

University of Zululand

KwaDlangezwa, KwaZulu-Natal

**A SURVEY OF STUDENTS' KNOWLEDGE,
BEHAVIOUR AND RESULTANT ATTITUDES
TOWARDS HIV/AIDS ON THE UNIVERSITY
OF ZULULAND CAMPUS**

**Dissertation in partial fulfillment of the requirements for the
degree Masters in Counselling Psychology**

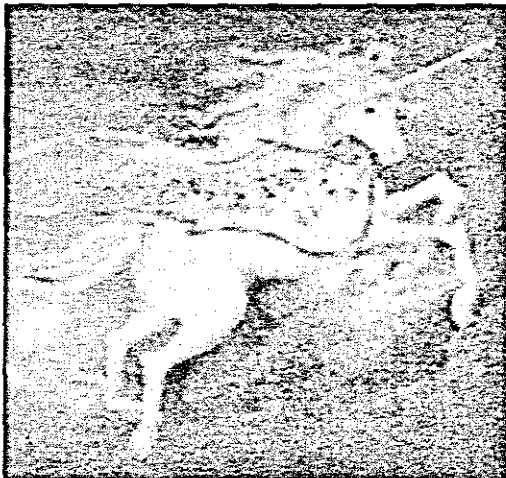
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ABSTRACT

The study investigated student behaviour and knowledge related to HIV/AIDS on the University of Zululand campus. Because of the social and economic conditions that exist in the country today such research is seen as both urgent and pertinent. It is hoped that the study will add to the knowledge base generated by other studies conducted at tertiary institutions throughout South Africa. The study had certain assumptions, which have been supported by the results of the survey. It was postulated that women students would be more conservative in sexual behaviour than male students and that females would be more accepting and empathetic towards People living with HIV/AIDS (PLWHA). The study also predicted that there would be a segment of the student population who would reveal a dissonance between attitudes, knowledge and behaviours and also that a proportion of students of both sexes would reveal significant gaps in their knowledge about how HIV/AIDS is transmitted. These predictions are underpinned by the results and discussion thereof, which places them within the context of early 21st century South African society.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

HIV/AIDS is arguably the most devastating disease in the history of the world. Every country in the world has been affected by its insidious onslaught. Africa is in crisis. HIV/AIDS is a threat to the economic and social stability of a continent already devastated by wars and political instability.

This study investigates behaviour, attitudes and concomitant knowledge towards HIV/AIDS in South Africa. It focuses on university students because they are individuals who will be vital to the economic and social future of the country. As leaders of the future they are role models for younger generations within communities in the region. Their behaviour and attitudes are thus important indicators of awareness and knowledge within what Shell (2000) notes as an age group, which is at particular risk. Although the research will only be conducted at the University of Zululand, because student populations throughout the country are well matched in terms of age and education it is probable that the research is indicative of South African students' behaviour and attitudes generally. It is hoped that the study will help in planning and updating policy for addressing the issues of HIV/AIDS on the University of Zululand campus particularly, and be helpful in formulating new plans of action in the tertiary education arena generally.

1.2 Statement of the problem

HIV/AIDS is undoubtedly the most devastating infectious disease that humanity has ever encountered (UNAIDS, 2001). In the two decades since HIV was identified it has become a worldwide pandemic. It is estimated that more than 60 million people have become infected with the virus (UNAIDS, 2002). HIV/AIDS is the fourth major killer globally and the prime cause of death in Sub-Saharan Africa (ibid). There is as yet no cure for the disease. Research by Dr Frank Palmer on HIV resistant sex workers in Nigeria has led to clinical trials with a vaccine in the United Kingdom, however it is estimated that it will be at least ten years before its efficacy will be known (*National Geographic*, 2001).

The human immuno-deficiency virus (HIV) is made up of a shell of proteins, which surround a strand of ribonucleic acid (RNA) and some enzymes (Gallo & Joy, 1991). HIV enters the bloodstream mainly through exchange of body liquids, mostly through sexual intercourse, and is immediately detected by the helper T-cells that recognise the virus as an enemy. These T-cells activate natural killer cells, which attack and eat cells that have been infected by viruses or bacteria. The Aids virus however escapes the body's defenders and it homes in on the helper T cell itself (ibid). Complex processes ensue, but in effect what happens is that the deoxyribonucleic acid (DNA), which is the master molecule of life, actually commands the cell to make more Aids viruses. After this process has been repeated a number of times the immune system is deprived of a critical number of white blood cells and is unable to combat opportunistic infections

(Stine, 1999). Even strong immune systems may not halt or slow the onset of Aids.

Globally infection rates continue to increase. There is the probability of high-unreported incidence in Eastern Europe and China while the Middle East and North Africa has a slower but marked spread; in India the pandemic shows signs of potential crisis (UNAIDS, 2001). In Sub-Saharan Africa the catastrophe grows. Shell (2000) asserts that the rapidity of the spread of the disease in Southern Africa has major implications for the long-term social, economic and military stability of the region. University students, who are often referred to as leaders of the future, fall within the fifteen to twenty four demographic age range noted as being at the highest risk of infection in the region (Shell, 2000, UNAIDS, 2001).

HIV/AIDS in South Africa is the fastest growing epidemic in the world amongst pregnant women (UNAIDS, 2001). The incidence of the virus in pregnant women was estimated at 24.5% by the end of 2000, with one of the highest infection rates being noted in KwaZulu/Natal (UNAIDS, 2001, p. 14). Schonteich (2000) predicts that the 350.000 children infected with HIV/AIDS and orphans will be more at risk of engaging in criminal activity, due to lack of proper support and nurturance and the inability of overburdened welfare organisations to provide adequate care. This will be a significant contributor to the increase of the crime rate in the country thus further undermining its stability (Schonteich, 2000). In tandem with the social impact, Quatteck (2000, p. 29) notes that the impact on the

South African economy will 'not bode well' for much needed foreign investment and the growth of the local Gross Domestic Product (GDP).

As with most life threatening diseases, people from middle-class backgrounds who are educated, well nourished and who have access to appropriate drugs have a greater life expectancy. The existing social and economic conditions among the working class population of South Africa who are mostly poorly educated and often badly nourished are ideal for the transmission of HIV/AIDS. Government policy, which allows limited access to retroviral drugs for HIV pregnant women and the population at large, is probably dictated by economics and is unlikely to change radically in the foreseeable future. It is estimated that 4.2 million South Africans are living with HIV infection (UNAIDS, 2000, p.14). It is predicted that infection rates will rise exponentially within the next twenty years unless effective awareness programmes are implemented which target groups that are most at risk of infection (Shell, 2000). The social problems in South Africa are underpinned by the prevailing paradigm of patriarchy, which since the terrorist attack on the Twin Towers in the United States of America appears to have become reaffirmed globally.

1.3 Motivation for the study

The continued increase in infection rates throughout South Africa is cause for concern. There could be as many as 7.5 million People Living With HIV/AIDS (PLWHA) by 2010 (UNWIRE, 2001). It is apparent that educating the populace of South Africa about the cause and transmission of HIV/AIDS is of overriding

importance. Kelly (2001, p.3) states that the failure of many African universities to tackle the HIV/AIDS crisis, leaving many students surrounded by a 'thick coat of ignorance' does not augur well for the continent.

However, South Africa unlike many African countries has institutionalised the response to HIV/AIDS in most university sectors (Chetty, 2000). Most tertiary institutions have adopted policy on HIV/AIDS. Strategic planning for this initiative evolved from a meeting of South African University Vice-Chancellors (SAUVCA) in October 2000 (Chetty, 2000). Research into HIV/AIDS is carried out by the majority of these institutions, some of which is reviewed by Harrison, Smit & Myer (2000). The University of Zululand adopted an institutional plan for addressing HIV/AIDS in 2001. This policy is wide-ranging and offers basic information about HIV infection and AIDS, informs students where to get help, and gives a synopsis of its policy and code of good practise pertaining to the disease. Dube (2000, p. 2) states:

The University of Zululand recognises that HIV/AIDS is not merely a health issue but a development issue that concerns the entire community. It is therefore committed to playing an active role in mitigating the impact of HIV/AIDS both on its own constituency of staff and students and on society as a whole.

Although policies pertaining to HIV/AIDS have been adopted at most campuses in South Africa a preliminary study into the attitudes and behaviour of students at Rhodes University Campus revealed a worrying dissonance between awareness and behaviour. It also found significant gaps in knowledge about HIV/AIDS transmission (Partington, K.A., Zitianiellis, M., Bohmke, W., Troxler, P., & de

Villiers, P. 2001). The standpoint and conduct of any group designated as, leaders of the future' is significant. Research into the knowledge, behaviour and resultant attitude of students at tertiary institutions is thus both urgent and pertinent in the social and economic climate existing in South Africa today.

