

**Knowledge and acceptance of male circumcision as an HIV prevention procedure among plantation workers at Border Limited, Zimbabwe**

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## **Declaration**

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## Abstract

This study sought to establish the level of knowledge of people on the medical benefits of male circumcision, especially the protective effect against HIV, with the aim of gathering baseline information on the subject for future health promotion programmes. A cross-section survey was conducted at Border Timbers Limited forest management units with 220 respondents that were conveniently selected into the study, and of these 49% were males and the remainder females. The data were collected using two questionnaires; one for females and the other for males. The data was analyzed using an Epi Info programme. The findings showed that, there was little knowledge on the benefits of male circumcision as they scored an average score of three out of eight, and 66% scored less than 50%. Striking was that that females were more knowledgeable than their male counterparts. Less than 20% knew of the protective effect of male circumcision against HIV. Fifty eight percent of the respondents had negative perceptions of the procedure, and 55% of the respondents were of the opinion that, male circumcision should be stopped with as little as twenty percent of the uncircumcised men willing to be circumcised. Under a third of the total respondents (26.7%) expressed their willingness to circumcise their male children.

Medically conducted circumcision was preferred by 95% of the respondents over traditionally conducted circumcision. Based on the above; the study concluded that, raising people's knowledge on benefits of male circumcision would help in changing people's perceptions and increase the acceptability of the procedure. It is recommended that the government together with the private sector urgently need to carry awareness campaigns to raise workplace on how male circumcision can reduce chances of getting HIV. Furthermore, traditional circumcision practice should be encouraged and the practitioners trained to carry the procedure in a safe way. Further studies are recommended to assess the impact of stigma on the already circumcised in order to effectively plan and overcome societal barriers for the recommended strategies to make an impact.

## Opsomming

Hierdie studie poog om die vlak van kennis van mense rakende die mediese voordele van manlike besnyding te vestig, veral die voorkomende effek teen MIV met die doel om basislyn inligting oor die onderwerp van toekomstige gesondheidsbeoordelings programme te bevorder.

'n Proefopname is uitgevoer by die Border Timbers Beperk bosbestuur eenhede met 220 respondente wat gerieflik gekies is, waarvan 49% mans en die res vroue is. Data is ingesamel met behulp van twee vraelyste vir vrouens en mans onderskeidelik. Die data was ontleed deur gebruik te maak van die Epi Info program. Die bevindinge het getoon dat daar min kennis oor die voordele van manlike besnyding is, aangesien 'n gemiddelde telling van drie uit agt behaal is en 66% respondente het minder as 50% behaal. Wat opvallend was, is dat vroue meer kennis as hul manlike eweknieë oor die onderwerp gehad het. Minder as 20% het geweet van die beskermende effek van manlike besnyding teen MIV. Agt en vyftig persent van die respondente het negatiewe persepsies oor die proses en 55% van die respondente was van mening dat manlike besnyding gestop moet word en so min as twintig persent van die onbesnyde mans is bereid om besny te word. Minder as 'n derde van die totale respondente (26,7%) was bereid om hul manlike kinders te besny. Medies uitgevoerde besnyding was verkies deur 95% van die respondente teenoor tradisionele besnyding. Gegronde op bogenoemde, het hierdie studie bevind dat die verhoging van mense se kennis oor die voordele van manlike besnyding sal help om mense se persepsies asook die verhoging van aanvaarbaarheid van die proses te verander. Daar word aanbeveel dat die regering, tesame met die privaatsektor dringend bewusmakingsveldtogte moet uitvoer om die werksplek op te voed oor hoe manlike besnyding die kanse om MIV te verminder. Verder moet tradisionele besnydingspraktyke aangemoedig word en praktisyne moet opgelei word om die prosedure op 'n veilige manier uit te voer. Verdere studies word aanbeveel om die impak van stigma op die reeds besnydes te assesser om doeltreffend te beplan en om maatskaplike hindernisse te oorkom vir die aanbevole strategieë om 'n impak te maak.

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I also want to express my gratitude to work mates for tolerating me. I know tampers would flare up or at time I would not just pay attention. Your patience and support has brought additional knowledge tools in the work place data base.

## **Dedication**

Lest we forget; this research is dedicated to all those engaged in HIV/AIDS research. My fellow men and women let us keep the good work as we still have many challenges ahead of us.

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## **List of Abbreviations**

AIDS: Acquired Immune Deficiency Syndrome

HIV: Human Immune Virus

MRCZ: Medical Research Council of Zimbabwe

MHCW: Ministry of Health and Child Welfare

NIH: National Institute of Health

RCT: Random Control Trial

STI: Sexually Transmitted Infection

UNFPA: United Nations Population Fund

UNICEF: United Nations Children and Education Fund

USA: United States of America

WHO: World Health Organization

# CHAPTER I

## INTRODUCTION

### 1.1 Background to the study

The number of people living with HIV/AIDS is increasing every day. According to the UNAIDS (2007), there are 33.2 million people across the world living with HIV; of these 30.8 million are adults, while 2.5 million are children. An estimate of 2.5 million new infections occurred in the same year while a total of 2.1 million deaths occurred during the same period. Africa with only about 10% of the world's population has the greatest HIV/AIDS burden in the world. Sub-Saharan Africa alone bears the greatest burden of the global epidemic. More than two thirds (68% i.e 22.5 million) of the people with HIV live in this region and AIDS is the leading cause of death. In the year 2007 alone the estimated number of AIDS deaths in the region was 1.6 million. This was about 76% of global AIDS deaths. According to UNAIDS (2007), it was estimated that 1.7 million people were newly infected with HIV in 2007. Unlike other regions, the majority (61%) of the people living with HIV in sub-Saharan Africa are women. The region's epidemics, however, vary significantly in scale, with national adult (15-49 years) HIV prevalence ranging from less than 2% in some countries in the Sahel. Furthermore, the statistic is above 15% in most of Southern Africa and has accounted for 35% of all people living with HIV, almost one third (32%) of all new HIV infections and AIDS deaths globally in 2007. It is estimated that, 11.4 million children have been orphaned by HIV/AIDS in this region, UNAIDS (2007).

National adult HIV prevalence exceeded 15% in eight countries namely: Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe in 2005. According to a report by the Ministry of Health and Child Welfare (2007), the adult HIV prevalence in Zimbabwe has dropped from 18% to 15.6% and about 1.3 million people were estimated to be living with HIV. HIV prevalence among pregnant women attending antenatal clinics has declined significantly in the past few years, from 26% in 2002 to 18% in 2006. Among young pregnant women (15-24 years), the prevalence decline from 21%-13% over the same period. The prevalence was highest among pregnant women attending antenatal clinics in mining

(26% HIV prevalence) and Commercial farming (22% prevalence) (Ministry of Health and Child Welfare Zimbabwe, 2007). Close to a million children have been orphaned by HIV/AIDS and almost every family in Zimbabwe has not been spared by the epidemic for either they have lost some family members or they are looking after some orphans or both. This necessitated the government has come up with the national AIDS policy and mobilizing financial resources to combat the pandemic and its devastating effects.

The following methods of HIV/AIDS prevention are offered in the country include HIV counseling and testing; abstinence; male and female condoms and comprehensive sexuality education. The programmes and policies to promote gender equality and have also been used so as to emphasize the implementation of standard infection prevention and control measures in all health facilities. The success of these methods largely depends on the compliance and attitude of the person using them.

Granted; the common method of HIV transmission is heterosexual intercourse. According to Bailey et al (2001), approximately 80% of the more than 36 million people worldwide living with HIV is infected through sexual intercourse. In adult men, an estimated 70% of HIV infections are acquired through vaginal intercourse, and in Africa this figure is over 90%. About half of the men with HIV have become infected through their penises (Szabo, 2000). Nevertheless; there is epidemiological evidence from several studies which shows that, male circumcision provides significant protection against HIV infection. Circumcised males are two to eight times less likely to become infected with HIV, (Szabo, 2000). This implies that, circumcision also protect people against other sexually transmitted infections, such as syphilis and gonorrhoea. People with a sexually transmitted infection are more likely to become infected with HIV, since the presence of STIs disrupts mucosal barriers to the infection thereby offering a portal of entry to the virus. Thus circumcision protect against HIV.

Concurrently, studies carried out in Kimusu, Kenya and Rakai in Uganda by the NIH of USA in 2006, medically performed male circumcision so as to reduce a man's risk of acquiring HIV through heterosexual intercourse by as much as 53 percent. The Kenya trial reported a 53% reduction in HIV incidence among 2,784 enrolled men, while the Uganda trial reported a 48% reduction in HIV incidence among 4,996 enrolled men. A similar study carried out in South

Africa by Agence National de Recherches sur le Sida (ANRS) of France found male circumcision to reduce HIV contraction by about 60 percent. This can be interpreted to mean that circumcision can prevent at least six out of ten female to male HIV transmissions. Auvert, et al (2005) contends that, male circumcision provides a degree of protection against acquiring HIV infection, equivalent to what a vaccine of high efficacy would have achieved. Consequently, male circumcision can be regarded as an important public health intervention for preventing the spread of HIV.

According to Szabo (2000), the evidence of the protective effect of circumcision comes from a study of couples in Uganda who had discordant HIV status. In this study the woman was HIV positive and her male partner was not. No new infections occurred among any of the 50 circumcised men over 30 months, whereas 40 of 137 uncircumcised men became infected during this time. Both groups had been given free access to HIV testing, intensive instruction about preventing infection, and free condoms (which were continuously available). It was surprising that 89% of the men never used condoms, and condom use did not seem to influence the rate of transmission of HIV.

The above shows that, male circumcision can help in reducing the transmission of HIV. On the basis of the epidemiological studies carried out above, the evidence of a significant protective effect of male circumcision against HIV acquisition is compelling to consider as an additional HIV prevention strategy, especially in areas of high HIV and STI prevalence, like in plantations and farms.

## **1.2 Statement of the problem**

According to WHO Bulletin, 84% out of 2006, around 20% of men globally, and 35% in developing countries are circumcised for religious, cultural, medical and other reasons. In Africa the practice varies from country to country. Researchers have noted significant variation in HIV prevalence in certain African and Asian countries that seemed to be associated with levels of male circumcision in the community. In areas where circumcision is common, HIV prevalence tends to be lower, and conversely areas of higher HIV prevalence overlapped with region where male circumcision is not commonly practiced (NIAD/NH 2006). Countries in

West Africa, where male circumcision is common, have HIV prevalence levels well below those of countries in eastern and Southern Africa despite the presence of similar risk factors. For example, according to UNAIDS (2007), in 2005 Benin had a HIV prevalence of 1.8%, while Cameroon had 5.4%. In countries of southern and eastern Africa with the highest HIV prevalence, male circumcision rates are generally under 20%. Most countries in southern Africa Zimbabwe included; have low levels of male circumcision and coincidentally have the highest burden of HIV/AIDS in the world.

Male circumcision has been perceived as a cultural/traditional act that is backward and not necessary. Colonization and urbanization have contributed to the disappearing of initiation ceremonies that used to be existent in the past. The problem is even worse because circumcision facilities are not easily accessible by all those needing them in the formal health sector in towns and other places. Only a few can afford the cost of the surgical procedure. People have little or no knowledge of the medical benefits of male circumcision and the procedure seems not acceptable to many people. It is against this background that the researcher has decided to carry out this study to determine the level of knowledge and acceptability of male circumcision among plantation workers at Border Timbers Limited in Manicaland province, in Zimbabwe.

### **1.3 Research Question**

How much knowledge and what level of acceptance do plantation workers have on circumcision as an HIV preventative method?

### **1.4 Purpose of the study**

The purpose of this study was to gather baseline information on people's knowledge on medical benefits of male circumcision, their perception on male circumcision and the acceptability of the procedure.

### **1.5 Aim of the study**

The study seek to establish the level of knowledge and acceptability of male circumcision with the hope of using the information to develop health promotion programmes on the procedure at



the work place and in the country in an effort to reduce the transmission of HIV. There appears to be a declining of practice of male circumcision because of ignorance of the advantages of male circumcision towards the reducing of the chances of contracting HIV/AIDS.

