Stigmatization of and discrimination against people who are HIV positive, or have AIDS – a female perspective in Zwartwater, Eastern Cape Province

by

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Fear

Care

Female perspective

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
CIA	Central Intelligence Agency
CD4	Cluster of differentiation 4
HIV	Human Immunodeficiency Virus
HSRC	Human Sciences Research Council
PLWHAs	People Living with HIV and AIDS
SAS	Statistics Analyses Software
UNAIDS	Joint United Nations Programme on HIV and AIDS
WHO	World Health Organization
WWW	World Wide Web

ABSTRACT

The aim of this study is to investigate the perceived stigmatization of and discrimination against people who are HIV positive or people who are living with AIDS. One questionnaire was used to collect qualitative and quantitative data. Data collection was conducted for a period of three weeks in the Eastern Cape province at the Zwartwater area in Lady Frere and at the Queenstown (Frontier) Hospital. A sample of 170 (of the 900) females was interviewed, of which 100 were sequentially sampled from the community and 70 were sequentially sampled whilst they were queuing at the Queenstown (Frontier) Hospital for care. Households from the rural area were selected by visiting every fourth house on the route linking the houses in this area. At the hospital, selection started at the back of the queue and every sixth person was selected and interviewed.

Scores were calculated for knowledge and attitudes towards people who are HIV-positive and towards people who have AIDS. It was found that knowledge and attitude scores did not differ between the various age groups tested. It was furthermore found that an increased knowledge score improved attitudes towards people who are HIV-positive or have AIDS.

DECLARATION

I declare that *Stigmatization of and discrimination against people who are HIV positive or have AIDS – a female perspective in Zwartwater, Eastern Cape Province* is my work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Khangela Frida Malgas November 2011

K. F. Malgas

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CHAPTER 1: OVERVIEW OF THE STUDY

1.0 Introduction

This chapter introduces the orientation to the study in which the aim and objectives of the study, the research questions, ethical issues and the definitions of major key concepts of the study will be described.

1.1 Background of the study

UNAIDS (2010) reported South Africa as one of the countries most severely affected by the HIV/AIDS epidemic. This report revealed an estimate of 5.6 million South Africans who were living with HIV in 2009. The South African Country Progress Report on the Declaration of Commitment on HIV/AIDS (Shisana et al. 2009) says two of the leading ways that contribute to the high HIV prevalence in South Africa include heterosexual sex transmission and mother-to-child transmission. It further identifies the drivers of the epidemic as migration, low perceptions of risk as well as the multiple concurrent sexual relationships.

In 2009 the South African Department of Health conducted a study based on the sample of 32,861 South African pregnant women who had been to 1,447 antenatal clinics across all nine South African provinces. The results of the study revealed estimated percentages of HIV infected women by age as follows:

- Age group 15–19 years: 13.7%;
- Age group 20–24 years: 26.6%;
- Age group 25–29 years: 37.1%;
- Age group 30–34 years: 41.5%,

- Age group 35–39 years: 35.4%;
- Age group 40–44 years: 25.6%; and
- Age group 45–49 years 23.9% (South Africa HIV and AIDS Statistics, 2010[a]).

The South African National HIV Survey, 2008 has also conducted a study by age and gender. The results showed that the HIV prevalence is mostly higher in females than in males of the same age. As an example, the report shows an HIV estimated of 32.7% among females of 25–29 years and 15.7% among males of the same age. In its conclusion, the report shows a 13.6% HIV prevalence among females, which is higher than the 7.9% among males in total (South Africa HIV and AIDS Statistics, 2010[b]).

Furthermore, the South African HIV Survey, 2008 shows that the African population has been estimated as the population with the highest HIV prevalence with an estimate of 13.6 %, followed by the coloured population with an estimate of 1.7%, and a tie percentage of 0.3% between the white and Indian populations.

The World Health Organization (WHO) Bulletin, 2011, "*Exposing misclassified HIV/AIDS deaths in South Africa*" has in its research discovered that more than 90% of HIV/AIDS deaths in South Africa were misclassified from 1996 to 2006. Furthermore, researchers from the WHO found it difficult to trace the HIV/AIDS deaths by using the data from South Africa's Vital Registration System, as the information was based on incorrect or other causes of death. The report further states that 48 causes of death were examined, and the following 14 were identified

as "source" causes: tuberculosis; sexually transmitted diseases excluding HIV infection; intestinal infectious diseases; selected vaccine-preventable diseases; parasitic and vector-borne diseases; meningitis and encephalitis; respiratory infections; other infectious diseases; maternal conditions; nutritional deficiencies; endocrine, nutritional, blood, and immune disorders; noncommunicable respiratory diseases; other digestive diseases; and "garbage" codes (including ill-defined and unspecified causes of death that should not be underlying causes). The study attributed the reasons for the misclassification of HIV/AIDS deaths in South Africa to death certificate issuers' being unaware of the individual's HIV status, and the fear of stigma that prevents individuals from getting tested.

The HIV/AIDS epidemic has brought along stigmatization of, and discrimination against infected and affected individuals. Letamo (2003) says people living with HIV/AIDS can be completely affected by stigmatized behaviour, irrespective of how they have become infected. Busza (1999) explains stigmatization behaviours towards HIV infected individuals as being excluded, rejected, disliked, avoided, sanctioned and harassed. Echoing the above, a quote from the Regional Consultation on Stigma and HIV/AIDS in East and Southern Africa says (2001:122): *"HIV/AIDS-related stigma is a real or perceived negative response to a person or persons by individuals, communities or society. It is characterized by rejection, denial, discrediting, disregarding, underrating, and social distance. It frequently leads to discrimination, and violation of human rights."* Letamo (2003) explains that these stigmatization behaviours may be caused by fear, which in turn

is caused by the lack of knowledge on how HIV/AIDS can or cannot be transmitted.

Morrison and Cuadra (2004) identified three main types of stigma, namely 'pre-existing stigma', 'HIV-related stigma' and 'enacted stigma'. These authors describe pre-existing stigma as a negative reaction to homosexuality, promiscuity and sometimes poverty. From a survey conducted by 373 health professionals in Mexico, results showed that almost a quarter of those professionals believed that homosexuality was the cause of HIV/AIDS in the country. It is said that more than 25% of Mexicans said they would never share a house with a homosexual; 13% of them said they would not share a house with someone living with HIV/AIDS, and almost three quarters of them felt that blame should be attributed to the people living with HIV for their status.

Furthermore, Morrison and Cuadra say HIV related stigma derives from different angles, like poor knowledge of HIV, an exaggerated risk perception and its close association with death. A survey was conducted amongst a quarter of health professionals in Mexico. The results of the survey showed that these health professionals believed that HIV and AIDS were one and the same, while almost a fifth of them did not know that HIV could be transmitted to a baby through breastfeeding.

The last identified type of stigma which is known as enacted stigma, is demonstrated in three main ways, namely *identification of infected persons*;

isolation from others and *imposing restrictions*. Morrison and Cuadra describe the latter type as the actual felt stigma by the HIV-infected person (Morrison and Cuadra, 2004).

1.2 The aim of the study

The main aim of this study is to investigate the perceived stigmatization of and discrimination towards people who are HIV positive or towards people who are living with AIDS. Furthermore, the influence of age on these perceptions will also be investigated. This research project reports only on the views of females living in a rural community in the Eastern Cape.

1.3 Objectives of the study

To collect and analyze the information provided by females from a rural community with regard to their perceptions and views on the stigmatization of and discrimination towards people who are HIV positive or have AIDS.

1.4 Research questions

This research project aims to answer the following research questions:

- What is the perceived HIV/AIDS knowledge of females living in the Zwartwater area? Does this perceived knowledge differ by age group?
- What is the attitude towards HIV of females living in the Zwartwater area? Do these attitudes differ among the various age groups?
- What is the attitude towards AIDS of females living in the Zwartwater area? Do these attitudes differ among the various age groups?
- What is the perceived HIV/AIDS infection rate in the area?

- Does increased knowledge reduce negative attitudes towards people who are infected by HIV or living with AIDS? Does age influence these perceptions?

1.5 Definitions of the key concepts

- According to American Psychological Association (2003), stigmatization is defined as the process of devaluation with a particular culture or setting where certain attributes are seized upon and defined as discreditable or not worthy. Stigma is a mark of disgrace associated with a particular circumstance, quality or person, (Welman and Kruger, 2001).

- Discrimination as defined by the UNAIDS protocol for identification of discrimination against people living with HIV refers to any form of arbitrary distinction, exclusion or restriction affecting people because of their confirmed or suspected HIV-positive status. Welman and Kruger (2001) also defined discrimination as making an unjust distinction in the treatment of different categories of people, especially on the grounds of race, sex or age.

- Attitude is a key concept in social psychology. In academic psychology parlance, attitudes are positive views of an "attitude object": a person, behaviour or event. Research has shown that people can also be "ambivalent" toward a target, meaning that they simultaneously possess a positive and a negative attitude towards HIV/AIDS (American Psychological Association, 2003).

- The Human Immunodeficiency Virus (HIV) is a virus known to be the cause of AIDS; others call it the AIDS virus (American Psychological Association, 2003).

- Acquired Immune Diseases (AIDS) is said to be acquired because one is not born with this virus but instead one acquires it from someone else. It is said to be a syndrome because it is a combination of a number of signs and symptoms characterizing a certain disease. During the AIDS stage, the person suffers from more than one infection at the same time. The strongest of those infections causes the person's death (American Psychological Association, 2003).

- Fear is an unpleasant feeling of perceived risk or danger, real or not. Fear also can be described as a feeling of extreme dislike to some conditions/object, such as: fear of darkness, fear of ghosts, fear of HIV/AIDS, etc. It is one of the basic emotions (American Psychological Association, 2003).

- Care is the work of providing treatment for or attending to someone or something (American Psychological Association, 2003).

- Knowledge is the awareness and understanding of facts, truths or information gained in the form of experience or learning (a posteriori) or through introspection (a priori). It is also an appreciation of possession of

interconnected details which, in isolation, are of lesser value (American Psychological Association, 2003).

- PLWHAs stands for People living with HIV and AIDS.

- Zwartwater is the place where the data was collected (See map in Appendix C).

1.6 Ethical issues

The study was approved by the University of the Western Cape's Research Committee dealing with ethical approval. The researcher ensured that the privacy of the participants was respected and ensured confidentiality of personal information. No names were recorded on the questionnaires, which would ultimately ensure that it was impossible to identify individual respondents (For more information, see Chapter 3).

1.7 Organization of the report

The first chapter introduces the orientation to the study in which the aim and objectives of the study, the research questions, ethical issues and the definitions of major key concepts of the study were described.

Chapter 2 focuses on the review of the relevant literature. The literature review will draw upon issues on the stigmatization of and discrimination against people who are HIV positive or people who are living with AIDS.

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Chapter 3 explains the research methodology, namely the research questions, the study design and sampling, study population, data analysis, instruments, ethical issues, and the limitations of the study.

Chapter 4 presents the study analysis and results.

The final chapter discusses the results of the study and compares the findings with that described in the literature. The concluding remarks and recommendations will also be made in the final chapter.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter focuses on the review of the relevant literature. The literature review will draw upon issues of stigmatization of and discrimination against people who are HIV positive or people who are living with AIDS.

Various sources, such as the Central Intelligence Agency (CIA World Factbook 12 July 2011) and UNAIDS (2010) reveal that there are about 5.6 million South Africans living with HIV/AIDS. The highest rate of infection is estimated among the ages of 15 to 49. The UNAIDS report gives estimates of South Africans who were found living with HIV/AIDS in 2009 in the following manner: adults aged 15 and older – 5 300 000; women aged 15 and older – 3 300 000; and children aged 0–14 years – 330 000. The UNAIDS (2010) report further estimated 310 000 AIDS related deaths and estimated 1 900 000 of orphans (aged between 0 and 17 years) as a result of HIV/AIDS related illnesses in 2009.

In the South African Country Progress Report (2010) on the Declaration of Commitment on HIV/AIDS, it is stated that there is a significant difference in HIV antenatal prevalence across the provinces. In this report, KwaZulu-Natal has been rated as the province with the highest HIV/AIDS prevalence rate of 38.7%, and the Western Cape province with the lowest rate of 16.1%. The HIV/AIDS prevalence rates of the other provinces fall in-between the two provinces mentioned above, in the following order: Mpumalanga – 35.5%, Free State – 32.9%, North West –31%, Gauteng – 29.9%, Eastern Cape – 27%, Limpopo

20.7%, and Northern Cape – 16.2% (source: Antenatal HIV sero-prevalence survey, 2008).

According to the *National Department of Health, South Africa, National HIV and syphilis prevalence survey source* which was published in the Journal Watch HIV/AIDS Clinical Care of 9 July 2007, a decline in the HIV prevalence has been noted in South Africa. The report states that a slight drop from 30.2% in 2005 to 29.1% in 2006 has been recorded among young adults and adolescents.

The Human Sciences Research Council (HSRC) has issued its Third National HIV Survey Report in a media report of 2009 which stated that HIV prevalence has declined from 5.6% in 2002 to 2.5% in 2008 among children aged 2–14. The researchers have also noticed a decline in new infections among teenagers 15–19 years of age in the same year.

Furthermore, in a report published in the *Sunday Times* of 20 June 2010 by Claire Keeton, South Africa saw a decline in new HIV infections by 35% between 2002 and 2008. These results were received through a survey that was conducted in 2002, 2005 and 2008. According to the report, the decline of HIV/AIDS prevalence can be attributed to a behaviour change among South Africans. This behaviour change includes the promotion of the use of condoms, HIV testing and treatment.

Keeton also quotes Dr Sue Goldstein from Soul City who alluded to the 2008 survey results. According to Keeton, the doctor attributes the decline of HIV infections among young people to all education and communication programmes conveyed through TV programmes such as 'Soul Buddy's Club', 'Love Life' as well as 'Soul City'. In conclusion of the report by Dr Goldstein, Keeton says these programmes managed to promote the use of condoms and engagement in safer sex activities by the youth.

Arendse (2002) speaks of AIDS in Africa as a misfortune that does not have an end. She further refers to its disastrous consequences that destroy families, leaving millions of children orphaned. AIDS kills many in privileged and underprivileged communities and destroys the economies of the already struggling countries. Arendse believes that it is important to understand the definition and the origin of AIDS and how it actually affects the human body.

2.1 The definition of AIDS

The acronym AIDS stands for Acquired Immune Deficiency Syndrome. According to Arendse (2002), the definition of AIDS indicates that this disease is acquired and is not an inherited disease. Arendse further says that this epidemic is caused by a virus known as the human immunodeficiency virus which penetrates the human body from outside. Furthermore, 'immunity' means that the body has a natural inherent ability to protect itself from infections and diseases, and 'deficiency' means that this ability has been weakened and therefore the body can no longer defend itself from the opportunistic infections, which can be described as the 'syndrome'.

2.2 Definition of the HI virus

HIV is the acronym for Human Immunodeficiency Virus. This virus can be transmitted in various ways, i.e. through blood, semen, vaginal fluid, breast milk in the case of a breastfeeding mother, and saliva (Khomanani, 2004:5). Afghani (2011) explains that the human immune system comprises different kinds of body cells that work together as a team against infections. Among these cells there are cells known as CD4 cells, which are compared to factories that produce all the necessary preventative tools in the human blood to fight against all germs and infections. Afghani explains that once HIV penetrates the body, it uses these CD4 cells to make more copies of the virus until there are more of itself, subsequently rendering the CD4 unable to protect the body from germs and infections.

2.3 Stigma and discrimination

UNAIDS (2003) describes *stigma* as a process of devaluation of people either living with or associated with HIV and AIDS, and Goffman (1963) describes *stigma* as an attribute that one person assigns to another that deeply discredits the other person's social identity. Goffman stresses that in cases where stigmatized people are surrounded by other, the results are often felt by everyone. He further argues that *stigma* is a phenomenon that is found in the attitude held by people about others. He further explains that people that tend to stigmatize other people do so in various ways that include describing specific qualities about the person being stigmatized. For example, there are names given by stigmatizing people to the HIV infected people such as '*lotto winners*' (Uys, 2005) or a description that refers to the HIV infected person as '*the one with 3 alphabets*' (Roodt, 2004).

UNAIDS (2005) explains that the process of stigmatization can go as far as causing people living with HIV to develop something called 'self- or internalized stigmatization', which affects the person's sense of pride or worth. This process causes people living with HIV to develop feelings of shame and self-blame. Furthermore, the isolation of people living with HIV/AIDS from their societies can lead them suffer from depression, withdrawal and sometimes suicidal feelings. The report by USAIDS (2006) says that the process of stigmatization has prevented open discussions about the causes and prevention of HIV/AIDS, as well as the willingness of people to open up about their status or even to secure advice, care and support from available resources.

Researchers such as Ogden and Nyblade (2005) say that stigmatizations and discriminations associated with HIV/AIDS are caused by the dread of getting infected, which escalates the 'what if scenarios', insufficient knowledge about how one gets infected by HIV/AIDS, and the fatal nature of HIV/AIDS.

2.4 HIV/AIDS related stigmatization and discrimination

According to UNAIDS (2005), AIDS related discrimination may manifest itself in different levels. These levels of discrimination against people living with HIV/AIDS vary from *family settings* to *community settings*. The report describes this kind of discrimination as an 'enacted stigma', which often means being isolated or denied taking part in community or organizational activities as a result of being HIV positive. For example, in certain areas, married women are forced to go back to her birth family once they are found to be HIV positive or once their

husbands die of AIDS. UNAIDS (2005) adds to the latter by saying that these acts are often accompanied by verbal harassment, physical violence, gossip, etc.

The next level of discrimination described in the UNAIDS (2005) report happens in *institutional settings.* For example, in the workplace someone can be denied an opportunity to work on the basis of the person's HIV-positive status. Schools can deny admission of children or dismiss a teacher due to the person's HIV status.

UNAIDS (2000) explains that stigmatization associated with HIV/AIDS was strengthened by various beliefs and stereotypes that were linked to HIV/AIDS. These beliefs saw HIV/AIDS as death, punishment, horror, war, etc. On top of those beliefs, people infected with the disease are perceived in some communities as carriers of shame on the family and community or carriers of danger in the workplace.

According to UNAIDS (2006), in order to curb the expansion of the HIV/AIDS pandemic and the stigmatization of people living with HIV/AIDS, change in attitude, social norms and behaviours will have to be applied. Furthermore, action against these stigmatizations will need to be carried out by the top leadership and at every level of society.