1.4 Résumé

The study will investigate student behaviour and knowledge related to HIV/AIDS on the University of Zululand campus. Because of the social and economic conditions that exist in the country today such research is seen as both urgent and pertinent. It is hoped that the study will add to the knowledge base generated by other studies conducted at tertiary institutions throughout South Africa.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

There are many apocryphal narratives about the aetiology of HIV/AIDS. Some pundits believe that it first surfaced in biblical times. In the early days of the pandemic, Michaelides (1991) likened the disease to a plague sent to cleanse the world of sexual perversion and postulated that this type of disaster had wiped out the ancient cities of Sodom and Gomorrah. He refers to a quote from Genesis 19 verse 4:

The men called out to Lot and asked, " Where are the men that came to stay with you tonight? Bring them out to us."

Michaelides (1991) further speculates that the virus lay dormant until the sexual excesses of 20th century, particularly its acceptance of homosexuality, caused it to reappear. This type of homophobic response has mostly disappeared. Another narrative states that HIV could have mutated from a virus similar to that carried by the Green Monkey of Central Africa. Hypotheses abound but definite answers are few. However, it is generally accepted that the following is the most likely scenario (Fan, H., Chen, I., Rosenberg, N., & Sugden, B., 1989, p.90).

The HIV that exists today probably evolved to its current form in Central Africa one hundred or so years ago. Fifteen to twenty years ago, it spread into high-density populations in the Western world and Africa, leading to the AIDS epidemic.

Schoub (1995) concurs with this scenario and further notes that HIV/AIDS was first observed in the USA and later recognised in Europe and Africa.

Although the aetiology of the disease is unknown we do have answers about the physiology and pathophysiology of the retrovirus. HIV/AIDS is well understood bio-medically and has been well researched from this perspective. This chapter seeks to give a broad overview of the physiology and pathophysiology associated with HIV/AIDS and look at its epidemiology globally, in Sub Saharan Africa and more pertinently in South Africa. It will also review some of the research, which has been conducted on South African University campuses.

2.2 The physiology of HIV/AIDS

The HIV virus is called the human immuno-deficiency virus or HIV; it is also a retrovirus. There are two strains of the HIV virus (Fan, Chen, Rosenberg & Sugden, 1991, p. 11):

Acquired immune deficiency (AIDS) and its aetiological agent, HIV, are of great clinical importance today. There are actually two related strains of HIV, HIV – 1 and HIV – 2. HIV 1 is the predominant virus associated with the current AIDS epidemic and is found in sub-Saharan Africa, North America, Europe and other parts of the world. HIV – 2 is currently found predominately in western coastal Africa, with little presence in North America or Europe. There is some suggestion that HIV – 2 may cause AIDS less efficiently than does HIV – 1.

It must also be noted that the HIV – 1 type itself has a number of subtypes, which have differing geographic distributions but all produce AIDS similarly. The genetic information of these viruses is carried in a single strand of RNA, which is surrounded by shell proteins (Gallo & Joy, 1991). In order for a retrovirus to take over a cell and replicate it must change the RNA to DNA, which is the reverse of most genetic messages. It is this backward flow of information that gives rise to the name retrovirus (ibid). The HIV virus is small, even in the microscopic world of bacteria. For instance, all viruses are smaller than a wavelength of visible light (Hammond, 1998). They contain a core of genetic material, either ribonucleic acid (RNA) or deoxyribonucleic acid (DNA) which is surrounded by a protective envelope or shell of proteins. There is some question as to whether viruses can be called living creatures as they contain proteins and genetic material but lack the cell structures common to all life (ibid). Viruses can only reproduce within a host, which they choose with care. The HIV virus is programmed to target the human immune system and its T - cells (Fan et al., 1989). The retrovirus is made up of a shell of proteins that surround a strand of RNA and various enzymes; RNA is important to the control of chemical activities, which takes place inside cells (Gallo & Joy, 1991). The kind of protein on the shell (or envelope) which encompasses the virus is shaped in such a way that it fits together exactly with another protein on the surface of the target cell; if the target cell does not have that particular protein then the virus cannot invade it (ibid).

AIDS is a disease, which is caused by the HIV retrovirus. It breaks down that part of the body, which is known as the immune system. The body's immune system ordinarily provides us with the weapons that we need to fight invading organisms, mostly we do not know we are under attack as the immune system fights off the intruders with ease (ibid). The virus enters the bloodstream typically during sexual intercourse; the body immediately detects the virus. According to Schoub (1995), the virus can also be transmitted by:

- Blood exchange – either by blood transfusion or the sharing of needles typical of substance abusers who use intravenous injections.
- Injuries by needles or other sharp instruments – more likely to happen in hospital environments.
- Any injury where there is blood. For instance, in Motor Vehicle Accidents persons are at potential risk from the blood of an HIV infected individual.
- Vertical transmission – This occurs when the infection is either transmitted to the foetus in utero or an uninfected baby becoming infected with the disease through its mother's breast milk.

The first three instances of HIV infection can be regarded as 'relatively rare' with sexual intercourse and vertical transmission being modes of 'regular' contagion (ibid, p.120). Schoub (1995, p.122) notes that the retrovirus would be 'rapidly inactivated' by the following impossible routes of transmission:

- Through the gastrointestinal tract.
- By inhaling the virus.
- Bed bug, mosquito or toilet seat transmission.

The white blood cells known as helper T-cells, recognise the virus as an enemy; these T-cells activate natural killer cells, which can usually destroy the cells, which have been infected by viruses or bacteria (ibid). The HIV virus however escapes the body's defenders and ignores most of the other blood cells as it hones in on the helper T-cell itself (Haseltine, 1990). There it finds a protein molecule on the surface of the helper T cell, which acts as a specific receptor for the virus; it is this perfect union between the virus and the molecule that makes the helper T-cells vulnerable to the HIV virus (Michaelides, 1991). The virus then passes through the T- cell's membrane and is stripped of its outer shell in the process (Gallo et al., 1991). The authors state that various responses occur but essentially what happens is that the DNA, which is the master molecule of life, actually commands the cell to replicate. When this process has been repeated a number of times the immune system is deprived of a critical number of white cells and is unable to fight off infections. Haseltine (1990, p. 37) states that:

Some of the major features of the acquired immune deficiency syndrome may be understood in terms of the characteristics of the virus. Life-long infection is a consequence of the life cycle of retroviruses and the formation of stably integrated viral genetic information into host cell DNA.

The strength or weakness of the immune system is probably one of the factors, which determine when an individual develops the symptoms of AIDS after exposure to HIV. Research has shown that people living with HIV/AIDS (PLWHA) do develop antibodies to the virus, but they do not stop the disease; except in the case of HIV resistant sex workers in Nairobi (*National Geographic*, 2001). Schoub (1995) notes that this is because the virus moves directly from one cell to another and does not enter the bloodstream. It then secretes itself in the DNA of the host where the antibodies cannot enter and it reproduces at an exponential rate giving the organism no time to muster its defences (*ibid*). HIV/AIDS can hide for years in the cells of an infected individual and remain undetected. These people have no symptoms and can unknowingly spread the disease, usually through sexual intercourse.

It must also be noted that at first the characteristics of HIV infection in Africa appeared to differ from those in the Western world, this distinction was typically associated with epidemiological variance (*ibid*). Essentially in Africa it was seen as a heterosexual disease and in the West a homosexual plague. This difference is now 'obsolete' as 'the African pattern of Aids is certainly not confined to Africa' (*ibid*, p.21).

To summarise when a virus, which cannot be killed straight away, enters the bloodstream it gets past the body's first defence, antibodies. These antibodies recognise proteins on the viruses called antigens, and attack them. When antibodies do not keep a virus in check the immune system brings out its soldiers;

these are the white blood cells that seek out infected cells and destroy them. Unfortunately the HIV virus attacks these cells, which usually protect us. It turns our white blood cells into units for making more viruses. It actually takes over the white blood cell. Every time a retrovirus takes over, it fills the white blood cell with thousands of new viruses; the cell then dies and releases those viruses to attack more white blood cells. Eventually the immune system cannot stand any more attacks and infections and conditions that would normally be fought of with ease may become life threatening. Globally the pattern of HIV/AIDS infection is characterised by heterosexual transmission.

2.3 Pathophysiology associated with HIV/AIDS

Gallo et al. (1991), state that the primary problem associated with HIV infection is impairment of the body's immune system, as a result of this damage opportunistic infections occur which eventually leads to the organism's death. Fan et al. (1989, p. 99) concur:

The breakdown of the immune system in HIV-infected individuals is a continuous and gradual process. It generally begins with the occurrence of relatively minor opportunistic infections and usually progresses to the severe and life-threatening disease AIDS.