### **1.6 Study objectives**

This research was guided by the following objectives-

1. To assess the level of knowledge of both male and female workers Border Timbers Limited on male circumcision as a method of preventing HIV acquisition in males.
2. To determine the perceptions of both male and female workers on male circumcision at Border Timbers Limited
3. To establish the acceptability of male circumcision by workers at Border Timbers Limited.
4. To recommend appropriate strategies for promoting male circumcision among the people of Zimbabwe basing on the findings.

### **1.7 Significance of study**

Male circumcision reduces the chances of acquiring HIV through vaginal sexual intercourse. Besides this, it has other advantages, such as being hygienic and reducing the chances of cervical cancer in women with circumcised partners. It appears there isn't enough information about the knowledge, perceptions and acceptability of male circumcision by plantation workers and even other groups of people in the country for the procedure to be embarked on at full scale. This study seeks to enrich the bank of information on the subject in the country. This information could be useful in planning for future health programmes.

The researcher decided to carry out the study in plantations estate institutions because the institutions drew workers from all over the country. Thus, there were workers from diverse traditions/ cultures and practices at one place making a good representation of the cultures that are practiced in the country. Information about people's understanding in the country could be obtained from these plantation workers. Based on the above considerations the researcher

thought it justified to conduct the study at the sites where plantation workers became participants.

Lastly, the research findings would enable the researcher to obtain a Masters of Philosophy degree in HIV/AIDS Management, to the delight of his family and himself.

### 1.8 Delineation of the study

The study targeted Border Timbers Limited employees, who were employed in its five commercial forest plantations at Penhalonga and Chimanimani all in Manicaland province, in Zimbabwe. Most of the timber business in Zimbabwe is backward-integrated; with plantation labour forming about 80% of employees and produce the bulk of the raw material for further processing and value addition (TPF, 2008). The researcher targeted this group to give a fair representation of perception of male circumcision and knowledge dynamics on the ground; as shown in the table below.

**Table 1.1 Distribution of the study population and sample N=1085**

Forest estate	Managerial staff Population	Managerial staff sample	General staff Population	General staff sample
Charter	4	4	352	68
Tilbury	4	4	307	57
Sheba	3	3	276	51
Sawerombi	1	1	29	22
Imbeza	1	1	111	6
Total	13	13	1075	207

Table 1.1 shows the population in the five estates that were studied showing a total number of 1085 people. The characteristics of the sample of the 220 respondents could be better understood in relation to the population from which it was selected.

## **1.9 Limitations of the study**

Some respondents were suspicious of the intentions of the researcher. They were unwilling to show their true attitudes and perceptions on the subject, due the present socio political environment in Zimbabwe. The respondents feared to be victimized for their opinions. To solve this, the researcher assured them that, the information was treated with the highest confidence and names would not be accessible to anyone, who had nothing to do with the study. This made the respondents feel at ease to contribute without fear.

Some of the respondents had problems in answering the questionnaire, owing to the levels of their literacy. The researcher trained research assistants to help those to complete the questionnaire. This made the process longer in some instances. However, most respondents managed to fill in their questionnaires.

In some instances, targeted respondents, by virtue of not understanding the questionnaire, was not very accommodative to being assisted as they deemed this, as the disappearance of confidentiality, after the exercise. The individuals with such a perception ended up refusing to complete the questionnaire. Through the research assistants, since they were local, these respondents were later persuaded to fill in their questionnaires.

Border Timbers Limited estates are separated in space, and operations took place at different times. This is a peculiar nature of plantation forest business. A total distance of 200 kilometres separated the furthest forest management unit from town. This made the physical presence of the researcher expensive and at times disabling. The research assistants, who were local, explained and kept the spirit of completing the questionnaire. This required a delicate management of time, which was sometimes difficult. However, were produced at the end.

Some respondents were not comfortable in answering the questions, they thought were sensitive. The research assistants explained to the respondent's reasons for asking these questions. This made respondents realize the importance of such questions and answered them accordingly.

## **1.10 Summary**

The chapter discussed the background to the study; statement of the problem; the purpose and objectives of the study; significance of the study; delimitations and limitations of the study.

Chapter two reviews related literature. It gives a historical perspective of the practice of male circumcision and its advantages and disadvantages as viewed by different authors. This will give insights on the knowledge and acceptability contestations in the discourse. Chapter three discusses the research methodology and its justification. It highlights of the guiding philosophy; research design; data collection; presentation and analysis procedures. Furthermore, the ethical considerations are also discussed. Chapter four deals with data presentation; analysis; interpretation and discussion, based on the computer output from Epi Info Version 3.3.2 of February 2005 programme. Chapter five gives a summary, conclusions and recommendations of the whole project. Detailed sources and methodological tools are provided on the references and appendices sections, respectively.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

In this chapter the researcher reviews literature on studies conducted by different authors on knowledge of the benefits of male circumcision, people's perception of male circumcision and acceptability of the procedure.

#### **2.2 The Embedded Culture of Circumcision**

Male circumcision is the surgical removal of all or part of the foreskin of the male reproductive organ (penis). It has been practiced by mankind since long back and it is not clear when and how it started. The earliest Egyptian mummies (2300BC) bear the marks of circumcision, and wall paintings in Egypt show that it was customary several thousand years earlier still. Many reasons for this practice have been proffered, ranging from obeying the law of God to promoting public health (Bhimji, 2000). Male circumcision has been believed to be treatment for a number of health problems/disorders. According to Winkel (2005), the American medical establishment has promoted male circumcision as a preventative measure for an astonishing array of pathologies, ranging from masturbatory insanity, moral laxity, aesthetics and hygiene, to headache, tuberculosis, rheumatism, hydrocephalus, epilepsy, paralysis, alcoholism, nearsightedness, rectal prolapse, hernia, gout, clubfoot, urinary tract infection, and cancer of the penis, cancer of the cervix, syphilis and AIDS. On medical grounds, male circumcision can be recommended if one has injury or anomalies of the foreskin and if one continues to suffer from infections.

The age to circumcise varies across societies and across individuals within societies. In most developed countries and in communities following Islam or Judaism and some minority Christian sector, circumcision is normally done within days or weeks after birth while in many African tribal groups, men are circumcised, usually in late childhood or early adolescence. In some parts of Africa and in the world, male circumcision is observed as a rite of passage into manhood. Adolescent boys undergo an initiation ceremony where they are circumcised and

taught the basics of a married life. Up until this stage, they will not be expected to be sexually active, hence the need to initiate them.

According to WHO Bulletin, 84% out of 2006, around 20% of men globally and 35% in developing countries are circumcised for religious, cultural, medical and other reasons. In Africa the practice varies from country to country. Researchers have noted significant variation in HIV prevalence in certain African and Asian countries that seemed to be associated with levels of male circumcision in the community (Laporte & Aggleton, 1998; Leclerc-Madlala, 2004). In areas where circumcision is common, HIV prevalence tends to be lower, conversely, areas of higher HIV prevalence overlapped with region where male circumcision is not commonly practiced (NIAD/NH 2006). Countries in West Africa, where male circumcision is common, have HIV prevalence levels well below those of countries in Eastern and Southern Africa, despite the presence of similar risk factors. For example, according to UNAIDS (2007) in 2005, Benin had a HIV prevalence of 1.8% while Cameroon had 5.4%. In countries of southern and Eastern Africa with the highest HIV prevalence, male circumcision rates are generally under 20%. Most countries in Southern Africa have low levels of male circumcision and coincidentally have the highest burden of HIV/AIDS in the world.

Men in Muslim countries are circumcised, as in North Africa, and a large part of West Africa. The practise of circumcision depends on other cultural factors, including changes that occurred under colonization. For example, in Cameroon and the Democratic Republic of the Congo, which are predominantly non-Muslim, most men are circumcised. In Kenya around 85% of adult men are circumcised, mainly as a rite of passage to manhood. Only one major ethnic group in Kenya, the Luo, who make up 13% of the Kenyan population, does not traditionally practise male circumcision. Circumcision rates tend to be low in South Africa; apart from the Eastern Cape where as many as 80-90% of men are circumcised. The Xhosa men in this region undergo circumcision as a part of a traditional rite of passage to adulthood, between 18 and 20 years of age (WHO Bulletin 84, 2006). In Zimbabwe the practice is not common in urban areas but pockets of people with traditional/cultural practice such as the Shangani, the Tonga and Ndebele practice it.

Male circumcision is conducted at varying cost from country to country and from institution to institution depending on where the procedure is conducted and who performs it and other various factors. According to Bailey et al (2005), data from Nyanza, Kenya suggest that circumcision can be done in medical facilities for about US\$25 per procedure. In South Africa in the Orange Free study, each circumcision was conducted for about US\$45 (Jewkes, 2006; Hargrove & Mahomva, 2005). According to Population Services International (2008), in Zimbabwe the cost of male circumcision is between US\$100 to US\$150 according to information gathered from some practitioners.

Striking is that, the acceptability of male circumcision is affected by socio-cultural backgrounds. Some cultures put a lot of emphasis on it, while others are silent about it. The Jews are one of the tribes that have been practicing male circumcision since long back and the procedure is acceptable among them. In their culture, practicing male circumcision is regarded as obeying God. The basis of the practice is found in Genesis (17vrs11) where Abraham was instructed by God to circumcise every male new born from that day onwards and never to stop the practice as a covenant with God. In Zimbabwe, the procedure is acceptable among some tribes like the Tshangani in the low veld and the Tonga in the Zambezi valley.,

### **2.3 Biological mechanisms of how male circumcision protects against HIV**

Based on the work done by MacLeod, Edwards & Bouchier (2007), the presence of the foreskin increases the biological susceptibility of men to HIV as the increased presence of inflammatory conditions, with resultant mucosal discontinuity and/or increased local lymphocyte recruitment increases the chance of HIV acquisition. This is further confounded by the occurrence of scratches, tears and abrasions during sexual intercourse that provides portals of entry for the virus. Concurrently, the micro-environment in the preputial sac between the unrestricted foreskin and the penis glands is conducive to survival of the HIV virus.

MacLeod, Edwards & Bouchier (2007) argue that, male circumcision reduces the risk of HIV infection as the removal of the foreskin reduces the ability of HIV to penetrate the skin of the penis. On the underside of the foreskin are located many special immunological cells, such as Langerhans cells which are prime targets for HIV. Langerhans cells have been found at high

densities in the inner but not the outer mucosal surface of the foreskin (ibid, 2007). These make the inner surface of the foreskin highly susceptible to HIV infection compared with the outer keratinized surface of circumcised penis. Circumcision removes these cells thus reduces chances of acquiring HIV. The Troparg Consultancy Services (2006) endorse the fact, that the absence of tears and abrasions in the circumcised penis reduces the chances of HIV acquisition. The tears and abrasions are found in the delicate skin of the inner surface of the foreskin of uncircumcised penis and could offer a portal of entry for HIV during sexual intercourse. This implies that, uncircumcised men are more prone to some infections, including STIs, which can enhance HIV transmission. The absence of moist conditions under the foreskin in the circumcised penis creates unfavourable conditions for the survival of HIV. This is not to suggest circumcised man is immune to infection.

### **2.3.1 Advantages of Male Circumcision**

Authors contend that the following are some of the advantages of male circumcision: MacLeod, Edwards & Bouchier (2007) states that,

- Circumcised men have a lower prevalence of HIV infection than uncircumcised men due to the change of the physiology of the penis.
- It can be carried out over a wide age range and it is a one-off intervention conferring lifelong reduced biological risk. “One of the beauties of circumcision is that it is a one-off operation which takes 16-20 minutes but then has a profound effect on the rest of a man’s life (Bailey 2006). It seems biologically plausible that, as long as it occurs before HIV exposure (and after full wound healing), circumcision would offer the same degree of protection against HIV and STIs regardless of the age (Bailey et al, 2001).
- Circumcision programs provide an important opportunity to educate men on sexual and reproductive rights and health. Services for male circumcision and related programs can be used to discourage marriages of young girls to older men, promote zero tolerance for sexual coercion and violence against girls and women, and encourage men to respect and support the health rights and needs of their partners. Men and their partners must be supported to abstain from sex for at least one month following the operation.
- It is relatively inexpensive/cheap (Troparg Consultancy Services, 2006).