2.5 Women and AIDS

According to Bassett & Mhloyi (1991), De Bruyn (1992), and Ringheim (1993), sexually active women are at a disadvantage in some cases because of the misconception that women have no rights on deciding about sex. Therefore

women find it difficult to be vocal partners in their sexual relationships. Among these women there are those who do not even know that they have rights of their own when it comes to intimate decisions. This act of disregarding women's rights includes the rights of married women as well. Lukalo (1998) stated that, because of these unsafe sexual conducts, women are at risk of contracting sexually transmitted diseases, which can eventually expose women to the infection of HIV. Lukalo goes further and explains that women find themselves in these compromised positions because of their financial independence on their men. So in fear of being rejected by men, women find it difficult to convince their sexual partners to use condoms, lest they be rejected. Women are more susceptible to HIV by the nature of their physical bodies. The anatomy of the female body makes it easy for the HIV to penetrate when the vaginal tissue is damaged (Lukalo, 1998).

2.6 Gender violence, inequity and HIV in South Africa

According to Pronyk et al. (2006), there are huge public-health challenges in Southern Africa that result because of intimate violence. Pronyk writes that almost 30% of women in South Africa alone, who had visited the public antenatal clinics, were diagnosed with HIV. He further argues that the reports of intimate violence submitted by a number of South African women give an indication that these violent acts are a risk factor for HIV infection. Pronyk adds that intimate violence against women by their intimate partners stems from the women's lack of economic opportunities and the rooted gender inequality.

Another incident of violence against women living with HIV is of a worker from a Richmond farm in KwaZulu-Natal, South Africa, who was stoned to death by men from her community after she had revealed her HIV status in the media (South African Government Information: December, 1998). The Global Coalition on Women and AIDS (2011) on "Gender Equality" believes that there should be laws and policies to protect women and girls against all sorts of discriminatory acts, such as deprivation of women and girls from their rights and privileges, and unfair treatment towards their gender, that ranges from traditional beliefs to ill treatment within their marriages. This organization further argues that women should be sufficiently represented in the decision-making processes of these policies regarding their status.

In 2004, a UNAIDS assessment found that women's participation in the development and review of national AIDS frameworks was non-existent in more than 10% of 79 countries, and inadequate in more than 80% (UNAIDS,2004).

2.7 HIV and sex education

In the first edition of the South African HIV/AIDS Life Skills Education Material Directory of 1999, researchers have indicated that offering intervention and educational programmes in HIV/AIDS and sexual health to younger children before they can actually engage in sexual activities, would limit the spread of HIV/AIDS. The researchers pointed out that having defined patterns of behaviour to younger children before they become sexually active, would be easier to control than trying to change their behaviour after they have experienced sexual engagement. In response to the need for controlling the spread of HIV/AIDS, the

researchers concluded that an education programme should be designed and put in context of a broader life skills programme.

In a literature review done by Matsaba (2010) at the University of Johannesburg, Faculty of Health Sciences, she speaks of collaboration amongst role players of HIV/AIDS education in public primary schools. She quotes Varga and Shongwe (1999:31) who have suggested that different stakeholders such as the different departments, NGOs, media, communities, peers, churches, parents and families should work together more effectively in ensuring the sustainability of life skills programmes that are intended to curb the infection and spread of HIV/AIDS among young children and the youth.

The Eastern Cape province has implemented a community-based participatory learning approach known as 'Stepping Stones'. 'Stepping Stones' is a gender transformative approach that was established to improve sexual health and civil communication by creating stronger and more gender-balanced relationships among partners. The activities of this programme include sex education, awareness of risk and the consequences of taking risks (Jewkes et al. 2008).

Another educational programme known as 'One Man Can' was launched by the Sonke Gender Justice Network in an attempt to change men's violent attitude towards their intimate partners. This campaign provided a one-year training programme for men, which focused on gender awareness and communication strategies to change the social norms about men and their responsibilities. The pre-results of the campaign showed that 63% of men believed that it was right for

men to behave violently towards their women, whereas the post-results of the campaign revealed that 83% of them realized that violence towards women was not acceptable (Colvin, 2009).

According to Sikkema et al. (2009), a six-session HIV prevention workshop was conducted for 97 abused women in South Africa. This intervention was conducted to make women aware of abuse and its link to HIV, as well as condom use, negotiation skills, and economic independence, and included role-playing. The workshop highlighted the fact that the implementation of condom use in intimate relationships may expose women to greater risks of violence. The evaluation results after the sessions showed that the number of women practising unsafe sex had decreased from 20% to 14% (Sikkema et al. 2009).

This chapter presented the literature review. The methodology, analysis of the data and the discussion of results will follow in the next chapters.

CHAPTER 3: STUDY METHODOLOGY

3.0 Introduction

This chapter presents the research methodology used in this study. It focuses on the study design, sampling, study population, data analysis, instruments, ethical issues and limitations of the study.

This study focuses on the female perspective of stigmatization of and discrimination against people who are HIV positive and people living with AIDS. In order to measure the extent of such stigmatization and discrimination, knowledge and attitude towards HIV and AIDS are investigated. Furthermore, the influence of age on these perceptions will also be investigated and quantified. This research project is aimed at understanding some of the complexities of stigmatization and discrimination as perceived by females in a rural community in the Zwartwater area in the Eastern Cape.

3.1 Research questions

This research project aims to answer the following research questions:

- What is the perceived HIV/AIDS knowledge of females living in the Zwartwater area? Does the perceived knowledge differ by age group?
- What is the attitude towards HIV of females living in the Zwartwater area? Do these attitudes differ in the various age groups?
- What is the attitude towards AIDS of females living in the Zwartwater area? Do these attitudes differ in the various age groups?
- What are the perceived HIV/AIDS infection rates in the area?

- Does increased knowledge reduce negative attitudes towards people who are infected by HIV or living with AIDS? Are these attitudes different in the various age groups?

3.2 Study design and sampling

The case-series study design was used in this study. Dawson and Trapp (2004) defined the case-series study as a simple descriptive account of interesting characteristics observed in a group of patients/people.

Data collection was conducted for a period of three weeks from 3 to 21 July 2006 in the Eastern Cape province at the Zwartwater Village in Lady Frere, and at Queenstown (Frontier) Hospital. A sample of 170 (of the 900) females was interviewed, of which 100 were sequentially sampled from the community and 70 were sequentially sampled whilst they were queuing at the Queenstown (Frontier) Hospital for care. Households from the rural area were selected by visiting every fourth house on the route linking the houses in this area. At the hospital, selection started at the back of the queue and every sixth person was selected and interviewed.

3.3 Data collection procedure

The researcher trained two assistants to help during the interviews of the questionnaires (see Appendix A4). Before the data collection process was conducted, permission letters were submitted to Mr C.Z. Sgqolana (the head of the community in the Zwartwater area), Miss Tywabi (the Chief Executive Officer in the Queenstown (Frontier) Hospital), and Mr Z. Merile at the Department of

Health in Bisho (see Appendix A2). Participants were interviewed and the questionnaire was completed by the researcher and the two interviewers, using the face-to-face format (Pendukeni, 2004). The interviews were conducted in Xhosa or English depending on the preference of the participants. The researcher later translated the Xhosa responses into English. The participants were asked to sign the consent form (see Appendix A3) prior to being interviewed.

3.4 Instruments

3.4.1 Semi-structured interview

One questionnaire was used to collect qualitative and quantitative data. Vaughn explains that the idea of using both types of data was to extract information as well as to get in-depth understanding of perceptions, beliefs, attitudes and experiences on the topic received from various points of views within a very short space of time (Vaughn et al, 1996). Patton (1987) explains that qualitative methods are mainly used to support findings which are obtained from open-ended questions, whilst quantitative methods are easily used for analysis which is based on scales that are composed of standardized questionnaire items (Patton, 1987). Patton also says that this was done by allowing the participants an opportunity to share and discuss their own experiences, opinions and perceptions of stigmatization of and discrimination against people who are HIV positive or have AIDS. Robson (1993) states that the qualitative format to interview questions works best for participants as it allows them to give detailed explanations and responses. The responses from the qualitative questions from the interviews were post-coded by the researcher for analysis purposes.

As Neuman (2000) said, *"Quantitative researchers are more concerned about issues of design, measurement, and sampling because their deductive approach emphasizes detailed planning prior to data collection and analysis. Whereas qualitative researchers are more concerned about issues of the richness, texture, and feeling of raw data because their inductive approach emphasizes developing insights and generalizations out of the data collected"* (Neuman, W.L., 2000: p.121).

According to Burnard (1991), qualitative analysis has the purpose of producing a systematic recording of the themes and issues discussed in the interview, and linking the themes and interviews under an exhaustive category system. He further argues that this process helps to stop the data from changing from its original condition, but allowing categories to be produced. The latter allows the researcher to interpret the meaning of the data (Burnard, 1991).

3.5 Development of scores for measurement of knowledge and attitude

Variables pertaining to knowledge of and attitude towards discrimination and stigmatization of HIV and AIDS were used to create scores (see Tables 3.1 to 3.3). A correct response was given one point, whereas an incorrect response earned zero. For example, all correct responses to knowledge questions were added to form the knowledge score. If a participant scored 12, the participant had answered all knowledge questions correctly. In a similar way the attitude scores were derived using questions testing attitudes towards HIV or AIDS.

Table 3.1: Questions used for the assessment of knowledge

Question	Response	Mark allocation
Q_5a Can you easily identify a person who is HIV positive?	Yes No	0 1
Q_5b Can you easily identify a person who has AIDS?	Yes No	0 1
Q_6 Can a person get HIV through witchcraft?	Yes No	0 1
Q_7 Can condom use during sexual intercourse reduce contracting HIV?	Yes No	1 0
Q_8 Can a healthy-looking person be infected with HIV?	Yes No	1 0
Q_9 Can a person reduce the risk of HIV infection by having one partner?	Yes No	1 0
Q_10 Can HIV be transmitted from mother to child?	Yes No	1 0
Q_11 Can you get HIV by sharing a meal with a person who is HIV positive?	Yes No	0 1
Q_11_1 Can you get HIV by sharing a meal with a person who has AIDS?	Yes No	0 1
Q_12 Can mosquitoes transmit HIV?	Yes No	0 1
Q_17 Can you be infected with HIV by using the same toilet as a person with the HIV virus?	Yes No	0 1
Q_36 Can people who are infected with HIV give it to other people by shaking hands?	Yes No	0 1

Table 3.2: Questions used for the assessment of attitude towards HIV

Question	Response	Mark allocation
Q_13 Would you buy fresh produce or meat from a shopkeeper who is HIV positive?	Yes No	1 0
Q_14a Would you use the same eating utensils as a person who is HIV positive, e.g. spoon, cup, plate, fork and knife, etc.?	Yes No	1 0
Q_15a Would you share a drink out of the same glass with someone who is HIV positive?	Yes No	1 0
Q_16 Would you kiss someone on the cheek that has the Virus?	Yes No	1 0
Q_23 Would you eat food cooked by someone that you knew is infected by HIV?	Yes No	1 0
Q_34 If one of your colleagues/friends was infected with HIV, do you think she/he should be allowed to go on working?	Yes No	1 0
Q_35 If one of your relatives/friends was infected with HIV, do you hope to keep it secret from others?	Yes No	0 1

Table 3.3: Questions used for the assessment of attitude towards AIDS

Question	Response	Mark allocation
Q_13_1 Would you buy fresh produce or meat from a shopkeeper who has AIDS?	Yes No	1 0
Q_14b Would you use the same eating utensils as a person living with AIDS, e.g. spoon, cup, plate, fork and knife, etc.?	Yes No	1 0
Q_15b Would you share a drink out of the same glass with someone who has AIDS?	Yes No	1 0
Q_18 Should a family member sick with AIDS be allowed to cook for the family?	Yes No	1 0

Tables 3.1 to 3.3 show the questions used to create the following scores: knowledge (ranging from 0 to 12); attitude towards HIV (ranging from 0 to 7); and attitude towards AIDS (ranging from 0 to 4).). A Cronbach alpha coefficient was calculated to test intercorrelation or the internal consistency between the questions that formed each score. The knowledge score had the lowest

Chronbach alpha coefficient of 0.4, whereas the attitude towards HIV and attitude towards AIDS scores respectively had higher Cronbach alpha's of 0.73 and 0.74. The two latter scores show acceptable internal consistencies within the created scores, whereas the knowledge score showed that the internal consistency was less acceptable and would in future need further developement.

3.6 Data analysis

Microsoft Excel was used for data capturing, and SAS software (Cary, 2011) was used for the analysis of the quantitative data. Descriptive statistics, frequency tables and cross-tabulations were used to describe the data. Pauw (1995) states that there are many method used to analyze qualitative data. He explains that the researcher had to go through various stages of analysis in order for the report to be introduced. Pendukeni (2004) added to this by saying that the data had to be coded first in order to form different categories and subcategories of the main themes from the raw data. Kruskal-Wallis tests will be used to analyse quantitative data for age group comparisons.

3.7 Ethical issues

The study was approved by the University of the Western Cape's Research Committee dealing with ethical approval. The researcher ensured that the privacy of the participants was respected and ensured confidentiality of personal information. No names were recorded on the questionnaires, which subsequently ensure that it was impossible to identify individual respondents. Participation was on a voluntary basis and there was no potential risk for participants as a result of participating in this study.

The information collected in this study will be used for purposes of this study only. All data will be kept secure by the researcher. Questionnaires will be destroyed on completion of the study. Permission to conduct the study was requested from the head of the community, from the Department of Health and the Queenstown (Frontier) Hospital (see Appendix A2) and also from the individual participant before completion of the questionnaire (see Appendix A3).

3.8 Limitations of the study

The study focused on female perceptions only. All participants were sampled from Zwartwater, which is a rural area in the Eastern Cape. The study did not measure the progression of stigma and discrimination where one would be able to see whether or not the perceptions of the participants had changed over time.

This chapter presented the methodology. The instruments of measurement are both qualitative and quantitative. The analysis of the data will follow in Chapter 4.

CHAPTER 4: RESULTS AND INTERPRETATION

4.0 Introduction

This chapter focuses on the demographic findings of the research questions, results of individual questions for both quantitative and qualitative research, results of the scores and the correlation between the scores. The findings are explained by means of frequency tables, graphs and appropriate inferential statistical techniques.

4.1 Background information of respondents

The study consisted of a sample 170 females. The demographic data collected included: age, marital status, employment, monthly income, monthly expenditure on food, and source of income. The ages were grouped into four groups to make the analysis more meaningful. Marital status options included: married, not married, living together, divorced, widowed, and 'other', which included being separated. The monthly salary income ranged from R0,00 to more than R3,500.

Of the 170 respondents that were interviewed in the survey, the majority was young people below age 25. Of the respondents, 60% were not married and only 29% were married. Close to a third (31%) of the respondents worked as domestic workers, 25% were unemployed and 21% were students. Only 2% reported that they were teaching and 1% indicated that they were health workers. The remainder of the participants were either on pension (4%) or employed by a variety of companies (16%). The majority (79%) of respondents earned between R0,00 and R500,00 per month, followed by 13% who monthly earned between

R501 and R1,000. About 6% of the respondents earned between R1,001 and R3,500 per month, with 2% earning more than R3,500 per month (see Table 4.1 and Appendix B1).

Table 4.1: Descriptive statistics for female respondents in the Zwartwater area

Variables		Frequency	Percent
Age group(in years)	15<25	65	38.24
	25<35	34	20.00
	35<45	36	21.18
	45+	35	20.59
	Total	170	100
Marital status	Married	50	29.41
	Not married	102	60.00
	Living together	2	1.18
	Divorced	3	1.76
	Widowed	12	7.06
	Other (separated)	1	0.59
	Total	170	100
Employment	Teacher	4	2.35
	Office worker	2	1.18
	Domestic worker	52	30.59
	Security personnel	2	1.18

	Health worker	2	1.18
	Unemployed	42	24.71
	Student	36	21.18
	Pensioner	7	4.12
	Other (e.g. Cashier)	23	13.53
	Total	170	100
Monthly income	0–500	134	78.82
	501–1,000	22	12.94
	1,001–1,500	6	3.53
	1,501–2,000	3	1.76
	2,001–2,500	0	0.00
	2,501–3,000	1	0.59
	3,001–3,500	0	0.00
	More than 3,500	4	2.35
	Total	170	100
Monthly expenditure	0–500	150	88.24
	501–1,000	19	11.18
	1,001–1,500	1	0.59
	Total	170	100
Source of income	Contribution from friends	4	2.35
	Family members	70	41.18
	Selling things	7	4.12
	Government grant	19	11.18

	From my wages	16	9.41
	Child support/grant	23	13.53
	Other (find my own way)	3	1.76
	Self-employed	2	1.18
	Selling and family	6	3.53
	Selling and friends	4	2.35
	Government grant and family	5	2.94
	Friends and family	4	2.35
	Child support/grant and family	7	4.12
	Total	170	100

Approximately 88% of the respondents spent between R0,00 and R500,00 on food per month; 11% spent between R501 and R1,000 and only 1% of the respondents spent more than R1,000. Forty-one percent the respondents had family members as their source of income, approximately 14% had child support/grants as their source of income, 11% had government grants as their source of income, approximately 9% had their wages as the source of income, and 25% had other ways of surviving (see Table 4.1).

The average number of children per female respondent was 2, with a minimum of 0 and a maximum of 9 children (see Table 4.2 and Appendix B5).

Table 4.2: Number of children per female respondent in the Zwartwater area

Variables	Mean	Std dev.	Minimum	Maximum
Number of Children per respondent	2.01	2.10	0.00	9.00

Table 4.3: Number of children per female respondent in the Zwartwater area by age group

Age group (years)	Frequency (n)	Mean	Std dev.	Minimum	Maximum
15<25	65	0.28	0.55	0.00	2.00
25<35	34	1.53	0.99	0.00	3.00
35<45	36	3.42	1.63	0.00	7.00
45 and above	35	4.23	2.14	1.00	9.00

Table 4.3 represents selected descriptive statistics of the number of children per respondent per age group. Sixty-five females aged from 15 to less than 25 years indicated that they had zero, one or two children. As expected, the average number of children increased with the age of the participants. Participants aged from 25 to less than 35 years reported having between zero and three children (mean = 1.53, standard deviation = 0.99). The age group 35 to less than 45 reported having between zero and seven children (mean = 3.42, standard deviation = 1.63). Participants aged 45 and older reported having between one and nine children (mean = 4.23, standard deviation = 2.14).

4.2 Findings of research questions

This section investigates the findings of the research questions. It assesses HIV/AIDS knowledge and attitude towards stigmatization of and discrimination against people living with HIV or AIDS.

4.2.1 Results reported for all respondents combined

Table 4.4 and Appendix B2 represent the percentage correct responses to individual questions used to create scores for knowledge and attitude towards stigmatization of and discrimination against HIV or AIDS sufferers. When looking at the questions, the majority (94%) of respondents understood that people infected with HIV could not infect other people by shaking hands. When asked "Can you easily identify a person who has AIDS?", 38% indicated that one could not identify a person who has AIDS. Approximately 85% of the respondents understood that using a condom during sexual intercourse could reduce contracting HIV, and approximately 87% of women agreed that HIV could be transmitted from mother to child. A worrying result was that two-thirds indicated that HIV could be transmitted by mosquitoes.