When individuals first become infected with HIV they usually do not suffer any manifestation of disease. In some individuals the body may show an immune reaction against the infection and the following acute symptoms have been described (Schoub, 1995):

- Mononucleosis-like illness – The primary symptoms are swollen lymph glands. In the case of HIV infection, all the lymph glands in the body become infected and sore throats and fevers can occur. This is known as generalised lymphadenopathy.
- Brain infection (encephalopathy) – Swelling and inflammation of the brain can occur even at this early stage in HIV infection. An individual may suffer impaired brain function and have problems with attention, memory and/or problem solving. Personality changes can also occur during the acute phase of HIV infection.

The aforementioned acute symptoms may or may not occur but early failure of the immune system is characterised by one or more of the following (Fan et al., 1989):

- Candida – A genus of fungus, which can be detected on the skin and mucous membranes, for instance the mouth or vagina, of most healthy individuals. In HIV infected individuals Candida often becomes resistant to treatment and it infects the mouth where it forms a white furry plaque. The infection can

spread to the oesophagus causing a distressing burning feeling when the person drinks or eats.

- Shingles – this is an excruciatingly painful condition, which manifests as a rash that usually occurs around the upper body. It is caused by the Varicella zoster, a member of the Herpes family, which causes chickenpox in children. This virus, after the first infection, can remain in the body for many years and be reactivated when the body is under stress. It causes a severe form of shingles that is difficult to treat in HIV infected individuals.
- Hairy Leukoplakia – This is a condition, which has been seen only in HIV/AIDS infected people. The papillae cells on the tongue grow at an exponential rate and cause white plaques to appear which cannot be scraped off. It can make talking and eating difficult.

After the primary or acute infection, which the individual may or may not suffer, symptomology a period without any symptoms follows (the asymptomatic period). This may be of a short duration or can be as long as eight to ten years (or more). HIV/AIDS infection is then characterised by symptoms, which typically fall into three groups described, by Fan et al. (1989):

- Wasting syndrome – This is characterised by a dramatic and sudden loss of weight for which the individual has no explanation. It is usually accompanied

by high fevers and night sweats. Diettrech (1997, p.1) makes the following observation:

There are several interrelated causes of HIV-associated wasting. The primary cause is HIV infection itself. For patients who present with wasting and have not yet pursued all options of potent suppressive antiretroviral therapy, such therapy may reverse the underlying pathophysiology and obviate the need for palliative measures. Other causes of wasting include opportunistic infections (OI's) that may cause diarrhoea, which in turn may lead to wasting. Wasting itself can cause further immunosuppression in infected persons and predispose them to certain diarrhoeal OI's that can lead to more wasting.

- Lymphadenopathy syndrome – This is an acute infection of the lymph glands that can occur at any time after HIV infection. It does not usually cause any pain.
- Dementia – Damage to the brain causes impaired mental function. Essentially, as the disease takes hold the individual may have problems with memory, motor functions and the ability to perform the tasks needed for daily living. After the onset of dementia death characteristically occurs after several months.

It must be stated that the neuropathology of the Central Nervous System (CNS) is complex. The retrovirus enters the brain through infected white blood cells and binds to the cells in the brain are termed T- cell receptors; there are other routes of infection, for instance, cells that are infected migrating to the brain from other areas of the body (ibid). Macreamer & Gallow (1992, p.79) state that:

Not all HIV infected patients have actual brain inflammation (e.g., encephalopathy or encephalitis). Particular areas of the brain (focal lesions) may become infected throughout the brain (diffuse brain involvement) the virus could damage tissue (grey and white matter), nerve cells (neurons, which compromise the brain and spinal cord), connective fibres between neurons (nerve fibres) and the covering of these fibres (myelin sheaths)

Neurological disease can affect up to one third of individuals suffering HIV/AIDS (Fan, H., Connor, R.F. & Villarreal, L.P., 1989).

- Spinal cord damage (myelopathy) – Spinal cord swelling can occur which stops nerve transmission to the muscles this can lead to weakness and paralysis.
- Peripheral nerve damage (neuropathy) – Swelling of the peripheral nerves causes sensations of either numbness, burning and stinging to the extremities.

Full-blown AIDS occurs when the body's immune system has no defences left. It is usual for serious opportunistic infections such as pneumonia and cancer to occur at this stage of the disease. The following opportunistic infections are common to HIV/AIDS infected individuals and indicate that the immune system is in a disastrous decline (ibid):

- Pneumocystitis pneumonia (PCP) – The *Pneumocystis carini* fungus causes inflammation of the lungs. It is a common fungus and illness only originates in individuals who have compromised immune systems. It is one of the leading causes of death among persons who have developed AIDS.
- Systemic mycosis – Three kinds of common fungi found in soil can cause generalised infections in HIV/AIDS infection. Healthy people can also get lung infections from these fungi but they are not usually generalised. When the immune system is suppressed this type of fungi can cause extensive and extreme systemic infections. Usually, with overwhelming infections of this kind, the individual dies.
- Tuberculosis -Schoub (1995) states that one of the most significant chronic infections linked to HIV/AIDS infection is tuberculosis. He notes that in Sub-Saharan Africa it is estimated that over one-half of the population is infected with this disease. The author notes that (ibid, p.107):

Tuberculosis has, therefore, now become the most important opportunistic infection in AIDS in developing countries. The problem is becoming even further compounded by the increasing occurrence of tuberculosis caused by infections, which are resistant to most of the antibiotics and drugs used in its treatment.

Other infections, which occur, are caused by protozoal, bacterial, viral infections and cancers are described by Fan et al., (1989) as:

- The protozoan cryptosporidium causes inflammation of the intestinal tract, which in healthy individuals would be of a short-term duration, not more than several days. In HIV/AIDS patients it causes severe diarrhoea, which can carry on for months causing extreme loss of weight.
- Toxoplasmosis – Domestic cats are a common cause of infection. It is a parasite, which can cause symptoms similar to those seen in brain tumours. It is difficult to treat as the drugs that can be used often cause individuals to develop a toxic reaction.

Bacterial infections occur typically in children born with the disease usually causing lung disease but do not occur as often in HIV/AIDS infected adults. Possibly because the mature immune system constituents that control bacterial infections are less affected by the HIV retrovirus.

- Cytomegalovirus – a commonly occurring virus that belongs to the herpes group can cause fevers, rashes, pneumonia and gastro-enteritis in HIV infected individuals.
- Kaposi's sarcoma – This is a cancer that causes tumours in the bloods vessels, which usually presents in older Jewish or Mediterranean men. In patients with AIDS the tumours, which can be seen as brown, purple or pink lesions on the skin spread over the entire body and its linings.

- Lymphomas – Typically these are cancers, which are associated with the B-cells that exist in the immune system. A specific type of lymphoma can invade the brain of AIDS patients.

In summary, HIV is an RNA retrovirus pathogenic in humans. HIV infection causes a progressive deterioration of immune function, of which AIDS is a late manifestation. This occurs through destruction of lymphocytes, also known as helper T cells. As immune function weakens, the body becomes vulnerable to various infections and tumours, which cause the severe morbidity and mortality associated with AIDS. The loss of helper T cells has an exceptionally devastating impact on immune defence against viruses, fungi, parasites, and certain bacteria.

2.3.1 The treatment of HIV/AIDS

The treatment of individuals is currently undertaken by using Zidovudine (AZT), which suppresses the replication of the retrovirus. A three in one drug is also available and has had favourable results. These drugs delay the onset of AIDS but do not cure the disease. The drug nevirapine is given to pregnant mothers as it cuts the mother to child infection rate from between 20% to 50% (*Sunday Times*, 16.5.2002.p.7). Effectively HIV positive mothers can then give birth to HIV negative babies. The South African Government has been ordered by the High Court of the land to provide nevirapine free to pregnant HIV positive mothers. The African Nationalist government took the battle to the constitutional court; it openly stated that it couldn't bear the cost of such a programme. The result of the hearing allows for the distribution of free nevirapine at specific

clinics/hospitals. It remains to be seen if this policy will see a decrease in infant HIV/AIDS infection and mortality rates.

The idea of immunising people against HIV/AIDS was first stated by Jonas Salk, who invented the polio vaccine (Schoub, 1995). There are numerous problems associated with the formulation of an effective vaccine, not least of which is the ethics of undertaking trials on human subjects. Schoub (1995, p.198) notes that there is a guarded optimism that 'a utilisable vaccine' could be in use in the next two decades. For instance, Dr Frank Palmer has been instrumental in the development of an HIV/AIDS vaccine in the United Kingdom; it is predicted that clinical trials lasting at least 10 years will be required to see if it is effective (*National Geographic*, 2001).

2.4 Patterns of HIV/AIDS infection globally

In 2001, the first year of the new millennium, around 40 million people world-wide were estimated to be living with HIV/AIDS (UNAIDS, 2001). This organisation notes that at least a third of the above figure are people between the ages of 15 – 24 years, who are also those most at risk of infection. UNAIDS (2001) reports that the most worrying thing about this is that most of these individuals do not know they carry the virus. This is because many countries do not have effective campaigns that will educate their populace about the disease. 'Many millions know nothing or too little about HIV to protect themselves against it' (ibid, p.1).