- Male circumcision is associated with a much lower risk of penile cancer.
- Female partners of circumcised men have a lower risk of cervical cancer as compared to those of uncircumcised partners. Circumcised men do not produce smegma which predisposes women to cervical cancer.
- Prevention of inflammation of the glands, penis and foreskin (balanitis) and prevention of scar tissue causing an inability to retract the foreskin (phimosis).
- Sexual desire, performance and satisfaction are maintained in circumcised males. According to Gray (2007), male circumcision does not reduce levels of sexual desire, satisfaction or performance. Uncircumcised men should not worry, instead should be motivated to undergo the procedure because their sexual performance and satisfaction will not be affected.

### **2.3.2 Disadvantages of Male Circumcision**

The following are some of the disadvantages of male circumcision as viewed by MacLeod, Edwards & Bouchier (2007);

- Male circumcision can be seen as a violation of human rights, particularly if carried out on children or adolescents.
- Male circumcision does not provide complete protection against HIV as it only offers between 50 and 60 percent protection. Men can develop a false perception of complete protection against HIV and engage in risky sexual behavior without protection. Circumcision only reduces chances of acquiring HIV. Therefore circumcised men should not feel totally protected instead they must continue to exercise safe sexual behaviour and use condoms alongside other prevention methods when having casual sex. Condoms are the first choice for preventing the sexual transmission of HIV. The correct use of condoms has been proved to be one of the most effective ways of preventing the transmission of HIV through sexual intercourse. Circumcision and condom use makes a very good combination of prevention methods of HIV transmission.
- During the healing period, sexually active men are likely to be at higher risk of HIV infection. Men should be instructed to refrain from sexual activity for about six weeks to ensure complete healing.

- Circumcision can be risky if it is performed in un-sterile conditions. It can lead to infection, excessive bleeding and permanent injury.

From the above assertions circumcision conducted in safe conditions has very little or no risks at all. According to Bailey et al (2001), the most frequent complication, bleeding, is seen in less than 0.1% of infant circumcisions in the USA. Other complications include infection, wound separation, unsatisfactory cosmetics, skin bridges, urinary retention, meatitis, and meatal stenosis also can occur, and in very rare instances, urethral fistula, amputation of a portion of the glands, and penile necrosis. The complication rate is between 0.2% and 0.6% according to data from developed countries on infant circumcision.

The above cannot be compared with what happens in the developing world, especially in Africa where there is a high number of traditional circumcisers who conduct the procedure in unsafe conditions. Bailey et al (2006) found that, traditional circumcision in Kenya resulted in a complication rate of 35%.

A study conducted in Turkey by Bailey et al in 2001 found out that circumcisions done by traditional circumcisers accounted for 85% of all those involving complications, and 99% of those that were judged serious, which included profuse bleeding, serious infection, secondary phimosis, meatal stenosis, and even penile amputation.

In order to minimize the risks associated with male circumcision, WHO, UNFPA, UNICEF, the World Bank and the UNAIDS Secretariat in December 2006 issued a joint statement in which they stated that, countries or health care institutions which decide to offer male circumcision more widely as an additional way to protect against HIV infection must ensure that, it is performed safely by well trained practitioners in sanitary settings under conditions of informed consent, confidentiality, risk reduction counseling and safety. WHO produced a technical manual, "*Male circumcision under local anesthesia*", which addresses the provision of safe male circumcision services for newborns, adolescents and adults and gives detailed technical information on the different surgical approaches.

## **2.4 Knowledge of medical benefits of male circumcision**

Roger Shapiro et al (2001) conducted a cross-sectional survey study with 605 men and women aged 18 years and above in various geographic and ethnically representative locations throughout Botswana. The survey consisted of a baseline questionnaire followed by an informational session on the potential risks and benefits of male circumcision. A second set of questions was administered following the informational session.

Not all the participants in the study knew about the medical benefits of male circumcision. Initially some stated that they would not favour circumcision for themselves or their children. However, some members in this cohort changed their minds after an informational session on the benefits of male circumcision was conducted. Before the informational session, 408 (68%) responded that they would definitely or probably circumcise a male child if circumcision was offered free of charge in a hospital setting; this number increased to 542 (89%) after the informational session. This shows that, some of the study participants denied the procedure without full information on its medical benefits. Following an informational session about male circumcision, an even larger proportion of participants stated that they would definitely or probably circumcise a male child, and a greater number of women stated that they would prefer to have a circumcised partner (Shapiro et al, 2001). Thus there is need to educate and reeducate people on the benefits of male circumcision.

The number of uncircumcised men who accepted to be circumcised increased after the informational session. Among 238 uncircumcised men, 145 (61%) stated that, they would definitely or probably get circumcised themselves if it were offered free of charge in a hospital setting; this number increased to 192 (81%) after the informational session (Shapiro et al, 2001). Knowledge is power; forty seven men changed their decision to be circumcised after being educated on the benefits of male circumcision.

In the same study by Shapiro et al (2001), of the 408 who initially responded that they would definitely or probably circumcise a male child, 70% listed protection from sexually transmitted diseases or HIV among their reasons, 16% listed cultural or traditional reasons, and 12% listed hygienic reasons. The majority of the study participants in Botswana had knowledge of the

protective benefits of male circumcision against sexually transmitted disease and HIV while a smaller number had knowledge of how circumcision contributes to good hygiene in men.

In another study in Zambia entitled '*Acceptability of male circumcision for prevention of HIV infection in Zambia*' the participants showed a lot of interest in more information on the benefits of male circumcision. The author of the study wrote; "*Focus group discussion participants were interested in more information*". Nearly all of the participants in non-circumcising districts reported that they would take their sons to a health facility to be circumcised, if they were educated on the advantages and disadvantages of male circumcision (Bailey & Lukobo, 2007). This shows that, the people did not have enough knowledge about male circumcision. Their acceptability of the procedure depended on their knowledge of the benefits of the procedure. There was need for health promotion programmes on the benefits of male circumcision.

In studies of acceptability of male circumcision conducted in Kenya and Uganda by Bailey and colleagues (2005), a sample of adult women reported that, they would prefer a circumcised partner for reasons of cleanliness and reduced chances of infection. Eighty eight percent of the same women said that they would prefer to have their sons circumcised. This shows that the women had knowledge of the benefits of male circumcision, thus they consented to the procedure to be done on their children and preferred it on their partners.

Fritz, Halperin & Woelk (2000), conducted a survey in a Harare beer hall with 200 randomly selected men to assess the attitude regarding potential introduction of male circumcision in Harare. Eighty nine (89) men offered various health-related factors associated with male circumcision. Twenty three mentioned that male circumcision is considered hygienic or smarter than un-circumcised; while 66 said that it reduces the likelihood of infections, including STIs. Only 6 mentioned something on HIV that male circumcision helps prevent STIs/HIV infection, or that male circumcision can spread HIV through the sharing of blades. This shows that very few men had knowledge of the protective effect of male circumcision against HIV with six men only mentioning something on HIV. Not all of the six men had knowledge of the protective effect of male circumcision against HIV since; some stated that there was a possibility of

acquiring HIV from the procedure if instruments are shared and not of the protective effect of the procedure. This could be one reason why some people would not accept to be circumcised.

Dube, January & Shamu (2006) from the University of Zimbabwe Community Medicine Department conducted a study entitled *knowledge, attitudes and practices towards circumcision in Zengeza 4, Zimbabwe* in which they found out those 24 out of 52 respondents knew the benefits of male circumcision. Eighteen men (35%) knew that male circumcision can reduce the transmission (acquisition) of HIV, 27 did not have this knowledge while seven were not sure of this fact. This shows that the greater part of people did not have the knowledge of protective effect of male circumcision against HIV.

## **2.5 People's Perception on male circumcision**

Bailey & Lukobo (2007) conducted a study in Zambia, in which focus group discussion were held with urban and rural men to assess male circumcision practices, opinions, and acceptability among married and unmarried men ages 18 to 39. The study subject had different perceptions of male circumcision. Not being circumcised was associated with uncleanness, premature ejaculation, and unfitness for marriage by the traditional groups practicing male circumcision. Male circumcision was viewed as a milestone for manhood, protection from disease, and an enhancement for women's sexual pleasure as circumcised men are thought to be able to "perform" longer, thereby increasing their female partner's satisfaction (Bailey & Lukobo, 2007)

The men among groups not practicing traditional male circumcision, expressed limited interest in male circumcision although some said they wished they had been circumcised because there was a common belief that women prefer circumcised men (Bailey & Lukobo, 2007). This could be a problem that uncircumcised men could face especially in circumcising communities. They could end up undergoing the procedure not because they want to, but because they would feel accepted by their peers and females, thus avoid stigmatization.

## **2.6 Acceptability of male circumcision**

The cost benefit analysis is a socio-economic rational employed by anyone in project intervention whether on the supply side or the demand side. Bailey & Lukobo (2007) in the Zambia study mentioned above, found out that the majority of participants preferred the procedure to be done by a medically trained person in a health facility and should be free or at a minimum cost. This might suggest that people do not prefer the traditional male circumcision procedure since they stated that they prefer it medically done. The following were cited as reason not to circumcise: cultural tradition, pain, and safety, as well as other barriers, such as cost and the concern that men would engage in more sex if they perceived themselves to be fully protected by circumcisions (Bailey & Lukobo, 2007). The study got the following reasons to circumcise, prevention of STIs, and hygiene. The participants had knowledge of the benefits of male circumcision however, having the knowledge alone could not make them accept the procedure because there were other factors, such as cost, place where the procedure would be done and the expertise/qualification of the person carrying out the procedure that would make them accept it.

Scott et al (2003) conducted a study in KwaZulu Natal, South Africa on acceptability of male circumcision as an HIV prevention method among a rural Zulu population in which he found out that about half the uncircumcised men surveyed (51%) said that, they would be circumcised if the procedure could be conducted safely with little pain and at low cost. Sixty-eight per cent of women said that they would like their primary partners to be circumcised. There is some similarity between the Zambian study and this South African study in that the majority of the study subject offered to be circumcised provided the procedure is conducted in a health institution at low cost.

According to Shapiro et al (2001), male circumcision was highly acceptable in Botswana, they wrote; “ Although the majority of males in Botswana are not circumcised, 68% of participants in our study respond that they would definitely or probably circumcised a male child if this service were offered for free in the hospital”. They cited the prevention of sexually transmitted diseases, including HIV, for accepting male circumcision. However, male circumcision was not acceptable to some people in the same study due to various reasons. Of the 86 participants, who

initially responded that they would definitely not or probably not circumcise a male child, 35% listed pain, 26% listed safety concerns, and 22% listed religious or cultural reasons ( Shapiro et al 2001). Auvert et al (2005) found out that, culture was not a hindrance to male circumcision in a Randomized Control Trial study carried out on Orange Farm in South Africa to determine the protective effect of male circumcision. Dr Adrian Puren, co- author of the study wrote: *“Culture is not necessarily a barrier to circumcision. In our trial we found that even Zulus, who traditionally have a low rate of circumcision, were willing to be circumcised”*.

According to Bailey (2005), approximately 60% of Luo men and women (Nyanza District Kenya) would prefer to be circumcised or have a circumcised partner if it could be done safely and at minimal cost. The Luo tribe makes about 13% of the Kenyan population and is the only major ethnic group, which does not traditionally practice male circumcision in Kenya.

Bailey et al, (2005) found out that, 29% of a sample of uncircumcised adult men in Uganda indicated that they would prefer to be circumcised. This is the study with the lowest acceptability levels. A Randomized Control Trial study carried out by Gray et al (2000) in the same country in Rakai, to determine the protective effect of male circumcision on HIV had an acceptance level of 60%. Acceptability findings from the randomized control study, based on interview with 1.178 uncircumcised men, found that 60% would accept male circumcision and enroll in a Randomized Control Trial, even if male circumcision were delayed (USAID/AIDS Mark, 2003). This could be possible considering the fact that, the cost of under going the procedure was going to be covered by the investigators. People are likely to volunteer into such programmes.