Seventy-nine percent of respondents understood that the risk of HIV infection could be reduced by having one partner. Approximately 88% indicated that one could not contract HIV through witchcraft. When asked "Can you get HIV by sharing a meal with a person who is HIV positive?" or "Can you get HIV by sharing a meal with a person who has AIDS?", 85% indicated that one could share

a meal with a person who was HIV positive and 82% agreed that one could share a meal with a person who had AIDS.

Most (82%) of the respondents correctly indicated that they could share cooking and eating utensils with HIV-infected people. When this question was repeated regarding people living with AIDS, the percentage was slightly lower (77%) (see Table 4.4). Approximately 72% of the respondents indicated that one could eat food cooked by someone who was infected by HIV. Sixty-two percent indicated that a family member could be allowed to cook although sick with AIDS (see Table 4.4).

Table 4.5 and Appendices B5 and B6 is a presentation of the scores of the respondents on HIV/AIDS knowledge, attitude towards stigmatization of and discrimination against people infected with HIV, and attitude towards stigmatization of and discrimination against people living with AIDS. Scores for knowledge and attitude were created by adding particular questionnaire items as indicated in Chapter 3 and mentioned in Table 4.4.

Table 4.4: Individual questions used to create scores for knowledge and attitude

Score variables		% correct
	Questions	
Knowledge	Q_5a Can you easily identify a person who is HIV positive?	75.29
	Q_5b Can you easily identify a person who has AIDS?	38.24
	Q_6 Can a person get HIV through witchcraft?	87.65
	Q_7 Can condom use during sexual intercourse reduce contracting HIV?	84.71
	Q_8 Can a healthy-looking person be infected with HIV?	65.29
	Q_9 Can a person reduce the risk of HIV infection by having one partner?	78.82
	Q_10 Can HIV be transmitted from mother to child?	87.65
	Q_11 Can you get HIV by sharing a meal with a person who is HIV positive?	85.29
	Q_11_1 Can you get HIV by sharing a meal with a person who has AIDS?	82.35
	Q_12 Can mosquitoes transmit HIV?	32.35
	Q_17 Can you be infected with HIV by using the same toilet as a person with the HIV virus?	62.94
	Q_36 Can people who are infected with HIV give it to other people by shaking hands?	94.12
Attitude towards HIV	Q_13 Would you buy fresh produce or meat from a shopkeeper who is HIV positive?	63.53
	Q_14a Would you use the same eating utensils as a person who is HIV positive, e.g. spoon, cup, plate, fork and knife etc.?	82.35
	Q_15a Would you share a drink out of the same glass with someone who is HIV positive?	65.88
	Q_16 Would you kiss someone on the cheek that has the HIV virus?	80.00
	Q_23 Would you eat food cooked by someone that you knew was infected by	71.76

	HIV?	
	Q_34 If one of your colleagues/friends was infected with HIV, do you think she/he should be allowed to go on working?	59.52
	Q_35 If one of your relatives/friends was infected with HIV, do you hope to keep it secret from others?	65.88
Attitude towards AIDS	Q_13_1 Would you buy fresh produce or meat from a shopkeeper who has AIDS?	60.00
	Q_14b Would you use the same eating utensils as a person living with AIDS, e.g. spoon, cup, plate, fork and knife etc.?	77.06
	Q_15b Would you share a drink out of the same glass with someone who has AIDS?	58.58
	Q_18 Should a family member sick with AIDS be allowed to cook for the family?	62.35

Table 4.5: Knowledge and attitude scores

Variable	Frequency (N)	Mean	Median	Std dev.	Minimum	Maximum
HIV/AIDS Knowledge	150	8.86	9.00	1.63	5.00	12.00
Attitude towards HIV	165	4.88	5.00	1.88	0.00	7.00
Attitude towards AIDS	167	2.60	3.00	1.43	0.00	4.00

There were 150 respondents who completed all the questions testing HIV/AIDS knowledge. The HIV/AIDS knowledge score seemed to be approximately normally distributed. The score distribution regarding attitude towards AIDS and attitude towards HIV was negatively skewed (see Figure 1).

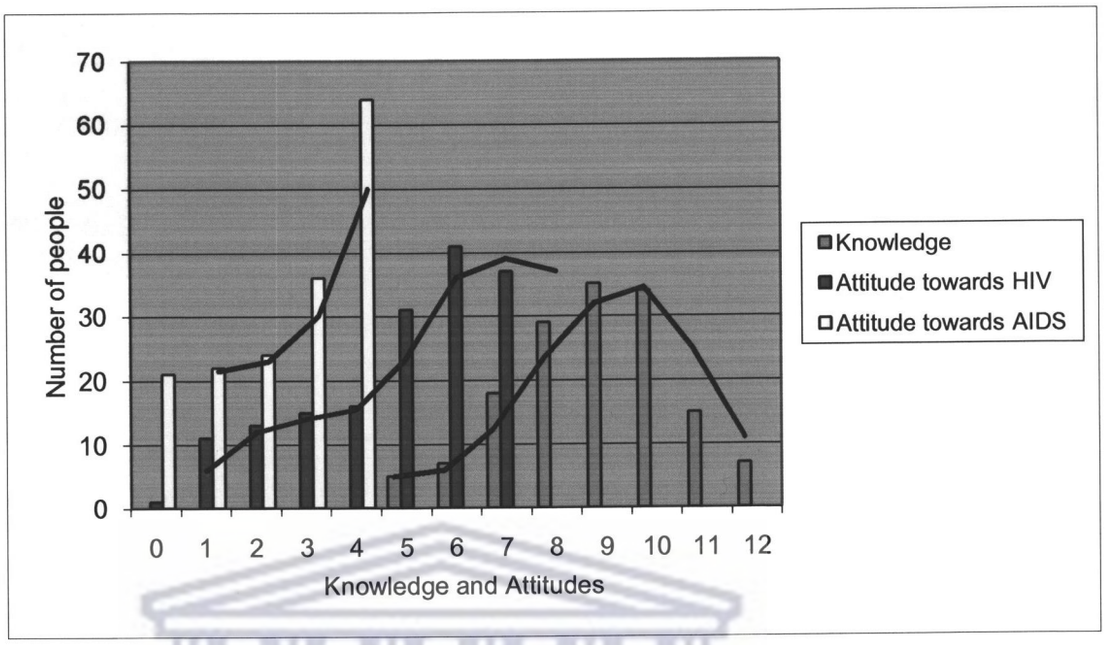


Figure 1: Scores of HIV/AIDS knowledge and attitude

Figure 1 shows that HIV/AIDS knowledge has 13 possible score values; attitude towards HIV has 8 possible score values; and attitude towards AIDS has 5 possible score values. Of the twelve questions that were used to create the knowledge score, only 5% (7 respondents) answered all the knowledge questions correctly. On average participants answered between 8 and 9 questions correctly. Three percent (5 respondents) only had 5 questions correct.

Seven questions were used to create the attitude towards HIV score. Only 22% (37 respondents) answered all attitude questions correctly. On average, participants answered between 4 and 5 questions correctly. One person had no questions correct.

Four questions were used to create the attitude towards AIDS score. Only 38% (64 respondents) answered all questions correctly. On average, participants answered between 2 and 3 questions correctly.

Table 4.6: Women's perceptions of HIV/AIDS infections in the Zwartwater area

Statement	Less than 50%	50% and above
What % of people in your community do you think have HIV/AIDS?	69.46	30.54
What % of women in your community do you think have HIV/AIDS?	70.66	29.34
What % of men in your community do you think have HIV/AIDS?	70.06	29.94
What % of children in your community do you think have HIV/AIDS?	77.84	22.16

Table 4.6 and Appendix B3 present the combined perceptions of the women about HIV/AIDS infection within their community. The perceptions of the women were grouped according two groups: less than 50% and 50% and above. Sixty-nine percent of the women believed that less than 50% of the people in their community were HIV positive or had AIDS. Approximately 71% of the women believed that less than 50% of the women or men in the community were HIV positive or had AIDS. Twenty-two percent of respondents indicated that they thought that more than 50% of the community's children were HIV positive or had AIDS.

Table 4.7: HIV or AIDS related perceptions

Statement	Strongly agree %	Agree %	Disagree %	Strongly disagree %
It is up to a woman to speak up if she wants a man to use a condom	62.05	19.28	15.66	3.01
A man needs other women, even if he has a steady partner	62.35	27.06	8.82	1.76
I would feel uncomfortable hugging someone who has HIV/AIDS	6.47	12.35	48.24	32.94
People who contract HIV/AIDS get pretty much what they deserve	2.35	8.24	54.12	35.29
If my housemate was HIV positive, I would ask that person to move out		1.78	56.21	42.01
If I talk about AIDS with a sexual partner they might feel offended	42.07	26.22	26.22	5.49
Part of me understands the AIDS risk, but another part of me can't accept that possibility	44.38	33.73	16.57	5.33
The possibility of my catching AIDS is something I've never really thought about	49.11	31.36	14.79	4.73

Table 4.7 and Appendix B4 present the responses regarding HIV/AIDS related perceptions of the women interviewed. The women had to rank the items from 'strongly agree' to 'strongly disagree'. When asked to rank their opinions on whether or not women should speak up if they wanted their men to use a condom, the majority of the women (62%) strongly supported this opinion, 19% agreed that this should be so, 16% disagreed and 3% strongly disagreed.

Approximately 62% of the women strongly agreed that a man needed other women even though in a steady relationship, 27% agreed that this was true and

approximately 11% of the women disagreed (disagree grouped together with strongly disagree, see Table 4.7).

When asked to comment on how the women would feel when hugging someone who had HIV/AIDS, about 19% of the respondents agreed that they would be uncomfortable (strongly agree grouped with agree), and more than 80% of the women did not think that they would be uncomfortable with hugging someone with HIV/AIDS (see Table 4.7).

A minority (11%) of the respondents indicated that people with HIV/AIDS deserved to have contracted the disease and approximately 89% felt otherwise (54% disagreed and 35% strongly disagreed). Ninety-eight percent of the respondents selected the 'disagree' and 'strongly disagree' options when asked on how they would react on finding out that their housemate was HIV positive, and only 2% indicated they would tell their housemates to move out. About 68% of the respondents felt that their sexual partners would be uncomfortable to talk about or discuss AIDS, while 32% indicated that their partners would not be offended. There was a decreasing trend from 'strongly agree' to 'strongly disagree' when the respondents were asked whether they understood the AIDS risk (44% strongly agreed, 34% agreed, 17% disagreed, 5% strongly disagreed). Forty-nine percent of the women strongly agreed that they never thought that there was a possibility for them contracting AIDS, 31% agreed that this was so, 20% felt otherwise (see Table 4.7).

4.2.2 Results reported for respondents by age group

This section is a discussion of the comparison of the knowledge and attitude scores by age group.

Table 4.8: HIV/AIDS knowledge scores by age group

Age group (years)	Frequency (n)	Mean	Median	Mode	Std dev.	Range	Interquartile range
15<25	58	8.91	9	8	1.71	7	2
25<35	28	8.89	9	9	1.29	5	2
35<45	33	8.82	9	8	1.79	7	2
45 and above	31	8.77	9	10	1.67	7	2

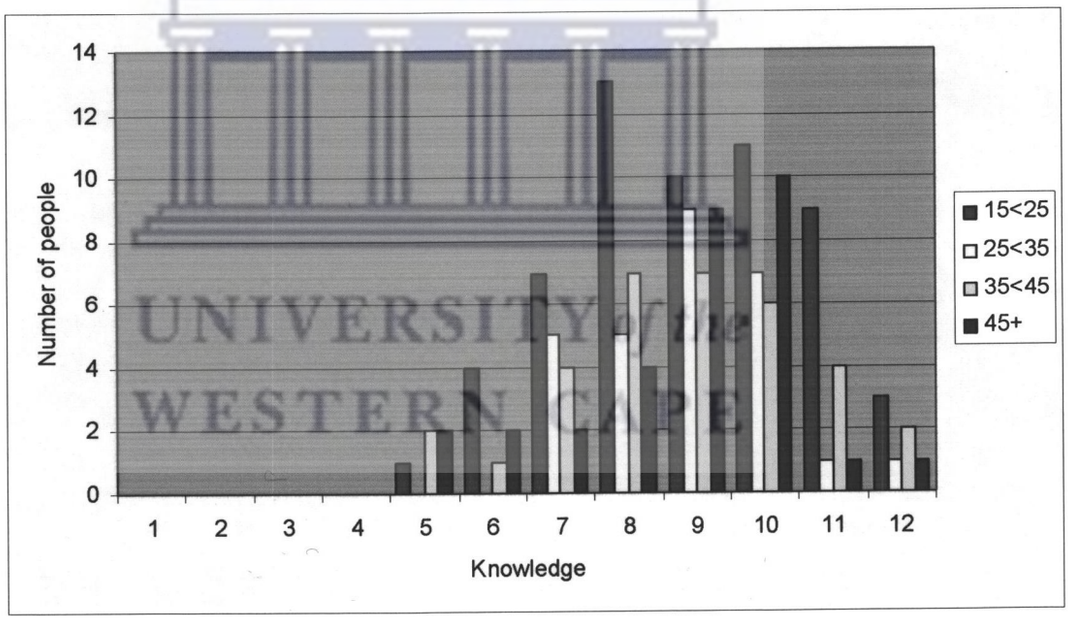


Figure 2: Scores of HIV/AIDS knowledge by age group

Twelve questions were used to create the knowledge score. In the 15 to less than 25 age group, only 5%(3 respondents) answered all the knowledge questions correctly, and in the 25 to less than 35 age group, only 4% (1 respondent) answered all the knowledge questions correctly. In the 35 to less than 45 age group, only 6% (2 respondents) answered all the questions correctly, and in the 45

and above age group, only 3% (1 respondent) answered all the knowledge questions correctly. Two percent (1 respondent) in the age group 15 to less than 25 had only 5 questions correct. Six percent (2 respondents) in the 35 to less than 45 age group and 7% (2 respondents) in the 45 and above age group had only 5 questions correct (see Table 4.8 and Figure 2 and Appendix B7).

Table 4.9: Scores of attitude towards people with HIV by age group

Age group (years)	Frequency (n)	Mean	Median	Mode	Std dev.	Range	Interquartile range
15<25	61	5.28	6.00	6.00	1.75	6.00	2.00
25<35	34	4.97	5.50	6.00	1.90	7.00	2.00
35<45	36	4.75	5.00	6.00	1.89	6.00	3.00
45 and above	34	4.24	5.00	5.00	1.97	6.00	4.00

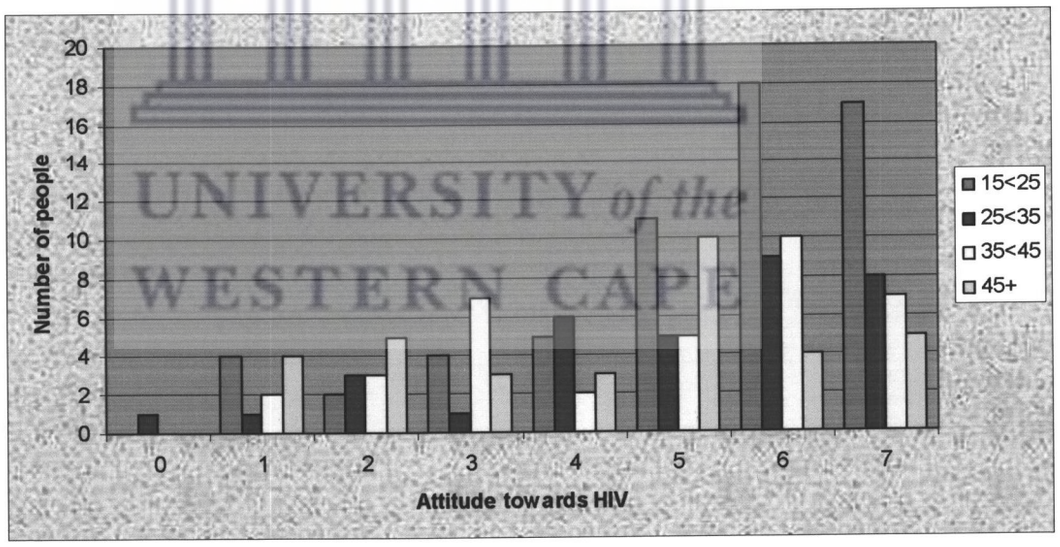


Figure 3: Scores of attitude towards HIV by age group

Seven questions were used to create the attitude towards HIV score. In the 15 to less than 25 age group, only 28% (17 respondents) answered all the attitude towards HIV questions correctly, while in the 25 to less than 35 age group, only 24% (8 respondents) answered all the attitude towards HIV questions correctly. In

the 35 to less than 45 age group, only 19% (7 respondents) answered all the questions correctly, and in the 45 and above age group only 15% (5 respondents) answered all the attitude towards HIV questions correctly. Seven percent (4 respondents) only had 1 question correct in the 15 to less than 25 year age group. Three percent (1 respondent) in the age group 25 to less than 35, 6% (2 respondents) in the 35 to less than 45 age group and 12% (4 respondents) in the 45 and above age group only had 1 question correct (see Table 4.9 and Figure 3 and Appendix B7).

Table 4.10: Scores of attitude towards people with AIDS by age group

Age group (years)	Frequency (n)	Mean	Median	Mode	Std dev.	Range	Interquartile Range
15<25	65	2.74	3.00	4.00	1.31	4.00	2.00
25<35	33	2.67	3.00	4.00	1.49	4.00	2.00
35<45	35	2.57	3.00	4.00	1.54	4.00	3.00
45 and above	34	2.29	3.00	3.00	1.47	4.00	3.00

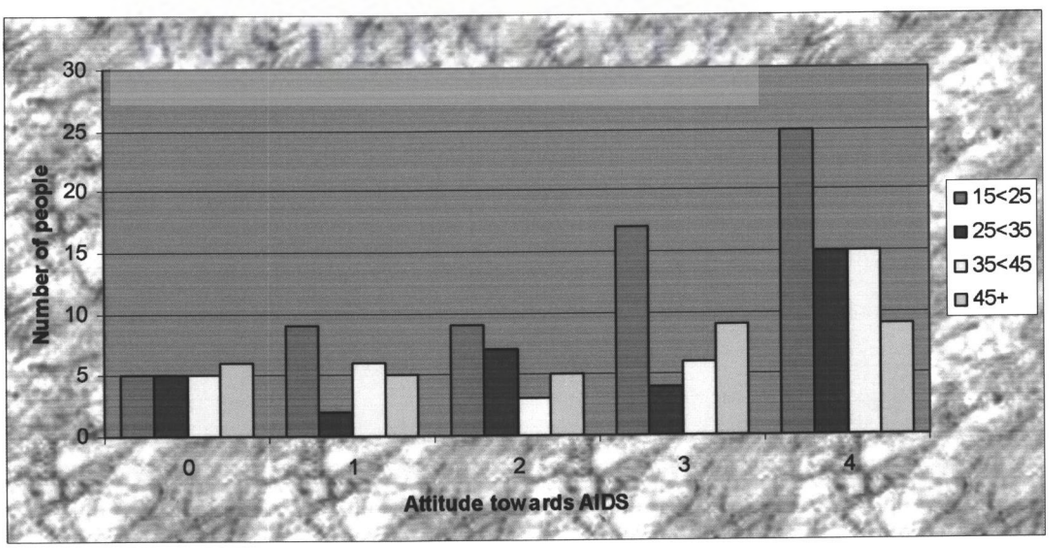


Figure 4: Scores of attitude towards AIDS by age group

Four questions were used to create the attitude towards AIDS score. In the 15 to less than 25 age group, only 39% (25 respondents) answered all the attitude towards AIDS questions correctly, while in the 25 to less than 35 age group and in the 35 to less than 45 age group, only 15 respondents answered all the questions correctly. In the 45 and above age group, only 27% (9 respondents) answered all the attitude towards AIDS questions correctly. Five respondents had no questions correct in the 15 to less than 25 age group, in the 25 to less than 35 age group and in the 35 to less than 45 age group. In the 45 and above age group there were 18% (6 respondents) who had no correct answers (see Table 4.10 and Figure 4).

