verguet 2013: 1). South Africa’s National strategic plan for HIV/AIDS and STI’s has reviewed the evidence on MMC and developed policy and programs that contribute to the objectives of reducing the number of HIV by 50%, including plans to scale up MMC nationally (Milford 2012: 496).

Ambiguous health policies and the lack of government commitment to adding MMC to the existing HIV prevention strategy is considered as a barrier for circumcision in South Africa (Dickson et al. 2011: 360). In 2007 the world health organization and Joint United Nations Programme on HIV/AIDS made a recommendation that voluntary MMC be implemented in countries with a generalized HIV epidemic and low rate of circumcision (Dickson et al. 2011: 10).
2.10 Theoretical framework

The theoretical framework used to guide this study is the Health Belief Model (HBM). A theory presents a systematic way of understanding events or situations. It is a set of concepts definitions and proposition that explain and predicts these events and illustrate the relationship between variables (Glanz and Rima 2005: 4). The theory helps in articulating assumptions and hypotheses concerning our strategies and targets of intervention. The HBM describes influential theories of health related behaviour processes of shaping behaviour and the effects of community and environmental factors on behaviour. The HBM complements existing resources that offer tools, techniques and model programs for practice, such as making health communication programs work. This theory is applicable to this study because the study is concerned with health promotion. The HBM is central to health behaviour and health promotion practice (Glanz and Rima 2005: 5).

The HBM was developed in the 1950’s by a group of Public Health Service Social Psychologists from the United States of America to provide a framework for understanding why some people take specific actions to avoid illness, whereas others fail to protect themselves (Glanz and Rimmer 2005: 12). The underlying concept of the original HBM is that the health behaviour is determined by personal beliefs or perceptions about a disease, and strategies available to decrease its occurrence. Perceptions are modified by other variables such as culture, educational level, past experiences skills and motivation (Glanz and Rimmer and 2005: 13).

The HBM is the process of enabling people to increase control over, and to improve their health. This is a framework for indicating people’s health related behaviors, such as healthcare use and compliance with medical regimen. The main HBM factors influencing health related decision making include perceived susceptibility, perceived severity of the conditions, perceived benefits of control measures, and perceived barriers to initiating and sustaining the required actions.
2.10.1 Assumptions of the Health Belief Model

For the individuals to take action, they have to make decisions regarding the behaviour creating the health problem, and realize that they are personally susceptible to harm and that moderating or stopping the behavior will be beneficial.

2.10.2 Perceived susceptibility to lifestyle modification

This is the belief that a person has with respect to acquiring chronic diseases. The more the person is susceptible to chronic diseases, the greater the likelihood of him using preventative measures. A man protecting himself or not might depend on his knowledge of perceived susceptibility to lifestyle modification such as going for MMC or using or not using a condom.

2.11 Components of the Health Belief Model

2.11.1 Perceived susceptibility to disease

Low perceived personal vulnerability is a risk factor that reduces motivation to initiate and sustain the necessary actions (Kip, Ehlers and Van der Wal 2009: 149). Perceived susceptibility is a belief about chances of getting an illness if nothing is done to prevent the disease. In this study low perceived vulnerability may increase the risk of males contracting HIV if they do not believe that they are susceptible to HIV if they do not protect themselves during a sexual act.

2.11.2 Perceived severity of disease

Perceived seriousness refers to personal evaluations of biomedical, financial and social consequences of contracting a disease. The HBM indicates that health related action depends on an equation of perceived benefits minus perceived barriers on males (Glanz and Rimmer 2005: 5). Males may have a perception of the severity or seriousness, consequences and complications of sexually transmitted infections including HIV and AIDS which might motivate
them to protect themselves such as going for MMC (Glanz and Rimmer 2005: 5).

2.11.3 Perceived benefits of health promotion action

People who believe in the effectiveness of treatment will be more adherent, while those who are suspicious of treatment are unlikely to be adherent. Individual’s perceived benefits of circumcision include that it will prolong their lives, improve their quality of life reduce HIV transmission and enhance their productivity (Kip, Ehlers and Van der Wal 2009: 150). If men believe that they will benefit from having MMC then they will be motivated to have it done.

2.11.4 Perceived barriers

The HBM can be useful for developing strategies to deal with clients that are not interested in health promotion because of perceived barriers (Glanz and Rimmer 2005: 4). Perceived barriers such as pain when circumcision is performed as well as the waiting period for the circumcision to heal may form barriers for males preventing them going for circumcision.

2.11.5 Perceived threat of disease

Perception about one’s personal vulnerability to a health threat and one’s risk are key determinants of health behaviour. Low perceived personal vulnerability is a risk factor because it reduces the motivation to initiate and sustain the necessary actions (Glanz and Rimmer 2005: 5). In this study if an individual feels that he is not vulnerable to HIV, he may not circumcise or use protection which will be a risk to contract diseases. The more a person feels that he is susceptible to HIV and AIDS, the greater is the likelihood of him protecting himself through having MMC or using a condom.
2.11.6 Perceived severity of HIV/AIDS

This is an individual’s personal belief about changing their lifestyle to protect himself against HIV and AIDS and that failure to change their lifestyle practices could have harmful effects on their health.

2.12 Cues to action

These are precipitating forces that make a person feel that they need to take action. Respondents might have been motivated by health promotion awareness messages on posters, internet and television or health talks at the clinic to take up circumcision.

2.12.1 Self-Efficacy

Self-efficacy reflects people’s belief about their ability to perform specific tasks in particular situations. Self-efficacy plays a critical role in managing chronic disease because it influences both initiating and maintaining health related actions (Kip, Ehlers and Van der Wal 2009: 151) and the confidence in one’s ability to take action (Glanz and Rimmer 2005: 13). If the client understands the importance of MMC he might have the circumcision. Self-efficacy plays a critical role in this study in influencing males to take initiative and maintain health related actions such adopting MMC as an HIV prevention strategy.
2.13 Structure of the Health Belief Model

Demographic variables
Psychosocial variables
Structural variables

Perceived threat of disease

Perceived susceptibility to disease
Perceived severity of disease

Perceived benefits of health promotion action minus perceived barriers to action

Likelihood of taking recommended action

Cues to act

Figure 2.1: Health Belief Model adapted from health promotion in the workplace
Source: Maville and Huerta (2008: 46)
2.14 Conclusion

This chapter presented the origin of MMC and the global prevalence of male circumcision, the HBM and the reason for undertaking circumcision which includes fear of pain, culture and religious beliefs. Currently male circumcision has been mainly adopted as a public health intervention for World Health Organization. The Joint United Nations Programme on HIV/AIDS (UNAIDS) has recommended adoption MMC after three landmark studies revealed the efficacy of male circumcision in reducing the transmission of HIV infection especially through heterosexual contact. Male medical circumcision is an important element in prevention of HIV and AIDS. Circumcision should be promoted because there is scientific evidence that MMC reduces HIV by 50-60%. It is important for health care professionals to promote MMC.
CHAPTER 3 : RESEARCH METHODOLOGY

3.1 Introduction

This chapter lays out the research design used in this study as well as methods of sampling and data collection with the aim of answering the questions the researcher is asking. The research design enables the researcher to structure the study. This chapter will include research design, the setting of the research, population and sample, data collection, data analysis and ethical considerations.

3.2 Research design

A research design is a blueprint for conducting a study. It maximizes control over factors that could interfere with the validity of the study findings. The research design helps the researcher to select the population for data collection and analysis (Grove, Burns, and Gray 2013: 43). According to Grove, Burns and Gray (2013: 57) quantitative research is a formal, objective systematic process in which numerical data are used to obtain information about the world, usually under conditions of consideration control. According to Polit and Beck (2012: 13) deductive reasoning is used to generate predictions that are tested in the real world and the research design is an overall plan for obtaining answers to the research questions.

In this study a quantitative descriptive survey research method was used to describe the knowledge, attitudes and perceptions of males attending the community health centers (CHCs) in eThekwini district regarding MMC.
3.3 Study setting

The study was conducted at four of the eight CHCs of the eThekwini district in the province of KZN in South Africa. The eThekwini district is divided into three sub districts namely south, west and north. There is one CHC in the south, two in the west and five in the north. These four selected CHCs were allocated codes as follows N1, N2, N3 and N4. These facilities were selected based on the large number of male attendees in the past year which was 9 622 in total. The CHCs are in operation 24 hours a day including public holidays. The district covers 2 297 km² in size and has a population of 3.44 million according to the census that was conducted in 2011 and 3 090 126 of this population are Zulus.

3.4 Population

According to Polit and Beck (2012: 273) the population is the entire aggregation of cases in which the researcher is interested; it is sometimes referred to as the target population. The target population in this study was the males attending the CHC at eThekwini district irrespective of whether they are circumcised or not. There is a great possibility of meeting circumcised men at CHCs as this is the only place where circumcisions are performed at the clinic level.

These men attend the clinic for different reason such as minor ailments, chronic diseases, circumcision and or post-circumcision. They will be an accessible population which according to Grove, Burns and Gray (2013: 351) is that portion of the target population to which the researcher has reasonable access.

3.5 Sampling and sampling technique

Sampling involves selecting a group of people, events, behaviors or other elements with which to conduct a study (Grove, Burns, and Gray 2013: 351). Sampling is the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made (Burns, Grove and Gray 2013: 351). The participants were attending community health care centers in selected public health institutions coded as N1, N2, N3 and N4.
Purposeful sampling was used to select four of the eight CHCs which were sampled because of their high number of male head count in the year 2014. The coded CHCs and the head counts were N1 = 1 569, N2 = 1 114, N3 = 1 113 and N4 = 5 795. Systematic random sampling of respondents was used. Every fifth client was sampled after they had read the information letter and agreed to participate in the study. They were spoken to while still waiting in the queue for consultation. The researcher explained the purpose of the research and gave them the information letter to read and understand and sign the consent form that they agree to participate in the study. The researcher was available to answer any questions the participants might have.