The following 'global overview' is adapted from the World Health Organisations (WHO) UNAIDS update (December, 2002, p. 2):

2.4.1 Eastern Europe and Central Asia

This sector, especially the Russian Federation continues to undergo what has now become the most rapidly growing epidemic in the world. It is calculated that during 2002 there were two hundred and fifty thousand new infections (UNAIDS, 2002, p.13). At least 1 million people live with HIV/AIDS in this region. It is noted that with the high levels of other sexually transmitted infections and the high rate of intravenous drug use the epidemic looks resolved to grow.

2.4.2 Asia and the Pacific

An estimated 7.2 million people in this region live with HIV/AIDS (ibid, p.13). During 2002 the disease caused four hundred and ninety thousand deaths. It must be stated that the seemingly low rates of infection in this region are seriously deceiving. This is because they mask the incidence of high rates of localised epidemics in certain of the world's most populated countries.

2.4.3 The Middle East and North Africa

This region has shown a slow but steady spread of the disease, the estimated incidence of PLWHA is five hundred and fifty thousand (ibid, p.24). The distribution is most notable in countries like Djibouti, Sudan and Somalia

countries already in crisis. It is true that most of the region enjoys a low incidence of infection but increasing numbers of PLWHA are being seen in the Islamic Republic of Iran and Libya.

2.4.4 High-income countries

These carry the risk of a revived epidemic. It is estimated that over seventy six thousand people in countries like North America, England and Australia were infected with HIV/AIDS during 2002 (ibid, p.26). This brings the total of PLWHA in these countries close to two million. There is alarming evidence of rising infection rates. The major problem is the practise of unsafe sex and the high incidence of intravenous drug use.

2.4.5 Latin America and the Caribbean

PLWHA in this region are estimated at nearly two million; the Caribbean has an infection rate amongst adults of about 2%, which makes it the second most area of infection globally (ibid, p.21). However, South and Central American countries have a fairly low infection rate. It is noted that the epidemic has taken hold among particular population groups, particularly amongst the lower working classes.

2.5 HIV/AIDS infection in Sub-Saharan Africa

Sub Saharan Africa remains the region most severely affected by HIV/AIDS. Approximately 3.5 million new infections occurred in 2002, bringing to 29.4 million the total number of people living with HIV/AIDS in this region (UNAIDS, 2002, p.17).

The following overview of specific countries in Sub Saharan Africa has been adapted from the WHO, UNAIDS (2002, pp. 14-20) report and gives an indication of how HIV/AIDS is devastating the region. It must be noted that some countries do not provide statistics relating to the pandemic. Nevertheless, it is a reasonable to assume that all countries in the region share similar patterns of HIV/AIDS infection.

2.5.1 Burkino Faso, Cameroon, Cote d'Ivoire, and Togo

In these West African countries the prevalence of infection rates amongst adults is more than 5%. They are poor regions and little appears to be happening in terms of HIV/AIDS prevention programmes. The Cote d'Ivoire's education programmes are resulting in people becoming more knowledgeable. For instance, in the capital Abidjan, pre-test and post test counselling has ensured that 80% of pregnant women are told the results of their HIV infection tests. Problematically only 50% of these mothers to be return to receive access for drugs, which would help to prevent mother to child transmission of the virus.

2.5.2 Botswana

PLWHA in this comparatively successful country are the first ones to be provided with ante-retroviral drugs through the public healthcare system. The overall rate of infection appears to be on the decline. However, the rate of infection amongst HIV infected pregnant women is still a cause for profound concern. In the rural areas infection rate is recorded at 43.9%, and in the urban areas 35.5%.

2.5.3 The Democratic Republic of Congo

This war torn land, which in the last two decades has slid further and further into political and social chaos, can be safely assumed to have a pandemic of critical proportions. Figures of PLWHA and prevalence of infection are, however, not available.

2.5.4 Kenya

This country can be considered to be in crisis. Kenya's Population Council surveyed the population in 2001 and found that 50% of the women who answered questionnaires had not (UNAIDS, 2001, p.16):

Disclosed their HIV Status to their partners because they feared it would expose them to violence or abandonment not only are voluntary counselling and testing services in short supply across the country, but stigma and discrimination continue to discourage people from discovering their HIV status.

2.5.5 Nigeria

Infection rate amongst the adult populace is estimated to be more than 5%. More money is being spent on governmental response to the pandemic and in 2002 an HIV/AIDS emergency action plan was launched.

2.5.6 Senegal

This country has a government that has general political support for its plan of action related to HIV/AIDS. This has resulted in a stasis – the pandemic, has neither grown nor declined.

2.5.7 Somalia, Guinea Bissau & Sierra Leone

Worryingly in Somalia, 70% of girls aged between 15-19 years have little knowledge about HIV/AIDS. Even worst, in Sierra Leone and Guinea Bissau more than 40% of girls in this age group have never even heard of the disease.

2.5.8 Swaziland

In 2002 the rate of HIV infection amongst pregnant women was 34.5% in rural areas and 32.2% in urban areas, which is extremely high.

2.5.9 Zambia

The rate of infection amongst urban dwellers is declining. This is noted particularly in young women aged between 15 – 24 years. The HIV/AIDS education programmes appear to be bearing fruit. Recent investigation indicate

that urban men and women have fewer multiple partners, wear condoms and engage in sexual intercourse less often. The spread of disease in rural areas is still, however cause for concern.

2.5.10 Zimbabwe

As this country plunges further into political chaos up to date figures on the prevalence of infection is not available. It is reasonable to hypothesise that with the growing levels of malnutrition and lack of state spending on healthcare that the situation in the country, with regard to the pandemic, is of critical proportions. It has been noted that only 11% of the women in the country have been tested for HIV and of this small percentage only about 50% return to collect the results.

To conclude, there is much promising progress in the region, many countries have adopted a national strategic plan and most others are in the process of developing a blueprint (UNAIDS, 2002). It appears that there is increasing political will to stem the flow of HIV/AIDS. This is seen in conferences such as The African Development Forum (2000) and the Organisation of African Unity Summit on HIV/AIDS. It must also be noted that at a meeting of African Heads of State in 2001 the attending leaders agreed to give at least 15% of their countries annual budgets to improve health services.

UNAIDS (2002) states that HIV infection is now undoubtedly the principal threat to the continent's continued progress and its pursuit of an African Renaissance. Many governments in Sub-Saharan Africa rely on a small number of skilled individuals in crucial areas of public, political and social services. Countries that are the worst hit are losing many of these people to AIDS, which has resulted in a decline in their economic base and loss of essential services such as health care, and education (ibid). It must also be stated that the many wars in the region are also instrumental in aiding the spread of the virus. People who live in war torn regions are often exposed to pandemics such as HIV/AIDS, these can move along the faultlines of society taking advantage of its faults and flaws. (Michaelides, 1991). These problems have added to the regions instability which has resulted in less foreign investment. This has further exacerbated the problem because with less investment there are fewer jobs thus poverty and poor social conditions are worsened. Diseases prosper in poverty stricken regions - HIV/AIDS is no exception.

2.6 HIV/AIDS infection in South Africa

UNAIDS (2002) reports that one in nine individuals in the country are infected with the HIV virus. It also notes that the South African Health ministry states that the incidence of HIV infection amongst pregnant women was about 24.5% countrywide in 2000. Although infection rates amongst adolescents has dropped a disturbing trend has been seen in the 20 – 34 year age group who show

increased rates of infection (ibid). Shell (2000, p.7) likens the HIV/AIDS pandemic to warfare:

If the HIV/AIDS pandemic was a war, South African might have to consider surrender. The enemy has targeted women and children after first devastating the nation's small homosexual community. By 2000 the enemy has decimated the entire population – in the strict Roman military sense of losing one in ten.... But the pandemic is not a war: if only it was. The pandemic is worse...the virus has no human understanding.

Although it is probable that HIV/AIDS existed in the country as early as the mid 1970's the first two cases of HIV infection were diagnosed in 1982 and the first death from the disease was recorded in 1985 (ibid). Shell (2000) has tracked the course of the disease and notes that homosexual transmission reached its highest point in 1990 and that from this point forward the disease became devastatingly heterosexual. For instance in 1996 73% of all the reported HIV infected persons were female (Department of Health, 1996, p.10). The following table highlights the devastation, which the pandemic is wreaking in the country (Shell, 2000, p. 11):

Table 2.1
Aids impact on South African population, 1990-2000

1990	2000
Life expectancy 65 years	Life expectancy 56.5 years
Fewer than 1000 AIDS deaths over the year	It is estimated that between 140-150 000 AIDS deaths will have occurred
The probability of a 15 year old dying before the age of 60 = 40 per 1000	The probability of a 15 year old dying before the age of 60 estimated at 80 per 1000
Less than 0.5% of the population infected with HIV/AIDS	Further: +- 330 000 AIDS sick 25000 new infections per day There will be between 100 000 and 150 000 children orphaned due to AIDS (Dorrington, 1999)

There can be no doubt that South Africa's good infrastructure has paradoxically aided the spread of HIV/AIDS. Essentially the good road, train and air networks help convey the virus as well as people and goods; in fact the transmission of the disease globally would probably not have reached pandemic proportions without the advent of the Jumbo Jet in the late 1970's. Partington (1998) notes that a quarter of the world's population is in transit at any given moment, courtesy of the Boeing 747. The impact of HIV/AIDS will take its toll on the following in South Africa (Shell, 2000):

- The economy – There will be huge monetary burdens placed on all levels of government. Production will fall because staff who are both skilled and experienced will become ill and eventually and die. The government will have to reallocate areas of the budget, which will probably cause a reduction in

economic growth. South Africa will lose overseas investment, as the extent of the pandemic in the country becomes known.