4.2.3 Correlation analysis between the knowledge and attitude scores

Table 4.11 shows the descriptive statistics of all variables included in the correlation calculations.

Table 4.11: Simple statistics of Spearman correlations for all model variables

Variable	N	Mean	Std Dev.	Median	Minimum	Maximum
Knowledge	150	8.86	1.63	9.00	5.00	12.00
Attitude towards HIV	165	4.88	1.88	5.00	0.00	7.00
Attitude towards AIDS	167	2.60	1.43	3.00	0.00	4.00

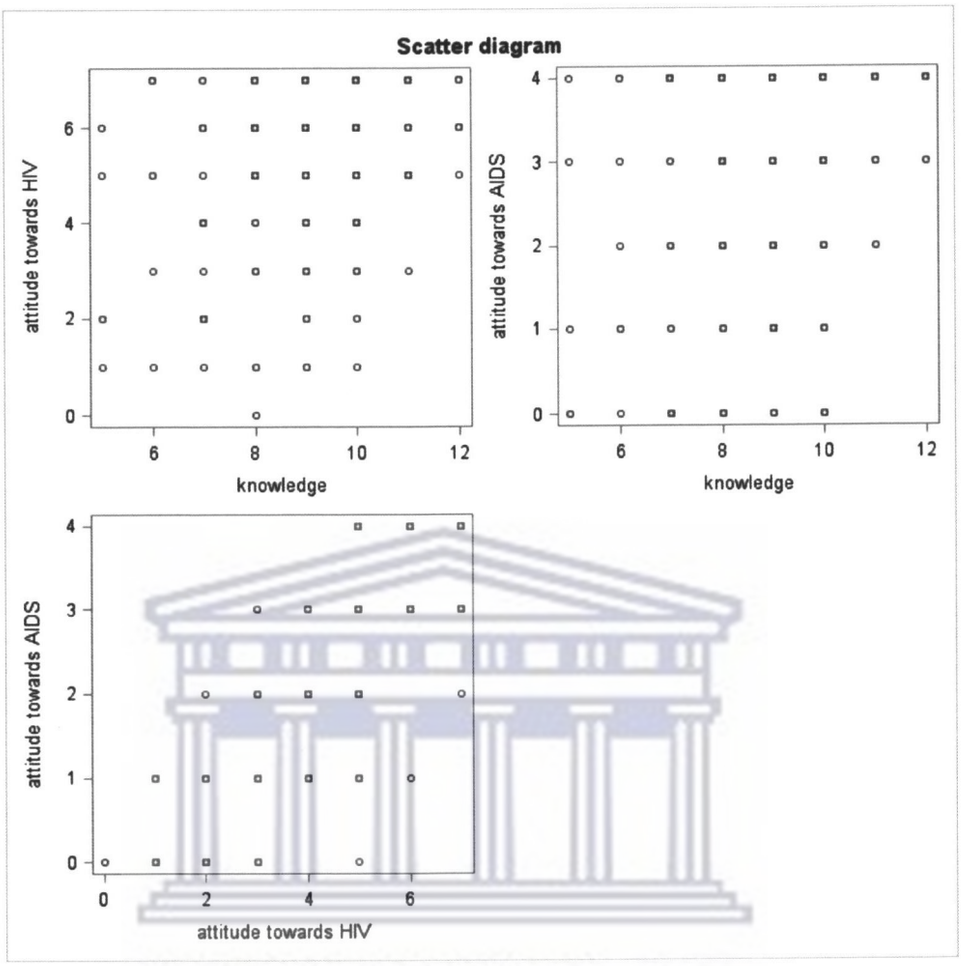


Figure 5: Scatter diagrams of knowledge and attitude scores

Table 4.12: Spearman correlations for all scores

Correlation value P value n	HIV/AIDS knowledge	Attitude towards HIV	Attitude towards AIDS
HIV/AIDS knowledge	1.00000	0.26841	0.26954
		0.001	0.0009
	150	147	149
Attitude towards HIV		1.00000	0.79913
			<0.0001
		165	163
Attitude towards AIDS			1.00000
			167

The Spearman correlation coefficients of the HIV/AIDS knowledge and attitude towards HIV, and knowledge and attitude towards AIDS show a weak positive relationship with the correlation coefficient values of 0.26841 and 0.26954. Although the relationships are weak, the correlations are respectively significant at 0.0010 and 0.0009. Attitude towards HIV and attitude towards AIDS show a strong positive relationship with the correlation coefficient value of 0.79913. This correlation is highly significant ($p<0.0001$) (see Table 4.12 and Figure 5 and Appendix B8).

4.2.4 Correlation analysis for the separate age groups

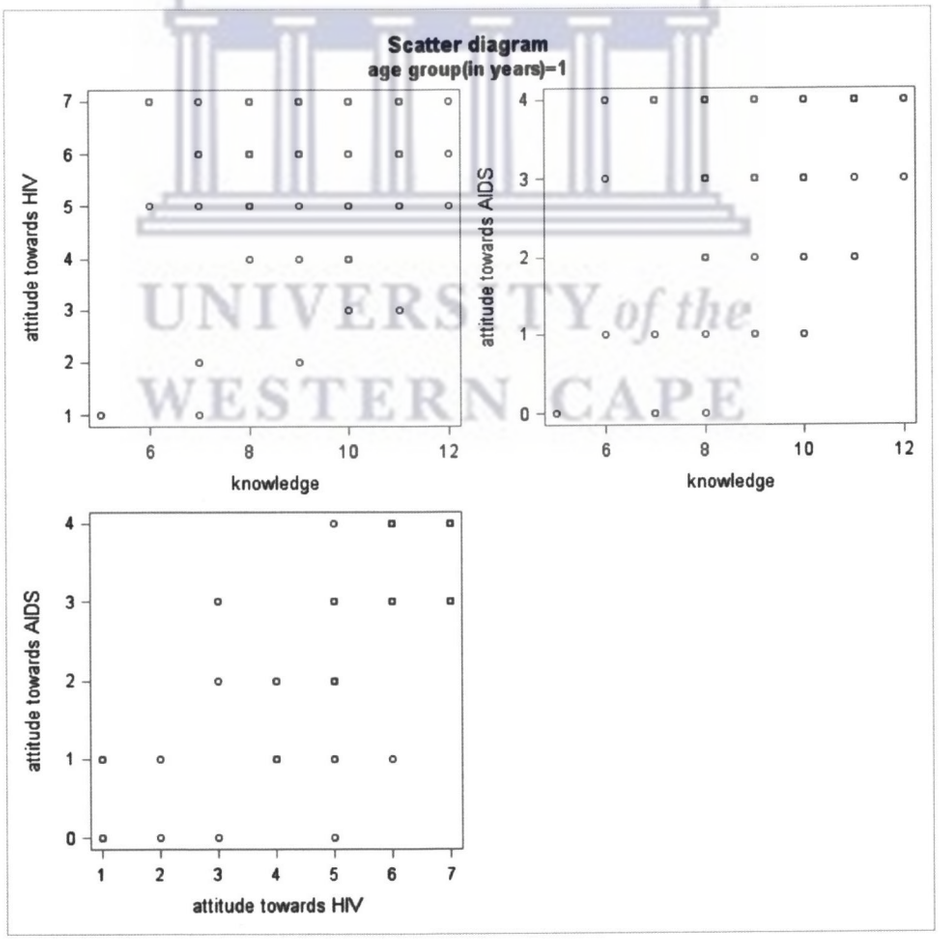


Figure 6: Scatter diagrams of knowledge and attitude scores for ages 15 to less than 25 years

Table 4.13: Spearman correlations for all scores for ages 15 to less than 25 years

Correlation value P value n	HIV/AIDS knowledge	Attitude towards HIV	Attitude towards AIDS
HIV/AIDS knowledge	1.00000	0.03204	0.19969
		0.81640	0.13290
	58	55	58
Attitude towards HIV		1.00000	0.73083
			<0.0001
		61	61
Attitude towards AIDS			1.00000
			65

In the 15 to less than 25 age group, the attitude towards HIV and attitude towards AIDS show a strong positive correlation of 0.73083. This correlation is highly significant ($p<0.0001$). HIV/AIDS knowledge is not significantly correlated with attitude towards HIV or attitude towards AIDS (see Table 4.13 and Figure 6 and Appendix B8).

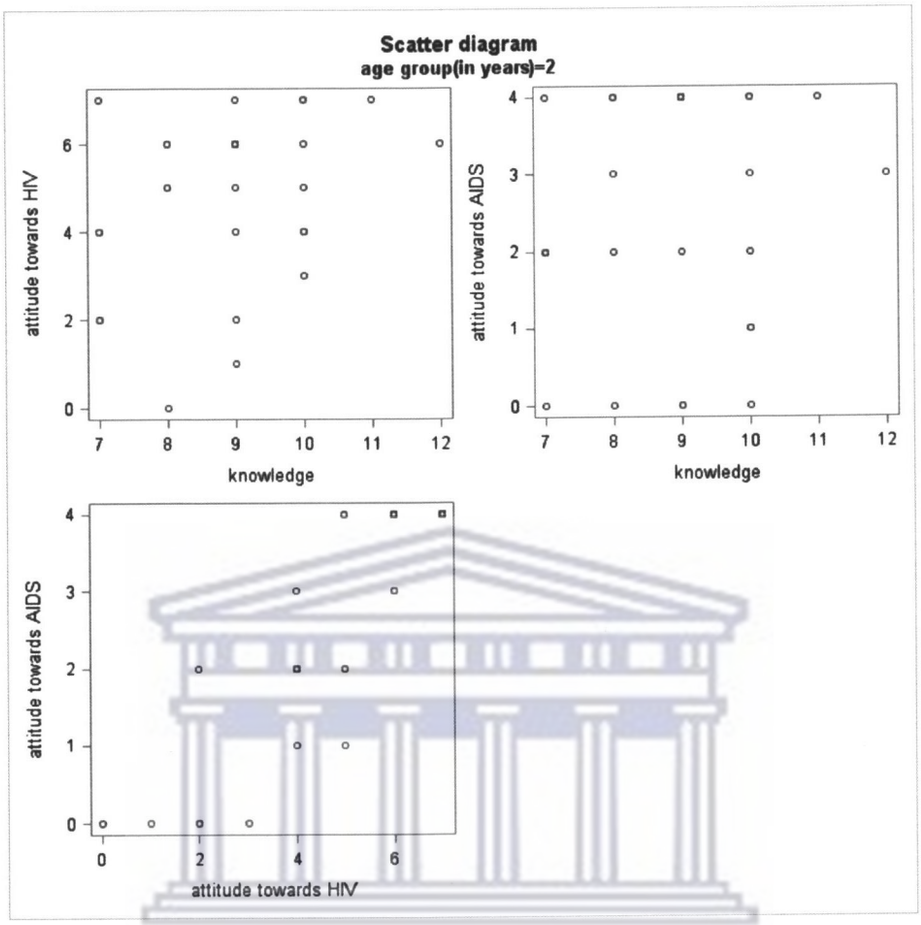


Figure 7: Scatter diagrams of knowledge and attitude scores for ages 25 to less than 35 years

Table 4.14: Spearman correlations for all scores for ages 25 to less than 35 years

Correlation value P value n	HIV/AIDS knowledge	Attitude towards HIV	Attitude towards AIDS
HIV/AIDS knowledge	1.00000	0.31495	0.09578
		0.1026	0.6278
	28	28	28
Attitude towards HIV		1.00000	0.86042
			<0.0001
		34	33
Attitude towards AIDS			1.00000
			33

In the 25 to less than 35 age group, attitude towards HIV and attitude towards AIDS show a strong positive correlation of 0.86042. This correlation is highly significant ($p<0.0001$) (see Table 4.14 and Figure 7 and Appendix B8).

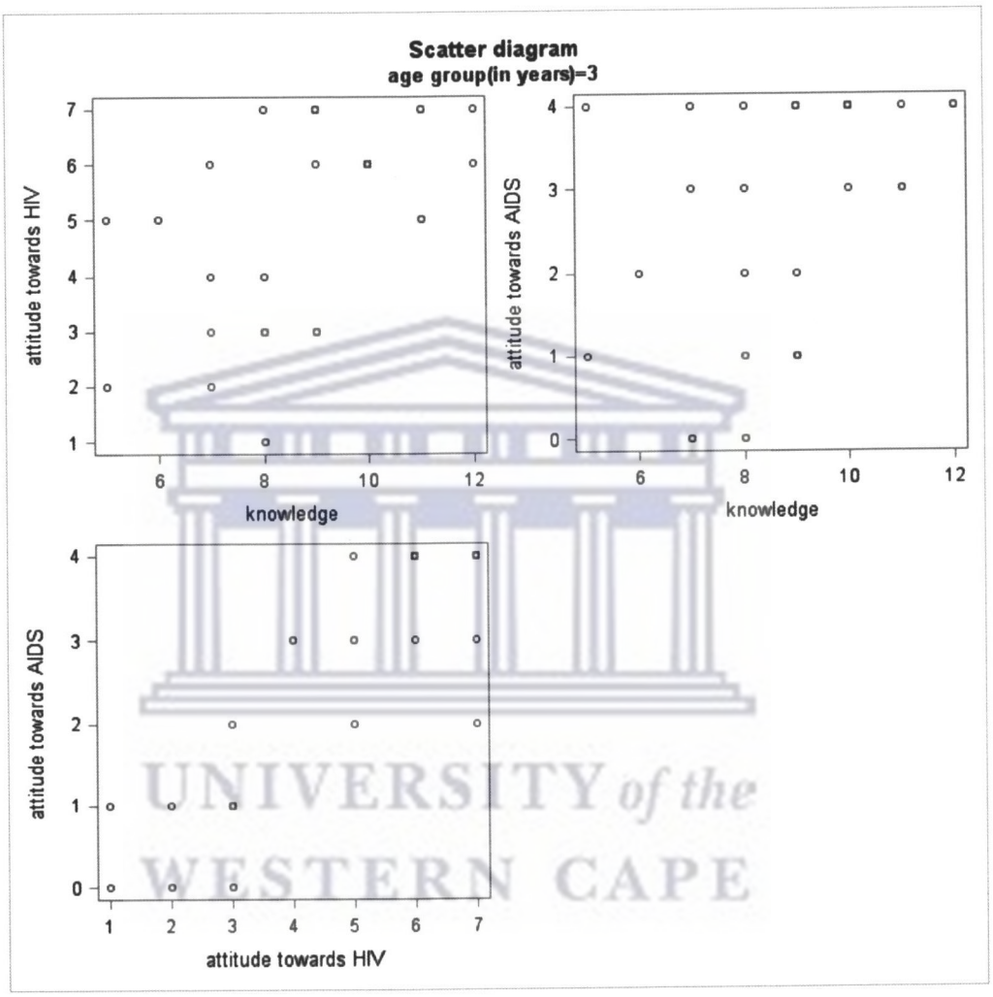


Figure 8: Scatter diagrams of knowledge and attitude scores for ages 35 to less than 45 years

Table 4.15: Spearman correlations for all scores for ages 35 to less than 45 years

Correlation value P value n	HIV/AIDS knowledge	Attitude towards HIV	Attitude towards AIDS
HIV/AIDS knowledge	1.00000	0.55809	0.47971
		0.0007	0.0055
	33	33	32
Attitude towards HIV		1.00000	0.81872
			<0.0001
		36	35
Attitude towards AIDS			1.00000
			35

In the 35 to less than 45 age group, HIV/AIDS knowledge and attitude towards HIV and HIV/AIDS knowledge and attitude towards AIDS show significant positive correlations of 0.55809 and 0.47971. Attitude towards HIV and attitude towards AIDS show a strong positive correlation of 0.81872. This correlation is highly significant ($p<0.0001$) (see Table 4.15 and Figure 8 and Appendix B8).

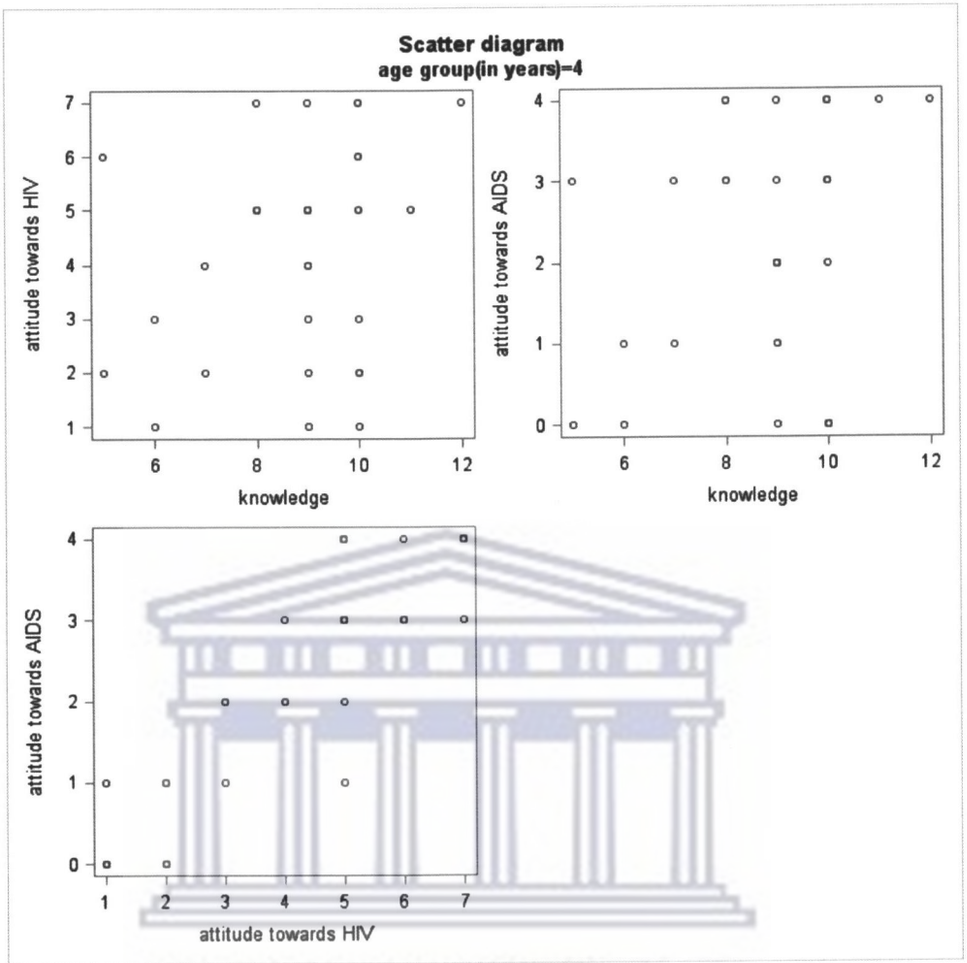


Figure 9: Scatter diagrams of knowledge and attitude scores for ages 45 years and above

Table 4.16: Spearman correlations for all scores for ages 45 years and above

Correlation value P value n	HIV/AIDS knowledge	Attitude towards HIV	Attitude towards AIDS
HIV/AIDS knowledge	1.00000	0.24224	0.25296
		0.1892	0.1698
	31	31	31
Attitude towards HIV		1.00000	0.84574
			<0.0001
		34	34
Attitude towards AIDS			1.00000
			34

In the 45 and above age group, attitude towards HIV and attitude towards AIDS show a strong positive correlation of 0.84574. This correlation is highly significant with p<0.0001 (see Table 4.16 and Figure 9 and Appendix B8).