Questionnaires were handed out by the researcher when the respondents exited the consulting room after their medical appointment. A quite consultation room was used to provide privacy with no interruptions. The researcher waited to collect the completed questionnaires as the respondents exited the room that they had used to fill the questionnaire.

3.5.1 Inclusion criteria

- Males 18 years old and above.
- Males that are attending a selected CHC in the eThekwini district.

3.5.2 Exclusion criteria

- Males younger than 18 years of age.

3.6 Sample size

The sample size was determined based on the number of male clients who had attended the CHCs in 2014 for circumcision. The total number of clients was constant. The sample size was determined with the assistance of the statistician to ensure that the sample is representative and statically significant.
of the general population, namely, N1 = 75, N2 = 278, N3 = 55 and N4 = 53 males totaling 461.

3.7 Data collection method

Data collection is a precise, systematic gathering of information relevant to the research. The primary method of collecting quantitative data is by use of questionnaires (Polit and Beck 2012: 32). A self-administered questionnaire was used to collect the data. The data collection tool was developed by the researcher and literature and was validated by a statistician. The questionnaire was translated from English to isiZulu and back to English by a qualified person who has a secondary National teacher’s diploma, Bachelor of Education and Honors in education from University of KwaZulu-Natal. The researcher personally administered the questionnaires to the respondents after their visit to the doctor or professional nurse. The questionnaire was collected immediately after the respondents had completed the questionnaire. For the process of data collection, the researcher used structured, self-administered questionnaires.

3.8 Data collection instrument/tool

The questionnaire is made up of eight sections. Sections one and two focused on personal data including residential area, section three on cultural affiliation, section four on level of education, section five on knowledge regarding MMC, section six on attitudes, section seven on perceptions of MMC and section eight on factors that motivate the respondents to be circumcised and section nine contains reasons that can motivate you to be circumcised. A Likert scale from
1 to 5 was used and had scores assigned to the response ranging from strongly disagree (1), to strongly agree (5).

The frequency of the score for strongly disagree and disagree as well as agree and strongly agree determined whether the participants have positive or negative attitudes towards MMC.

3.9 Data collection

A self-administered questionnaire was used to collect the data. The data collection tool was developed by the researcher from the literature and was validated by the statistician. The questionnaire was translated from English to isiZulu and back to English by a qualified person who has a secondary National teacher’s diploma, Bachelor of education and honors in education from the University of KwaZulu-Natal. To accommodate all participants each questionnaire was accompanied by an information letter explaining the purpose of the study and a consent form to sign if they agreed to participate in the study.

The researcher met the respondents in the queue while awaiting consultation so as not to cause any disruption of the service. A quite consultation room was used for the respondents to complete the questionnaire after they have finished their appointment. Questionnaire was collected from each respondent as soon as they completed them.

Arrangements were made with a social worker in case any of the respondents felt embarrassed stressed or anxious about the questions asked as some questions in the questionnaire could be embarrassing since they are of a sexual nature.

3.10 Reliability

Reliability is the degree of consistency with which an instrument measures an attribute. Three key aspects for reliability of the instrument are stability, internal consistency and equivalence. The stability of an instrument is the extent to which similar results are obtained on two separate occasions (Polit and Beck
The researcher used systematic random sampling to select respondents. The researcher administered the same instrument to a sample of ten males in a pilot study on two different occasions and compared scores obtained. Result obtained was not included in the main study. Changes were not made to the instrument.

During the main study, the same questionnaire was administered to respondents who meet the inclusion criteria until the required sample number was reached. Test-retest reliability is the determination of the stability or consistency of a measurement technique, by correlating the scores obtained from repeated measures. Internal consistency was evaluated by performing a calculation of the co-efficient alpha. The normal range of values for coefficient alpha is between 0.00 and 1.00 (Polit and Beck 2012: 375).

### 3.11 Validity

Validity is the degree to which an instrument measures what it is supposed to measure (Polit and Beck 2012: 377). The validity of the instrument (questionnaire) was maintained by ensuring that all respondents were given the questionnaire at the research setting identified by the researcher, and all the participants answered the same questionnaire.

For those participants who would not understand English, the tool was translated into isiZulu and was approved by the ethics committee. The researcher used content and construct validity. The translation of the tool was completed by a person that has teachers National Diploma and was checked and approved by the Durban University of Technology Ethics Committee.

### 3.12 Content validity

Content validity concerns the degree to which an instrument has an appropriate sample of items for the construct being measured and adequately covers the construct domain (Polit and Beck 2012: 377). This was measured by checking
the items in the data collection tool against research objectives and concepts in the theoretical framework, to ascertain whether they measure all components of the study. For the purpose of this study, all items in the data were in line with the construct of the Health Belief Model.

3.13 Construct validity

This refers to the validity of inferences from observed persons, settings and interventions in a study of the constructs that these instances might represent within an instrument, or the degree to which it measures the construct under investigation (Polit and Beck 2012: 379). Construct validity examines the fit between the conceptual and operational definition of variables and determines whether the instrument actually measures the theoretical construct that it purports to measure (Polit and Beck 2012: 379). For the purpose of this research, the researcher measured the research objectives and questions in accordance with the theoretical framework which used construct of the Health Belief Model.

3.14 Data analysis

The aim of data analysis is to convey data into an answer to the original research question. The most powerful tool available to the researcher in analyzing quantitative data is statistics. Statistical procedure is used to analyze quantitative data. The collected data was captured and organized using statistical Package for Social science (SPSS) version 22 and was analyzed using descriptive statistics.

Descriptive statistics allow the researcher to organize the data in a way that gives meaning and insight, and to examine a phenomenon from a variety of angles (Grove, Burns, and Gray 2013: 49). Data was analyzed using descriptive statistics, frequency and cross tabulation tables and various types of graphs and inferential statistical methods such as the Chi-square test for categorical data was used. The statistical significance was at a confidence level of 0.05.
3.15 Ethical consideration

Ethics is a set of moral principles which is suggested by an individual or group and is subsequently widely accepted. It offers rules and behavioral expectations about the correct conduct towards respondents, employers, sponsors, other researchers, assistants and participants (De Vos et al. 2011: 114).

Permission was sought from the Durban University of Technology Institutional Research Ethics Committee, the District office, Provincial Department of Health Research Committee and the hospital manager who in turn informed the community health care centers about the study to be conducted. Participants were given an information letter to read and understand; explaining the study and what their involvement was, and the researcher was available to answer any questions from the respondents. Thereafter respondents were asked to sign a consent form if they agreed to participate.

They were informed that participation is voluntary and that they were free to withdraw from the study at any time and that they would not be compromised in any way. Respondents were informed that confidentiality was maintained at all costs; their names will be known to the researcher only. Codes were allocated to identify them. The researcher ensured that there was a social worker available if some participants became emotional and distressed during interviews.

3.16 Conclusion

This chapter focused on the research methodology. The researcher utilized a quantitative research paradigm. Self-administered questions were used to collect data. The findings of the study are presented in the next chapter.
CHAPTER 4 PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents findings from data obtained through the use of a questionnaire. The purpose of this study was to assess knowledge, attitudes and perceptions of males with regard to MMC. Data was obtained from four CHCs. Each CHC was allocated a code N1, N2, N3 and N4 for confidentiality purposes. The questionnaire was made up of sections. Sections one and two contained questions on personal data including residential area. Section three collected data on cultural affiliation, section four collected data on the level of education. Section five was on knowledge of medical male circumcision, section six covered attitudes, section seven perceptions on MMC and section eight contained information on factors that motivated participants to be circumcised and a health belief model construct. A Likert scale was used. The HBM guided the study. The HBM factors influencing health related-decision making include perceived susceptibility, perceived severity of the conditions, perceived benefit of control measures, and perceived barriers to initiating and sustaining the required actions. Four hundred and sixty one questionnaires were distributed with a response rate of 100% although some of the respondents did not complete the entire questionnaire.

4.2 Demographic data

The population in this study comprised 461 males from the following CHCs: N1 constituting 16.5% of the total sample (n = 76), N2 with 11.7% (n = 54), N3 with 11.5% (n = 53) and N4 with 60.3% (n = 278) (Table 4.1).
Table 4.1: Frequency of respondents and CHC sites

<table>
<thead>
<tr>
<th>CHC Sites</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cator Manor</td>
<td>76</td>
<td>16.5</td>
</tr>
<tr>
<td>Newtown A</td>
<td>54</td>
<td>11.7</td>
</tr>
<tr>
<td>Phoenix</td>
<td>53</td>
<td>11.5</td>
</tr>
<tr>
<td>Kwa Mashu</td>
<td>278</td>
<td>60.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>461</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.2.1 Residential area

As can be seen from Figure 4.1, the majority of respondents were from urban areas with a response of 75.1% (n = 346) followed by rural 23.0% (n = 106) and 2.0% (n = 4) did not specify where they resided.

![Figure 4.1: Residential area](image-url)
4.2.2 Cultural affiliation

Figure 4.2 indicates the cultural affiliations of the respondents. The cultural affiliation of the majority was Zulu 74% (n = 341), followed by Pondo 12.1% (n = 56), Hindu 5.9% (n = 27), Sotho 4.8% (n = 22), Moslem 1.7% (n = 8) and Jewish 0.4% (n = 2). In this study 0.2% (n = 1) were affiliated to other cultural groups and 9% (n = 4) of the respondents unspecified.

Figure 4.2: Cultural affiliation
4.2.3 Academic level

The majority of the respondents 68.5% (n = 316) had some/all secondary education while 14.3% (n = 66) had only some/all primary education, 12.8% had a diploma (n = 59), 2.6% (n = 12) had a degree and 0.7% (n = 3) had a higher degree (post graduate). Some respondents (1.1%, n = 5) did not answer this question.