In a survey conducted by Fritz et al (2000) in Harare, 172 (86%) men were uncircumcised. Of these 77 (45%) indicated that, they would want to be circumcised if the procedure was affordable and safely conducted. Safety and affordability of the procedure is an important factor for acceptability as it was considered by most uncircumcised men in various studies. On the other hand Dube and colleagues (2006) in the Zengeza 4 study found that 45(86%) men were not circumcised. Of these men, 11(21%) accepted to be circumcised, 34 did not accept, while 7 were not sure of their position. The researchers noted that most women from several studies wanted to circumcise their children and preferred circumcised partners for hygiene and reduced

chances of acquiring sexually transmitted diseases including HIV. However, the rate of un-circumcision in the study was high while acceptability was lower than what was found out in Fritz et al's study in 2000.

## **2.7 Summary**

The researcher reviewed different studies on male circumcision and found out that the procedure was generally acceptable by most of the respondents provided it was done safely and at a cost the people could afford. Some people had knowledge of the benefits of male circumcision while others did not have. This affected the acceptability of the procedure. It appears that more people may accept the procedure after receiving information on the medical benefits of male circumcision.



## CHAPTER III

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter discusses the research methodology employed in this research. Areas discussed in this chapter include the research philosophy, its design, population and determination of the sample and sampling procedures, research instruments, data collection, presentation and analysis procedures. The chapter ends up with a summary.

#### 3.2 Research Design and Philosophy

Business research methods are based on a philosophy of science and a theory of society (Nyamuda, 2002). Research methodology is the study of the methods used in obtaining data, for a research project (Bell, 1993). The philosophy of science is based on four sets of assumptions: ontology; epistemology; human nature and the methodological debate. Ontology relates to issues pertaining to reality (<http://pespmc1.vub.ac.be/SOCIETY.html>). This study dealt with acceptability of male circumcision by plantation workers at Border Timbers Limited. Epistemology centers on the nature of knowledge.

This research has no positivism in knowledge (<http://pespmc1.vub.ac.be/EPISTEMI.html>). It assumes that knowledge and acceptability of male circumcision by plantation workers is relative and is not amenable to any form of classification. The knowledge and acceptability of male circumcision as an HIV prevention method depended on the respondents in their different situation. The research assumes that, human nature is a product of environment in which a person lives. Based on the above consideration, this research was based on the understanding that, the acceptability of male of male circumcision as HIV infection prevention at Border Timbers Limited could be obtained through firsthand feedback of the workers themselves, and the rules that govern them in society. It was found most appropriate to use descriptive survey using both quantitative and qualitative methods.

A descriptive survey provided a snapshot of the current affairs, and at the same time accommodated the examination of some relationships of the variables of knowledge and acceptability. Thus, the study was a descriptive cross sectional survey, of plantation workers at Border Timbers Limited (Weiger, 2001). It was a population survey using a sample to avoid the cumbersomeness of the whole population. Through the use of a descriptive survey it was possible to use a questionnaire. Besides that, the study design was relatively cheap and was suitable for carrying out the studies in a short space of time as was in the case of this study. A cross-sectional survey may be repeated in order to measure the changes over time in the knowledge, perceptions and acceptability of male circumcision in the study population, especially after implementing a male circumcision health promotion programmes. Thus the researcher opted for this study type.

### **3.3 Study population**

According to Babbie (1979), a population is any group of individuals that have one more characteristics in common that are of interest to the researcher. In this study, the study population was made up of Border Timbers Limited plantation workers, across their rank and file. Plantation workers refer to those employed to do silviculture and timber harvesting for further processing into the mills and markets. The workers were divided into plantation floor workers occupying lower grades and plantation managers being in-charge of forest management units. Border Timbers Limited plantation forestry operations are scattered, but concentrated around the Manicaland province, whose capital city is Mutare.

The company uses the Paterson grading system. Management level is defined as all those who fall in the D band and higher, whilst the general staff are those in the A, B and C bands. There were 13 employees in D band; 91 in C band and 491 in B band and 469 in A band, totalling 1085 in the population (also see Table 1.1).

Any employee who was employed in the research period had an equal chance of being included in the study. Space and time make plantation forestry peculiar for management decisions and researches alike (Uys, 1993). Geographical spread of the of Border Timbers Limited operations and the time frame of the study made impossible to reach all employees of all the five

operations namely: Charter, Tilbury and Sawerombi in Chimanimani and Sheba and Imbeza in Penhalonga, all covering 50 000 hectares. Consequently, sampling of the population was done irrespective of rank and file. Effort was made to distinguish between management employees and general staff. This was done in an attempt to ensure that, there was enough management representation in the sample to present a balanced view between the various levels of staff.

Management staff included those chartered with plantation forestry management. They planned, led and controlled the running of the landed business. They represented the owners of the means of production and articulated the motivational policies of Border Timbers Limited. On the other hand, general staff were the plantation floor workers whose job was to execute the annual plan of operations on a day to day basis. They included machine operators, mechanics, planting work gangs and harvesting chainsaw operators. Physical output of production depended on these incumbents.

### **3.4 Sample and Sampling Procedures**

The researcher used Epi Info *STATCALC* programme Version 3.3.2 of February 2005 to calculate the sample at 95% confidence level. He assumed 60% acceptability as the highest possible value derived from Bailey's 2005 study in Nyanza District, Kenya among the Luo men. In the study, 60% of Luo men preferred to be circumcised if it was to be done safely and at minimal cost. The least acceptable value of 45% was adopted as derived from a study conducted by Fritz et al (2000) in Harare. A sample size for females and males was calculated separately.

The sample size of 233 workers, 116 males and 117 females was calculated using the Epi Info programme. The researcher managed to get the responses of 220 workers, 108 males and 112 females in the study. This was 94.4% of the expected (calculated) sample size.

Non-probability convenience sampling method was used to select participants into the study. The researcher conveniently selected workers that were at work on the days of data collection. Those absent due to various reasons and those on internship did not have the chance to participate in the study. The researcher could have used probability sampling but due to limitation of time, he was not able to do so. Probability sampling required a lot of time to come

up with a complete sampling frame in the study sites and then sample from it. On the other hand, non probability sampling is limited in that all the workers were not given equal chance to be selected into the study thus there was some selection bias.

The researcher got the assistance of members of the staff and the administration at the data collection sites in accessing working where participants were gathered. He talked to them in groups about the purpose of the study and then some participants from groups who would have consented to participate were selected into the study by the accompanying staff member before moving on to the next group until the intended number of participants was met.

### **3.5 Data collection instruments**

The researcher used self administered questionnaires to collect information from study participants. According to Leedy & Ormand (2005), a questionnaire is an instrument with open or closed questions or statements, to which a respondent must react. This was a primary source of data collection. The researcher designed two self administered questionnaires, one for males and the other for females. Each questionnaire was accompanied by a covering letter explaining the purpose of the study to the prospective respondent. General instructions on completing the questionnaire and the importance of completing all questions were included. The covering letter explained why it was important that the potential respondent personally completed the questionnaire.

Apart from establishing rapport, it was also aimed at gathering as much information as possible from them on their demographic characteristics, their knowledge and perceptions of male circumcision and their acceptability of the procedure. They were asked to state how they would want circumcision to be performed and whether they think it's necessary to embark on a massive campaign of male circumcision. Females were asked if it matters to them to have a circumcised partner or not. Both females and males were asked whether circumcision was of any importance to them and whether they would accept to circumcise their male children.

### **3.6 Pre-testing**

The researcher pre-tested the questionnaires at Mutare Board and Paper Mills (a plantation forestry company) with 1 manager and nine general staff, to check for the validity and reliability of the data collection instruments that were, if the instruments were measuring what they were supposed to measure. Mutare Board and Paper Mills pilot respondents were best suited for pre-testing of the data collection instruments, since they were not going to be included in the study. The researcher took the opportunity to correct and rephrase all ambiguous questions. The questions that were corrected included the phrasing of if a woman would prefer a circumcised partner. In order to get more information to the impact of motivation the questionnaire had to be reconfigured to accommodate more open ended narratives. After the necessary changes have been effected, the questionnaires were sent out into the field for a period of 20 days.

### **3.7 Data collection procedure**

At each study site, the researcher gathered the participants in one venue and then administered the questionnaire. He made the respondents to sit as far away from each other as possible so as to discourage any undue influence among the participants during the answering session. After selecting the sample participants the researcher first explained to them about the study, its purpose and objectives and how they would contribute to the study. The participants were given the opportunity to ask questions about the study and other issues of interest to them. The researcher answered all their questions and then asked for their consent to participate in the study before administering the questionnaire.

### **3.8 Ethical considerations**

The researcher started by seeking permission to carry out the study from Africa Center of HIV/AIDS Management at Stellenbosch University and this was granted. He also sought permission from the Ethical Committee at Stellenbosch University and the Human Resources Manager at Border Timbers Limited and the workers themselves to conduct the study.

The researcher extensively explained the purpose and objective of the study to all participants and gave them the opportunity to ask questions on issues that needed their clarification. Verbal

informed consent was sought from all study subjects before participation into the study. The study subjects were assured that the study was anonymous and that the information they supplied was going to be treated with utmost confidentiality and was only going to be used for the purpose of the study. Access to the study participant information was going to be limited to people with something to do with the study and no one else. However processed information (study report) could be made available to anyone interested in the study. The participants were assured that they needed not worry since the study was anonymous and their names were not to appear anywhere. This information also appeared on the top of every questionnaire that was given to the study participants. The participants were informed that they could withdraw from the study at any time without providing reasons and without any disadvantages.

### **3.9 Data Analysis Procedure**

The purpose of statistical analysis is to increase the conciseness, clarity and objectivity with which results are presented and interpreted, and where an analysis does not serve those ends it is inappropriate (<http://esapubs.org/esapubs/Statistics.htm>). The responses on all questionnaires were coded, summarised and presented in a table. Data from the questionnaire was coded and analyzed using an Epi Info Version 3.3.2 of February 2005 programme under the following variables, demographic data, and knowledge of benefits and risks of male circumcision, people's perceptions on male circumcision, acceptability of male circumcision and suggestions on implementing male circumcision programmes. Various statistical measures were applied to analyse data.

### **3.10 Summary**

The methodology that sought to guide this research has been discussed in this chapter albeit, the philosophical constructs that dominated deliberations and research contestations. However, key areas discussed were the research design, population sample and sampling procedures, research instruments, data collection, presentation and analysis procedures. This justified the research posture, in terms of validity and reliability.

The next chapter presents, analyses, interprets and discusses the data.

## CHAPTER IV

### DATA PRESENTATION; ANALYSIS; INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

In this chapter, the researcher presents the results obtained from the three study centres. The results are categorised into five main sections namely demographic characteristics of respondents, knowledge of benefits of male circumcision, perceptions of respondents on male circumcision, acceptability of the procedure and suggestions on how male circumcision can be promoted to become one of the HIV prevention methods.

#### 4.2 Demographic characteristics of the respondents

There were 220 respondents; 108 (49.1%) males and 112 (50.9%) females. Their ages ranged between 19 and 42 and their average age was 24.6 years. All were workers in the employment of Border Timbers Limited, in Manicaland province, in Zimbabwe.

**Table 4.1: Study participants per study centre N=220**

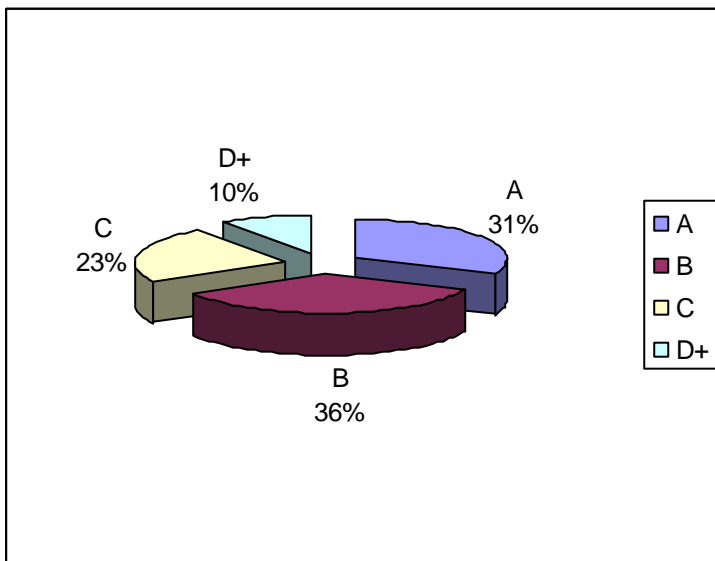
<b>Name of plantation</b>	<b>Number of Males</b>	<b>Number of Females</b>	<b>Total</b>
Charter Estate	37	37	<b>74</b>
Tilbury Estate	29	35	<b>64</b>
Sheba & Imbeza	42	40	<b>82</b>
<b>Total</b>	<b>108</b>	<b>112</b>	<b>220</b>

From background information on the questionnaire it was established that, all the respondents had attained a minimum of secondary school education. Seventy three percent of the respondents had attained beyond Junior certificate, 11% Ordinary level, 9.0% a Diploma and 7.0% a Degree and were studying for a post-graduate qualification.