4.2.5 Kruskal-Wallis tests of continuous variables and scores by age group

Table 4.17: Kruskal-Wallis test results by age group

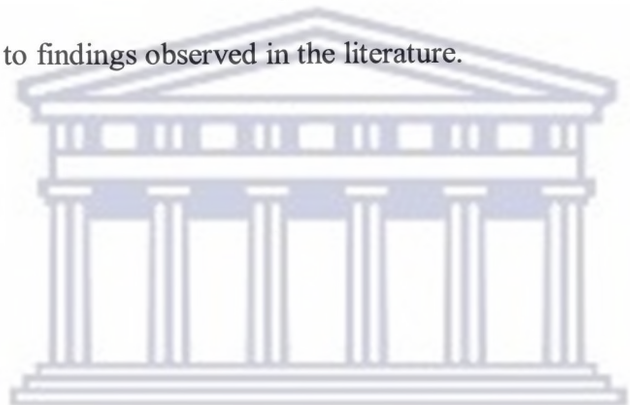
Variable scores	DF	Kruskal-Wallis χ^2 value	P-value
Number of Children per respondent	3	114.4013	<0.0001*
Number of family members died as a results of AIDS	3	3.6322	0.3040
Number of friends died as a result of AIDS	3	1.6990	0.6372
Knowledge	3	0.0576	0.9964
Attitude towards HIV	3	7.3544	0.0614
Attitude towards AIDS	3	2.3175	0.5092
* p<0.01			

All continuous variables and scores were tested for differences among age groups by means of Kruskal-Wallis tests. There was a significant difference observed in the number of children per respondent as age increased (Kruskal- Wallis χ^2 = 114.4013; p-value<0.0001) (see Table 4.17 and Appendix B9). This corresponds to the information presented in Table 4.3 where it was recorded that the mean number of children per respondent increased as the age group increased. No differences in the age groups were observed regarding the number of family members or friends who died as a result of AIDS. When comparing the

HIV/AIDS knowledge score, attitude towards HIV score or attitude towards AIDS score amongst the age groups, no significant differences were observed.

4.3 Conclusion

In this chapter, the results of the study were discussed in detail. Various tests and graphical presentations were employed to show demographic findings and perceptions, knowledge and attitude of the women towards HIV/AIDS in the Zwartwater area. In the next chapter the results of this study will be discussed and compared to findings observed in the literature.



CHAPTER 5: DISCUSSION OF THE RESULTS

5.0 Introduction

This chapter presents the experience of the researcher on conducting the interviews, the discussion of the results highlighted in the previous chapter, the limitations, conclusion, and recommendations of the study.

Interviewing the respondents was found to be the most challenging part of the data collection process. Although households were selected sequentially and participants were not asked to reveal their HIV status, it remained challenging to interview HIV-positive people, as these respondents were terrified because of the stigma attached when they voluntarily revealed their status to the interviewer. The discussions between the interviewer and the participant in many cases led to long interview times. The consequence was that only 100 people could be interviewed over a period of two weeks. The interviews were more successful at the Queenstown (Frontier) Hospital. The respondents were given fruit to eat while being interviewed. It took 3 to 4 days to interview 70 people at the hospital. The data collection part of the research was a very touching experience as there were participants who had full-blown AIDS and many shared their concerns about the future of their children with the researcher. This study aims to investigate the experience of females regarding stigmatization and discrimination that resulted due to HIV/AIDS. From the resulting information it can be seen that this group of vulnerable females are greatly affected by the HIV/AIDS situation in the Zwartwater area. Support needs to be provided to empower and equip females to break the cycle of HIV infection.

5.1 Research questions discussed

5.1.1 Perceived HIV/AIDS knowledge of females living in the Zwartwater area and whether this knowledge differs by age group

The first research question was aimed at understanding the perceived HIV/AIDS knowledge of the respondents and whether or not this perceived knowledge of respondents residing at Zwartwater differed by age group. The results revealed that respondents could, on average, answer about 9 of the 12 knowledge questions correctly. Correct answers ranged between 5 and 12 (see Table 4.5). When assessing the 12 individual questions that tested knowledge, the percentages for correct answers ranged between 32% and 94%. The two questions that showed the greatest lack of knowledge were the ease of identification of a person who is HIV positive (38% were correct) and whether HIV could be transmitted via mosquitoes (32% were correct). It can be concluded that although some of the respondents chose not to answer some of the knowledge questions; the results based on those that responded are promising, indicating that the respondents are knowledgeable.

When observing the perceived knowledge by age group, the mean number of correct answers of all five age groups was approximately 9 out of 12 questions. All age groups therefore seem to have almost the same knowledge level. This might be due to the fact that they reside in the same area and are therefore equally exposed to the same sources of knowledge.

5.1.2 Attitude towards HIV of females living in the Zwartwater area

Do these attitudes differ in the various age groups?

The second research question was aimed at understanding the "attitude towards HIV" of the respondents and whether or not the attitude of respondents residing at Zwartwater differed by age group. The results revealed that respondents could, on average, answer about 5 of the 7 attitudes towards HIV questions correctly. When looking at the 7 individual questions that tested attitude towards HIV, the responses in agreement with the question ranged between 60% and 82%. The two questions that showed some negative attitude towards HIV were "Would you buy fresh produce or meat from a shopkeeper who is HIV positive?" of which only 64% indicated that they would, and "If one of your colleagues/friends was infected with HIV, do you think she/he should be allowed to go on working?" of which only 60% indicated a 'Yes' answer. The results showed that the majority of respondents did not reveal negative attitudes towards people who were HIV positive, but awareness programmes could still be implemented to improve the current situation. No significant difference was found when comparing attitude towards HIV within the age groups.

5.1.3 Attitude towards AIDS of females living in the Zwartwater area

Do these attitudes differ among the various age groups?

The third research question was aimed at understanding the attitude towards AIDS and whether or not the attitude towards AIDS of the respondents residing at Zwartwater differed by age group. The results revealed that respondents could, on

average, answer about 3 of the 4 attitudes towards AIDS questions correctly. Correct answers ranged between 0 and 4 (see Figure 1). When assessing the 4 individual questions that tested attitude towards AIDS, the percentage of questions answered correctly ranged between 59% and 77%. The two questions that showed the most negative attitude towards people who had AIDS were "Would you share a drink out of the same glass with someone who has AIDS?", of which only 59% indicated that they would, and "Would you buy fresh produce or meat from a shopkeeper who has AIDS?", of which 60% indicated that they would. Attitude towards AIDS did not differ significantly in the various age groups.

5.1.4 Perceived HIV/AIDS infection rates in the area

The fourth research question was aimed at understanding the perceived HIV/AIDS infection rate of respondents residing in the Zwartwater area. The results revealed that the perceptions of the women were grouped according to two percentages: less than 50% and 50% and above (see Table 4.6). Seventy percent of the women believed that less than 50% of the people in their community were HIV positive or had AIDS. Approximately 71% of women believed that less that 50% of women or men in the community were HIV positive or had AIDS. Twenty-two percent of respondents indicated that they thought that more than 50% of the community's children were HIV positive or had AIDS.

5.1.5 Impact of increased knowledge on the negative attitude towards people who are infected by HIV or living with AIDS

Is this relationship different among the age groups?

The fifth research question was aimed at understanding the impact of increased knowledge of the respondents regarding the negative attitude towards people who are infected by HIV or living with AIDS and whether or not the attitude of the respondents residing at Zwartwater differed by age group.

The Spearman correlation coefficient testing the correlation between knowledge and attitude towards HIV status or AIDS is roughly 0.3 (and significant). There is thus some indication that improved knowledge leads to a more positive attitude towards people who are HIV positive or who are living with AIDS. Based on these findings, it can be concluded that knowledge attained by the Zwartwater respondents to some extent impacted on their attitudes towards people suffering from HIV or AIDS.

It is understood that the relationship between knowledge and attitude could be formed by many factors and that this relationship is not easy to quantify. Knowledge is intended to empower an individual. The more knowledgeable a person, the more it is expected that behaviour or attitude will change.

5.2 Conclusion

It is not easy to collect data on HIV/AIDS – particularly in rural areas. When comparing similar questions, it is interesting to note that the respondents were slightly more positive in their attitude towards people with HIV than to those with AIDS. This is evident from the questions "Would you purchase fresh produce or meat from a shopkeeper who has AIDS?", of which only 60% indicated that they would, whereas 64% indicated that they would if the person was HIV positive. When asked if they would share a drink out of the same glass with someone who had AIDS, only 59% indicated that they would, whereas 66% indicated that they would if the person was HIV positive. If a family member was sick with AIDS, only 62% would allow them to cook for the family whereas 72% would allow someone with HIV to cook. The sharing of eating utensils is more likely to occur when a person is HIV positive (82%) compared to when the person has AIDS (77%). This indicates some evidence that the people in the area would be more tolerant to someone with HIV than to someone with AIDS.

It is evident from the results that many people still need to be educated about HIV risks and their attitudes towards people who are HIV-positive and those who have AIDS. From the data reported it is evident that this specific community has been greatly affected by HIV and AIDS. Some participants indicated that they had lost up to ten family members due to AIDS and up to thirty-five friends (see Appendix B5). One of the most alarming facts mentioned by the participants is that 89% believed that a man needs other women, even if he is in a steady relationship. Furthermore most (81%) felt that it was up to woman to speak up if she wants a

man to use a condom. Knowing that the majority of participants are reliant on family for their income, many might not be able to "insist" that condoms should be used.

UNAIDS (2005) explains that the process of stigmatization can go as far as causing people living with HIV to develop something called 'self- or internalized stigmatization', which affects the person's sense of pride or worth. This process causes people living with HIV to develop feelings of shame and self-blame. Furthermore, the isolation of people living with HIV/AIDS from their societies can ultimately cause depression, withdrawal and sometimes suicidal feelings. The report by USAIDS (2006) says that the process of stigmatization has prevented open discussions about the causes and prevention of HIV/AIDS, as well as the willingness of people to open up about their status or even to secure advice, care and support from available resources.

According to UNAIDS (2006), in order to curb the expansion of the HIV/AIDS pandemic and the stigmatization of people living with HIV/AIDS, change in attitude, social norms and behaviours will have to be applied. Furthermore, action against these stigmatizations will need to be carried out by the top leadership and at every level of society.

5.3 Limitations

Only females living in one specific rural area were included in the sample for this study. This study could possibly be expanded to include a wider range of people living in various areas of South Africa.

A significant period of time has lapsed since the time of data collection and the release of the results, as the researcher had changed her employment and the challenges at work prohibited her to make the required progress to publish these important findings.

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APPENDICES

APPENDIX A

Appendix A1: Letters requesting permission to conduct the study

A.1: Letter of permission to conduct the survey at the Frontier Hospital

M-23 Hector Peterson Residence
University of the Western Cape
Private Bag x79
Belhar
7535
23 June, 2006

Senior Nursing Service Manager
Frontier Hospital
Private Bag x7063
Queenstown
5320
Eastern Cape Province

Dear Madam

RE: A letter of permission to conduct a survey in the Frontier Hospital

I am currently registered for a Masters Degree in Statistics at the University of the Western Cape. One of the requirements to be awarded with the above-mentioned degree is to conduct a mini-thesis. I would therefore request permission from you and your community to conduct the following study at the Frontier Hospital and in the Zwartwater area. I would like to find out what is the stigmatization and discrimination towards people who are HIV positive and towards people who are living with AIDS in your area. This study will only focus on the female perspective at the Frontier Hospital and in the Zwartwater area, Eastern Cape Province.

The findings of this study will be presented to you when the research has been completed. Based on the above I therefore apply to conduct this study at the Frontier Hospital and Zwartwater area starting on 3rd July 2006 for the duration of three weeks. A stratified random sampling procedure will be used to select the female participants in the Zwartwater area and sequential sampling will be used to select the additional participants visiting the Frontier Hospital. All information obtained will remain strictly confidential and no names will be attached to the interviews conducted.

Could you please inform me if this study could be conducted in the Frontier Hospital?

Thanking you in anticipation

Khangela Frida Malgas (Miss)

083 334 8393

A1.2: Letter of permission to conduct the survey in the Zwartwater area

M-23 Hector Peterson Residence
University of the Western Cape
Private Bag x79
Belhar
7535
21 June, 2006

The Head of the Community
Mr. Z.C. Sgqolana
Zwartwater Village
Eastern Cape Province

Dear Sir

RE: A letter of permission to conduct a survey in the Zwartwater area

I am currently registered for a Masters degree in Statistics at the University of the Western Cape. One of the requirements to be awarded with the above-mentioned degree is to conduct a mini-thesis. I would therefore request permission from you and your community to conduct the following study in the Zwartwater area. I would like to find out what is the stigmatization and discrimination towards people who are HIV positive and towards people who are living with AIDS in your area. This study will only focus on the female perspective in the Zwartwater area, Eastern Cape Province.

The findings of this study will be presented to you when the research has been completed. Based on the above I therefore apply to conduct this study at the Queenstown Hospital and Zwartwater area starting in July 2006 for the duration of three weeks. A stratified random sampling procedure will be used to select the female participants in the Zwartwater area and sequential sampling will be used to select the additional participants visiting the Queenstown hospital. All information obtained will remain strictly confidential and no names will be attached to the interviews conducted.

Could you please inform me if this study could be conducted in the Zwartwater area?

Thanking you in anticipation

Khangela Frida Malgas (Miss)

Appendix A2: Letters of approval

Letter 1: Letter of approval for conducting the survey at the Frontier Hospital

11-JUL-2006 12:48 From: To:0458397235 P.1

Eastern Cape Department of Health

Enquiries:	Zonwabele Merle	Tel No:	040 609 3915
Date:	07th July 2006	Fax No:	040 639 1440
e-mail address:	merlez@impilo.ecape.gov.za		

Dear Ms Malgas

Re: Stigmatization and Discrimination towards people who are HIV positive or have AIDS- a female perspective in Zwartwater and Frontier Hospital, Eastern Cape Province

The Department of Health would like to inform you that your application for conducting a research on the abovementioned topic has been approved based on the following conditions:

1. During your study, you will follow the submitted protocol with ethical approval and can only deviate from it after having a written approval from the Department of Health in writing.
2. You are advised to ensure observe and respect the rights and culture of your research participants and maintain confidentiality of their identities and shall remove or not collect any information which can be used to link the participants. You will not impose or force individuals or possible research participants to participate in you study. Research participants have a right to withdraw anytime they want to. However, you shall be responsible in dealing with any adverse effects following the research treatment provided in your study.
3. The Department of Health expects you to provide a progress on your study every 3 months (from date you received this letter) in writing.
4. At the end of your study, you will be expected to send a full written report with your findings and implementable recommendations to the Epidemiological Research & Surveillance Management. You may be invited to the department to come and present your research findings with your implementable recommendations.
5. Your results on the Eastern Cape will not be presented anywhere unless you have shared them with the Department of Health as indicated above.

Your compliance in this regard will be highly appreciated.

DEPUTY DIRECTOR: EPIDEMIOLOGICAL RESEARCH & SURVEILLANCE MANAGEMENT

Letter 2: Letter of approval for conducting the survey in the Zwartwater area

Zwartwater A/Area
Lady Frere.
22/07/2006.

This is to confirm that I allowed Khangela Malgas at the above-mentioned location to carry out her research work. She did it successfully, and I recommend her duty which she did at this location.

HEADMAN
SIGN
DATE 22/7/2006
ZWARTWATER A/AREA

Appendix A3: Participant's consent form

Name of the person to be interviewed:.....

Date of consent:.....

Name of interviewer:.....

I agree to participate in the research and understand that this will be an individual interview. I have been fully informed of the purpose of the study and the procedure as explained.

I understand that the information collected in this study will be used for purposes of this study only. All data will be kept secure by the researcher and the questionnaires will be destroyed on completion of the study. If I choose to withdraw from the study I have the right do so although an indication explaining my decision if volunteered would be welcomed.

Signature of consent Date

....

Thanking you

KF Malgas (Researcher)

Contact numbers
XXXX

Appendix A4: Semi-structured interview: English and Xhosa version

Assessment of stigmatization of and discrimination against people who are HIV positive and people who are living with AIDS in the Zwartwater area

ID NR			

Questionnaire 1: English version

My name is Khangela Frida Malgas; I am currently studying at the University of the Western Cape doing a Masters Degree in Statistics. One of the requirements for this degree is to conduct a mini-thesis. I have chosen to investigate the attitudes towards HIV/AIDS in Zwartwater and Queenstown Hospital. I would like to ask your time to answer the following questions. All information obtained will remain strictly confidential and your name will never be used. I would like to start asking you the questions.

1. Age group(in years)

15<25	1
25<35	2
35<45	3
45+	4

2. Marital status

Married	1
Not married	2
Living together	3
Divorced	4
Widowed	5
Other (Specify)	6

3(a). Have you heard about HIV?

Yes	1	No	2

3(a).1 If yes, how much would you say you know about HIV?

Very little	1
Enough	2
A lot	3
Everything	4

3(b). Have you heard about AIDS?

Yes	1	No	2

3(b).1 If yes, how much would you say you know about AIDS?

Very little	1
Enough	2
A lot	3
Everything	4

4. Do you know how you can get HIV?

Yes	1	No	2

4.1 If yes, how?

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

Sex(sex without a condom)	1
Pregnancy and breast-feeding	2
Blood transfusion	3
Sharing needles	4

5(a). Can you easily identify a person who is HIV positive?