![Figure 4.3: Academic level](image_url)

4.2.4 Age

The youngest age of respondents was 18 years and the oldest was 67 years. The mean age was 31.26 with a standard deviation of 8.849 (Table 4.2).

<table>
<thead>
<tr>
<th>Minimum Age</th>
<th>Maximum Age</th>
<th>Mean Age</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>67</td>
<td>31.26</td>
<td>8.849</td>
</tr>
</tbody>
</table>
4.3 Knowledge about medical male circumcision

Question 5 of the questionnaire aimed to solicit knowledge of respondents on MMC and HIV (Figure 4.4). The respondents were expected to respond by stating ‘yes’ or ‘no’ depending on the statement.

**Question 5.1.** Sixty five point one percent of the respondents (n = 300 p < .0005) knew that having unprotected sex with circumcised men will not prevent women from contracting HIV and are susceptible to diseases, 34.5% (n = 159) had no knowledge and 0.4% (n = 2 p = .0004) did not respond to this statement.

**Question 5.2.** More than half of the respondents 59.9% (n = 276 p < .0005) perceived that circumcision does not prevent an uninfected man from getting HIV and 39.3% (n = 181) had no knowledge that circumcision does not prevent men from getting HIV. Four respondents did not answer this question.

**Question 5.3.** Further analysis assessed respondents’ answers to the statement “You are more likely to get HIV from men who are circumcised than from those who are not circumcised”. The majority of respondents 55.5% (n = 256 p = .0004) agreed with this statement, implying that they perceived that women are more likely to get HIV from men who are circumcised, 43.4% (n = 200) answered “No” to the statement and 1.1% (n = 5) did not respond.

**Question 5.4.** On knowledge of whether male circumcision is as effective as condom use in HIV prevention, 54.7% (n = 252) had sound knowledge while 44% (n = 203) had no knowledge.

**Question 5.5.** Of the respondents 53.6% (n = 247 p < .0005)) knew that male circumcision will reduce the risk of men contracting HIV and 45.3% (n = 209) respondents did not have this knowledge. Four (n = 9%) of the respondents did not answer this question.

**Question 5.6.** Only 52.1% (n = 240) of the respondents had some knowledge that circumcision improves personal hygiene and 47.3% (n = 218) had no knowledge.
**Question 5.7.** More than half of the respondents 56.8% (n = 262 p = .0004) knew that MMC will reduce HIV transmission while 42.3% (n = 195) did not know.

**Question 5.8.** Results revealed that 54% (n = 249) had some knowledge that circumcised men could still contract HIV if they had unprotected sex with infected women and 46.4% (n = 214) had no knowledge.

**Question 5.9.** Further analysis of data on knowledge indicated that 52.1% (n = 240) had knowledge that the risk of contracting HIV is higher in males who are not circumcised as opposed to 46.4% (n = 214) who had no knowledge.

**Question 5.10.** More than half of the respondents 55.5% (n = 256 p = .0004) indicated that it is important to be circumcised at a young age and 43% (n = 198) had no knowledge of this.

**Question 5.11.** Most respondents 56.2% (n = 259 p = .0004) perceived that the presence of the foreskin increases the chances of getting HIV, while 42.7% (n = 197) had no knowledge that the foreskin increases the chances of contracting HIV.

**Question 5.12.** Fifty seven percent of the respondents (n = 263 p = .0004) had knowledge that circumcision will aid in the prevention of HIV whereas 42.3% (n = 195) had no knowledge.
4.4 Attitudes on medical male circumcision

In Question 6 of the questionnaire, respondents were asked to use a Likert scale rating from 1-5 to rate their attitudes on MMC where scores ranged from 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree (Figure 4.5).

**Question 6.1.** Thirty eight point eight percent of the respondents (n = 179) agreed with the statement that all males should have MMC done, 18.7% (n = 86) strongly agreed, 17.8% (n = 82) disagreed, 16.5% (n = 76) strongly disagreed and 7.2% (n = 33) were neutral. One point one percent (n = 5) of respondents did not answer this question.

**Question 6.2.** The results revealed that 38.8% (n = 179) agreed with the statement that it is good that children should be circumcised, 25.4% (n = 117) strongly agreed, 15.4% (n = 71) disagreed, 10.2% (n = 47) strongly disagreed and 8.7% (n = 40) were neutral. Seven of the respondents did not answer this question.
Question 6.3. On the statement that married men should not be circumcised, 33.2% (n = 153) agreed that married men should not be circumcised, 25.6% (n = 118) strongly agreed, 21% (n = 97) disagreed, 10.6% (n = 49) strongly disagreed and 8.7% (n = 40) were neutral.

Question 6.4. The results revealed that 39.5% (n = 182) agreed with the statement that they would go for MMC, 29.1% (n = 134) strongly agreed, 12.4% (n = 57) disagreed, 10.2% (n = 47) strongly disagreed and 7.6% (n = 35) were neutral. One point three percent (n = 6) of respondents did not answer this question.

Question 6.5. Most respondents 38.4% (n = 177) agreed with the statement that they would motivate another male to have medical circumcision, 28.9% (n = 133) strongly agreed, 15.4% (n = 71) disagreed, 9.8% (n = 45) strongly disagreed, and 6.1% (n = 28) were neutral. One point five percent (n = 7) of respondents did not respond to this question.

Figure 4.5: Attitudes
The Wilcoxon Signed Rank test was used to test whether the average value of the answers to Question 6 (Figure 4.5) is significantly different from a value of 3. The results indicated that there is significant agreement that medical male circumcision is something all males should have done ($Z = -2.997, p = .003$); it is good for the children to be circumcised ($Z = -7.840, p < .0005$); married men should not be circumcised ($Z = -6.331, p < .0005$); I will go for medical male circumcision ($Z = -9.084, p < .0005$) and I will motivate other men to have medical male circumcision ($Z = 8.735, p < .0005$).

4.5 Perceptions on medical male circumcision

Question 7 of the questionnaire investigated the perceptions of males regarding MMC by means of answers to questions using a Likert scale 1-5 (Figure 4.6).

**Question 7.1.** Figure 4.6 indicates that 28.9% ($n = 133$) agreed with the statement that they could easily get HIV after circumcision, 21.3% ($n = 98$) strongly agreed 24.5% ($n = 113$) disagreed, 13.9% ($n = 64$) strongly disagreed, 9.3% ($n = 43$) were neutral and 2.2% ($n = 10$) did not respond.

**Question 7.2.** Of the respondents, 29.3% ($n = 135$) disagreed with the statement that circumcision will cause pain, while 15.0% ($n = 69$) strongly disagreed, 23.2% ($n = 107$) agreed, 23.2% ($n = 107$) strongly agreed with the statement, 8.5% ($n = 39$) were neutral and 1.1% ($n = 5$) did not respond.

**Question 7.3.** Twenty seven point eight percent of the respondents ($n = 128$) agreed with the statement that there is chance that after circumcision they would not produce sperm, 24.3% ($n = 112$) strongly agreed, 26.5% ($n = 122$) disagreed, 15.8% ($n = 73$) strongly disagreed and 4.6% ($n = 21$) were neutral.

**Question 7.4.** Of the respondents, 29.1% ($n = 134$) disagreed with the statement that that medical male circumcision will increase riskier behaviour,
19.7% (n = 91) strongly disagreed, 24.7% (n = 114) strongly agreed, 20.6% (n = 95) agreed, 4.6% (n = 21) were neutral and six respondents did not answer this question.

**Question 7.5.** An almost equal number of respondents, 27.8% (n = 128) and 28% (n = 129) agreed and strongly agreed with the statement that circumcision will prevent them from having children, 18.4% (n = 85) strongly disagreed, 17.8% (n = 82) disagreed 6.5% (n = 30) were neutral and 1.5% (n = 7) of respondents did not answer this question.

**Question 7.6.** The majority of respondents 28.9% (n = 133) agreed with the statement that circumcision will cause erectile dysfunction, 24.9% (n = 115) strongly agreed, 19.3% (n = 89) strongly disagreed, 19.1% (n = 88) disagreed, and 5% (n = 23) were neutral. Thirteen of the respondents 2.8% ( N = 13) did not answer this question.

**Question 7.7.** The majority of the respondents 33.2% (n = 153) agreed with the statement that they will contract infections even after circumcision, 22.3% (n = 103) strongly agreed, 15.8% (n = 73) strongly disagreed, 15.2% (n = 70) disagreed, 10.4% (n = 48) were neutral and 14 (n = 3.0) of the respondents did not answer this question.

**Question 7.8.** Most of the respondents 28.2% (n = 130) agreed with the statement that male circumcision will make their penis appear naked, 23.6% (n = 109) strongly agreed, 17.4% (n = 80) disagreed, 16.1% (n = 74) strongly disagreed 11.1% (n = 51) were neutral and seven of the respondents did not answer this question.

**Question 7.9.** Of all the respondents 26.7% (n = 123) agreed with the statement that that they will not be able to masturbate after circumcision, 25.2% (n = 116) strongly agreed, 21.7% (n = 100) disagreed, 17.1% (n = 79) strongly disagreed and 7.2% were neutral. Ten of the respondents did not answer this question.
Question 7.10. Most of the respondents 28.2% (n = 130) agreed with the statement that their partners will not have sexual satisfaction after medical male circumcision, 23.2% (n = 107) strongly agreed, 24.7% (n = 114) disagreed, 14.5% (n = 67) strongly agreed and 7.4% (n = 34) were neutral. Nine respondents did not answer this question.