- Medical costs – In the year 2000 there were about 4 million HIV infected people in the country and the cost of treatment for each individual for one month was estimated at R4300. Using these figures one can calculate the minimum costs of medication alone per year for treating advanced AIDS cases five years from that date as in excess of R750 000 000 000 (Glaxo, 1999). Quattek (2000) predicts that HIV infection rates will rise to a plateau of about 17% by 2006. On the basis of this she postulates that the rate of infection amongst skilled and semi-skilled workers will rise as high as 30%. She predicts a gloomy future for the South African consumer (Quattek, 2000, p.29):

The costs of the Aids epidemic are likely to cause a domestic savings squeeze – and this could potentially set off a vicious spiral. Domestic savings as a percentage of the Gross Domestic Product are expected to be on average 2 percentage points lower. South Africa would need to attract foreign savings to plug the gap.

This was written before the downward spiral of the South African currency in 2002 and the rising tension in the Middle East, which has impacted on oil prices globally. It is clear that with these new stressors the potential economic problems in South Africa are much worse than previously anticipated.

- Impact on family structure – Many individuals infected with HIV/AIDS and who ultimately succumb to the disease are parents and leaders in society. This means that whole generations of children will grow to adulthood without the love and care of parents as role models.
- Impact on women and children - PLWHA need proper care the burden of which has traditionally fallen on the women in a family. As the HIV infection rate is highest amongst young women then women who are in their late 50's and older will be left to deal with this problem. There is also an urban myth in the region that intercourse with an uninfected girl or child will cure an individual of the disease. This has led to an increase in violent rapes on both women and children of both sexes, some as young as 5 months. Welman (1999, p.19) notes:

Enough women are raped every day in South Africa to fill four Jumbo Jets, which is a national disgrace.

South Africa has a societal structure that is underpinned by the paradigm of patriarchy. This stems from colonialism, tribalism and apartheid all of which promote male authoritarian values. As a result females often feel powerless in terms of sexual relationships, which typically see the woman as child and the male as parent.

- Orphans – Children who are orphaned because of AIDS often find themselves shunned by society. It is also true that increasing numbers of babies who are HIV positive are abandoned. The department of health has estimated that there will be a million children under the age of 15 who will have lost their mothers to AIDS in the near future (Department of Health, 1999). This tragedy is summed up by Shell (2000, p.19):

By 2010 there will be an orphan for every parking bay in every major city in South Africa. The Department of Health reports some studies showing that death rates among orphans are 2.5 to 3 times higher than those of non-orphans.

- Impact on the individual – PLWHA are prone to both severe depression and feel very alone. The psychological reaction to infection has been found to be more emotional than for other fatal diseases.
- Impact on life expectancy – The average in the aforementioned table does not take into account group differences. Shell (2000, p. 16) separates individuals into three distinct groups:
 - Those born with the virus can expect to live 2.5 years.
 - Those born free of the virus but who contract it in later life. Their life expectancy is about 25 years.

- Finally, those born free of the virus and who live such that they are at low risk of contracting the virus; their life expectancy will be in the high 60's.

Schonteich (2000, p.57) has noted another probable outcome of the HIV/AIDS pandemic. He hypothesises that there will be a significantly higher crime rate in the country.

Growing up without parents and badly supervised by relatives and welfare organisations this growing pool of orphans will be at greater than average risk to engage in criminal activity.

He further states that as teenagers and young adults commit most crime, many of whom will have lost their parents, the burden of care for these youngsters will fall on the state. From this it can be inferred that more money will be needed to maintain all aspects of the criminal justice system, courts, prisons etc. This will add to the countries economic burden. Schonteich (2000) postulates that increase in the rate of crime will occur over a 5 to 20 year period and warns that the government must find a new plan of action for dealing with this problem. He postulates that traditional crime prevention methods have little effect. This is probably because they were been formulated in a socio-historic context that does not take into account the mood and attitudes of young people in contemporary society. Recently the problem has made itself known to the general public in

South Africa through the print media. For instance, Clarke (2002, p.1) in a hard-hitting leader page article for the Independent Newspaper states that:

Time is running out for South Africa to come to grips with the nightmarish spectre of feral aids orphan gangs roaming our city streets. Scientists and research workers paint a grim, nightmarish picture of bands of lawless children, armed to the teeth and rampaging for food shelter; waging war against each other and society at large.

She notes that there are 100 000 AIDS orphans living in KwazuluNatal alone and this figure could rise exponentially within the next decade.

2. 7 Examples of HIV/AIDS research undertaken on South African university campuses

Harvey (1997, p.10) states that purposeless investigations into behaviours, attitudes and knowledge undertaken at a countrywide level, could overlook 'specific sub-groups' such as university students who as specific populations may have divergent 'values and beliefs' from the general populace. This is echoed by Partington et al. (1998), who note that attitudes are inherent to belief systems and concomitant values that make up specific populations or subgroups; essentially any such subgroup is likely to downplay some risks and accentuate others.

The most significant consideration, however, is that quantitative studies can ascertain psychosocial components of behaviours that put individuals at risk; the resultant policy and educational interventions can save future loss of life (Shell, 2001). It is thus important that investigations of specific populations, particularly those that fall into the most at risk 15 – 24 year age group, are undertaken.

DramAide, a Non-Governmental Organisation (NGO) is based on the campus of the University of Zululand. Harrison et al., (2002, p.5) note that:

The programme uses a peer-based approach that involves the use of drama to impart educational messages, especially to the youth. It relies on this method and recruits peer leaders from schools to design and present HIV/AIDS educational drama to classmates. The programme was evaluated in a randomised, controlled trial, which showed significantly improved knowledge and attitudes among students exposed to the programme, and an increase in condom use amongst sexually active students.

Hallowes (2001, p. 27) tried to 'identify or determine the attitudes of young adults towards AIDS' at a high school in Empangeni, KwazuluNatal. Her research determined that females have more empathetic attitude towards PLWHA but that they were not as willing to go for HIV testing. She also noted that white males have a more negative attitude towards AIDS than white females and other ethnic groups.

McIntyre, Alons, Brown, Magnani & Kaufman (2000), at the University of Natal, evaluated a Life Skills programme aimed at reaching two high school teachers in each province of the country. They found that the programme encountered considerable difficulties because of geographical and school curriculum constraints. It has thus had limited success.

Julia Cardo (1999) while based at Rhodes University used a phenomenological methodology to interpret HIV and Metaphor as an imaginative response to illness. In this qualitative study she states that the medical model has been criticised for a perceived failure to listen to people and how they experience and make meaning of illness. She states that HIV/AIDS has disputed the adequacy of the bio-medical model and has made the meaning of illness more salient in the caring professions. For instance, Cardo (1999, p.i) asserts:

This study revealed that metaphorical thinking about HIV/AIDS has a powerful impact on individuals' embodiment of their world. Metaphor is also an effective means of conveying and eliciting meaning in the experience of illness.

Nel, Foot, Shipalala, Lodge, & Usher (2001) undertook an ethnographic observation focused on student reaction to different forms of AIDS/HIV communication on the Rhodes University campus. They determined that because the information was often not relayed in an appropriate or relevant mode to the student population, it was generally ignored.

Partington, K.A., Zitianiellis, M., Bohmke, W., Troxler, P., & de Villiers, P. (2001) in a quantitative survey, on reactions to aids communication on the Rhodes University campus, found that students who responded to the questionnaire had some knowledge about HIV/AIDS but that there were significant gaps in knowledge and understanding about the disease. They also found a worrying dissonance between knowledge about the sexual transmission of the disease and risky sexual behaviour.

Harvey (1997) studied attitudes and behaviour related to AIDS/HIV among Zulu speaking standard eight high school students. The results of this study found that the sample had insufficient knowledge about HIV/AIDS; because of this they were not able to develop better attitudes about the disease. The author also found that even though students accepted that the disease caused death, few thought that they would be susceptible. As a result of this the adoption of preventative behaviour was not perceived important.