**Table 4. 2 Characteristics of the sample size N=220**

<b>Managerial Staff</b>	<b>Number</b>	<b>Percentage</b>	<b>General Staff</b>	<b>Percentage</b>	<b>Total number</b>
Charter -	4	100	68	0.20	72
Tilbury-	4	100	57	0.20	63
Sheba-	3	100	51	0.20	55
Imbeza-	1	100	22	0.20	23
Sawerombi-	1	100	6	0.19	7
Total-	13	100	207	0.20	220

Tables 4.1 and figure 4.1 shows the study population of plantation workers in their work categories. The sample size of 233 workers, 116 males and 117 females was calculated using the Epi Info programme. The researcher managed to get the responses of 220 workers, 108 males and 112 females in the study. This was 94.4% of the expected (calculated) sample size. This justifies a minimum retention rate of questionnaires required by to carry out statistical analysis in Epi Info programme.



**Figure 4.1 Distribution of responses by grade of employee N=220**



The majority of the respondents [159 (72.2%)] were still single while 57(25.9%) were married. Three were widowed and one was engaged. Only 41(18.6%) of the respondents had male children and the rest had no male children.

One hundred and ninety three (88%) of the respondents were Christians 6 (3%) were of the African Tradition Religion, while 21 respondents did not state their religion. The Christians were of seven different denominations and there were nine different tribes among the respondents. Striking were respondents from Malawi and Mozambique however, this might not be surprising given the diversity of ethnic groups in the plantations.

#### **4.3 Knowledge of medical benefits of male circumcision**

The majority of the respondents [175 (79.6%)] stated that male circumcision was not practiced in their culture/tradition or their religion, 41 (18.6%) stated it was practiced in their tradition while 4 respondents had no idea whether it was practiced or not. The reasons given for the practice of the procedure were following tradition of initiation of boys into manhood, improving general hygiene and prevention of STIs. Eighty six percent of the respondents correctly defined male circumcision. Close to 10% of them had no idea of what male circumcision was. Of these 14 were women and 7 were man. Close to 4% of the respondents stated than male circumcision was the passage or graduation of boys into manhood instead of stating that it is the surgical removal of the foreskin of the penis.

On knowledge of benefits of male circumcision, 41 (18.6%) knew that male circumcision has a protective effect against acquiring HIV, while close to 31% of the respondents knew about the role of male circumcision in protecting against other STIs. Sixty-two (28.2%) respondents stated that, male circumcision had a hygienic benefit. Twenty three comma three percent22.3% of the respondents did not know any benefits of male circumcision, as shown by table 4.3.

**Table 4.3: Medical benefits of male circumcision N=220**

<b>Reponses</b>	<b>Frequency</b>	<b>Percentage</b>
Protects against contracting HIV	41	18.6
Hygienic	62	28.2
Protects against contracting STIs	68	30.9
No idea	49	22.3
<b>Total</b>	<b>220</b>	<b>100.0</b>

Table 4.4 below shows that, the association between knowledge of medical benefits of male circumcision and the respondents' religion. From the narratives on whether circumcision was of any benefit to the males, 23 (21.3%) stated that it was of beneficial to them while 85 (78.7%) of the 108 males stated that it was not beneficial to them. Of these 23 males, 10 were circumcised and 13 were not. NB Eleven (10.4%) of all male respondents were circumcised. The benefits include protection against STIs and HIV and improved hygiene. Six of the 23 respondents did not state any benefits even though they had indicated that circumcision was beneficial to them.

**Table 4.4: Association between Knowledge and Religion n=98.**

<b>Religion</b>	<b>Knowledge of benefits</b>		
	<b>Had knowledge</b>	<b>No knowledge</b>	<b>Total</b>
African Tradition	6	3	9
Christianity	56	33	89
<b>TOTAL</b>	<b>62</b>	<b>36</b>	<b>98</b>

OR 1.20 95% CI 0.2<OR<5.0

The table above shows that 62 out the 98 of the respondents had knowledge of the medical benefits of male circumcision. The 102 respondents did not show their religious faith. Taking the respondents as a subset of the sample, this could show that was no association between knowledge of the respondents on medical benefits of male circumcision and their religion.

One hundred and forty six (66%) of the respondents stated a variety of complications of male circumcision which are summarized in the table 4.5 below.

**Table 4.5: Complications of Male Circumcision n=146**

Responses	Frequency	Percentage
Trauma	2	1.4
Sexual insensitivity	3	2.1
Possibility of getting HIV if instruments are shared	11	7.5
Death	15	10.3
Wounds take long to heal	19	13.0
Damage to penis	25	17.1
Excessive bleeding	27	18.5
Can cause serious infections	44	30.0
<b>Total</b>	<b>146</b>	<b>100.0</b>

Table 4.5 shows that close to eight percent of the respondents stated that one could end up contracting HIV if instruments are shared during the procedure. The common complication was serious infections. However, 74 (34%) of the total respondents of 220 had no idea of any complication of the procedure. The finding gives justification why circumcision not well accepted as AIDS prevention method.

**Table 4.6: Circumcision status versus Benefits of Circumcision N=108**

Circumcision status	CONSIDERATION OF MALE CIRCUMCISION		
	Beneficial	Non Beneficial	TOTAL
Not circumcised	13	84	97
Circumcised	10	1	11
<b>TOTAL</b>	23	85	108

OR 0.02,95% CI 0.00<OR<0.13

Table 4.6 shows that, there appears to be an association between being circumcised and consideration of the procedure as beneficial to oneself and the association was significant. This may suggest that if the procedure is launched it is likely to have a large mass appeal to the public.

From the narratives, thirty- four (30.4%) of the 112 women stated that, male circumcision was beneficial to them while 78 (69.6%) stated that, it was of any benefit to them. The convergence of these findings stimulated further enquiry into the knowledge and benefits of male circumcision among plantation workers. The benefits included protection from cervical cancer, improved hygiene and protection from STIs and HIV as shown on the table below-

**Table 4.7: Benefits of Male Circumcision Mentioned by Females. n=29**

<b>Benefit</b>	<b>Frequency</b>	<b>Percentage</b>
Protection from cervical cancer	1	3.4
Protection from STIs and HIV	11	38.0
Improve general hygiene	17	58.6
<b>Total</b>	<b>29</b>	<b>100.0</b>

From the table above the 34 women five did not state any benefits although they had earlier on stated that male circumcision was beneficial to them.

From the narratives and discussions on whether there was need to circumcise men, 39 (36%) stated that, there was need while 72 (64%) of the 112 women stated that it was not necessary. The need was for women to benefit from the benefits in table 4.7, and also to insure sexual satisfaction of females since some women regarded the circumcised men as more satisfying than the un circumcised.

For the researcher to get the scores on the respondents, all indicators of knowledge of the beneficial effects on the questionnaires were given a possible score of 8 and each respondent's responses were marked against this score. Table 4.8 below is a frequency table of the scores obtained by the respondents.

**Table 4.8: Score of Respondents' Responses N=220**

Score		0	1	2	3	4	5	6	7	8	Total
Frequency	Males	3	16	24	36	17	7	3	2	0	108
	Females	6	7	17	27	22	7	12	4	0	112
Total Frequency		19	23	41	63	39	14	15	6	0	220

The average score for males was 2.8, while that for females was 3.1. There were more females who scored 0, 6 and 7 out of 8 than males. The average score for all respondents was 3 out of 8 and as a percentage the average score was 38%. From these findings, the striking feature is the low knowledge base despite other indicators of possible acceptance highlighted above. The table below is a comparison of the scores in terms of sex with regards to the 50% (4 out of 8) mark.

**Table 4.9: Comparison of Male and Female Scores N=220**

Sex	Score		
	<50%	50%≤	Total
Females	67(60%)	45(40%)	112
Males	79(73%)	29(27%)	108
Total	146	74	220

Paradoxically, as shown by table 4.9 above, forty percent of the females scored more than half compared to 27% of the males. Female respondents appear to have more knowledge of benefits of male circumcision than males.

#### 4.4 Perceptions on Male Circumcision

From narratives on the perception of the respondents on male circumcision, 44 (20.0%) of the participants stated that, male circumcision was bad while 45 (20.5%) of the respondents did not state their perception the table below is a summary of the respondents' perceptions.

**Table 4.10: Views of Respondents on Male Circumcision. N=220**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
Not good, it gives false HIV protection to man	2	0.9
It is torture and violation of human rights	4	1.8
It is against what God created male like	4	1.8
Good for people who believe in that culture	8	3.6
It is old fashioned.	11	5.0
It is an acceptable African culture	14	6.4
Not necessary. Useless culture with little benefits	19	8.6
It is good	30	13.6
Prevents transmission of STIs	39	17.7
It is bad	44	20.0.
No perception	45	20.5
<b>Total</b>	<b>220</b>	<b>100.0</b>

When the respondents were limited to two options to state whether male circumcision should be practiced or not, 45% stated that, it should be practiced while 55% stated that, it should have been stopped long back. The convergence of these findings to the earlier on assertions shows that, there is a knowledge gap with the population that can only be bridged by health promotion strategies.

**Table 4.11: Perception of Male Circumcision against Circumcision Status n=87**

Perception of male circumcision	Circumcision status		
	Not circumcised	circumcised	TOTAL
Against what God created men like	1	0	1
Torture of innocent people and violation of human rights	2	0	2
Old fashioned	7	0	7
Not necessary	10	0	10
Its bad	27	1	28
Good practice	30	9	39
<b>TOTAL</b>	<b>77</b>	<b>10</b>	<b>87</b>

Findings in table 4.11 show a summary of the respondents' perceptions with respect to their circumcision status. Most of the males with a negative perception of male circumcision were not circumcised as shown in table 4.12 above. Nine of the 11 circumcised men had a positive perception of the procedure. Table 4.12 below shows the association between circumcision status and perception of respondents to the procedure.

**Table 4.12 Association between Circumcision Status and Perception of the procedure n=87**

Circumcision status	Perception on Male circumcision		
	Negative	Positive	Total
Uncircumcised	46	30	76
Circumcised	2	9	11
<b>Total</b>	<b>48</b>	<b>39</b>	<b>87</b>

OR 6.9, 95% CI 1.4 < OR < 34.2

Table 4.12 shows there was an association between circumcision status and respondents' perception of the procedure, the association was significant. However this is not surprising as those already circumcised would have an overt appreciation of the procedure.

Table 4.13 below shows the association between knowledge of medical benefits of male circumcision and the respondents' perception.

NB. 22 respondents did not state their perception.

**Table 4.13: Association between Knowledge and Perception on Male Circumcision n=86**

<b>KNOWLEDGE OF BENEFITS</b>	<b>PERCEPTION</b>		
	Negative	Positive	<b>TOTAL</b>
Did not have the knowledge	16	3	18
Had the knowledge	31	16	67
<b>TOTAL</b>	47	39	86

OR 6.2, 95% CI 1.6 < OR < 23.3

There was a significant association between knowledge of respondents on benefits of male circumcision and their perception of the procedure.

**Table 4.14: Association between Religion and Respondents' perceptions n=98**

<b>Religion</b>	<b>Perception</b>		
	Negative	Positive	<b>Total</b>
African Tradition Religion	2	4	<b>6</b>
Christianity	61	31	<b>92</b>
<b>TOTAL</b>	<b>63</b>	<b>35</b>	<b>98</b>

OR 0.25, 95% CI 0.04 < OR < 1.46

Table 4.14 shows how ones perception could have been influenced by his religion, four of the six African Tradition Religion and 31 of the 92 male Christians respondents had a positive perception of male circumcision. There were indicators of association between the two aspects despite lack of statistical significance between ones religion and perception of male circumcision.