Question 7.11. Results revealed that of the respondents 30.2% (n = 139) agreed with the statement that the penis may be cut off during medical male circumcision, 23.2% (n = 107) strongly agreed, 21.9% (101) disagreed, 17.8% (n = 82) strongly disagreed, 5.9% (n = 27) were neutral and five respondents did not answer this question.

Question 7.12. Twenty nine point seven percent of the respondents (n = 137) agreed with the statement that circumcision will improve sexual satisfaction, 26.7% (n = 123) agreed, 17.1% (n = 79) disagreed, 16.9% (n = 78) strongly disagreed and 6.3% (n = 29) were neutral. Fifteen of the respondents did not answer this question.

Question 7.13. Respondents’ general perception of circumcision and sexual pleasure was further assessed, and 26% (n = 124) agreed with the statement that sexual pleasure diminishes when a man gets circumcised, 25.2% (n = 116) strongly agreed, 21.9% (n = 101) strongly disagreed, 18.7% (n = 86) disagreed, 5.2% (n = 24) were neutral and ten of the respondents did not answer this question.

Question 7.14. One hundred and thirty four of the respondents 29.1% (n =134) strongly agreed with the statement that circumcision is for young people and that old men do not need to be circumcised, 27.1% (n = 125) agreed, 21.5% (n = 99) strongly disagreed, 16.3% (n = 75) disagreed, 3.3% (n = 15) were neutral and thirteen of the respondents did not answer this question.
The Wilcoxon Signed Rank test was used to test whether the average value of the answers to Question 7 (Figure 4.6) is significantly different from a value of 3. Results revealed significant differences in the following statements: “I could easily get HIV after circumcision” (Z = -2.960, p = .0003), “There is a chance that after circumcision I will not produce sperm” (Z = -2.787, p < .0005), “Having male circumcision will prevent me from having children” (Z = -3.849, p < .0005), “Being circumcised will cause erectile dysfunction” (Z = -2.732, p < .0005), “I will contract infection even after circumcision” (Z = -4.181, p < .0005), “Medical male circumcision will make my penis appear naked” (Z = -3.632, p < .0005), “I will not be able to masturbate after circumcision” (Z = -3.189, p < .0005), “My partner will not have sexual satisfaction after I have medical male circumcision” (Z = -3.021, p < .0005), “My penis may be cut off after during male circumcision” (Z = -2.607, p < .0005, “Being circumcised will improve sexual satisfaction” (Z = -4.311, p < .0005), “Sexual pleasure diminishes when a men
gets circumcised” (Z = -1.780, p < .0005) and “Circumcision is for young people, old men do not need to be circumcised” (Z = -3.196, p < .0005).

### 4.6 Cues in action

Question 8 explored cues in action. Cues in action means factors that would motivate a man to be circumcised such as advertisements and respondents were expected to respond either yes or no to a list of motivating factors (Figure 4.7). The Binominal test was used to test the significant proportion of the respondents on knowledge in action. The most common motivating factor was displayed health posters on circumcision, with 71.4% (n = 329 p < .0005) answering yes and 27.3% (n = 126) answering no. The second most common motivating factor was programmes on television with 66.6% (n = 307 p < .0005) answering yes and 32.3% (n = 149) answering no. The third most common motivating factor was newspaper articles on circumcision with 65.9% (n = 304 p < .0005) answering yes and 32.1% (n = 148) answering no. The fourth most common motivating factor was health talks by health care workers with 64.9% answering yes (n = 299) and 33.6% answering no (n = 155). The fifth most common motivating factor was suffering from STIs with 59.0% (n = 272 p<.0005) answering yes and 40.1% (n = 185) answering no. The least common motivating factor was information on the internet with 56.8% (n = 262 p<.0005) answering yes and 40.6% (n = 187) answering no.
4.7 Reasons for having or not having medical male circumcision

Question 9 of the questionnaire explored the reasons for having / not having MMC. The respondents were required to respond with yes and no to a list of reasons (Figure 4.8). The Binominal test was used to test for significant differences in the answers.

The highest reason was HIV prevention with 73.5% answering yes (n = 399 p < .0005) and 24.7% (n = 114) answering no. The second highest reason was family, with 70.3% (n = 324 p < .0005) answering yes and 28.2% (n = 130) answering no. The third highest reason was traditional beliefs with 66.4% (n = 306 p < .0005) answering yes and 33.0% (n = 152) answering no. The fourth highest reason was peer pressure with 61.0% (n = 281 p < .0005) answering yes and 37.5% % (n = 173) answering no. The lowest reason was religious beliefs with 49.9% (n = 230) answering yes and 48.2% answering no (n = 222).
4.8 Conclusion

In this chapter the results of descriptive statistics were presented by means of tables and figures. The majority of the respondents were knowledgeable about circumcision; uncircumcised respondents were willing to be circumcised.
CHAPTER 5 DISCUSSION OF THE RESULTS

5.1 Introduction

This chapter will conclude and provide a brief overview of the study which focuses on medical male circumcision. A quantitative approach was utilized using a descriptive method. The findings will be discussed in relation to the research objectives, literature and previous studies and Health Belief Model on medical male circumcision. Data was collected using a questionnaire. The findings, conclusions, recommendations, limitations and areas for further research will be presented.

5.2 Overview of the research

5.2.1 The aim of the study

The aim of the study was to investigate and describe the knowledge, attitudes and perceptions of males with regard to medical male circumcision.

5.2.2 Objectives of the study

- Assess the knowledge of males regarding medical male circumcision.
- Describe the attitudes of males regarding medical male circumcision.
- Describe the perception of males regarding medical male circumcision.

5.3 Discussion of the findings in relation to the Health Belief Model

5.3.1 Demographic characteristics

The study was conducted on a male population. The distribution of respondents from the urban area was 75.1% and the rural area 23%. These results show that people from the rural areas are not utilizing the health services as frequently as one would expect.
One of the components of the HBM is the demographic variable of age of the respondents which was between 18 to 67 years answered the questionnaire. In this study it was found that the older males were more knowledgeable than the younger males. There was a significant positive relationship between knowledge and higher age \( r = 0.135, p = .004 \) which according to Castro et al. (2010: 365) additional information is necessary for more knowledge so as to promote the acceptance of circumcision among all male population.

Most of the cultural affiliations were present in the sample which signified a fair cross sectional representation. Zulus were in the majority (74%) regarding cultural affiliation which may be attributed to the Zulus being the pre-dominant cultural group in the eThekwini district. This finding is congruent with the 2011 census in the eThekwini district of which 3.09 of the population of 3.44 million are Zulus (eThekwini Municipality 2011: 16).

The majority of the respondents (68.5%) had a secondary education which indicates a high rate of literacy. Education provides people with knowledge and skills that can lead to a better quality of life. The fact that the level of education was high among the respondents suggests that MMC implementers should utilize this as an advantage and focus on health education campaigns to promote MMC. This is supported by Castro et al. (2010: 368) who state that knowledge and support are beneficial in dealing with issues relating to circumcision.

5.3.2 Knowledge on medical male circumcision

About 65% of the respondents had knowledge that having unprotected sex with circumcised men will not prevent women from contracting HIV. Fifty nine percent of the respondents exhibited good knowledge that circumcision does not prevent uninfected men from getting HIV and knew that they could get HIV if they did not use a condom, which, from an HBM point of view, indicates that there are those that take action about their health.
Moreover 55.5% of the respondents had no knowledge that women are more likely to get HIV from men that are uncircumcised than from those that are circumcised.

Two hundred and sixty two of the respondents had knowledge that circumcision will reduce HIV but are still susceptible to contract HIV if they have unprotected sex with infected women. Fifty six percent of the respondents exhibited high level of knowledge and agreement with the importance of being circumcised at a younger age. Fifty seven percent of the respondents agreed that medical male circumcision will aid in the prevention of HIV, a finding which is supported by Naidoo et al. (2012: 7) that circumcision will decrease HIV transmission.

Despite high level of knowledge there is still a proportion of the respondents, that is, 55.5%, who are not knowledgeable that a person is more likely to get HIV from men that are uncircumcised. This group is likely to engage in high risk behaviour or spread the misconception that circumcision does not prevent men from getting HIV if measures to increase knowledge among them are not taken. Considering that 56% of the population is less knowledgeable, (it could be that they are not yet familiar with concepts of male circumcision. Their lack of knowledge could mean that MMC as an HIV prevention intervention has not reached this population via the mass media advertising campaigns that promotes MMC, or that the medical providers they see are not involved in circumcision campaigns and have lower knowledge pertaining to the circumcision procedure so are reluctant to discuss this option with their patients (Naidoo et al. 2012: 6).

These perceptions are consistent with the findings of a study among pharmacy and nursing students of the University of KwaZulu-Natal conducted by Naidoo et al. (2012: 4). These researchers found that the levels of knowledge seemed high but respondents younger than 21 years were more ignorant and less knowledgeable.
A little more than half, that is, 54.9% knew that circumcised men could still contract HIV if they had unprotected sex with infected women meaning that the respondents knew that circumcision does not wholly protect them against HIV transmission. About 44.5% still think that once you are circumcised there is no need to use protection, you cannot be infected and you are not susceptible to HIV. These findings are similar to the findings in a South African study by Lissoubret et al. (2013: 10) which expressed concern regarding HIV acquisition among circumcised men if they practice unsafe sex acts once they are circumcised, thinking that they are now immune to HIV acquisition.

The perception of 28.3% of respondents that medical male circumcision will make their penises appear naked is supported by Khumalo-Sakutukwa* et al. (2013) whose study found that the males believed rumors that circumcised men were born without a foreskin which they considered abnormal, and that circumcised men were ridiculed by other men.