Yes	1	No	2

5(a).1 If yes, how can you identify whether a person is HIV positive?
List at least few ways:

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

5(b). Can you easily identify a person who has AIDS?

Yes	1	No	2

5(b).1 If yes, how can you identify whether a person has AIDS?

List at least few ways:

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

6. Can a person get HIV through witchcraft?

Yes	1	No	2

7. Can condom use during sexual intercourse reduce contracting HIV?

Yes	1	No	2

8. Can a healthy-looking person be infected with HIV?

Yes	1	No	2

9. Can a person reduce the risk of HIV infection by having one partner?

Yes	1	No	2

10. Can HIV be transmitted from mother to child?

Yes	1	No	2

11. Can you get HIV by sharing a meal with a person who is HIV positive?

Yes	1	No	2

11.1 Can you get HIV by sharing a meal with a person who has AIDS?

Yes	1	No	2

12. Can mosquitoes transmit HIV?

Yes	1	No	2

13. Would you buy fresh produce or meat from a shopkeeper who is HIV positive?

Yes	1	No	2

13.1 Would you buy fresh produce or meat from a shopkeeper who has AIDS?

Yes	1	No	2

14(a). Would you use the same eating utensils as a person who is HIV positive? E.g. Spoon, cup, plate, fork & knife etc.

Yes	1	No	2

14(a).1 If no, why not?.....
.....
.....
.....

14(b). Would you use the same eating utensils as a person living with AIDS? E.g. Spoon, cup, plate, fork & knife etc.

Yes	1	No	2

14(b).1 If no, why not?.....
.....
.....
.....

15(a). Would you share a drink out of the same glass with someone who is HIV positive?

Yes	1	No	2

15(a).1 If no, why not?.....
.....
.....
.....

15(b). Would you share a drink out of the same glass with someone who has AIDS?

Yes	1	No	2

15(b).1 If no, why not?.....
.....
.....
.....

16. Would you kiss someone on the cheek that has the HIV virus?

Yes	1	No	2

16.1 Why? Please explain.....
.....
.....
.....

17. Can you be infected with HIV by using the same toilet as a person with the HIV virus?

Yes	1	No	2

17.1 Why? Please explain:.....
.....
.....
.....

18. Should a family member sick with AIDS be allowed to cook for the family?

Yes	1	No	2

18.1 Why? Please explain:.....
.....
.....
.....

19. Have you ever been for an HIV test?

Yes	1	No	2

20. Do you intend to go for an HIV test?

Yes	1	No	2

20.1 If No, why not? Please explain.....
.....
.....
.....

21. Would you be willing to nurse a family member who has AIDS?

Yes	1	No	2

22. Would you be willing to nurse a non-family member who has AIDS?

Yes	1	No	2

23. Would you eat food cooked by someone that you knew is infected by HIV?

Yes	1	No	2

23.1 If No, why not? Please explain:.....
.....
.....
.....

24. Would you be friends with a person who has HIV or AIDS?

Yes	1	No	2

25. If your sexual partner/husband is HIV positive, what precautions would you take?

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

Abstain from sex	1
Use a condom	2
Be faithful	3
No precautions	4
I would not be able to take any precautions	5

26. Do you tell other people when HIV positive people disclose his/her status to you?

Yes	1	No	2

26.1 If someone discloses his/her HIV status, what would you do?

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

Tell my friend about it?	1
Tell their family members?	2
Tell their husband/wife or sexual partner?	3
Tell nobody?	4

27. How would you feel if you get HIV from your husband/wife?

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

27.1 If your sexual partner is HIV positive, do you think that he/she should tell you?
Please explain:.....
.....
.....
.....

27.2 What would you do if your sexual partner told you that he/she is HIV positive?
Please explain:.....
.....
.....
.....

28. Do you think it's good for you and your partner to test your HIV status before marriage?

Yes	1	No	2

28.1 Why? .....
.....
.....
.....

29. Do you personally know someone who is HIV positive?

Yes	1	No	2

30. How would you **feel** if there were learners in your child's class who are HIV positive? Please
explain:.....
.....
.....
.....

31. Do you think that there is a cure for HIV?

Yes	1	No	2

31.1 If yes: please tell me more about it.....
.....
.....
.....
.....

32. If a parent has HIV or AIDS, do you think that his/her children are stigmatized?

Yes	1	No	2

33. How many children do you have?

34. If one of your colleagues/friends is infected with HIV, do you think she/he should be allowed to go on working?

Yes	1	No	2

35. If one of your relatives/friends was infected with HIV, do you hope to keep it secret from others?

Yes	1	No	2

35.1 If yes, How? Please explain.....
.....
.....
.....

36. Can people who are infected with HIV give it to other people by shaking hands?

Yes	1	No	2

36.1 How? Please explain.....
.....
.....
.....

37. Have any of your family members died as a result of AIDS?

Yes	1	No	2

37.1 If yes, How many?

38. Have any of your friends died as a result of AIDS?

Yes	1	No	2

38.1 If yes, How many?

To what extent do you agree or disagree with each of the following statements?

Statement	Strongly agree =1	Agree =2	Disagree =3	Strongly disagree =4
39. I would feel uncomfortable hugging someone who has HIV/AIDS.	☐	☐	☐	☐
40. People who contract HIV/AIDS get pretty much what they deserve.	☐	☐	☐	☐
41. If my housemate was HIV positive, I would ask that person to move out.	☐	☐	☐	☐
42. If I talk about AIDS with a sexual partner he might feel offended.	☐	☐	☐	☐
43. Part of me understands the AIDS risk, but another part of me can't accept that possibility.	☐	☐	☐	☐
44. The possibility of me catching AIDS is something I've never really thought about.	☐	☐	☐	☐
45. It is up to a woman to speak up if she wants a man to use a condom.	☐	☐	☐	☐
46. A man needs other women, even if he has a steady girlfriend/wife.	☐	☐	☐	☐

Statement	Less than 5%	Between 5% & 10%	Between 10% & 20%	Between 20% & 50%	Between 50% & 60%	More than 60%
47. What % of people in your community do you think have HIV/AIDS?	☐	☐	☐	☐	☐	☐
48. What % of women in your community do you think have HIV/AIDS?	☐	☐	☐	☐	☐	☐
49. What % of men in your community do you think have HIV/AIDS?	☐	☐	☐	☐	☐	☐
50. What % of children in your community do you think have HIV/AIDS?	☐	☐	☐	☐	☐	☐

51. What type of job are you doing?

Teacher	1
Office worker	2
Domestic worker	3
Assistant nurse	4
Security personnel	5
Health worker	6
Other (specify).....	7

52. What is your monthly income?

0-500	1
501-1000	2
1001-1500	3
1501-2000	4
2001-2500	5
2501-3000	6
3001-3500	7
More than 3500	8

53. About how much money do you spend on food per month?

0-500	1
501-1000	2
1001-1500	3
1501-2000	4
2001-2500	5
2501-3000	6
3001-3500	7
More than 3500	8

54. List the source of income that you personally have e.g. contribution from friends and family members, selling things on streets, other.

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

Comment:

Thank you for your cooperation and time.

Questionnaire 2: Xhosa version

ID NR			

Imibuzo nkcukacha

Igama lam ndingu Khangela Frida Malgas; ndenza imfundo enoMsila kwezoBalo kwiDyunivesithi yase Ntshona Koloni. Enye yemfuno zale mfundo inomsila (Masters) kukwenza uphando ngokubhala lo mqulwana. Ndikhethe ukuphanda ngezimvo ezigwenxa malunga nentsholongwane kagawulayo okanye ugawulayo kwisithili sase Zwartwater nakwisibhedlele saseKomani. Ndingathanda ukucela ixesha lakho siphendule lemibuzo ilandelayo. Zonke inkcukacha ezithatyathiweyo ziyakuba yimfihlo zisetyenziswe ngokufanelekileyo negama lakho alisayi kusetyenziswe. Ndingathanda ukuba siqalise ukubuzana imibuzo.

1. Ubudala ngokweminyaka

15<25	1
25<35	2
35<45	3
45+	4

2. Imeko yomtshato

Utshatile	1
Awutshatanga	2
Uyahlalisana	3
Wawuqhawula umtshato	4
Ungumhlolokazi	5
Chaza nezinye	6

3(a). Ukhe weva ngentsholongwana kagawulayo?

ewe	1	hayi	2

3(a)1. Ukuba kunjalo, ungathetha kangakanani ngolwazi lwakho malunga nentsholongwane kagawulayo?

Kancinci	1
Ngokwaneleyo	2
Kakhulu	3
Yonke into	4

3(b). Ukhe weva ngogawulayo?

ewe	1	hayi	2

3(b).1 Ukuba kunjalo, ungathetha kangakanani ngolwazi onalo malunga nogawulayo?

Kancinci	1
Ngokwaneleyo	2
Kakhulu	3
Yonke into	4

4. Uyayazi indlela onokosuleleka ngayo yintsholongwane kagawulayo?

ewe	1	hayi	2

4.1. Ukuba kunjalo, wazi njani?

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

Isini(Ngokungazikhuseli xa nisabelana ngesondo)	1
Ukukhulelwa nokuncancisa usana	2
Ukunikezelana ngegazi/ ufunxo-gazi	3
Ukwabelana ngezitofu/ngenaliti	4

5(a). Unganakho ukumbona lula umntu onentsholongwane kagawulayo?

ewe	1	hayi	2

5(a).1 Ukuba kunjalo, ungambona njani ukuba umntu unentsholongwane kagawulayo? Dwelisa iindlela zibembalwa ubuncikane.

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

5(b). Unganakho ukumbona lula umntu onogawulayo?

ewe	1	hayi	2

5(b).1 Ukuba kunjalo, ungambona njani ukuba umntu unogawulayo? Dwelisa iindlela zibembalwa ubuncikane.

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

6. Umntu angayifumana intsholongwane kagawulayo ngobugqwirha?

ewe	1	hayi	2

7. Ukusetyenziswa kwekhondom xa nisabelana ngesondo ingaba kuyakunciphisa na ukosuleleka kwintsholongwane kagawulayo?

ewe	1	hayi	2

8. Ingaba umntu okhangeleka ephilile uyachaphazeleka kwintsholongwane kagawulayo?

ewe	1	hayi	2

9. Ingaba umntu uyayinciphisa ingozi yokosuleleka kwintsholongwane kagawulayo ngokuba neqabane elinye?

ewe	1	hayi	2

10. Ingaba intsholongwane kagawulayo iyanikezelana na ukusuka kumama ukuya emntwaneni?

ewe	1	hayi	2

11. Ungosuleleka yintsholongwane kagawulayo ngokwabelana ngokutya nomntu onayo?

ewe	1	hayi	2

11.1 Ungosuleleka yintsholongwane kagawulayo ngokwabelana ngokutya nomntu onogawulayo?

ewe	1	hayi	2

12. Ingaba iingcongconi zingayisasaza intsholongwane kagawulayo?

ewe	1	hayi	2

13. Ungayithenga imveliso entsha okanye inyama kunovenkile onentsholongwane kagawulayo?

ewe	1	hayi	2

13.1 Ungayithenga imveliso entsha okanye inyama kunovenkile onogawulayo?

ewe	1	hayi	2

14(a). Ungasisebenzisa isixhobo esinye nomntu onentsholongwane kagawulayo?
Umzekelo: icephe, ikomityi, isitya, ifolokwe nemela njalo- njalo.

ewe	1	hayi	2

14(a).1 Ukuba akunjalo, kungokuba kutheni?.....
.....
.....
.....

14(b) Ungasisebenzisa isixhobo esinye nomntu onogawulayo?
Umzekelo: icephe, ikomityi, isitya, ifolokwe nemela njalo- njalo.

ewe	1	hayi	2

14(b).1 Ukuba akunjalo, kungokuba kutheni?
.....
.....
.....
.....

15(a). Ungabelana ngesiselo esikwiglasi enye nomntu onentsholongwane kagawulayo?

ewe	1	hayi	2

15(a).1 Ukuba akunjalo, kungokuba kutheni?.....
.....
.....
.....

15(b) Ungabelana ngesiselo esikwiglasi enye nomntu onogawulayo?

ewe	1	hayi	2

15(b).1 Ukuba akunjalo, kungokuba
kutheni?.....
.....
.....
.....

16. Ungamncamisa esidleleni umntu onentsholongwane kagawulayo?

ewe	1	hayi	2

16.1. Kutheni? Nceda ucacise.....
.....
.....
.....

17. Ungosuleleka yintsholongwane kagawulayo ngokusebenzisa indlu yangasese kunye nomntu onentsholongwane kagawulayo?

ewe	1	hayi	2

17.1. Kutheni? Nceda ucacise.....
.....
.....
.....

18. Linakho ilungu lekhaya eligula ngugawulayo ukuvunyelwa liphekele ikhaya?

ewe	1	hayi	2

18.1. Kutheni? Nceda ucacise.....
.....
.....
.....

19. Ukhe wayivavanyelwa intsholongwane kagawulayo?

ewe	1	hayi	2

20. Unayo injongo yokuya kuvavanyela intsholongwane kagawulayo?

ewe	1	hayi	2

20.1. Ukuba akunjalo, kutheni kungenjalo? Nceda ucacise
.....
.....
.....
.....

21. Ungakhululeka ukonga ilungu lekhaya elinogawulayo?

ewe	1	hayi	2

22. Ungakhululeka ukonga ilungu elingelolakhaya elinogawulayo?

ewe	1	hayi	2

23. Ungakutya ukutya okuphekwe ngumntu omaziyo ukuba wosulelwe yintsholongwane kagawulayo?

ewe	1	hayi	2

23.1. Ukuba akunjalo? Nceda ucacisa.....
.....
.....
.....

24. Ungasisihlobo nomntu onentsholongwane kagawulayo okanye ugawulayo?

ewe	1	hayi	2

25. Ukuba iqabane lakho lesondo okanye umyeni wakho uchatshazelwe yintsholongwane kagawulayo ungathabatha manyathelo mani?
.....
.....
.....
.....
.....
.....
.....
.....
.....

Ungayeka ukwabelana ngesondo	1
ungasebenzisa ikhondom	2
Unganyaniseka kwiqabane elinye	3
Awunakusebenzisa nto	4
Awunakuthabatha kwanyathelo	5

26. Uyabaxelela abanye abantu xa abantu abanentsholongwane kagawulayo ngobume babo?

ewe	1	hayi	2

26.1 Ungenza ntoni ukuba ubani ukuchazela ngokuchaphazeleka kwakhe yintsholongwane kagawulayo?
.....
.....
.....
.....
.....

Ungaxelela umhlobo wakho ngalonto	1
Ungaxelela abantu bakowabo	2
Ungaxelela umyeni/umfazi/iqabane lakhe	3
Awunakuxelela nomnye umntu	4

27. Ukuba ungafumana intsholongwane kagawulayo emyenini wakho ungaziva njani?
.....
.....
.....
.....

27.1 Ukuba iqabane lakho linentsholongwane kagawulayo, ucinga kufanelekile ukuba likuxelela? Nceda ucacise.....
.....
.....
.....

27.2 Ungenza ntoni ukuba iqabane lakho likuxelela ukuba lichaphazeleke kwintsholongwane kagawulayo? Nceda ucacise
.....
.....
.....
.....

28. Ucinga kulungile ukuba wena neqabane lakho nenze uvavanyo lwentsholongwane kagawulayo phambi kokuba nitshate?

ewe	1	hayi	2

28.1. Kutheni? Chaza izizathu:
.....
.....
.....
.....

29. Wena buqu kukho umntu omaziyo onentsholongwane kagawulayo?

ewe	1	hayi	2

30. Ungaziva njani ukuba eclasini yomntwana wakho kukho abantwana abanentsholongwane kagawulayo? Nceda ucacise
.....
.....
.....
.....

31. Ucinga ukuba likhona iyeza lentsholongwane kagawulayo?

ewe	1	hayi	2

31.1 Ukuba kunjalo, nceda ukhe undityebisele ngalo.....
.....
.....
.....
.....

32. Ukuba umzali unentsholongwane kagawulayo okanye ugawulayo, ucinga ukuba abantwana bakhe bayanukunezwa?

ewe	1	hayi	2

33. Bangaphi abantwana bakho?

34. Ukuba omnye wogxa bakho uchaphazeleke kwintsholongwane kagawulayo, ucinga ukuba angavunyelwa ukuya kusebenza?

ewe	1	hayi	2

35. Ukuba omnye wezizalwane okanye izihlobo zakho uchaphazeleke kwintsholongwane kagawulayo, unethemba lokuba loonto ingagcinakala ifihlakele kwabanye?

ewe	1	hayi	2

35.1 Ukuba kunjalo, ungakwenza njani oko? Nceda ucacise
.....
.....
.....
.....

36. Abantu abachatshazelwe yintsholongwane kagawulayo banganakho na ukuyinikezela kwabanye abantu ngokubambana ngezandla?

ewe	1	hayi	2

36.1 Bangakwenza njani oko? Nceda ucacise .....
.....
.....
.....

37. Ingaba kukho omnye welungu lekhaya othe wabhubha ngenxa kagawulayo?

ewe	1	hayi	2

37.1 Ukuba kunjalo, bangaphi?

38. Ingaba kukho omnye wabahlobo bakho othe wabhubha ngenxa kagawulayo?

ewe	1	hayi	2

38.1 Ukuba kunjalo, bangaphi?

Uvuma okanye wala kangakanani nengxelo nganye kwezi zilandelayo?

Ingxelo	Ndivuma kakhulu =1	Ndiyavuma =2	Andivumi =3	Andivumi kakhulu =4
39. Ndingaziva ndingonwabanga ukwanga/ukuwola umntu onentsholongwane kagawulayo okanye ugawulayo.	☐	☐	☐	☐
40. Abantu abosuleleke yintsholongwane kagawulayo okanye ugawulayo bafumana okuhle ebebekufuna.	☐	☐	☐	☐
41. Ukuba umntu endihlala kunye naye endlwini unentsholongwane kagawulayo, ndingamcela aphume.	☐	☐	☐	☐
42. Ukuba ndithetha ngogawulayo neqabane lam liziva ngathi liyatyholeka.	☐	☐	☐	☐
43. Inxalenye yam iyabuqonda ubungozi bukagawulayo kodwa enye inxalenye yam ayilwamkeli oloxanduva.	☐	☐	☐	☐
44. Uxanduva lokufumana ugawulayo yinto endingazange ndicinge ngayo.	☐	☐	☐	☐
45. Kusemntwini obhinqileyo ukuba ufuna umntu oyindoda asebenzise ikhondom.	☐	☐	☐	☐
46. Indoda ifuna abanye abantu ababhinqileyo ngoku inaye umntu osisigxina.	☐	☐	☐	☐

Ingxelo	Ngaphantsi kwe 5%	Phakathi kwe 5% ne 10%	Phakathi kwe 10% ne 20%	Phakathi kwe 20% ne 50%	Phakathi kwe 50% ne 60%	Ngaphezu kwe 60%
47. Linani elingakanani labantu ekhulwini ocinga ukuba banentsholongwa kagawulayo okanye ugawulayo kwindawo ohlala kuyo?	☐	☐	☐	☐	☐	☐
48. Linani elingakanani labafazi ekhulwini ocinga ukuba banentsholongwa kagawulayo okanye ugawulayo kwindawo ohlala kuyo?	☐	☐	☐	☐	☐	☐
49. Linani elingakanani lamadoda ekhulwini ocinga ukuba banentsholongwa kagawulayo okanye ugawulayo kwindawo ohlala kuyo?	☐	☐	☐	☐	☐	☐
50. Linani elingakanani labantwana ekhulwini ocinga ukuba banentsholongwa kagawulayo okanye ugawulayo kwindawo ohlala kuyo?	☐	☐	☐	☐	☐	☐

Hlomla:

Enkosi kakhulu ngentsebenziswano nangexesha lakho.