When the respondents were provided with information on the protective effect of male circumcision they changed their view and were willing to be circumcised. The rest did not change their perception. Ten percent of the sixty women who initially had a negative perception on male circumcision changed their view to accepting that male circumcision should be practiced. Striking were the male respondents who did not change their negative perception on male circumcision.

#### 4.5 Acceptability of Male Circumcision

Nine of the 11 circumcised men were Christians, while two were of African tradition religion. In terms of their tribes / ethnic groups, the circumcised were Nda, Tshangani, Karanga, Korekore, Manyika and Jindwi. On how they were circumcised, 6 respondents stated that they were circumcised traditionally, while two were medically circumcised. The other 3 males did not know how they were circumcised. As to when the circumcision was conducted, 7 stated that they were circumcised before adolescence while others were circumcised during adolescence.

On acceptability of male circumcision, 21 (21.6%) of the 97 uncircumcised men stated that, they were willing to be circumcised if they were given the opportunity to do so. Table 4.15 below shows the association between willingness to be circumcised and perceived benefit status of the procedure.

**Table 4.15: Association between Benefits of Male Circumcision and its Acceptability n=97**

Benefits of male circumcision	Willingness to be circumcised		
	Not Circumcised	Circumcised	TOTAL
Beneficial	2	10	12
Not Beneficial	74	11	85
<b>Total</b>	76	21	97

OR 0.03, 95% CI 0.01 < OR < 0.15

There was a significant association between willingness to be circumcised and consideration of the procedure as of benefit to the respondents.

Those who were willing to undergo the procedure were of the Nda, Manyika, Korekore, Karanga, Tshangani and Jindwi tribes. In terms of religion, 4 (19%) were of the African

Tradition Religion and the rest were Christians. Table 4.16 below shows the association between religion and willingness to be circumcised.

**Table 4.16: Association between religion and willingness to be circumcised n=87**

<b>Religion</b>	<b>Willingness to be circumcised</b>		
	Not Willing	Willing	<b>Total</b>
African Tradition Religion	2	4	6
Christianity	67	14	81
<b>Total</b>	69	18	87

OR 0.10, 95% CI 0.02 < OR < 0.63

Table 4.16 shows that there was a significant association between religion and willingness to be circumcised. Most of the respondents had a positive perception of the procedure except for three people, two who did not state their perception and one who stated that it was not necessary to him because of little benefits.

**Table 4.17: Male Perceptions against Willingness to be circumcised n=108**

Perception of male circumcision	Willingness to be circumcised			
	Willing	Not willing	Not applicable	TOTAL
Against what God created man like	0	1	0	1
Good practice	18	12	9	39
It's bad	0	27	1	28
No perception stated	2	19	1	21
Not necessary. Useless culture with little benefits	1	9	0	10
Old fashioned	0	7	0	7
Torture of innocent people and violation of human rights	0	2	0	2
<b>TOTAL</b>	<b>21</b>	<b>76</b>	<b>11</b>	<b>108</b>

The table above shows that, eighteen of the 21 who were willing to undergo the procedure had a positive perception of the procedure. This was a good indicator by possible of the early adopters of male circumcision should the innovation be made to diffuse into the members of the public.

**Table 4.18: Association between Male Perception against Acceptability of the Procedure n=97**

Perception	Willingness to be circumcised		
	Not Willing	Willing	Total
Negative	64	3	67
Positive	12	18	30
<b>TOTAL</b>	<b>76</b>	<b>21</b>	<b>97</b>

OR 32.0, 95% CI 8.1 < OR < 125.8

The table 4.18 below shows the association between perceptions and willingness to be circumcised. The test statistic of the association between perception of respondents of male circumcision and their willingness to be circumcised was significant suggesting that any promotion of this procedure should target these respondents as peer educators.

The males stated the following reasons for accepting to be circumcised; protection from STIs and HIV, following culture/tradition, improved hygiene since circumcised men were considered to be more hygienic than uncircumcised men and sexual pleasure because of delayed ejaculation. On the other hand reasons for denying circumcision included, it being too painful and torturous, possibility of getting HIV if contaminated instruments were shared during the procedure, fear of damage of the penis leading to infertility, it being not necessary at all to others while others believed that circumcision was against what God wanted men to look like at creation, so they did not accept to be circumcised.

Thirty two (68%) of the 41 parents with male children stated that. their children were not circumcised while 9 (26%) stated that they were circumcised. Seven out of the 9 respondents with circumcised children stated that, their children were traditionally circumcised while the remaining two stated that, their children were medically circumcised.

On circumcising their male children, 58 (26.4%) stated they would accept to circumcise their children, 160 (72.7%) stated that they would not circumcise their children. while 2 (0.9%) were not sure.

**Table 4.19: Reasons for Circumcising Male Children n=58**

<b>Reasons for circumcising male children</b>	<b>Frequency</b>	<b>Percent/%</b>
Sexual satisfaction of future female partner	7	12
Following culture/tradition	9	16
Hygiene	18	31
Protection against HIV and STI	24	41
<b>Total</b>	<b>58</b>	<b>100</b>

The reasons for circumcising children included improved general hygiene, protection against STIs and HIV, sexual satisfaction of their future female partners and following culture/tradition and the table 4.19 summarizes the general reasons. However more specific reasons against circumcision of children are summarized in the Table 4.20 below.

**Table 4.20: Reasons against circumcision of children n=156**

<b>Reason for not circumcising male children</b>	<b>Frequency</b>	<b>Percentage</b>
Lack of knowledge of benefits of the procedure	4	2.6
It is out date/old fashioned	8	5.1
Against what God created man like	10	6.4
Not necessary	12	7.7
Should be personal choice	22	14.1
Not wanting to see the child suffering because of pain	24	15.4
Not believing in male circumcision	30	3.8
Fear of complications	46	3.2
<b>Total</b>	<b>156</b>	<b>100.0</b>

From the table above the highest frequency was on fear and not believing in the benefits on circumcision. Complications which the respondents were afraid of included damage of the penis, death, contracting HIV if instruments were shared, serious infections, excessive bleeding and sore healing of wounds. The findings may suggest that, to manage the fear and anxiety the surgical procedure may need qualified surgeons to avoid send a message of fear to potential recipients.

On the question of conditions of conducting the procedure, 199 (95.5%) respondents preferred medically conducted circumcision, while 21 (9.5%) opted for the traditional conducted one for themselves for the reasons that circumcision was a traditional practice that should be done traditionally. They also said that, the traditional circumcisers were more experienced than the medical ones since the practice is done more traditionally than medically. Those who opted for medical circumcision stated that, it was conducted under hygienic conditions and the chances of

getting an infection or complications were minimum since there would qualified personnel to deal with any challenging situation that may arise during and after carrying out the procedure.

On what were the respondents' prerequisites for accepting to undergo the procedure, 48 stated their conditions while the rest regarded it as inapplicable to them.

**Table 4.21: Prerequisites for Undergoing Circumcision n=48**

<b>Responses</b>	<b>Frequency</b>	<b>percentage</b>
Benefits of undergoing the procedure	20	41.7
Qualification/experience of circumciser	5	10.4
Hygienic condition	19	39.6
Less risks	4	8.3
<b>TOTAL</b>	<b>48</b>	<b>100.0</b>

Twenty (41.7%) of the 48n males stated that, they would consider the benefits of undergoing procedure, 19 (17.6%) considered hygienic conditions, while 5 (46%) considered the experience and qualifications of the practitioner.

**Table 4.22: Women preference on Man Circumcision state N=112**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Accept both circumcised and uncircumcised	66	58.9
Must be circumcised	29	25.0
Must be uncircumcised	17	15.2
<b>Total</b>	<b>112</b>	<b>100.0</b>

Table 4.22 shows that sixty six (59%) of the 112 women stated that, they would accept any man whether circumcised or uncircumcised. The majority of these women stated that, they did not have enough knowledge on the difference between these two conditions to warrant them to make a choice between the two. To them a male was a male whether circumcised or not, while 29 (25.8%) stated that they preferred circumcised men for cleanliness, less chances of getting STIs and sexual satisfaction especially delayed ejaculation. On the other hand. 15.2% preferred

uncircumcised men for the reasons that they enjoyed playing with the foreskin of the penis and that the uncircumcised head of the penis is sexually sensitive as they regarded the circumcised penis as insensitive.

#### 4.6 Suggestions on promotion of male circumcision

The majority of the respondents 154 (70%) were of the opinion that there was no need to embark on a nationwide programme to circumcise males, while 30% of the respondents were for the idea as shown below.

**Table 4.23: Suggested Age Groups for Circumcision n=70**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
After adolescence	3	.9
At adolescences	11	6.3
Before adolescence	10	3.6
Infancy	28	16.1
Under fives	21	12.5
<b>Total</b>	<b>70</b>	<b>100.0</b>

Table 4.23 show seventy (31.8%) respondents came up with suggested age groups to conduct male circumcision, the most suggested groups were at infancy and under fives. As of the suggestion on how male circumcision can be promoted as one of the methods of HIV prevention, 76 (34.5%) respondents made various suggestions while the majority was not for the idea. The most common suggestion was carrying out awareness campaigns on the benefits of male circumcision to all the people, parents and youth included in a bid to create awareness to everyone. This was suggested by 67 (88%) of the 76 respondents. Other suggestions included offering male circumcision at every maternity clinic and hospital free of charge and making it compulsory to every male.

## **4.7 Conclusion**

The researcher presented results obtained from the study participants. Most of the respondents had little information on the benefits of male circumcision. On perceptions, the majority had a negative view of male circumcision which could have contributed to low acceptability of the procedure. The chapter ended by compiling suggestions made by respondents on how male circumcision could be promoted to be one of HIV prevention methods.

## **4.8 Discussion of results**

In this section, the researcher discusses the results presented in the previous chapter. Major findings in this chapter are discussed and compared with what other investigators found out in similar studies.

### **4.8.1 Demography characteristics of respondents**

The age of the respondents ranged between 19 and 42 years with an average age of 24.6 years. Seventy three percent of them had attained secondary education hence the literacy of respondents was very high. Interestingly most of the respondents were Christians and a few belonged to African Tradition Religion. In terms of tribes, there was a variety of tribes among the respondents and they came from different regions of the country. The respondents were a source of information on different cultures/traditions and practices of people of Zimbabwe, since they belonged to different tribes and originated from different parts of the country. There was a diversity of cultures and traditions among the respondents in as much as it is in the Zimbabwean population. In a way this study is similar to the study conducted by Roger Shapiro et al (2001) in which 605 respondents from various geographic and ethnically representative locations throughout Botswana participated in the study.

The fact that one religion was dominant in the country and that could be taken to mean that the same ideology, ideas or beliefs of this religion were common in most people in the study and the country at large. A handful of the respondents were of the opinion that circumcision was against what God made men to look like and some gave what sounded to be a theological interpretation of the subject/ circumcision saying that they were against physical circumcision



but were for spiritual circumcision of one soul. However the study could not come up with a position whether Christianity was for or against male circumcision. Also the majority of the Christians were not for circumcision.

#### **4.8.2 Knowledge of medical benefits of male circumcision**

On knowledge of practice of male circumcision 80% stated that it was not practiced in the culture or religion. Only (18.6) respondents knew about the HIV protective effect offered by male circumcision, while (30.9%) respondents stated that it protected against STIs. This suggests that most of the respondents (81.6%) did not know about the protective effect of male circumcision against HIV transmission even though there were more respondents who knew about the protective effect against other STIs.

The number of people who did not know of the protective benefit of male circumcision against STIs and HIV was high. Forty nine respondents had no idea at all of the benefits of male circumcision. Furthermore, the average score of 3 out of 8 indicates that the level of knowledge of the respondents on circumcision and its benefits was low as most of the respondents got a score below half. The study found no significant association between religion and knowledge of medical benefits of respondents on male circumcision. This implies that, the low levels of knowledge of medical benefits cannot be linked to the respondents' religion.