5.3.3 Attitudes of males on medical male circumcision

The respondents (38.8%) understood the benefit of MMC and reflected positive attitudes that all males should be circumcised. This positive attitude may mean that they will send their sons for circumcision. Furthermore, 38.8% perceived the benefit that it is good for children to be circumcised. Most of the respondents (39.5%) understood the benefits of going for MMC. Furthermore, 38.4% agreed that they will motivate other males to have MMC. Most of the respondents (33.2%) felt that married men should not be circumcised. This is supported by Macintyre et al. (2014: 4) who found that although men expressed a positive attitude about circumcision they doubted that they would go for the procedure because they were married and thus felt that it was no longer necessary for them.
The results revealed that 39.5% of the respondents agreed that they would go for circumcision. This high acceptability of MMC is supported by Verguet* (2013: 2), Wang*, Duke and Schmid (2009: 595) and Naidoo et al. (2012: 4). These sub-Saharan Africa studies have shown the median proportion of uncircumcised are willing to be circumcised.

5.3.4 Perceptions of males on medical male circumcision

Respondents (28.9%) agree that they are susceptible to getting HIV easily even after circumcision as opposed to a study by Anderson and Cockcroft (2012: 301) which found that circumcised men believed that they are fully protected against HIV once circumcised. A proportion of the respondents (23.2%) reported that pain was a barrier to the uptake of medical male circumcision and further to this, 30.2% of respondents had the perception that their penis may be cut off during the procedure. These findings are incongruent with Maibvise* and Mavundla (2013: 139). The assumption could be made that uncircumcised men with positive perceptions could accept male circumcision once the barriers are eliminated or reduced.

Thirty three percent of the respondents agreed with the statement that a circumcised man can still contract HIV if he has unprotected sex with infected women; with this perception they will possibly protect themselves. This contradicts the study by Anderson and Cockcroft (2012: 4) who found that reduced condoms use after MMC and perhaps an increasing number of sexual partners among circumcised men which may have a negative effect on the epidemic especially if a significant proportion of those undergoing MMC are already HIV positive and given the evidence MMC does not reduce transmission from HIV positive men.
Only 29.5% of the respondents agreed that MMC will increase riskier behaviour and individuals will be more susceptible to HIV. They had a perception that they are protected which is supported by Naidoo et al. (2012: 3) who found that respondents perceived that promoting male circumcision would cause an increase in riskier sexual behaviour. The respondents also indicated that male circumcision would both undermine their existing protective behaviour and strategies.

While 29.7% believe that being circumcised improves sexual satisfaction, a proportion of respondents 17.1% believe sexual satisfaction will not improve after MMC, and, further, 16.9% also have a perception that sexual pleasure diminishes when men gets circumcised.

This proportion of the respondents that present with negative perceptions could be attributed to lack of knowledge about MMC. These findings are supported by Castro et al. (2010: 369).

The respondents perceived HIV as a problem for the current generation, therefore circumcision is for the young as they are the ones who are at risk (Macintyre et al. 2013: 4) and that older men did not consider MMC to be beneficial. Older men perceived circumcision with shame of being emasculated and perceived manhood as being determined by either the presence or absence of the foreskin and if you are circumcised you are considered as half men. Twenty seven percent of the participants have a perception that there is a chance that after circumcision they will not produce sperm and moreover 28.9% agreed that circumcision will cause erectile dysfunction and further 28.2% agreed with the statement that circumcision will make their penis look naked. Twenty eight percent of the respondents perceived that they will not have children after circumcision. This assumption may be a great barrier to the uptake of MMC.
The respondents’ lack of knowledge about circumcision and negative attitudes is reason to enhance cues in action by providing health information to these respondents so as to overcome ignorance. This is supported by Macintyre et al. (2014: 4) who found that men regard circumcision as having no meaning; this lack of meaning makes it impossible to implement medical circumcision.

The finding that 24.3% of respondents strongly agreed that there is a chance that after circumcision they will not produce sperm, and 27.8% agree with this statement, is supported by Khumalo-Sakutukwa et al. (2013: 9) who found that the assumption that men without a foreskin were not capable of producing sperm during ejaculation and that sperm comes from the foreskin needed further education.

5.3.5 Cues in action

Various countries have adopted MMC as part of a comprehensive approach to HIV prevention. An increased awareness of the protective effect of male circumcision has led to acceptability of the practice especially among non-circumcising communities. However, a challenge still remains regarding the way in which the information is circulated to the public. The results revealed that the most common motivating factor (71.4% of respondents) for MMC was displayed health posters on circumcision. The second most common factor was programmes on television (66.6% of respondents). This corresponds to the findings of Osamor and Owumi (2011: 16) that social networks were important motivators for MMC.

The least common factor was information on internet (40.6%) which is supported by Naidoo et al. (2012: 6) in her study on MMC. Numerous studies have shown that mass media such as newspaper, magazines, television and radio are a major source of providing information about HIV and AIDS. Male circumcision promotional and advertising in the mass media in South Africa has been scarce and much less prominent when compared to other prevention strategies (Naidoo et al. 2012:6).
5.3.6 Reasons for having / not having medical male circumcision

The highest reason for having / not having MMC was HIV (73.5%) followed by family (70.3%), traditional beliefs (66.4%), peer pressure (61%) and religious beliefs (49.9%). Wilcken, Keil and Dick (2010: 907) state that in many African societies male circumcision is carried out for cultural reasons particularly as an initiation ritual and a rite of passage into manhood.

Bearing in mind that traditional leaders have been identified as a vital source as circumcision service providers there is therefore a need to involve these leaders in rolling out the MMC programmes in a bid to fight HIV/AIDS. The family being a motivating factor in encouraging males to adopt circumcision and is supported by Osamor and Owumi’s (2011: 18) study which revealed that those who had support from family members and friends who were concerned about their health are more likely to comply with their health needs than those who did not. In the current study, 73.5% agreed that having HIV motivated them to be circumcised. This is supported by Khumalo-Sakutukwa et al. (2013: 8) who found in their study that participants agreed to go for medical male circumcision if it would protect them from contracting the disease.
5.4 Recommendations

It is recommended that:

- The ministry of health should enforce extensive mass campaigns that include the provision of information; the use of various communication approaches should be enhanced.

- Media communication channels should dispel myths about MMC and promote its health benefits. Government to make use of cheap and reliable sources to cascade the information to the community such as television and radio, to adopt MMC as measure of HIV prevention.

- Extensive training of health personnel who perform MMC is crucial in ensuring that safety is maintained and risks related to the MMC procedure are minimized. This will reduce barriers to circumcision and enhance acceptability.

- It is essential to ensure the dissemination of accurate and factual information highlighting the health benefits of MMC in HIV prevention.

- Health education campaigns and more structured programmes of health promotion on benefits of MMC are enforced. These structured programmes can be conducted at the clinics, churches and workplaces. Health facilities should be prepared to accommodate and scale up on circumcision of male children. Involving of the traditional healers to ensure the adoption of MMC procedure should be enhanced.

- Qualitative studies should be conducted to obtain more detailed information on factors that could encourage more men to be circumcised.

- The Department of Health should liaise with the Department of Education to conduct health promotion programmes on MMC.

- There is an increase in public awareness on medical male circumcision.
• Non circumcising communities should be provided with male circumcision material to read to have more understanding of MMC.

• Local government should articulate national policies and provide understandable and accurate information highlighting the risk and benefits of MMC.

• Equipping stakeholders with appropriate logistics will not only ensure their buy-in but will also guarantee that MMC is performed in a safe and hygienic environment.

• There is a need to sensitize, to make the people of eThekwini district who have not yet been reached by information campaigns.

• Health care workers should provide mass education emphasizing the importance of circumcision.

• There must be integration of male circumcision as one of the HIV prevention methods into HIV counselling and testing as an entry point for male circumcision information and education.

5.5 Limitations of the study

The researcher was challenged by the respondents who were reluctant to leave their seats in the queue for the purpose of discussing the study and completing the questionnaire in a private and quite room. Some respondents were unable to complete the questionnaire before their consultation some respondents came back to finish their questionnaire and some respondents did not come back. The researcher stipulated the age limit to be 18 years and above. However, the downside of this age limit is that it excludes males who are less than 18 years who are also affected by the HIV epidemic thereby missing out on their views. Only clients and not health workers were investigated.
5.6 Further research

- Investigating the knowledge, attitudes and perceptions of health workers which might influence that of males.
- A further study should be undertaken to find an opinion of females on MMC.
- Research of males younger than 18 years old as they are also affected by the pandemic of HIV/AIDS and might have differing attitudes toward MMC.

5.7 Conclusion

This was a quantitative descriptive study that was conducted on MMC in eThekwini district. The study sought to assess the level of knowledge, attitudes and perceptions of males with regard to medical male circumcision. Most of the respondents are knowledgeable about MMC and displayed a positive attitude toward MMC. The majority reported their awareness that MMC offers partial protection and one can still contract HIV even if one is circumcised. Nevertheless, the proportions (56.5%) of respondents who are not knowledgeable still need information, education and counselling for the success of the country’s MMC services on HIV prevention measures. Cutting off of the penis is one of the major concerns expressed by respondents; education of the public and training of MMC providers should be provided to dispel this perception. More studies are required in KZN as the province with the highest burden of HIV.
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APPENDIXES

Appendix 1: IREC approval

26 November 2015

IREC Reference Number: REC 107/15

Mrs LI Khumalo
25 Crescent Road
Pinetown

Dear Mrs Khumalo

Knowledge, attitudes and perceptions of males with regard to medical male circumcision

The Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tool.

Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the IREC acknowledges receipt of your gatekeeper permission letters.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Yours Sincerely,

Professor J K Adam
Chairperson: IREC
LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: Knowledge, perceptions and attitudes of males with regard to medical male circumcision.

Principal Investigator/s/researcher: Mrs. Innocentia Duduzile Khumalo (Honors in Health Studies).