These results are underpinned by a University of Durban Westville study conducted by Razak (1996). Her research was a qualitative investigation of knowledge, attitudes and sexual practice of adolescents in relation to sexually transmitted diseases and HIV/AIDS. She noted that few adolescents are able to 'translate their knowledge into adopting safe sex behaviour' (ibid, p.11). Razak (1996) recommended that health promotion and sex education, which is user friendly and accessible in the community, is needed to help prevent high-risk behaviour among adolescents.

2.8 Résumé

In summary, research at South African Universities is ongoing and essential. The HIV/AIDS pandemic is not yet at its peak in the region and investigations both of a qualitative and quantitative nature into all arenas pertaining to HIV/AIDS is necessary. This will allow a broad understanding on the impact of the disease from community, individual and economic perspectives. In turn, this will allow the formulation of appropriate and effective methods of coping with the pandemic within specific sub-groups and the country and large.

CHAPTER 3: METHODOLOGY

3.1 Introduction

The purpose of this study is to contextualise existing HIV/AIDS associated behaviour, attitudes and knowledge among a demarcated high-risk group, namely individuals falling within the 15-24 year age group. The health belief model (HBM) underpins the construction of the questionnaire-based survey that was conducted at the University of Zululand amongst predominately Zulu speaking students. This model establishes 6 related factors to HIV/AIDS (see 3.4). A previous study by Harvey (1997) was conducted amongst adolescent Zulu school children using a similar, though not as extensive questionnaire. A pilot study was thus deemed unnecessary.

3.2 Sample

The sample of 200 for this research was drawn 6,467 students at the University of Zululand (See Appendix 2). Systematic random sampling was used as in this way 'one can be reasonably sure that the population is not skewed or biased because of inequality in any of the subpopulations' (Leedy, 1997, p.212). A list of students attending the university was obtained and the 1st student was selected thereafter every 32nd person was randomly selected. The participants were well matched (homogenous) in terms of age and education lending reliability and validity to the method, that is each individual fell into the designated age range requisite to the study and each participant met the academic requirements for acceptance at the aforementioned tertiary institution. Exclusion criteria was limited to students who did

not fall within the 15 – 24 demographic range which is noted as being particularly at risk (Shell, 2000, UNAIDS 2001). Three protocols were excluded because the respondents did not fall within the specified age range and 47 were discarded because of failure to adequately complete the protocol.

3.3 Ethical Considerations

The educational institution where the research took place accepted the dissertation proposal, which implies an implicit acceptance of the subject matter and related questionnaire.

Individual participants were informed about the character and purpose of the study. They were informed verbally when the questionnaires were handed out and informed that all participants would remain anonymous. A covering letter was also attached to the front page of the protocol in line with the psychology department's strict adherence to ethical practice (Appendix B).

3.4 The Questionnaire

The questionnaire consisted of 63 questions, which had to be answered by all respondents. The first six questions related to demographic details. The remaining 57 questions related to knowledge, behaviour and attitudes relating to HIV/AIDS. The questions were selected to allow for in-depth statistical analysis to be undertaken. The protocol was sequenced in such a way that it enabled the least threatening demographic type questions to be asked first, followed by those regarding attitudes and knowledge. These were followed by questions pertaining to

personal sexual behaviour. Other questions related to knowledge and attitude, which enabled the participant to regain equilibrium after answering the challenging personal questions.

A final open-ended question asking how participants felt during the completion of the questionnaire and for any additional comments was included. This will be reviewed briefly, separate to the quantitative data, to show trends in student thinking.

The HBM (Rosenstock, Strecher & Becker, 1994) basically overviews the determinants of health-related behaviours which identify a number of elements that serve to either advance or discourage the adoption of a healthy behavioural mode. The major challenge the model faces is that people are evidently willing to ignore the long term effects of their behaviour in favour of more pressing concerns. In the context of this research the obvious example is that people may ignore concern about acquiring the HIV retrovirus when faced with more immediate needs such as sexual gratification or perhaps peer pressure (Harvey, 1997). The six components of the HBM were used as a guide to develop the questions in the protocol and adapted from Rosenstock et al. (1994):

1. Knowledge – This pertains to knowledge of health risks and what can be considered high-risk behaviour. It also refers to where the individual can gain information about preventative methods, which can be used to prevent HIV/AIDS infection.

2. Perceived susceptibility – This refers to the individual's subjective perception of contracting a particular illness.
3. Perceived barriers – This is the opposite of the above. It is what an individual perceives as a negative outcome when faced with the adoption a health promoting behaviour. For instance, men may not want to wear a condom because of cultural issues
4. Perceived severity – Relates to the subjective evaluation of medical, social and/or financial problems associated with becoming infected with HIV/AIDS. If an individual has witnessed a relative or friend being repeatedly hospitalised because of an illness s/he will perceive the financial implications inherent to disease.
5. Perceived benefits – Pertains to the positive outcomes linked to adopting specific behaviours – people will only adopt these behaviours if they feel they will benefit. Men may be persuaded to use a condom if they believe that it is an effective way of preventing HIV/AIDS infection.
6. Cues to action – These can be likened to mechanisms, which trigger a specific response. If, for instance, more than one individual in a family has died of HIV/AIDS an adolescent can be cued to act in a positive health-promoting manner. This could be sexual abstinence or the use of condoms.

A full copy of the questionnaire can be found in Appendix 1.

3.5 Data collection

Each student was administered a questionnaire with 60 questions. A section of the survey provided information on personal history. The questionnaire was further developed, underpinned by the Health Belief Model, to elicit information on attitudes to HIV/AIDS and the sexual behaviour of the respondents. Each questionnaire was given to a participant who filled in the protocol individually in a group setting, which took no longer than 25 minutes. A master's student in counselling psychology supervised the filling in of the questionnaires to ensure individual privacy.

3.6 Data analysis

The basic aim of this study is to examine student behaviour, attitudes and related knowledge to HIV/AIDS on the University of Zululand campus. One of the main objectives in the current study is to provide descriptive information that will add to the research base in South Africa generally. It is also postulated that because the student population in South Africa's tertiary institutions is well matched (homogeneous) in terms of age and education, that is the student populations meet the academic requirements required for acceptance into a tertiary institution and are in the demographic age range required by the study, it is probable that this research is indicative of South African student behaviour and attitudes nationwide. Reliability and validity is lent to the study because the sample group, was drawn from a population generally well matched in terms of two key variables level of education, and homogeneity within a specific age range (Steele, 2001).

The following predictions are based on general stereotypes, which this study seeks to affirm or reject, and a preliminary unpublished study undertaken on the Rhodes University Campus, Grahamstown. It is hypothesised that:

- Women students will be more conservative in sexual behaviour than male students.
- Women students will be more accepting and empathetic towards People Living with HIV/AIDS.
- There will be a segment of the student population who will reveal a dissonance between attitudes and knowledge and their behaviour.
- A proportion of students of both sexes will reveal significant gaps in their knowledge about how HIV/AIDS is transmitted.

To achieve this aim the following statistical investigations were made:

- Descriptive statistics – Diamontopoulus et al. (1997), note that visual representations, like pictures, give a clear illustration of data thus some graphical representation of specific tables is provided. Cross tabulation of gender results will be presented as percentages (%'s).

- Chi Sq (X) – to test for the association between two nominal variables. For instance, to check for an association between gender and perceived empathy towards people living with HIV/AIDS.
- Independent t tests- - used on interval data to compare means within the subgroups of the sample population to establish if any significant differences exist. Bonferroni adjustment to the level of significance is unnecessary because the statistical analysis is performed on subsets of groups and not on multiple pairwise comparisons (Miller, 1981).
- Levene's f statistic - used to test for equality of variance of the results between the different groups and/or sub-groups (Mardia, Kent & Biddy, 1979). This will indicate how individual raw scores vary relative to the mean and will show which group has the greater spread of results. A smaller spread of results indicates a response pattern that is more cohesive; a greater spread of results is indicative of a less cohesive response pattern within that group. Essentially, a sub group (male/female) within the broader group (all respondents) may have a wider or narrower opinion/knowledge base to specific questions, which can be ascertained by comparing the variability.

3.7 Résumé

The methodology of the study is underpinned by a sound research design underpinned by a valid conceptual model and particular attention to ethical procedures.

CHAPTER 4: RESULTS

4.1 Introduction

From the two hundred questionnaires returned, fifty were discarded. Forty-seven were rejected because of the failure of respondents to complete the surveys and three were excluded because the respondents did not meet the given age criteria. The analysis was undertaken on the one hundred and fifty questionnaires that were returned with all questions completed by the sample group.

Females made up forty four percent and males fifty six percent of the final sample. Interestingly, males were more willing to complete the questionnaire than females.¹ The University of Zululand has a higher intake of female students² than males so the unwillingness of females to complete the questionnaire is an area that has the potential for further study. The age range of the respondents was between 15-24, which is required in terms of the study as these are the individuals who are most at risk of HIV/AIDS infection.