Fritz et al (2000) found out that, 6 (6.7%) of the 89 men who knew about the benefits of male circumcision mentioned something on HIV and circumcision in their study. The percentage of respondents with information in this current study was higher than in Fritz et al (2001) study. This could be attributed to difference in time when the studies were conducted. In the current days people are having more information about HIV and male circumcision than they had in 2001. The difference could also be attributed to the characteristics of the respondents. Fritz et al (2001) used males from a beer hall, while this study incorporated tertiary students.

#### **4.8.3 Perceptions of respondents on male circumcision**

Fifty eight percent of the respondents had negative perceptions of male circumcision. This was further confirmed by 55% respondents who stated that it should have been stopped long ago.

Most of them viewed it as torturous, painful, against God, very bad and not necessary at all. However, some people had a positive perception of male circumcision.

The negative perceptions in most of the respondents could have been a result of lack of knowledge or little knowledge of medical benefits of male circumcision. The study found a significant association between the two. Having the knowledge of the benefits of male circumcision is paramount in building a positive perception of the procedure as those who were circumcised or knew of its benefits had a positive view of the procedure. It would be logical to have the majority of the respondents with a negative perception of the procedure since most of them did not have enough information on the medical benefits of male circumcision. It is difficult for people to have a positive perception when they are not fully informed about the benefits of the procedure.

Knowledge is power as it can influence one's perception. Eight of the 84 respondents who initially had a negative attitude changed their perception to be willing to be circumcised after being supplied with information on the protective effects of male circumcision. This is similar to what was found by Shapiro et al (2001) when some respondents changed their perception and accepted to be circumcised. Among 238 uncircumcised men, 145 (61%) stated that they would definitely or probably get circumcised themselves if it were offered free of charge in a hospital setting; this number increased to 192 (81%) after the informational session (Shapiro et al, 2001). This further demonstrates the fact that, there is an association between knowledge and perceptions. Increasing one's knowledge can possibly influence one's perception in the positive or negative sense depending on the advantages or benefits one would stand to gain.

Some women were of the opinion that, male circumcision increased sexual satisfactions as circumcised males were considered to have delayed ejaculation while others were of a contrary opinion. The others stated that they enjoyed playing with the foreskin, and were of the opinion that the uncircumcised penis was more sexually sensitive than the circumcised penis. However, according to Gray (2007), male circumcision does not reduce levels of sexual desire, satisfaction or performance.

#### **4.8.4 Acceptability of male circumcision**

Ninety percent of the men were not circumcised and this could indicate low circumcision rate in the country. This study concurs with the Fritz et al's (2000) study in terms of high rate of uncircumcision which was 86%. Most of the parents, (78%) stated that their children were not circumcised, echoing the high rates of uncircumcision among the respondents. This could be due to lack of information on the benefits of male circumcision or due to the rarity of the procedure in hospitals and clinics since most of those who were circumcised had it traditionally conducted. With the fear that traditionally performed circumcision could result in complications due to unhygienic conditions and looming possibility of contracting HIV through sharing instruments, many people would not be willing to be circumcised.

The majority of the uncircumcised males were not willing to be circumcised. Close to twenty two percent of the 97 uncircumcised men accepted to undergo the procedure. This was lower than those who were willing to undergo the procedure in Fritz et al's (2000) study. This was about a third of the who were to undergo the same procedure in Shapiro et al (2001), which had acceptability level of 68%. With the low level of knowledge of benefits of male circumcision, and most of the people having a negative perception, not many people would opt for the procedure.

Not many respondents were willing to have their male children circumcised. There were more reasons against child circumcision than for personal circumcision which showed even lower acceptability level for child circumcision. Some of the reasons were human rights related to the extent that some respondents felt that they were not in a position to decide for their children to be circumcised or not. They preferred to let the child decide for himself when he would be grown up.

The study confirmed an association between knowledge of benefits of male circumcision and perception of the procedure as well as an association between perception and willingness to undergo the procedure. Lack of information on the benefits of male circumcision could have been a contributory factor to low acceptability of the procedure. It would be difficult to accept to be circumcised when one is not informed and convinced of the benefits of the procedure.

Lack of knowledge would lead to negative perception which would ultimately lead to low acceptability. As mentioned earlier on Shapiro et al (2001), acceptability of the procedure increased after an informational session on the benefits of male circumcision was offered to the study participants. In this study, a similar situation occurred when 8 of the 84 males who initially had a negative perception of male circumcision and were not willing to be circumcised and were not willing to be circumcised changed their view after receiving some information on the benefits of the procedure.

The study also confirmed a significant association between perceived benefits of male circumcision and willingness to be circumcised. People are likely to undergo the procedure if they know of the benefits of the procedure and they view themselves standing to gain something by undergoing the procedure.

Religion can also contribute to acceptability of male circumcision. The study confirmed a significant protective association between religion and acceptability of male circumcision even though most of the Christians were not circumcised and not willing to undergo the procedure

Ninety percent of the 84 uncircumcised men did not change their position on willingness to be circumcised. Some of them argued that, the protective effect was not complete so it would not help, instead it was even more dangerous as it could create a sense of false protection in circumcised men. These men would be tempted to engage in more risky sexually behaviour thinking that they are protected. Some opted for other HIV preventive methods which are in existence than circumcision which they regarded to be painful for nothing

The majority of the respondents preferred medically performed circumcision for safety and hygienic reasons. There were less chances of contracting HIV through sharing of instruments and also less chances of complications since the people would conduct it are professionally and specialist would be available to deal with any challenging situation. Scott et al (2003) found out that, about half the uncircumcised men survey (51%) said that they would be circumcised if the procedure could be conducted safely with little pain and at low cost. The respondents in this current study also opted for safe conditions which were found when the procedure is medically conducted

## **4.9 Summary**

This chapter presented results of the research study. It looked at the statistical indicators of knowledge, perceptions and attitudes of participants, on the major issues surrounding the male circumcision debate in the plantations. The findings showed that, most people knew about male circumcision but very few had knowledge of the protective effect of the procedure against HIV acquisition and transmission.

The next chapter gives a summary, conclusions and recommendations of the research study.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction.

This chapter consists of three sections, which wind up this research report. These are the summary, research conclusions and recommendations.

#### 5.2 Summary

The study set out to establish the level of knowledge and acceptability of male circumcision with the hope of using the information to develop health promotion programmes on the procedure at the work place and in the country in an effort to reduce the transmission of HIV. Besides the above, male circumcision it has other advantages, such as being hygienic and reducing the chances of cervical cancer in women with circumcised partners. In addressing what appeared lack to be of enough information about the knowledge, perceptions and acceptability of male circumcision by plantation workers and even other groups of people in the country for the procedure to be embarked on at full scale. This study set to enrich the bank of information on the subject in the country.

The research findings would assist in the strategic evaluation of current HIV/AIDS prevention strategies, so as to enable the formulation and improvement of the multi-sectorial and multi-methodical approaches to the disease prevention. In order to accomplish the assessment, a sample of 220 employees from all plantation management units was involved in the study. They were divided into management and general workers according to their Paterson grades. The methodology was based on the philosophy that, knowledge of about HIV/AIDS prevention in plantation workers is relative and cannot be amendable to any form of classification, hence there was need to come up with first hand information using qualitative and quantitative techniques in a descriptive survey. The researcher used non- probability sampling techniques to come out with an optimal sample size. The optimal sample size was arrived at using Epi info *STATCALC* programme Version 3.3.2 of February 2005, to calculate the sample at 95% confidence level.

The study then used questionnaires to get information backed by narratives. The study wanted to solve the problem where it appears that low level of male circumcision countries coincidentally have the highest burden of HIV/AIDS in the world. Nevertheless, male circumcision has been perceived as a cultural/traditional act that is backward and not necessary. Colonization and urbanization have contributed to the disappearance of initiation ceremonies that used to be existent in the past.

In carrying out this study, some respondents were suspicious of the intentions of the researcher. They were unwilling to show their true attitudes and perceptions about their knowledge on practice due to the socio political environment in Zimbabwe. To solve this, the researcher assured that the information was to be treated with the highest confidence and names would not be accessible to anyone who had nothing to do with the study. Some of the respondents had problems in answering the questionnaire owing to the levels of their literacy. The researcher trained research assistants to help those who were to complete the questionnaire. Most respondents managed to fill in their questionnaires.

Border Timbers Limited estates are separated in space and operations took place at different times. This was a peculiar nature of forestry business. A total distance of 200 kilometres separated the furthest forest management from the nearest urban unit. This made the physical presence of the researcher expensive and at times disabling. The research assistants, who were local, collected or kept the spirit of completing the questionnaires up. This required a delicate management of time, which was sometimes difficult. However, this produced good results at the end.

Despite the above constrains the following conclusions could be made.

### **5.3 Conclusion**

Most people knew about male circumcision but very few had knowledge of the protective effect of the procedure against HIV acquisition and transmission; some people had information of other benefits, such as cleanliness/improved hygiene and reduced chances of getting other sexually transmitted diseases. Their level of knowledge on male circumcision and its benefits

was found to be low (37%) as most of the respondents had a score less than half on knowledge questions in the questionnaire and only 18.6% knew of the protective effect of male circumcision against HIV. Thus the respondents had low level of knowledge of the protective effect of male circumcision against HIV acquisition.

Most (58%) of the respondents had negative perception of the procedure to the extent that 55% of the respondents were of the opinion that, the procedure was supposed to have been stopped long ago. The study found out that, there was a significant association between knowledge of medical benefits of male circumcision and one's perception of the procedure. Thus, increasing one's knowledge on the medical benefits of the procedure is paramount in creating a positive perception of male circumcision.

The prevalence of male circumcision was low among the respondents as most of the male respondents and the respondents' male children were not circumcised. The procedure was lowly accepted by the respondents with a percentage acceptability of 21% by the male respondents, while 26.4% of all the respondents expressed their willingness to circumcise their male children. Almost all the respondents preferred medically performed circumcision even though most of the circumcised respondents and their children were traditionally circumcised. Medically performed circumcisions were preferred because of the expertise and professionalism of the people conducting the procedure and reduction of chances of complications.

Acceptability of male circumcision was affected by people questioning the procedure and people's knowledge of its benefits as these three aspects had a significant association with each other. Raising people's knowledge of the benefits of male circumcision could influence positive perceptions in them which could lead to increased willingness to undergo the procedure.

The study concluded that the respondents had low level of information on the medical benefits of male circumcision. The majority of the respondents had a negative perception of the procedure while the minority, 21%, was willing to undergo the procedure.



## 5.4 Recommendations

The researcher made the following recommendations in-order to make male circumcision an HIV preventive method that is accepted by many people;

- The heads of institutions and corporate bodies should make information on male circumcision and other HIV prevention methods available to employees so as to increase awareness on the role of male circumcision in preventing HIV acquisition and transmission. This could be achieved by inviting speakers on the subject and through sourcing literature on the subject.
- The Ministry of Health and Child Welfare's (MOHCW), Department of Health Promotion, Non- Governmental organizations and other organizations involved in the fight against HIV/AIDS can also help by carrying out awareness campaigns to raise workplace knowledge on how male circumcision can reduce the chances of getting HIV.
- All medical personnel offering ante-natal services should be educated on how male circumcision can contribute to reducing the acquisition and transmission of HIV, so that they can transmit the information to expecting parents during ante-natal clinics, with the hope of raising awareness among parents
- All maternity offering services should be equipped so that they can offer circumcision services especially to all those willing to have their children circumcised soon after delivery or during infancy. With that respect, all medical doctors should be trained and empowered to carry out circumcision. This should be done with the hope of making circumcision services available to many people at affordable prices.
- The MOHCW should engage traditional circumcision in the practice of male circumcision as they can make a significant contribution in terms of increasing the number of circumcised people. They should be trained to conduct safe circumcision so as to reduce the risk of infections, acquiring HIV during the procedure, and avoiding other complications that may arise.
- Further studies are recommended to assess the impact of stigma on the already circumcised in order to effectively plan and overcome societal barriers for the recommended strategies to make an impact.

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# Appendix 1

## Questionnaires

### Questionnaire for males

1. Age..... Marital status.....
2. Number of Children.....Males.....Females.....
3. Tribe (*Optional*).....
4. Current place of residence.....Place of origin/Home area.....
5. Religion (*Optional*).....Denomination.....
6. Name of institution.....
7. Programme of study.....
8. Level of Education attained.