Co-Investigator/s/supervisor/s: Ms. D. Sokhela (M Tech) and Dr. A. Razak

Brief Introduction and Purpose of the Study: I will be conducting a study about the knowledge, perceptions and attitudes of males with regard to medical male circumcision. The purpose of the study is to get information into the knowledge, perceptions and attitudes of male with regard to medical male circumcision.

Outline of the Procedures: Firstly I will ask you to read this information, ask questions where you do not understand and I will then ask you to sign the consent agreeing to take part in the study.

Risks or Discomforts to the Participant: You will not experience any risk or discomfort because I will not do anything to you, it will be questionnaires only.
**Benefits:** What you will gain from this study is that if there is anything that needs to be corrected I will recommend that it is corrected to make sure that the level of quality you get is good.

**Reason/s why the Participant May Be Withdrawn from the Study:** Respondents may withdraw from the study at any time with no penalties because participation is voluntarily.

**Remuneration:** You will not be given any money or any reward for participating in the study. You will be doing this on your free will.

**Costs of the Study:** All cost that is transport, stationary, etc. will be borne by myself as the researcher.

**Confidentiality:** Will be maintained by the use of codes to protect the identity of respondents. The consent forms of respondents and records will be kept under lock and key and electronic information will be kept in password in the computer.

**Research-related Injury:** No compensation however you will not suffer any injury because I will be asking questions. Arrangements will be made with a social worker to debrief respondents should they fill embarrassed, stressed or anxious about questions asked as some questions in the questionnaire could be embarrassing since they are of a sexual nature.

**Persons to Contact in the Event of Any Problems or Queries:** For any queries please contact me on 031 4596086 or the student supervisor 0313732032 or the institution Research Ethics administrator on 0313732900 (Supervisor and details) Please contact the researcher (tel no. 0762060024), my supervisor (tel no.) or the Institutional Research Ethics administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za.
CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, ___________ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: ___________.

- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.

- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.

- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the researcher.

- I may, at any stage, without prejudice, withdraw my consent and participation in the study.

- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.
I, Dudu Khumalo (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Dudu Khumalo

Full Name of Researcher

Signature

Full Name of Witness (If applicable)

Signature

Full Name of Legal Guardian (If applicable)

Signature
Appendix 3: Incwadi yolwazi nesivumelwano ngocwaningo

INCWADI YOKUNIKA ULWAZI

Sawubona,

Ngiyabonga kakhulu ngokuthi ube ingxenye yalolucwaningo.

Isihloko socwaningo: Ulwazi, imicabango kanye nemibono yabesilisa mayelana nokusokwa.

emitholampilo yaseThekwini, KwaZulu-Natal

Umcwaningi omkhu: Mrs. I. D. Khumalo (Honors in Health studies)

Obheke Umcwaningi: Ms. D.G. Sokhela (M Tech: Nursing)


Inhloso yocwaningo: Inhloso ngqangi ukuba ngithole ukuthi nithini imibono yenu mayalana nokusokwa. Ekugcineni ngizosebenzisa imininingwane engiyitholile ukuheha abesilisa ukuba basoke nokulingisa inking uma zikhona ezibikwe asebesokile.

Uhlaka lokuzokwenziwa: Uzofunda lencwadi uyizwe ubuze kumcwaningi uma ungaqondi kahle bese ushicilela isivumelwano sokuvuma ukuthi uyathanda ukuba ingxenye yocwaningo.

Amathuba okungaphatheki kahle: Awekho amathuba okuzizwa ungasaphathekile kahle, ngoba uzophendula imibuzo engizokunoka yona.
**Inzuzo:** Wena uzozuza ngokuthingizobhala ngemiphumela yalolucwaningco emabhukwini ongakwazi nawe ukuwafunda. Bese ngibeka izincomo uma ngithole okungahambi kahle ukuthi kunyiselela kungakwazi ukuncani ukuthi uthole ukuthi usokwe kahle.

**Isizathu sokuhoxiswa kulolucwaningco:** Ungakwazi ukunqaba ukuthi ukuze usokwe kahle. Futhi lokho ngeke kubeka izincomo una ukuthi ukuze usokwe kahle.

**Iholo:** Ayikhobe etholakalayo ngokuba ingxenye yocwaningco.

**Izindleko zocwaningco:** Zonke izindleko zocwaningco zibhekene nami njengomcwanningi, akukho lutho obhekheke ukuthi ukukhokhe wena.

**Imfihlo:** Amagama awuzusetshenziswa kulolucwaningco. Ngisenzokuwa nelukuthi ngakhe nekhaluxana kwemiphumela umfihlo eyiyimfthelo yokuhlelelele ukuthi ukukhokhe wena.

**Ukulimala okungenziwa ucwaningco:** Akukho kuhlawulwa, kephe akukho ukulimala njengoba uzophendula Imibuzo kawuza kungakhe kuza ukuthi usokwe kahle oluzokwenziwa kuwena. Kuzokwenziwa amalungiselelo nosonhlalakahle ukuthi akhulumisane nabakhetha ukwakwazi ukucwaningco uma kakhona imibuzo engabaphathi kahle njengoba eminye yayo imayelana nezocansi.

**Ongabathinta uma kunenkina noma kukhona ofuna ukukubuza:** Thintana nami uNkz. I. D. Khumalo kulenomboloyocingo 0762060024 noma umqaphi uMs. D. G. Sokhela kulenombolo 031 373 2292 noma ikomidi eliphakeme lokubhekele ukuvikeleka kocwaningco kulenombolo 031 373 2900.

**Okuvulelekile:** Uma uvuma ukuba ingxenye yocwaningco ngicela ukuthi usayine imvume ekhasini elilandelayo.
ISIVUMELWANO

Isivumelwano sokuba yingxenye yocwaningo

• Ngiyaqinisekisa ukuthi ngitsheliwe Umcwaningi uDuduzile Khumalo_______________________ (igama lomcwaningi), ngendlela yokuqhutshwa yocwaningo, inzuzo nokuphathelene nokungaphetheni kwalolucwaningo – Inombolo yemvume yekomiti:_______________.

• Ngitholile futhi, ngafunda ngazisisa incwadi yolwazi engaphezulu (Incwadi yabazongenela ucwaningo) ngalolucwaningo.

• Ngiyazi ukuthi imiphumela yalolucwaningo, kanye nakho konke okuqondene nami jengobulili, iminyaka, usuku lokuzalwa, iziqalo zamagama ami, isifo esingiphethe kuzogcinwa kuyimfihlo embikweni kulolucwaningo.

• Ngokubhekelela izidingo zalolucwaningo, ngiyavuma ukuthi ulwazi oluzoqoqwa kulolucwaningo Umcwaningi angalufaka ku khomputha ukuze athole imiphumela.

• Ngingaphuma kulolucwaningo, ngibuyisele emuva imvume, nokuba ingxenye yalolucwaningo noma kunini ngaphandle kokuthola ukungaphatheki ngendlela.

• Ngibe nethuba elanele lokubuza imibuzo (ngokuzivumela mina ngingaphoqwanga) ngiyazinikela ukuthi ngikulungele ukuba ingxenye yalolucwaningo.
• Ngiyaqonda ukuthi imiphumela ezotholakala ngenxa yalolucwaningko ephathelene nokuzinikela kwami ukuba yingxenye yalo ngiyokwazi ukuyithola.

____________________ __________ ______ _______________

Full Name of Participant  Date   Time   Signature  /  Right Thumbprint

I, ___Duduzile Khumalo___________ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

____________________ __________ _______________

Full Name of Researcher  Date   Signature

____________________ __________ _______________

Full Name of Witness (If applicable)  Date   Signature

____________________ __________ _______________

Full Name of Legal Guardian (If applicable)  Date   Signature
Appendix 4: Letter of validation of questionnaire

Gill Hendry B.Sc. (Hons), M.Sc. (Wits)

Mathematical and Statistical Services

Cell: 083 300 9896

email: hendryfam@telkomsa.net

To whom it may concern

This is to confirm that I carried out questionnaire validation for Dudu Khumalo (Student number: 21449560) who is currently studying for MTech: Nursing at the

Durban University of Technology.

Yours faithfully

Mars Gill Hendry
Appendix 5: Sample size letter

From: The Hendrys [mailto:hendryfam@telkomsa.net]

Sent: 06 May 2015 09:48 AM

To: Khumalo Dudu

Subject: RE: Sample Size

Hi Dudu

The sampling should take the following form:

Given simple random sampling with alpha = .05 and a margin of error = .05:

Need to have a minimum of 384 respondents. To this we add 20% to take care of any non-response for individual questions. So the sample size should be 461 in total.

This needs to be broken down by clinic as follows:

NA 1= 75
NA 2 =278
NA 3 =55
NA 4 = 53
Total 461

Hope this helps.

Regards

Gill
Appendix 6: Permission letter to eThekwini District

25 Crescent Road
Pinetown
3601

The District Manager
EThekweni District
Mayville
4001

Dear Madam

Re: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am presently registered for a Master’s Degree in Nursing at the Durban University of Technology in the Department of Nursing. My student no. is 2144956. The proposed title of my study is ‘Knowledge, perceptions and attitudes of males with regard to medical male circumcision. I hereby request permission to conduct the study in Community health care centers of eThekwini district.

The purpose of the study is to investigate the knowledge, attitudes and perceptions of males with regard to medical male circumcision.

Objectives of the study are to:

- Describe the knowledge, perceptions and attitudes of males with regarding to medical male circumcision.
• Assess the knowledge of males regarding medical circumcision.

• Determine the attitudes of males regarding medical circumcision.

• Describe the perceptions of males regarding circumcision

Significance of the study:

Nursing practice: The results of the study may help health care workers to understand and acknowledge the attitude of health care users with regard to medical male circumcision.