Demographics of the sample population are given in numbers of the participating group. The results pertaining to the HBM model of questioning are expressed as percentages (%) and broken down into gender across the sample group. The chi square statistic is used to estimate association between variables, for instance, to check for an association between gender and perceived empathy to PLWHA. Any statistically significant data is reported. An Independent T test is used on appropriate data and any statistically significant difference between genders is

¹ See page 101

² See Appendix 2

reported. Levene's test for equality of variance is used to display variability within groups.

4.2 Demographics

The following tables are included to show predominant language, race, sexual orientation, number of respondents who have had sexual intercourse and at what age they first had sexual relations in the sample group. A table showing religion to which the respondent belongs is included, notably only 14 of the respondents (0.09%) said they had no religious affiliation. There is a multiplicity of different religious groupings in the sample, which is likely to reflect the student population as a whole.

Table 4.2.1
Racial grouping

RACIAL GROUPING	MALE	FEMALE	TOTAL
African	80	60	140
Coloured	4	1	5
Indian	0	5	5
TOTAL	84	66	150

Table 4.2.2
Language spoken

GENDER	AFKN	ENG	SETS	SOTH	ZUL	OTH	TOTAL
MALE	2	1	0	1	68	12	84
FEMALE	0	5	3	0	57	1	66
ALL GROUPS	2	6	3	1	125	13	150

KEY:

- AFKN = AFRIKAANS ENG = ENGLISH
- SETS = SETSWANA SOTH = SESOTHO
- ZUL = ZULU OTH = OTHER

The principal language is Zulu, which reflects the ethnicity of the surrounding area.

Table 4.2.3
Sexual orientation

GENDER	HETEROSEXUAL	HOMOSEXUAL	TOTAL
Male	79	5	84
Female	66	0	66
TOTAL	145	5	150

Individuals who participate in the survey are predominately heterosexual a statistic which most likely reflects the student body as a whole.

Table 4.2.4

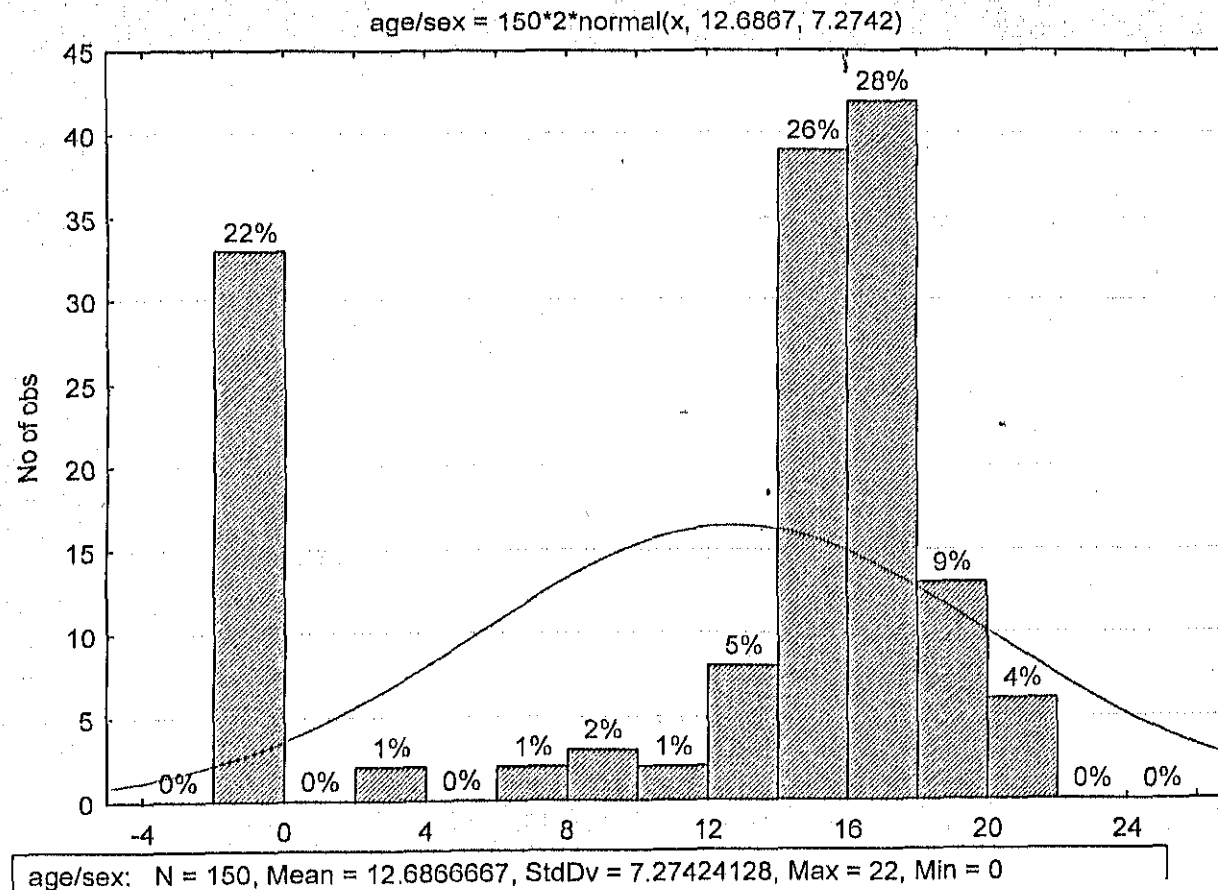
Age when respondent first had sexual intercourse

G	NS	3YR	8YR	10Y	12Y	13Y	14Y	15Y	16Y	17Y	18Y	19Y	20Y	21Y	22Y	T
M	17	0	2	2	2	3	2	14	17	7	8	6	0	4	0	84
F	16	2	0	1	0	2	1	2	6	14	13	4	3	1	1	66
All G's	33	2	2	3	2	5	3	16	23	21	21	10	3	5	1	150

- KEY: M = Male * F = Female * All G's = All groups
- T = Total number of Respondents * NS = Not had sex * Y = age in years G = Gender

Histogram 4.2.1

Percentage of individuals who have had sex, all groups at given age



Seventeen males and sixteen females report not having had sexual intercourse at all which accounts for 22% of the sample group, this may reflect a trend towards abstinence in some of the student body. However, the propensity is for males to first have sex at the age of fifteen and sixteen years and for females to have their first sexual encounter between seventeen and eighteen years old. Infant sexual encounters are reported twice amongst females. Pre-adolescent sexual encounters are reported seven times in females and eleven times amongst males. These statistics are worrying in terms of the survey because pre-adolescents have little or no recourse to safe sexual practices and also in terms of sexual abuse (paedophilia), which is a reflection on societal values in South Africa. The myth that sexual intercourse with a virgin cures HIV/AIDS may in some way explain these results and is an area for further research.

Table 4.2.5
Religious affiliation

RELIGION	MALE	FEMALE	TOTALS
African Congregational Church	1	2	3
Zionist Church	22	6	28
Nazareth Church	1	0	1
Church of Christ	0	2	2
Methodist Church	6	2	8
Rastafarian	1	0	1
Christian –but non churchgoers	9	2	11
Hindu	0	2	2
Seventh Day Adventist	0	2	2
Catholic	10	9	19
Christian Faith Gospel	2	3	5
Anglican	6	5	11
Apostolic	1	6	7
Muslim	1	5	6
Lutheran	6	9	15
Baptist	4	0	4
Full Gospel	0	3	3
Reform Church	0	2	2
Protestant Church	2	1	3
No Religious affiliation	11	3	14
Assembly of God	0	2	2
Alliance Church	1	0	1
TOTAL	84	66	150

Twenty-one different religious affiliations are noted. In terms of the survey, this is relevant, as only fourteen individuals (0.09%) reported not belonging to any group. This would appear to indicate that all other participants have had exposure to value systems that promote honesty, truth, love for others and self which are pre-requisites for empathy towards PLWHA.

Table 4.2.6
Respondents who have had sexual intercourse

GENDER	HAD SEX	NOT HAD SEX	TOTAL NO OF RESPONDENTS
MALE	60	24	84
FEMALE	39	27	66
ALL GROUPS	99	51	150

Sixty males (71.4%) report to having had sex and thirty-nine females (59%). This indicates that more males than females in the study have experienced sexual intercourse.

4.3 Results pertaining to HBM model

a) Knowledge

The responses to questions relating to knowledge about HIV/AIDS transmission are given in the following table. Numbers 1,7,9 are all common modes of transmission of the HIV virus. These items should have a 100% response rate. Numbers 2,3,4,5,6 and 8 are not common sources of HIV contagion. Ideally, these items should have a 0% response rate. Number 10 was given 2 alternate responses; that of motor vehicle accidents and a game called Undize, these will be discussed briefly in the following section.

Table 4.3.1
Knowledge about HIV/AIDS transmission

Question 58: Which of the following do you believe commonly leads to the transmission of HIV/AIDS?