APPENDIX B

Appendix B1: Background information of respondents

Table B1_1: Age group (in years)

Age group	Frequency	Percent	Cumulative frequency	Cumulative percent
15<25	65	38.24	65	38.24
25<35	34	20.00	99	58.24
35<45	36	21.18	135	79.41
45+	35	20.59	170	100.00

Table B1_2: Marital status

Marital status	Frequency	Percent	Cumulative frequency	Cumulative percent
Married	50	29.41	50	29.41
Not married	102	60.00	152	89.41
Living together	2	1.18	154	90.59
Divorced	3	1.76	157	92.35
Widowed	12	7.06	169	99.41
Other (separated)	1	0.59	170	100.00

Table B1_3: What type of job are you doing?

Employment	Frequency	Percent	Cumulative frequency	Cumulative percent
Teacher	4	2.35	4	2.35
Office worker	2	1.18	6	3.53
Domestic worker	52	30.59	58	34.12
Security personnel	2	1.18	60	35.29
Health worker	2	1.18	62	36.47
Unemployed	42	24.71	104	61.18
Student	36	21.18	140	82.35
Pensioner	7	4.12	147	86.47
Other (cashier)	23	13.53	170	100.00

Table B1_4: What is your monthly income?

Monthly income	Frequency	Percent	Cumulative frequency	Cumulative percent
0-500	134	78.82	134	78.82
501-1,000	22	12.94	156	91.76
1,001-1,500	6	3.53	162	95.29
1,501-2,000	3	1.76	165	97.06
2,501-3,000	1	0.59	166	97.65
More than 3,500	4	2.35	170	100.00

Table B1_5: About how much money do you spend on food per month?

Monthly expenditure	Frequency	Percent	Cumulative frequency	Cumulative percent
0-500	150	88.24	150	88.24
501-1,000	19	11.18	169	99.41
1,001-1,500	1	0.59	170	100.00

Table B1_6: List the source of income that you personally have, e.g. contribution from friends?

Source of income	Frequency	Percent	Cumulative frequency	Cumulative percent
Contribution from friends	4	2.35	4	2.35
Family members	70	41.18	74	43.53
Selling things	7	4.12	81	47.65
Government grant	19	11.18	100	58.82
From my wages	16	9.41	116	68.24
Child support/grant	23	13.53	139	81.76
Other (find my own way)	3	1.76	142	83.53
Self-employed	2	1.18	144	84.71
Selling and family	6	3.53	150	88.24
Selling and friends	4	2.35	154	90.59
Government grant and family	5	2.94	159	93.53
Friends and family	4	2.35	163	95.88
Child support/grant and family	7	4.12	170	100.00

Appendix B2: Individual questions used to create scores for knowledge and attitude

Table B2_1: Knowledge scores

Can you easily identify a person who is HIV positive?

Q_5_a	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	42	24.71	42	24.71
No	128	75.29	170	100.00

Can you easily identify a person who has AIDS?

Q_5b	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	105	61.76	105	61.76
No	65	38.24	170	100.00

Can a person get HIV through witchcraft?

Q_6	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	18	10.59	18	10.59
No	149	87.65	167	98.24
Don't know	3	1.76	170	100.00

Can condom use during sexual intercourse reduce contracting HIV?

Q_7	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	144	84.71	144	84.71
No	22	12.94	166	97.65
Don't know	4	2.35	170	100.00

Can a healthy-looking person be infected with HIV?

Q_8	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	111	65.29	111	65.29
No	52	30.59	163	95.88
Don't know	7	4.12	170	100.00

Can a person reduce the risk of HIV infection by having one partner?

Q_9	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	134	78.82	134	78.82
No	32	18.82	166	97.65
Don't know	4	2.35	170	100.00

Can HIV be transmitted from mother to child?

Q_10	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	149	87.65	149	87.65
No	19	11.18	168	98.82
Don't know	2	1.18	170	100.00

Can you get HIV by sharing a meal with a person who is HIV positive?

Q_11	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	20	11.76	20	11.76
No	145	85.29	165	97.06
Don't know	5	2.94	170	100.00

Can you get HIV by sharing a meal with a person who has AIDS?

Q_11_1	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	27	15.88	27	15.88
No	140	82.35	167	98.24
Don't know	3	1.76	170	100.00

Can mosquitoes transmit HIV?

Q_12	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	110	64.71	110	64.71
No	55	32.35	165	97.06
Don't know	5	2.94	170	100.00

Can you be infected by using the same toilet as a person with the HIV virus?

Q_17	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	63	37.06	63	37.06
No	107	62.94	170	100.00

Can people who are infected with HIV give it to other people by shaking hands?

Q_36	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	10	5.88	10	5.88
No	160	94.12	170	100.00

Table B2_2: Attitude towards HIV scores

Would you buy fresh produce or meat from a shopkeeper who is HIV positive?

Q_13	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	108	63.53	108	63.53
No	59	34.71	167	98.24
Don't know	3	1.76	170	100.00

Would you use the same eating utensils as a person who is HIV positive?

Q_14a	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	140	82.35	140	82.35
No	30	17.65	170	100.00

Would you share a drink out of the same glass with someone who is HIV positive?

Q_15a	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	112	65.88	112	65.88
No	58	34.12	170	100.00

Would you kiss someone on the cheek that has the HIV virus?

Q_16	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	136	80.00	136	80.00
No	34	20.00	170	100.00

Would you eat food cooked by someone that you knew is infected by HIV?

Q_23	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	122	71.76	122	71.76
No	48	28.24	170	100.00

If one of your colleagues/friends is infected with HIV, do you think she/he should be allowed to go on working?

Q_34	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	100	59.52	100	59.52
No	68	40.48	168	100.00

Frequency missing = 2

If one of your relatives/friends was infected with HIV, do you hope to keep it secret from others?

Q_35	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	58	34.12	58	34.12
No	112	65.88	170	100.00

Table B2_3: Attitude towards AIDS scores

Would you buy fresh produce or meat from a shopkeeper who has AIDS?

Q_13_1	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	102	60.00	102	60.00
No	66	38.82	168	98.82
Don't know	2	1.18	170	100.00

Would you use the same eating utensils as a person living with AIDS?

Q_14b	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	131	77.06	131	77.06
No	39	22.94	170	100.00

Would you share a drink out of the same glass with someone who has AIDS?

Q_15b	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	99	58.58	99	58.58
No	70	41.42	169	100.00

Should a family member sick with AIDS be allowed to cook for the family?

Q_18	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	106	62.35	106	62.35
No	64	37.65	170	100.00

Appendix B3: Women's perceptions of HIV/AIDS infections in the Zwartwater area

Table B3_1: What % of people in your community do you think have HIV/AIDS?

Q_47	Frequency	Percent	Cumulative frequency	Cumulative percent
Less than 50%	116	69.46	116	69.46
50% and more	51	30.54	167	100.00

Frequency missing = 3

Table B3_2: What % of women in your community do you think have HIV/AIDS?

Q_48	Frequency	Percent	Cumulative frequency	Cumulative percent
Less than 50%	118	70.66	118	70.66
50% and more	49	29.34	167	100.00

Frequency missing = 3

Table B3_3: What % of men in your community do you think have HIV/AIDS?

Q_49	Frequency	Percent	Cumulative frequency	Cumulative percent
Less than 50%	117	70.06	117	70.06
50% and more	50	29.94	167	100.00

Frequency missing = 3

Table B3_4: What % of children in your community do you think have HIV/AIDS?

Q_50	Frequency	Percent	Cumulative frequency	Cumulative percent
Less than 50%	130	77.84	130	77.84
50% and more	37	22.16	167	100.00

Frequency missing = 3

Appendix B4: HIV/AIDS related perceptions

Table B4_1: I would feel uncomfortable hugging someone who has HIV/AIDS.

Q_39	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	11	6.47	11	6.47
Agree	21	12.35	32	18.82
Disagree	82	48.24	114	67.06
Strongly disagree	56	32.94	170	100.00

Table B4_2: People who contract HIV/AIDS get pretty much what they deserve.

Q_40	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	4	2.35	4	2.35
Agree	14	8.24	18	10.59
Disagree	92	54.12	110	64.71
Strongly disagree	60	35.29	170	100.00

Table B4_3: If my housemate was HIV positive, I would ask that person to move out.

Q_41	Frequency	Percent	Cumulative frequency	Cumulative percent
Agree	3	1.78	3	1.78
Disagree	95	56.21	98	57.99
Strongly disagree	71	42.01	169	100.00

Frequency missing = 1

Table B4_4: If I talk about AIDS with a sexual partner he might feel offended.

Q_42	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	69	42.07	69	42.07
Agree	43	26.22	112	68.29
Disagree	43	26.22	155	94.51
Strongly disagree	9	5.49	164	100.00

Frequency missing = 6

Table B4_5: Part of me understands the AIDS risk, another part of me can't accept.

Q_43	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	75	44.38	75	44.38
Agree	57	33.73	132	78.11
Disagree	28	16.57	160	94.67
Strongly disagree	9	5.33	169	100.00

Frequency missing = 1

Table B4_6: The possibility of my catching AIDS is something never thought about.

Q_44	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	83	49.11	83	49.11
Agree	53	31.36	136	80.47
Disagree	25	14.79	161	95.27
Strongly disagree	8	4.73	169	100.00

Frequency missing = 1

Table B4_7: It is up to a woman to speak up if she wants a man to use a condom.

Q_45	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	103	62.05	103	62.05
Agree	32	19.28	135	81.33
Disagree	26	15.66	161	96.99
Strongly disagree	5	3.01	166	100.00

Frequency missing = 4

Table B4_8: A man needs other women, even if he has a steady partner.

Q_46	Frequency	Percent	Cumulative frequency	Cumulative percent
Strongly agree	106	62.35	106	62.35
Agree	46	27.06	152	89.41
Disagree	15	8.82	167	98.24
Strongly disagree	3	1.76	170	100.00

Appendix B5: Scores for female respondents in the Zwartwater area

Table B5_1: For all age groups

Variable	Label	N	Mean	Std dev	Minimum	Maximum
Q_33	**How many children do you have**	170	2.01	2.10	0.00	9.00
Q_37_1	**If yes, How many family members died as a result of AIDS**	64	1.77	1.53	1.00	10.00
Q_38_1	**If yes, How many of your friends died as a result of AIDS**	80	3.20	4.40	1.00	35.00
Knowledge		150	8.86	1.63	5.00	12.00
Attitude towards HIV		165	4.88	1.88	0.00	7.00
Attitude towards AIDS		167	2.60	1.43	0.00	4.00

Table B5_2: Age group (in years) = 15<25

Variable	Label	N	Mean	Std dev	Minimum	Maximum
Q_33	**How many children do you have**	65	0.28	0.55	0.00	2.00
Q_37_1	**If yes, How many family members died as a result of AIDS**	20	1.70	1.03	1.00	5.00
Q_38_1	**If yes, How many of your friends died as a result of AIDS**	25	3.32	3.42	1.00	14.00
Knowledge		58	8.91	1.71	5.00	12.00
Attitude towards HIV		61	5.28	1.75	1.00	7.00
Attitude towards AIDS		65	2.74	1.31	0.00	4.00

Table B5_3: Age group (in years) = 25<35

Variable	Label	N	Mean	Std dev	Minimum	Maximum
Q_33	**How many children do you have**	34	1.53	0.99	0.00	3.00
Q_37_1	**If yes, How many family members died as a result of AIDS**	18	1.50	0.79	1.00	3.00
Q_38_1	**If yes, How many of your friends died as a result of AIDS**	17	2.41	1.33	1.00	5.00
Knowledge		28	8.89	1.29	7.00	12.00
Attitude towards HIV		34	4.97	1.90	0.00	7.00
Attitude towards AIDS			2.67	1.49	0.00	4.00

Table B5_4: Age group (in years) = 35<45

Variable	Label	N	Mean	Std dev	Minimum	Maximum
Q_33	**How many children do you have**	36	3.42	1.63	0.00	7.00
Q_37_1	**If yes, How many family members died as a result of AIDS**	15	2.60	2.67	1.00	10.00
Q_38_1	**If yes, How many of your friends died as a result of AIDS**	23	4.43	7.17	1.00	35.00
Knowledge		33	8.82	1.79	5.00	12.00
Attitude towards HIV		36	4.75	1.89	1.00	7.00
Attitude towards AIDS		35	2.57	1.54	0.00	4.00

Table B5_5: Age group (in years) = 45 and above

Variable	Label	N	Mean	Std dev	Minimum	Maximum
Q_33	**How many children do you have**	35	4.23	2.14	1.00	9.00
Q_37_1	**If yes, How many family members died as a result of AIDS**	11	1.18	0.40	1.00	2.00
Q_38_1	**If yes, How many of your friends died as a result of AIDS**	15	2.00	1.31	1.00	5.00
Knowledge		31	8.77	1.67	5.00	12.00
Attitude towards HIV		34	4.24	1.97	1.00	7.00
Attitude towards AIDS		34	2.29	1.47	0.00	4.00

Appendix B6: Knowledge and attitude scores

Table B6_1: Knowledge

Moments			
N	150	**Sum weights**	150
Mean	8.86	**Sum observations**	1329
Std deviation	1.63448574	**Variance**	2.67154362
Skewness	-0.2670046	**Kurtosis**	-0.2593507
Uncorrected SS	12173	**Corrected SS**	398.06
Coeff variation	18.4479203	**Std error mean**	0.1334552

Basic Statistical Measures			
Location		**Variability**	
Mean	8.860000	**Std deviation**	1.63449
Median	9.000000	**Variance**	2.67154
Mode	9.000000	**Range**	7.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	12
99%	12
95%	11
90%	11
75% Q3	10
50% Median	9
25% Q1	8
10%	7
5%	6
1%	5
0% Min	5

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
5	169	12	59
5	164	12	92
5	132	12	102
5	106	12	126
5	23	12	161

Frequency Counts			
Value	Count	Percent	
		Cell	Cum
5	5	3.3	3.3
6	7	4.7	8.0
7	18	12.0	20.0
8	29	19.3	39.3
9	35	23.3	62.7
10	34	22.7	85.3
11	15	10.0	95.3
12	7	4.7	100.0

Table B6_2: Attitude towards HIV

Moments			
N	165	Sum weights	165
Mean	4.88484848	Sum observations	806
Std deviation	1.88189727	Variance	3.54153732
Skewness	-0.7206134	Kurtosis	-0.5452372
Uncorrected SS	4518	Corrected SS	580.812121
Coeff variation	38.5251922	Std error mean	0.1465055

Basic Statistical Measures			
Location		Variability	
Mean	4.884848	Std deviation	1.88190
Median	5.000000	Variance	3.54154
Mode	6.000000	Range	7.00000
		Interquartile range	2.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	33.34242	Pr > |t|	<.0001
Sign	M	82	Pr >= |M|	<.0001
Signed Rank	S	6765	Pr >= |S|	<.0001

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	7
99%	7
95%	7
90%	7
75% Q3	6
50% Median	5
25% Q1	4
10%	2
5%	1
1%	1
0% Min	0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
0	78	7	144
1	162	7	150
1	148	7	156
1	143	7	161
1	137	7	170

Frequency Counts			
Value	**Count**	**Percents**	
		Cell	**Cum**
0	1	0.6	0.6
1	11	6.7	7.3
2	13	7.9	15.2
3	15	9.1	24.2
4	16	9.7	33.9
5	31	18.8	52.7
6	41	24.8	77.6
7	37	22.4	100.0

Table B6_3: Attitude towards AIDS

Moments			
N	167	**Sum weights**	167
Mean	2.5988024	**Sum observations**	434
Std deviation	1.42718815	**Variance**	2.03686603
Skewness	-0.5982977	**Kurtosis**	-1.0190944
Uncorrected SS	1466	**Corrected SS**	338.11976
Coeff variation	54.9171479	**Std error mean**	0.11043914

Basic Statistical Measures			
Location		**Variability**	
Mean	2.598802	**Std deviation**	1.42719
Median	3.000000	**Variance**	2.03687
Mode	4.000000	**Range**	4.00000
		Interquartile range	3.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	4
99%	4
95%	4
90%	4
75% Q3	4
50% Median	3
25% Q1	1
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
0	164	4	156
0	162	4	157
0	155	4	160
0	149	4	161
0	143	4	168

Frequency Counts			
Value	**Count**	**Percents**	
		Cell	**Cum**
0	21	12.6	12.6
1	22	13.2	25.7
2	24	14.4	40.1
3	36	21.6	61.7
4	64	38.3	100.0

Appendix B7: Knowledge and attitude scores by age group

Table B7_1: Knowledge by age group (in years) = 15<25

Moments			
N	58	**Sum weights**	58
Mean	8.9137931	**Sum observations**	517
Std deviation	1.70946265	**Variance**	2.92226255
Skewness	-0.1232507	**Kurtosis**	-0.690613
Uncorrected SS	4775	**Corrected SS**	166.568966
Coeff variation	19.1777241	**Std error mean**	0.22446344

Basic Statistical Measures			
Location		**Variability**	
Mean	8.913793	**Std deviation**	1.70946
Median	9.000000	**Variance**	2.92226
Mode	8.000000	**Range**	7.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	12
99%	12
95%	12
90%	11
75% Q3	10
50% Median	9
25% Q1	8
10%	7
5%	6
1%	5
0% Min	5

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
5	23	11	45
6	63	11	62
6	60	12	1
6	32	12	54
6	31	12	59

Frequency Counts			
Value	Count	Percents	
		Cell	Cum
5	1	1.7	1.7
6	4	6.9	8.6
7	7	12.1	20.7
8	13	22.4	43.1
9	10	17.2	60.3
10	11	19.0	79.3
11	9	15.5	94.8
12	3	5.2	100.0

Table B7_2: Attitude towards HIV by age group (in years) = 15<25

Moments			
N	61	Sum weights	61
Mean	5.27868852	Sum observations	322
Std deviation	1.7524378	Variance	3.07103825
Skewness	-1.115441	Kurtosis	0.45151904
Uncorrected SS	1884	Corrected SS	184.262295
Coeff variation	33.1983559	Std error mean	0.22437667