For the profession: Medical male circumcision reduces the risk of HIV infection by 60% the results of the study may assist in that if they are less infections, the burden on health care facilities will be reduce and more people will be healthier and to motivate those that have not circumcised to come for circumcision.

For the community: Once it is understood how males perceive medical male circumcision strategies to encourage them may be devised in order to increase the number of males who would come forward for the procedure.

The descriptive survey quantitative design will be used to explore the knowledge, perceptions and attitudes of males with regard to medical male circumcision questionnaire will be used. The ethical clearance will be sought from Durban University of Technology, and the Department of Health.

A questionnaire will be used to collect data from the respondents. Participation is voluntary, and informed consent will be obtained from all respondents. Confidentiality will be maintained at all times. Please find attached a copy of my research proposal.

Names of facilities used and respondents will not be attached to the questionnaire guide; instead codes will be allocated for confidentiality. All respondents will be given an information letter to read, after which they will voluntarily sign a written consent and these will only be used for the purpose of research ethics and will therefore be kept confidential by the researcher.
Furthermore respondent’s will be informed that they could refrain from answering questions that they are not comfortable with and could withdraw from participating at any stage of the study if they so wished. They will be assured that their participation will not be compromised them in the way. Responded will not be expected to pay for their participation in the study and they will in turn not receive any payment for their participation.

The results of the study will assist the profession in that since there is shortage of health personnel in the country medical male circumcision will reduce the number of clients with infections, if there is no overcrowding the health personnel will be less stressed and will be able to render good quality care.

Sincerely

………………………………….    ……………………………….
Mrs. I.D. Khumalo (Researcher)    Dr D Sokhela (Supervisor)
Telephone: 0762060024    Telephone: 031-373 2687
Email: Dudu.khumalo@kznhealth.gov.za    Email: dudus@dut.ac.za
Appendix 7: Permission letter to the KZN Department of Health

25 Crescent Road
Pinetown
3601

The Health Research and Knowledge Management Component
KwaZulu-Natal Department of Health
Private Bag X9051
Pietermaritzburg
3201

Dear Sir

Re: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am presently registered for a Master’s Degree in Nursing at the Durban University of Technology in the Department of Nursing. My student no. is 21449560. The proposed title of my study is ‘Knowledge, perceptions and attitudes of males with regard to medical male circumcision’ I hereby request permission to conduct the study at the CHCs in eThekwini district.

The purpose of the study is to investigate the knowledge attitudes and perceptions of males with regard to medical male circumcision.

Objectives of the study are to:

- Assess the knowledge of males regarding medical male circumcision.
- Determine the attitudes of males regarding medical circumcision.
• Describe the perceptions of males regarding circumcision.

Significance of the study

Nursing practice: The results of the study may help health care workers to understand and acknowledge the attitudes of health care users with regard to medical male circumcision.

For the profession: Medical male circumcision reduces the risk of HIV infection by 60% the results of the study may assist in that if they are less infections, the burden on health care facilities will be reduce and more people will be healthier and also to encourage those that have not circumcised to come for circumcision.

For the community: Once it is understood how males feel about medical male circumcision strategies to encourage them may be devised to help them to come forward for the procedure.

The ethical clearance will be sought from Durban University of Technology, and Department of Health,

A questionnaire will be used to collect data from the respondents and is voluntary, and informed consent will be obtained from all respondents. Confidentiality will be maintained at all times. Please find attached a copy of my research proposal.

Names of facilities used and respondents will not be attached to the questionnaire guide; instead codes will be allocated for confidentiality. All respondents will be given an information letter to read, after which they will voluntarily sign a written consent and these will only be used for the purpose of research ethics and will therefore be kept confidential by the researcher.

Furthermore respondent’s will be informed that they could refrain from answering questions that they are not comfortable with and could withdraw from participating at any stage of the study if they so wished. They will be assured that their participation will not be compromised them in the way. Responded will
not be expected to pay for their participation in the study and they will in turn not receive any payment for their participation.

The results of the study will assist the profession in that since there is a shortage of health personnel in the country, medical male circumcision will reduce the number of clients with infections, if there is no overcrowding the health personnel will be less stressed and will be able to render good quality care.

A questionnaire will be used to collect data from the respondents. Participation is voluntary, and informed consent will be obtained from all participants. Confidentiality will be maintained at all times. Please find attached a copy of my research proposal.

Sincerely

………………………………….    ……………………………….
Mrs. I.D. Khumalo (Researcher)     Dr D. Sokhela (Supervisor)
Telephone: 0762060024              Telephones: 031-373 22039
Email: Dudu.khumalo@kznhealth.gov.za   Email: dudus@dut.ac.za
Appendix 8: Questionnaire (English)

QUESTIONNAIRE ON CIRCUMCISION

Please indicate your responses with a tick in the appropriate blocks or write on the space provided.

Facility (CHC) code:

1. Age in years

2. Residential Area

   Urban
   Rural

3. State your cultural affiliation

   Zulu
   Pondo
   Hindu
   Moslem
   Sotho
   Jew
   Other: please detail _______________

80
4. State your academic level

<table>
<thead>
<tr>
<th>No formal education</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Some/ all primary education</td>
<td></td>
</tr>
<tr>
<td>Some/ all secondary education</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td>Higher Degree</td>
<td></td>
</tr>
<tr>
<td>Other: Please detail __________</td>
<td></td>
</tr>
</tbody>
</table>

5. KNOWLEDGE ON MEDICAL MALE CIRCUMCISION

Indicate your agreement with the following statements

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Having unprotected sex with circumcised men will not prevent women from contracting HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2 Circumcision does not prevent an uninfected man from getting HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3 You are more likely to get HIV from men who are circumcised than from those who are not circumcised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.4 Male circumcision is as effective as condom use in HIV prevention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5 Male circumcision will reduce the risk of the man contracting HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.6 Medical male circumcision improves personal hygiene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.7 Medical male circumcision will reduce HIV transmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.8 A circumcised man can still contract HIV if he has unprotected sex with infected women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.9 The risk of contracting HIV is higher in males who are not circumcised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.10 It is important to be circumcised at a younger age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.11 The presence of the foreskin increases the chances of getting HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.12 Medical male circumcision will aid in the prevention of HIV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. ATTITUDES ABOUT MEDICAL MALE CIRCUMCISION

Indicate your agreement with the following statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Medical male circumcision is something all males should have done</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.2</td>
<td>It is good for children to be circumcised</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.3</td>
<td>Married men should not be circumcised</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.4</td>
<td>I would go for medical circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.5</td>
<td>I would motivate another male to have medical circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. PERCEPTION OF MEDICAL MALE CIRCUMCISION

Indicate your agreement with the following statements

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>I could easily get HIV after circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.2</td>
<td>Medical male circumcision will cause pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.3</td>
<td>There is a chance that after circumcision I will not produce sperm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.4</td>
<td>Medical male circumcision will increase riskier behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>Having male circumcision will prevent me from having children</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.6</td>
<td>Being circumcised will cause erectile dysfunction.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.7</td>
<td>I will contract infections even after circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.8</td>
<td>Medical male circumcision will make my penis appear naked</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.9</td>
<td>I will not be able to masturbate after circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.10</td>
<td>My partner will not have sexual satisfaction after I have medical male circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.11</td>
<td>My penis may be cut off during medical male circumcision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### CUES IN ACTION

8. Indicate whether the following items motivated you to be circumcised

<table>
<thead>
<tr>
<th>Motivating factors</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Programmes on TV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.2 Newspaper articles on circumcision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3 Displayed health posters on circumcision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4 Information on the internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5 Health talks by health care workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.6 Suffering from STIs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Indicate whether the following items are REASONS FOR having/Not having medical male circumcision

<table>
<thead>
<tr>
<th>REASONS</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 Religious belief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.2 Traditional belief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.3 Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.4 Peer pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.5 HIV prevention</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 9: Questionnaire (isiZulu)

Siyabonga ngokuthi ube ingxenye yalolucwangingo.

Imibuzo Mayelana ngokusokwa

Uyacelwa ukuba uphendule imibuzo elandelayo ufake uphawu.

Inombolo yomtholampilo:

1. Iminyaka yakho

2. Uhlalakuphi

| Edolobheni |  
| Emakhaya |  

3. Yisho ukuhlobana kwakho ngokwamasiko

| Zulu |  
| Pondo |  
| Hindu |  
| Moslem |  
| Msuthu |  
| IJuda |  
| Okunye |  

4. Yisho Izinga lakho lemfundo

| Awufundanga |  
| Izinga eliphansi |  
| Izinga eliphezulu |  

84
5. Ulwazi ngokusokwa

**Beka uphawu kulemibono elandelayo**

<table>
<thead>
<tr>
<th>YEBO</th>
<th>CHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Ukwenza ucansi olungaphile nomuntu osokiwe akumvikeli owesifazane ukuthola igculazi</td>
</tr>
<tr>
<td>5.2</td>
<td>Ukusokwa kowesilisa ongenalo igciwane lengculazi akumvikeli ukuthola ingculazi</td>
</tr>
<tr>
<td>5.3</td>
<td>Kungenzeka uthole ingculazi kowesilisa osokiwe</td>
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<td>5.4</td>
<td>Ukusokwakuyefana nokusebenzisa ikhondomu ukuvikela igculazi</td>
</tr>
<tr>
<td>5.5</td>
<td>Ukusokwa ngokwezempilo kuyawehlisa amathuba okuthola igculazi</td>
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<tr>
<td>5.6</td>
<td>Ukusokwa ngokwezempilo kuhuphula izinga lokuhlanzeka</td>
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<tr>
<td>5.7</td>
<td>Ukusokwa ngokwezempilo kwehlisa ukuthelelela ngengculazi</td>
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<tr>
<td>5.8</td>
<td>Osokiwe owesilisa angalithola igciwane lengculazi uma eya ocansini olungaphile</td>
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<td>5.9</td>
<td>Ubungozi bokuthelelana ngengculazi buphezulu kowesilisa ongasokiwe.</td>
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<td>5.10</td>
<td>Kusemqoka ukusokwa usemncane</td>
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<tr>
<td>5.11</td>
<td>Ukubakhona kwejwabu kwenyusa amathuba a okuthola igculazi</td>
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<tr>
<td>5.12</td>
<td>Ukusokwa ngokwezempilo kuyalekelela ukuvikela ingculazi.</td>
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6. Indlela yokubuka ukusokwa