Ordinary level		Advanced level		Diploma		Degree	
----------------	--	----------------	--	---------	--	--------	--

9. What do you understand by male circumcision?

.....  
.....

10. What are the benefits of male circumcision?

.....  
.....

11. Do you know of any complications that may arise from the procedure(*Please list* )

.....  
.....

12. Is male circumcision practiced in your tradition/culture or Religion ? Yes/No

13. If yes what is the basis of the practice?. Please explain.

.....  
.....

14 Please explain how you view / perceive male circumcision

.....  
.....

15. Male circumcision is being practiced in some countries and in some regions of this country. Do you think male circumcision should be practiced in these current days or should have stopped long back?

Should be practiced		Should have stopped long back	
---------------------	--	-------------------------------	--

16. Please explain your answer to 15 above

.....  
.....

17. This question is for people with male children. Are your male children circumcised?  
Yes/ No/ Not applicable

18. Are you circumcised ? Yes/ NO

19. If you answer to 18 above is yes, how was the procedure conducted?

Traditionally		Medically		Do not have information	
---------------	--	-----------	--	-------------------------	--

20. At what age were you circumcised?

Before adolescence		During adolescence		After adolescence	
--------------------	--	--------------------	--	-------------------	--

21. Is male circumcision of any benefit to you? Yes /No

22. If your answer to 21 above is yes, what are the benefits?

.....  
.....

23. If you are not circumcised, would you accept to be circumcised? Yes / No

24. Please give reasons for you choice to 23 above.

.....  
.....

25. in the event of being blessed with baby boy(s), would accept to have him/them circumcised.? Yes/ No

26. Please explain why you would accept or deny Circumcising your child/ children?

.....  
.....

27, Under what conditions would prefer male circumcision to be conducted?

Traditionally		Medically	
---------------	--	-----------	--

28Please explain your choice in 27 above.

.....  
.....

29. What would you consider for you to accept to be circumcised or your children to be circumcised?

.....  
.....



*Recent scientific studies have reviewed that medically performed male circumcision reduces the rate of acquisition of HIV in males by 60%. However it does not offer total prevention against HIV acquisition. Would this information make you change your opinion/ perception about male circumcision?*

30. If so how does your perception of male circumcision change?

.....  
 .....

31. Do you think there is need to embark on a nationwide programme to circumcised males?

Yes/ No

32.If your answer to 31 above is yes, what age group would be the most ideal to target for this exercise.?

Infants	Under fives	Before adolescence	At adolescence	Adults

33. Do you have any suggestion on how male circumcision can be promoted to be one of the prevention methods of HIV transmission?

.....  
 .....

*Thank you very much for your cooperation. May you be blessed in everything you do*

**Questionnaire for females**

1. Age..... Marital status.....

2. Number of Children.....Males.....Females.....

3. Tribe (*Optional*).....

4. Current place of residence.....Place of origin/Home area.....

5. Religion (*Optional*).....Denomination.....

6. Name of institution.....

7. Programme of study.....

8. Level of Education attained.

Ordinary level		Advanced level		Diploma		Degree	
----------------	--	----------------	--	---------	--	--------	--

9. What do you understand by male circumcision?

.....  
 .....

10. What are the benefits of male circumcision?

.....  
 .....

11. Do you know of any complications that may arise from the procedure(*Please list* )

.....  
 .....

12.Is male circumcision practiced in your tradition/culture or Religion ? Yes/No

13. If yes what is the basis of the practice?. Please explain.

14 Please explain how you view / perceive male circumcision

.....  
.....

15. Male circumcision is being practiced in some countries and in some regions of this country. Do you think male circumcision should be practiced in these current days or should have stopped long back?

Should be practiced		Should have stopped long back	
---------------------	--	-------------------------------	--

16. Please explain your answer to 15 above

.....  
.....

***Question 17 and 18 are for people with male children.***

17. Are your male children circumcised? Yes/ No / Not applicable

1. If you answer to the above question is yes, how was the procedure done?

Traditionally		Medically	
---------------	--	-----------	--

2. in the event of being blessed with baby boy(s), would accept to circumcise him( them)?  
Yes/No

3. please give reasons to your choice in 19 above.

.....  
.....

4. under what conditions would you prefer male circumcision to be conducted ?

Traditionally		Medically	
---------------	--	-----------	--

5. is male circumcision of any benefit to you ? Yes/ No

6. If yes what are the benefits ?

.....  
.....

7. do you there is need for males to be circumcised ? Yes/ No

8. If your answer to 24 above is yes, please explain the need for the procedure.

.....  
.....

26.given the option to choose a male partner, what would be you preference in terms of circumcision state ?

Circumcised		Uncircumcised		Ant of the two options	
-------------	--	---------------	--	------------------------	--

27. Please explain your answer to 26 above.

.....  
.....  
.....

*Recent scientific studies have reviewed that medically performed male circumcision reduces the rate of acquisition of HIV in males by 60%. However it does not offer total prevention against HIV acquisition. Would this information make you change your opinion/ perception about male circumcision?*

28. If so how does your perception of male circumcision change?

.....  
.....

29. Do you think there is need to embark on a nation wide programme to circumcised males? Yes/ No

30. If your answer to 29 above is yes, what age group would you suggest to be the ideal to target group?

Infants	Under fives	Before adolescence	At adolescence	Adults

31. Do you have any suggestion on how male circumcision can be promoted to be one of the prevention methods of HIV transmission?

.....  
.....  
.....

*Thank you very much for your cooperation. May you be blessed in everything you do*

## Appendix 2



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jou kennisvennoot • your knowledge partner

### CONSENT TO PARTICIPATE IN RESEARCH

---

Knowledge and acceptance of male circumcision as an HIV prevention procedure among plantation workers at Border Limited, Zimbabwe.

You are asked to participate in a research study conducted by **Taremeredzwa Mhangara**, from **The Africa Centre for HIV / AIDS Management in the Faculty of Economic and Management Sciences** at Stellenbosch University. The results will contribute to a dissertation. You are selected as a possible participant in this study because you are a plantation worker and a possible beneficiary of the positive come the research.

#### 1. PURPOSE OF THE STUDY

The purpose of this study is to gather baseline information on people's knowledge on medical benefits of male circumcision, their perception on male circumcision and the acceptability of the procedure.

#### 2. PROCEDURES

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

1. To participate by filling the form
2. Take your time to answer questions
3. Feel free to ask whatever you do not understand.
4. If you feel you no longer want to go through with the questionnaire, you are free to stop.

The questionnaires are two one for males and one for females and will take you thirty minutes to fill. Please feel free to choose a place where you feel comfortable about when you are filling the form.

### **3. POTENTIAL RISKS AND DISCOMFORTS**

No risks are foreseeable during the questionnaire phase. Some emotional response is not expected from participants owing to the content covered by the questionnaire. Every effort will be made to ensure the physical and emotional safety of participants during the questionnaire. Should there be any unforeseeable severe reaction to the interview; a clinical psychologist will be available to assist.

There might be fear of deception whereby participants doubt that the investigator is not revealing the whole truth about the purpose of the study or questionnaire. They might feel that they are indirectly assessed by the employer. This will be addressed by clearly explaining the purpose of the whole process and participants will be shown the University letter with contact details if they want to confirm.

Discomfort due to feeling of incompetence-The subjects might feel that the more they reveal information about the subject; they might actually be viewed as incompetent. This might bring out a feeling of inferiority complex. The investigator will emphasize that it just a study and has nothing to do performance assessment. They will be told that there is no wrong or right answer to the question. The study is merely to gather baseline information on people's knowledge on medical benefits of male circumcision, their perception on male circumcision and the acceptability of the procedure.

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

The study seek to establish the level of knowledge and acceptability of male circumcision with the hope of using the information to develop health promotion programmes on the procedure at the work place and in the country in an effort to reduce the transmission of HIV. The benefits will be operationalized so as to meet the following objectives -

- To assess the level of knowledge of both male and female workers Border Timbers Limited on male circumcision as a method of preventing HIV acquisition in males.
- To determine the perceptions of both male and female workers on male circumcision at Border Timbers Limited.
- To establish the acceptability of male circumcision by workers at Border Timbers Limited.
- To recommend appropriate strategies for promoting male circumcision among the people of Zimbabwe basing on the findings.

## **5. PAYMENT FOR PARTICIPATION**

The subjects will not receive any payment.

## **6. CONFIDENTIALITY**

Any information that is obtained in connection with this study will not be identified with the subjects. Moreso, the data is confidential and will not be disclosed without with subject permission or as required by law. Subjects need not to put their names on the questionnaire. Confidentiality will be maintained by means of locking up raw data in a safe. Only the investigator will have access to the data. The Information can only be released to the Supervisor or the Research Department of the University if they need to see it.

If the results of the study are published, no names of the subjects will be published apart from the fact that it will be difficult to trace data back to the person even his or her plantation of work.

## **7. PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.



Participation may be terminated if the participant starts to feel that the questionnaire is a direct attack to her/him and hence making it impossible to continue with the investigation. The subject might react with intense emotions such as crying uncontrollably or being defensive in such a manner that it leads to failing to respond rationally. No questions will be asked to justify the withdrawal.

## **8. IDENTIFICATION OF INVESTIGATORS**

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

Research Personnel:	Ms Malene Fouche
Department:	Division for Research Development
Telephone:	+2721 808 4622
Email:	<a href="mailto:mfouche@sun.ac.za">mfouche@sun.ac.za</a>
Principal Investigator:	Taremeredzwa Mhangara
Department:	Economic and Management Science
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Supervisor:	Dr Thozamile Qubuda
Department:	Economic and Management Science
Telephone:	+2721 808 3999
Email:	tqubuda@sun.ac.za

## **9. RIGHTS OF RESEARCH SUBJECTS**

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; +2721 808 4622] at the Division for Research Development.

---

<sup>1</sup> Researcher is based in Zimbabwe during the research and academic period hence the international contact of +263712944121

**SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE**

The information above was described to ----- by Taremeredzwa Mhangara in English and I am the participant is in command of this language. I participant was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent that the Subject/participant may participate in this study. I have been given a copy of this form.

\_\_\_\_\_

**Name of Subject/Participant**

\_\_\_\_\_

**Name of Legal Representative (if applicable)**

\_\_\_\_\_

**Signature of Subject/Participant or Legal Representative**

\_\_\_\_\_

**Date**

**SIGNATURE OF INVESTIGATOR**

I declare that I explained the information given in this document to \_\_\_\_\_  
[name  
of the subject/participant] and/or [his/her] representative \_\_\_\_\_ [name of the  
representative]. He/she was encouraged and given ample time to ask me any questions. This  
conversation was conducted in\_\_English and (no translator was used).

*Ta. Mhangara*

30 July 2010

**Signature of Investigator**



BORDER TIMBERS LIMITED



**HEAD OFFICE**

Aberdeen Road  
P O Box 458  
Mutare  
Telephone : 64224  
Telex : 81111 ZW  
Fax : 64142

From

**FACTORY**

Chimanimani Road  
P O Box 228  
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From

**SALES/DEPOT**

Melbourne Road  
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From

**SALES/DEPOT**

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Belmont  
Bulawayo  
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From

**BORDER TIMBERS**

**INTERNATIONAL**  
Dublin Road  
P O Box 2190  
Mutare  
Telephone : 64346  
Fax : 66378

From

16 July 2010

Dear Mr. Taremeredzwa Mhangara

**Re: Knowledge and acceptance of male circumcision as an HIV prevention procedure among plantation workers at Border Limited Zimbabwe**

Thank you the above titled proposal submitted to human resources department of organization for research. Please be advised that the company has reviewed and approved your application to conduct the above titled study. All serious problems having to do with the subject must be reported to the human resources department for use by **Institutional Ethical Review Committee** within three working days using standard forms obtained from my office. Please be remained to send copies of your final research results for our records for the company library. Lastly I would want to wish well in your work and your studies.

Yours sincerely.

For and on behalf of Border Timbers Limited

Z Mazarire  
**Human Resources Manager**

**CC: Managing Director**