Basic Statistical Measures			
Location		Variability	
Mean	5.278689	Std deviation	1.75244
Median	6.000000	Variance	3.07104
Mode	6.000000	Range	6.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	7
99%	7
95%	7
90%	7
75% Q3	7
50% Median	6
25% Q1	5
10%	3
5%	1
1%	1
0% Min	1

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1	57	7	47
1	23	7	51
1	19	7	60
1	10	7	62
2	53	7	64

Frequency Counts			
Value	Count	Percents	
		Cell	Cum
1	4	6.6	6.6
2	2	3.3	9.8
3	4	6.6	16.4
4	5	8.2	24.6
5	11	18.0	42.6
6	18	29.5	72.1
7	17	27.9	100.0

Table B7_3: Attitude towards AIDS by age group (in years) = 15<25

Moments			
N	65	Sum weights	65
Mean	2.73846154	Sum observations	178
Std deviation	1.31430736	Variance	1.72740385
Skewness	-0.7320475	Kurtosis	-0.6759688
Uncorrected SS	598	Corrected SS	110.553846
Coeff variation	47.99437	Std error mean	0.16301977

Basic Statistical Measures			
Location		Variability	
Mean	2.738462	Std deviation	1.31431
Median	3.000000	Variance	1.72740
Mode	4.000000	Range	4.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	4
99%	4
95%	4
90%	4
75% Q3	4
50% Median	3
25% Q1	2
10%	1
5%	0
1%	0
0% Min	0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
0	53	4	55
0	42	4	58
0	37	4	59
0	23	4	60
0	10	4	62

Frequency Count			
Value	**Count**	**Percents**	
		Cell	**Cum**
0	5	7.7	7.7
1	9	13.8	21.5
2	9	13.8	35.4
3	17	26.2	61.5
4	25	38.5	100.0

Table B7_4: Knowledge by age group (in years) = 25<35

Moments			
N	28	**Sum weights**	28
Mean	8.89285714	**Sum observations**	249
Std deviation	1.28637549	**Variance**	1.6547619
Skewness	0.21352441	**Kurtosis**	-0.1406349
Uncorrected SS	2259	**Corrected SS**	44.6785714
Coeff variation	14.4652666	**Std error mean**	0.24310212

Basic Statistical Measures			
Location		**Variability**	
Mean	8.892857	**Std deviation**	1.28638
Median	9.000000	**Variance**	1.65476
Mode	9.000000	**Range**	5.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	12
99%	12
95%	11
90%	10
75% Q3	10
50% Median	9
25% Q1	8
10%	7
5%	7
1%	7
0% Min	7

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
7	97	10	79
7	85	10	90
7	83	10	99
7	77	11	75
7	71	12	92

Frequency Counts			
Value	**Count**	**Percents**	
		Cell	**Cum**
7	5	17.9	17.9
8	5	17.9	35.7
9	9	32.1	67.9
10	7	25.0	92.9
11	1	3.6	96.4
12	1	3.6	100.0

Table B7_5: Attitude towards HIV by age group (in years) = 25<35

Moments			
N	34	**Sum weights**	34
Mean	4.97058824	**Sum observations**	169
Std deviation	1.89872835	**Variance**	3.60516934
Skewness	-0.9430715	**Kurtosis**	0.22731812
Uncorrected SS	959	**Corrected SS**	118.970588
Coeff variation	38.1992685	**Std error mean**	0.32562923

Basic Statistical Measures			
Location		**Variability**	
Mean	4.970588	**Std deviation**	1.89873
Median	5.500000	**Variance**	3.60517
Mode	6.000000	**Range**	7.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	7.0
99%	7.0
95%	7.0
90%	7.0
75% Q3	6.0
50% Median	5.5
25% Q1	4.0
10%	2.0
5%	1.0
1%	0.0
0% Min	0.0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
0	78	7	82
1	93	7	83
2	97	7	90
2	87	7	91
2	71	7	94

Frequency Counts			
Value	Count	Percents	
		Cell	Cum
0	1	2.9	2.9
1	1	2.9	5.9
2	3	8.8	14.7
3	1	2.9	17.6
4	6	17.6	35.3
5	5	14.7	50.0
6	9	26.5	76.5
7	8	23.5	100.0

Table B7_6: Attitude towards AIDS by age group (in years) = 25<35

Moments			
N	33	Sum weights	33
Mean	2.66666667	Sum observations	88
Std deviation	1.49303941	Variance	2.22916667
Skewness	-0.7041014	Kurtosis	-0.8972774
Uncorrected SS	306	Corrected SS	71.3333333
Coeff variation	55.9889777	Std error mean	0.2599048

Basic Statistical Measures			
Location		Variability	
Mean	2.666667	Std deviation	1.49304
Median	3.000000	Variance	2.22917
Mode	4.000000	Range	4.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	4
99%	4
95%	4
90%	4
75% Q3	4
50% Median	3
25% Q1	2
10%	0
5%	0
1%	0
0% Min	0

Basic Statistical Measures			
Location		**Variability**	
Mean	4.750000	**Std deviation**	1.88793
Median	5.000000	**Variance**	3.56429
Mode	6.000000	**Range**	6.00000
		Interquartile range	3.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	7
99%	7
95%	7
90%	7
75% Q3	6
50% Median	5
25% Q1	3
10%	2
5%	1
1%	1
0% Min	1

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
1	122	7	123
1	100	7	126
2	113	7	130
2	108	7	131
2	106	7	135

Frequency Counts			
Value	**Count**	**Percents**	
		Cell	**Cum**
1	2	5.6	5.6
2	3	8.3	13.9
3	7	19.4	33.3
4	2	5.6	38.9
5	5	13.9	52.8
6	10	27.8	80.6
7	7	19.4	100.0

Table B7_9: Attitude towards AIDS by age group (in years) = 35<45

Moments			
N	35	**Sum weights**	35
Mean	2.57142857	**Sum observations**	90
Std deviation	1.53939855	**Variance**	2.3697479
Skewness	-0.5528548	**Kurtosis**	-1.2956475
Uncorrected SS	312	**Corrected SS**	80.5714286
Coeff variation	59.8654992	**Std error mean**	0.26020585

Basic Statistical Measures			
Location		**Variability**	
Mean	2.571429	**Std deviation**	1.53940
Median	3.000000	**Variance**	2.36975
Mode	4.000000	**Range**	4.00000
		Interquartile range	3.00000

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	4
99%	4
95%	4
90%	4
75% Q3	4
50% Median	3
25% Q1	1
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
0	120	4	128
0	113	4	129
0	108	4	131
0	105	4	132
0	100	4	135

Frequency Counts			
Value	Count	Percents	
		Cell	Cum
0	5	14.3	14.3
1	6	17.1	31.4
2	3	8.6	40.0
3	6	17.1	57.1
4	15	42.9	100.0

Table B7_10: Knowledge by age group (in years) = 45 and above

Moments			
N	31	Sum weights	31
Mean	8.77419355	Sum observations	272
Std deviation	1.66752666	Variance	2.78064516
Skewness	-0.7694885	Kurtosis	0.36664106
Uncorrected SS	2470	Corrected SS	83.4193548
Coeff variation	19.0048994	Std error mean	0.29949663

Basic Statistical Measures			
Location		Variability	
Mean	8.77419	Std deviation	1.66753
Median	9.00000	Variance	2.78065
Mode	10.00000	Range	7.00000
		Interquartile range	2.00000

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	12
99%	12
95%	11
90%	10
75% Q3	10
50% Median	9
25% Q1	8
10%	6
5%	5
1%	5
0% Min	5

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	7
99%	7
95%	7
90%	7
75% Q3	6
50% Median	5
25% Q1	2
10%	1
5%	1
1%	1
0% Min	1

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
1	162	7	144
1	148	7	150
1	143	7	156
1	137	7	161
2	167	7	170

Frequency Counts			
Value	**Count**	**Percents**	
		Cell	**Cum**
1	4	11.8	11.8
2	5	14.7	26.5
3	3	8.8	35.3
4	3	8.8	44.1
5	10	29.4	73.5
6	4	11.8	85.3
7	5	14.7	100.0

Table B7_12: Attitude towards AIDS by age group (in years) = 45 and above

Moments			
N	34	**Sum weights**	34
Mean	2.29411765	**Sum observations**	78
Std deviation	1.4674119	**Variance**	2.15329768
Skewness	-0.3623845	**Kurtosis**	-1.265122
Uncorrected SS	250	**Corrected SS**	71.0588235
Coeff variation	63.9641084	**Std error mean**	0.25165906

Basic Statistical Measures			
Location		**Variability**	
Mean	2.294118	**Std deviation**	1.46741
Median	3.000000	**Variance**	2.15330
Mode	3.000000	**Range**	4.00000
		Interquartile range	3.00000

Note: The mode displayed is the smallest of 2 modes with a count of 9.

Quantiles (Definition 5)	
Quantile	**Estimate**
100% Max	4
99%	4
95%	4
90%	4
75% Q3	4
50% Median	3
25% Q1	1
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
0	164	4	156
0	162	4	157
0	155	4	160
0	149	4	161
0	143	4	168

Frequency Counts			
Value	Count	Percents	
		Cell	Cum
0	6	17.6	17.6
1	5	14.7	32.4
2	5	14.7	47.1
3	9	26.5	73.5
4	9	26.5	100.0

Appendix B8: Spearman correlations between the knowledge and attitudes scores

Table B8_1: Spearman correlations for all scores

Simple Statistics						
Variable	**N**	**Mean**	**Std Dev**	**Median**	**Minimum**	**Maximum**
Knowledge	150	8.86000	1.63449	9.00000	5.00000	12.00000
Attitude towards HIV	165	4.88485	1.88190	5.00000	0	7.00000
Attitude towards AIDS	167	2.59880	1.42719	3.00000	0	4.00000

Spearman Correlation Coefficients Prob > |r| under H0: Rho=0 Number of Observations			
	Knowledge	**Attitude towards HIV**	**Attitude towards AIDS**
Knowledge	1.00000	0.26841	0.26954
		0.0010	0.0009
	150	147	149
Attitude towards HIV	0.26841	1.00000	0.79913
	0.0010		<.0001
	147	165	163
Attitude towards AIDS	0.26954	0.79913	1.00000
	0.0009	<.0001	
	149	163	167

Table B8_2: Spearman correlations by age groups

Age group (in years) = 15<25

Simple Statistics						
Variable	**N**	**Mean**	**Std Dev**	**Median**	**Minimum**	**Maximum**
Knowledge	58	8.91379	1.70946	9.00000	5.00000	12.00000
Attitude towards HIV	61	5.27869	1.75244	6.00000	1.00000	7.00000
Attitude towards AIDS	65	2.73846	1.31431	3.00000	0	4.00000

Spearman Correlation Coefficients Prob > |r| under H0: Rho=0 Number of Observations			
	Knowledge	**Attitude towards HIV**	**Attitude towards AIDS**
Knowledge	1.00000	0.03204	0.19969
		0.8164	0.1329
	58	55	58
Attitude towards HIV	0.03204	1.00000	0.73083
	0.8164		<.0001
	55	61	61
Attitude towards AIDS	0.19969	0.73083	1.00000
	0.1329	<.0001	
	58	61	65

Age group (in years) = 25<35

Simple Statistics						
Variable	**N**	**Mean**	**Std Dev**	**Median**	**Minimum**	**Maximum**
Knowledge	28	8.89286	1.28638	9.00000	7.00000	12.00000
Attitude towards HIV	34	4.97059	1.89873	5.50000	0	7.00000
Attitude towards AIDS	33	2.66667	1.49304	3.00000	0	4.00000

Spearman Correlation Coefficients Prob > |r| under H0: Rho=0 Number of Observations			
	Knowledge	**Attitude towards HIV**	**Attitude towards AIDS**
Knowledge	1.00000	0.31495	0.09578
		0.1026	0.6278
	28	28	28
Attitude towards HIV	0.31495	1.00000	0.86042
	0.1026		<.0001
	28	34	33
Attitude towards AIDS	0.09578	0.86042	1.00000
	0.6278	<.0001	
	28	33	33

Age group (in years) = 35<45

Simple Statistics						
Variable	**N**	**Mean**	**Std Dev**	**Median**	**Minimum**	**Maximum**
Knowledge	33	8.81818	1.79330	9.00000	5.00000	12.00000
Attitude towards HIV	36	4.75000	1.88793	5.00000	1.00000	7.00000
Attitude towards AIDS	35	2.57143	1.53940	3.00000	0	4.00000

Spearman Correlation Coefficients Prob > |r| under H0: Rho=0 Number of Observations			
	Knowledge	**Attitude towards HIV**	**Attitude towards AIDS**
Knowledge	1.00000	0.55809	0.47971
		0.0007	0.0055
	33	33	32
Attitude towards HIV	0.55809	1.00000	0.81872
	0.0007		<.0001
	33	36	35
Attitude towards AIDS	0.47971	0.81872	1.00000
	0.0055	<.0001	
	32	35	35

Age group (in years) = 45 and above

Simple Statistics						
Variable	**N**	**Mean**	**Std Dev**	**Median**	**Minimum**	**Maximum**
Knowledge	31	8.77419	1.66753	9.00000	5.00000	12.00000
Attitude towards HIV	34	4.23529	1.97037	5.00000	1.00000	7.00000
Attitude towards AIDS	34	2.29412	1.46741	3.00000	0	4.00000

Spearman Correlation Coefficients Prob > |r| under H0: Rho=0 Number of Observations			
	Knowledge	**Attitude towards HIV**	**Attitude towards AIDS**
Knowledge	1.00000	0.24224	0.25296
		0.1892	0.1698
	31	31	31
Attitude towards HIV	0.24224	1.00000	0.84574
	0.1892		<.0001
	31	34	34
Attitude towards AIDS	0.25296	0.84574	1.00000
	0.1698	<.0001	
	31	34	34

Appendix B9: Kruskal-Wallis Test by age group

Table B9_1

Wilcoxon Scores (Rank Sums) for Q_33 by age group					
Age group	**N**	**Sum of scores**	**Expected under H0**	**Std dev under H0**	**Mean score**
15<25	65	2614.0	5557.50	304.153962	40.215385
25<35	34	2829.0	2907.00	250.351998	83.205882
35<45	36	4444.0	3078.00	255.708874	123.444444
45+	35	4648.0	2992.50	253.071393	132.800000
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-square	114.4013
DF	3
Pr > Chi-square	<.0001

Table B9_2

Wilcoxon Scores (Rank Sums) for Q_37_1 by age group					
Age group	**N**	**Sum of scores**	**Expected under H0**	**Std dev under H0**	**Mean score**
15<25	20	686.50	650.00	59.580128	34.325000
25<35	18	561.00	585.00	57.793003	31.166667
35<45	15	553.00	487.50	54.450737	36.866667
45+	11	279.50	357.50	48.494711	25.409091
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-square	3.6322
DF	3
Pr > Chi-square	0.3040

Table B9_3

Wilcoxon Scores (Rank Sums) for Q_38_1 by age group					
Age group	N	Sum of scores	Expected under H0	Std dev under H0	Mean score
15<25	25	1036.0	1012.50	92.293807	41.440000
25<35	17	698.0	688.50	81.454662	41.058824
35<45	23	996.0	931.50	90.120285	43.304348
45+	15	510.0	607.50	77.718340	34.000000
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-square	1.6990
DF	3
Pr > Chi-square	0.6372

Table B9_4

Wilcoxon Scores (Rank Sums) for knowledge by age group					
Age group	N	Sum of scores	Expected under H0	Std dev under H0	Mean score
15<25	58	4436.0	4379.00	254.613634	76.482759
25<35	28	2089.0	2114.00	203.719535	74.607143
35<45	33	2462.0	2491.50	216.582641	74.606061
45+	31	2338.0	2340.50	211.703517	75.419355
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-square	0.0576
DF	3
Pr > Chi-square	0.9964

Table B9_5

Wilcoxon Scores (Rank Sums) for attitude towards HIV by age group					
Age group	**N**	**Sum of scores**	**Expected under H0**	**Std dev under H0**	**Mean score**
15<25	61	5675.50	5063.0	290.910409	93.040984
25<35	34	2897.00	2822.0	243.754578	85.205882
35<45	36	2868.00	2988.0	248.899360	79.666667
45+	34	2254.50	2822.0	243.754578	66.308824
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-square	7.3544
DF	3
Pr > Chi-square	0.0614

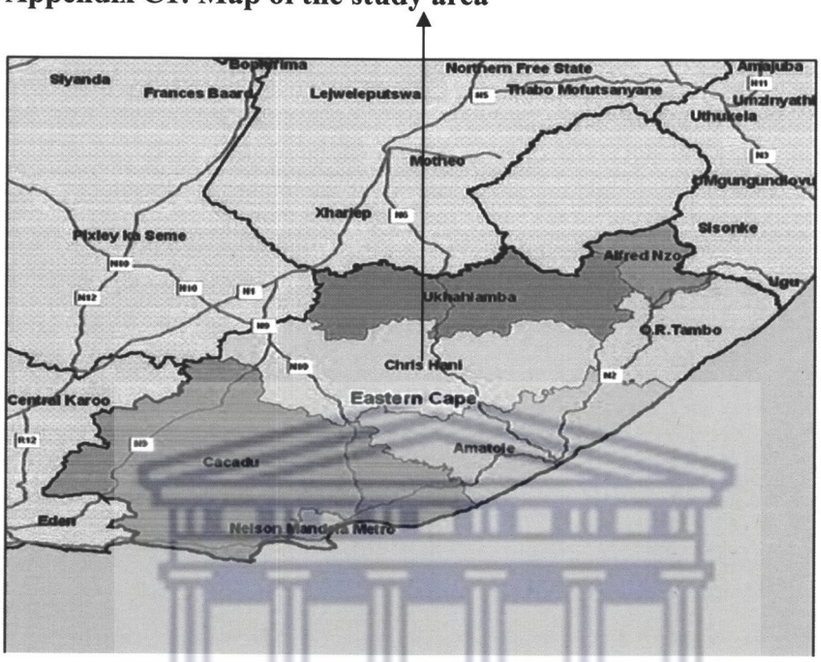
Table B9_6

Wilcoxon Scores (Rank Sums) for attitude towards AIDS by age group					
Age group	**N**	**Sum of scores**	**Expected under H0**	**Std dev under H0**	**Mean score**
15<25	65	5688.0	5460.0	293.251835	87.507692
25<35	33	2883.0	2772.0	239.493287	87.363636
35<45	35	2962.0	2940.0	244.796364	84.628571
45+	34	2495.0	2856.0	242.186122	73.382353
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-square	2.3175
DF	3
Pr > Chi-square	0.5092

APPENDIX C

Appendix C1: Map of the study area



(www.dplg.gov.za/html/progs/isrdpNodes/Hani.htm)