**Beka uphawu olukhombisa indlela ovumelana ngayo nalemibona engezansi**

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<tr>
<th></th>
<th>Angivumi kakhulu</th>
<th>Angivumi</th>
<th>Ngiphakathi nendawo</th>
<th>Ngiyavuma</th>
<th>Ngiyavuma kakhulu</th>
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<tbody>
<tr>
<td>6.1</td>
<td>Ukusokwa ngokwezempilo into okumele ukuthi bonke abesilisa bayenze</td>
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<tr>
<td>6.2</td>
<td>Kuhle ukuthi abantwana basokwe</td>
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<tr>
<td>6.3</td>
<td>Asikho izidingo sokusoka abashadile</td>
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<td>6.4</td>
<td>Ngizoyya ukuyosokwa</td>
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<tr>
<td>6.5</td>
<td>Ngiyobaqgugquzela abanye ukuthi basoke</td>
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7. Imibono ngokusokwa ngokwezempilo

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<td>7.1</td>
<td>Kulula ukuthola ingculazi emva kokusokwa</td>
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<td>7.2</td>
<td>Ukusokwa emtholampilo kuyokwenza ngizwa izinhlungu</td>
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<td>Kunamathuba okuthi emva kokusokwa ngeke ngikhiphe isidoda</td>
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<td>7.4</td>
<td>Ukusokwa emtholampilo kuyokwenza ngingabe ngisazinakekela ngokocansi</td>
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<td>7.5</td>
<td>Ukusokwa kuyokwenza ngingabatholi abantwana</td>
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<td>7.6</td>
<td>Ukusokwa kuyokwenza ngingavukela.</td>
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</table>
7.7  Ngiyozithola izifo noma sengisokiwe.

7.8  Ukusokwa kuyokwenza ukuthi isitho sami sibukeke singembethe

7.9  Ngeke ngikwazi ukushaya indlwabu emva kokusokwa

7.10 Umlingani wami ngeke asajabula ocansini emva kokusokwa

7.11  Umphambili wami ungasikeka ngenkathi ngisokwa

7.12 Ukusokwa kuyokwenza ngcono umbumnandi kwezocansi.

7.13 Umbumnandi bocansi buyaphela emva kokusokwa

7.14 Ukusokwa okwezingane, amadoda amadala akadingi ukusokwa

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8. Yisho izinto ezingakugugquzela ukuba usokwe

<table>
<thead>
<tr>
<th>Izinto ezingakugugquzela</th>
<th>Yebo</th>
<th>Cha</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Izinhlelo zikamabona kude</td>
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<tr>
<td>8.2 Amaphephandaba akhuluma ngokusokwa</td>
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<tr>
<td>8.3 Izinqwembe ezikhangisa ngokusokwa</td>
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<tr>
<td>8.4 Ulwazi kuma khomputha</td>
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<td>8.5 Izinkulumo ezimayelana nezempilo</td>
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8.6 Ukupathwa izifo zoncansi

9. Yisho izinto ezingakwenza uvume ukusokwa noma ungavumi

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<tr>
<th>Izizathu</th>
<th>Yebo</th>
<th>Cha</th>
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</thead>
<tbody>
<tr>
<td>9.1 Inkolo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.2 Ukukholelwa emasikweni</td>
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<tr>
<td>9.3 Umndeni</td>
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<td></td>
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<tr>
<td>9.4 Igcindezi kubangani</td>
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<td></td>
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<tr>
<td>9.5 Ukuvikeleka kwi ngculazi</td>
<td></td>
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</tbody>
</table>
Appendix 10: Approval letter Medical Officer KZN DoH

18 November 2015

Dear Mrs Khumalo

Re: Knowledge, attitudes and perceptions of males with regard to medical male circumcision.

I have pleasure in informing you that your application to conduct research in Ethekwini district has been approved at the following health care facilities:

i. Kwa Mashu Community Health Centre,
ii. Newtown A Community Health Centre,
iii. Phoenix Community Health Centre, and
iv. Cato Manor Community Health Centre.

Please note the following:

i. All research activities must be conducted in a manner that does not interrupt clinical care at the health care facility,
ii. Logistical details must be arranged with the CEO/medical manager/operational manager of the facility,
iii. this research project should only commence after final approval by the KwaZulu-Natal Health Research and Knowledge Unit, and full ethical approval, has been granted, and
iv. A report of your findings should be forwarded to the Ethekwini district office on completion of your project.

Yours sincerely

H Somaroo (Dr)
Medical Officer- Public Health Medicine
Appendix 11: Approval letter Health Research Committee KZN DOH

17 December 2015

Dear Mrs D Khumalo
(Durban University of Technology)

Subject: Approval of a Research Proposal

1. The research proposal titled ‘Knowledge, attitudes and perceptions of males with regard to medical male circumcision’ was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby approved for research to be undertaken at Phoenix, Newtown A, KwaMashu & Cato Manor Community Health Centres.

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200 and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

[Signature]

Dr E Luge
Chairperson, Health Research Committee

Date: [Date]
Appendix 12: Letter of permission Newtown CHC

Enquiries: Mrs. Z.B. Khumalo

Date: 18/11/2015

Dear Sir / Madam

**Re - Permission to conduct a research study**

This letter serves to confirm that the CHC Manager has had a meeting with Ms. Dudu Khumalo to discuss the above mentioned study. The study protocol and procedures were presented and explained to her.

Newtown CHC is willing to participate in this study.

Yours sincerely

(Electronically transmitted)

Mrs. Z.B. Khumalo
CHC Manager
Newtown CHC
Appendix 13: Letter of permission Cato Manor CHC

Reference
Mrs. GN Mkhize
Est 4201
Date: 23/10/2015

Attention: Mrs. ID Khumalo

RE-PERMISSION TO CONDUCT RESEARCH AT CATO MANOR CHC

I have the pleasure in informing you that permission has been granted to you by Cato Manor CHC to conduct research on KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF MALES WITH REGARD TO MEDICAL MALE CIRCUMCISION

Please note the following:

1. Ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regards to this research.

2. This research will only commence once this office (facility) has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.

3. Please ensure that the office (facility) is informed before you commence your research.

4. Ensure that you make arrangement with the facility for orientation of staff about your research.

5. The facility will not provide any resources for this research.

6. You will be expected to provide feedback on your findings to the facility.

Yours Faithfully,
Mrs. GN Mkhize
Nurse Manager (Acting CEO)

Signature: ____________________________ Date: 23/10/15

[Mrs. Yvonne Weerakkody, Department Trainee, Respondent]

Fighting Disease, Fighting Poverty, Giving Hope.
Appendix 14: Letter of permission KwaMashu CHC

Attention: Mrs D. Khumalo
Durban University of Technology

Dear Madam,

RE: PROVISIONAL PERMISSION TO CONDUCT RESEARCH – KWAAMASHU CHC

Please note that provisional permission has been granted for you to do Research at KwaMashu CHC on the research proposal title: To investigate knowledge, perceptions and attitudes of males with regard to medical male circumcision at Community Health Care Centres in eThekwini.

However, you are kindly advised to request permission at Head Office – Health Research & Knowledge Management, their contact no is 033 395 3189 and eThekwini District Office, their contact number no is 031 240 5336.

Wishing you all the best on your research study.

Thank you,

[Signature]

Clinical Manager
Appendix 15: Letter of permission Phoenix CHC

PHOENIX COMMUNITY HEALTH CENTRE
3256 BROOKSTONE PLACE, WHETSTONE,
PHOENIX, 4058
Private Bag X007, ML ENCOMBE, 4100
Tel: 031 5360000 Fax: 031 5360001
Email: Nokuthula@phchealth.gov.za

Enquiries: Dr N Vabaza
Tel: 031 5360000
Date: 26 September 2015

Dudu Khumalo
University of KwaZulu-Natal
Durban

RE: REQUEST TO CONDUCT RESEARCH
"Knowledge, attitudes and perceptions of males with regard to medical male circumcision"

Dear Dudu,

1. Your request to conduct research at Phoenix CHC is hereby granted.
2. Please adhere to all the principles, guidelines and policies of the DOH as you conduct this research.
3. Please ensure that this office is informed of the date of commencement of your research.
4. Phoenix CHC will not be able to provide you with any resources for this research.
5. You are requested to share your findings with us at Phoenix CHC.

Thank you

Yours sincerely,

Dr N Vabaza
Medical Manager and CEO

Department van Gesondheid
Fighting Disease, Fighting Poverty, Giving Hope.
Appendix 16: Letter of permission RK Khan Hospital

ENQUIRIES: DR P.S. SUBBAN
16 NOVEMBER 2015

Mrs I.D. Khumalo
Durban University of Technology

Dear Madam,

RE: PERMISSION TO CONDUCT A RESEARCH PILOT STUDY; "KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF MALES WITH REGARD TO MEDICAL MALE CIRCUMCISION.

Permission is granted to your students to conduct your study at this institution.

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the institution with regards to this research.

2. Please ensure this office is informed before you commence your research.

3. You will be expected to provide feedback on your findings to this institution.

4. Kindly liaise with Dr J. Brijkumar, Clinical Manager, on Ext. No. 8428

Yours faithfully,

[Signature]

HOSPITAL CEO