TRANSMISSION AGENT	FEMALES % THIS ITEM LEADS TO TRANSMISSION OF HIV/AIDS NO OF RESPONDENTS = 66	MALES % THIS ITEM LEADS TO TRANSMISSION OF HIV/AIDS NO OF RESPONDENTS = 84
Unprotected sexual intercourse	96.9	95.2
Mosquito bites	9.00	16.0
Kissing	24.2	14.2
Oral sex	37.8	42.8
Sharing razors	65.1	57.1
Blood transfusions	66.6	67.8
Sharing needles	63.6	66.6
Sharing cutlery	10.0	22.6
Mother to child transmission	87.8	72.6
Other = Motor vehicle accidents	7.00	2.38
Other = Undize	1.51	-

The following table represents questions that point towards the individual's general knowledge about issues relating to HIV/AIDS.

Table 4 3.2
General individual knowledge pertaining to HIV/AIDS

Question 10: Have you ever heard of the AIDS helpline?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	88.0	11.0	84
FEMALE (%)	77.2	22.7	66
ALL GROUPS (%)	83.3	16.6	150

Question 13: Have you seen the acronym PLWHA (People Living with HIV/AIDS) before?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	70.2	29.7	84
FEMALE (%)	74.2	25.7	66
ALL GROUPS (%)	72.0	28.0	150

Question 60: Do you think you have a good knowledge about HIV/AIDS generally?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	73.8	26.1	84
FEMALE (%)	75.7	24.2	66
ALL GROUPS (%)	74.6	25.3	150

Question 61: Do you know where to get HIV/AIDS counselling and testing on campus?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	59.5	33.3	84
FEMALE (%)	63.6	36.3	66
ALL GROUPS (%)	65.3	38.0	150

More males than females report having heard of the HIV/AIDS helpline. Conversely more females than males report to knowing where to get HIV/AIDS counselling on the University of Zululand campus. This may explain why they are more familiar with the PLWHA acronym, which is found on posters in the university clinic (which offers the HIV/AIDS testing/counselling). Moreover, it is a possibility that males find it easier to request information in a mode that does not require face-to face interaction. Thirty-eight (25%) of the respondents feel they do not have good knowledge about HIV/AIDS. This is a cause for concern as lack of knowledge may well result in behaviours, which lead to HIV/AIDS infection or inappropriate behaviours when meeting PLWHA, for instance refusal to share cutlery.

b) Perceived personal susceptibility

The results of responses to the questions associated with perceived personal susceptibility are presented in the following table.

Table 4.3.3
Perceived personal susceptibility

Question 28: HIV/AIDS is a threat to our society?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	9.00	8.00	13.0	69.0	84
FEMALE (%)	4.00	10.6	16.6	68.1	66
ALL GROUPS (%)	7.00	9.00	14.6	68.6	150

Question 29: Have you worried that you may have the HIV virus?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	25.0	39.2	10.7	25.0	84
FMALE (%)	36.3	16.0	18.2	21.2	66
ALL GROUPS (%)	30.0	32.6	14.0	23.3	150

Question 30: What do you think your chances are of becoming HIV infected?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	22.6	54.7	19.0	3.00	84
FMALE (%)	22.7	48.4	19.6	9.00	66
ALL GROUP (%)	22.6	52.0	19.3	6.00	150

The results indicate that both males and females to perceive HIV/AIDS to be a threat towards society and thus themselves. There is a stronger tendency for males to worry about becoming HIV infected and the chance of already being HIV positive; this could well be related to the statistics (table 4.2.6) that a higher frequency of males report to having had sexual intercourse and more sexual partners (tables 4.5.4 – 4.5.5)

c) Perceived barriers

The following table represents students' attitudes to perceived barriers to healthier behaviours.

Table 4.3.4
Perceived barriers

Question 34: Have you been teased by friends for using condoms?

GENDER	YES	NO	NOT SEXUALLY ACTIVE/NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	40.4	46.4	13.0	84
FEMALE (%)	21.2	59.0	19.7	66
ALL GROUPS (%)	32.0	52.0	16.0	150

Question 35: Do you have a condom where you can easily get it if you need it?

GENDER	YES	NO	NOT SEXUALLY ACTIVE/NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	70.2	17.8	11.9	84
FEMALE (%)	40.9	40.0	18.1	66
ALL GROUPS (%)	57.36	28.0	14.6	150

Question 36: Do you think condoms protect you 100% against HIV/AIDS?

GENDER	YES	NO	NOT SEXUALLY ACTIVE/NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	20.2	77.3	2.38	84
FEMALE (%)	34.8	54.5	10.6	66
ALL GROUPS (%)	26.6	67.3	6.00	150

Question 37: Are you shy to have a condom in your possession?

GENDER	YES	NO	NOT SEXUALLY ACTIVE/NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	9.52	84.5	2.00	84
FEMALE (%)	30.3	48.4	19.6	66
ALL GROUPS (%)	18.6	68.6	12.6	150

Question 38: Are you too shy to buy a condom?

GENDER	YES	NO	NOT SEXUALLY ACTIVE/NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	6.00	91.6	2.00	84
FEMALE (%)	33.3	46.9	19.6	66
ALL GROUPS (%)	18.0	72.0	10.0	150

Question 46: Have you ever discussed the risk of HIV/AIDS with your boyfriend/girlfriend/sexual partner?

GENDER	YES	NO	NOT SEXUALLY ACTIVE/NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	52.3	32.1	15.4	84
FEMALE (%)	63.6	15.1	21.2	66
ALL GROUPS (%)	57.3	24.6	18.0	150

Question 51: Do you think that condoms can break during sex?

GENDER	YES	NO	TOTAL NO RESPONDENTS
MALE (%)	95.2	4.76	84
FEMALE (%)	96.9	3.03	66
ALL GROUPS (%)	96.0	4.00	150

More males than females get teased for using condoms, however they are more likely to have one in their possession and are less shy to buy them. Females are more likely to discuss the risk of HIV/AIDS with their friends and sexual partners. Of the total sample 67.3% of respondents report knowing that condoms are not 100% effective against the transmission of HIV/AIDS. Worryingly, however

26.6% of both genders perceive condoms to offer 100% protection against the virus, with more females than males holding this belief.

Ninety six percent of all respondents understand that condoms can break during use. This may be a perceived barrier to condom usage, i.e. unreliability of the condom.

d) Perceived severity

Responses to the question associated with an individual's friend/relative becoming infected with HIV/AIDS. If the respondent has witnessed either friends and/or relatives being repeatedly hospitalised because of HIV infection, it is expected that s/he will perceive the financial implications inherent to the illness.

Table 4.3.5
Perceived severity

Question 14: Do you have a relative who is HIV +?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE %	16.6	23.8	59.5	84
FEMALE %	24.4	10.6	65.1	66
ALL GROUPS %	20.0	18.0	62.0	150

Question 15: Do you have a relative who is sick with HIV/AIDS?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE %	15.4	47.6	36.9	84
FEMALE %	9.00	43.9	46.9	66
ALL GROUPS %	12.6	46.0	41.3	150

Question 17: Do you have a friend who is HIV +

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE (%)	5.95	35.7	58.3	84
FEMALE (%)	7.57	27.2	65.1	66
ALL GROUPS (%)	6.66	32.0	61.3	150

Question 18: Do you have a friend who is sick with Aids?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE (%)	11.9	63.1	25.0	84
FEMALE (%)	4.52	54.5	40.9	66
ALL GROUPS (%)	8.67	59.3	32.3	150

Both genders report having witnessed HIV/AIDS infection and illness amongst their family and friends. Although some of the respondents, more males than females, report to not having had this experience a proportion of the sample group are unsure of HIV/AIDS infection and related illness amongst family and friends.

e) Perceived benefits

Results of the responses to questions linked to adopting behaviours. Individuals may, for instance, be persuaded to use a condom, or have only one sexual partner if they believe that it is an effective way of preventing HIV/AIDS.

Table 4.3.6
Perceived benefits-condom use

Question 32: Have you ever used a condom?

GENDER	YES	NO	TOTAL NO RESPONDENTS
MALE (%)	61.9	38.1	84
FEMALE (%)	62.1	37.8	66
ALL GROUPS (%)	62.0	86.0	150

Question 33: Did you use a condom the last time you had sex?

GENDER	YES	NO	TOTAL NO RESPONDENTS
MALE (%)	52.3	27.3	84
FEMALE (%)	46.9	28.6	66
ALL GROUPS (%)	50.0	28.6	150

Sixty two percent of both genders report to having used condoms, which indicates that these individuals perceive there are benefits to condom usage. These may be, for instance, the prevention of unwanted pregnancies and the transmission of HIV/AIDS and other sexually transmitted diseases (STD's). However, only 50% of respondents report to using condoms the last time they had sex, which indicates an inconsistent pattern of behaviour. The sexually active students who do not use condoms when having sex are vulnerable to HIV/AIDS and STD infections.

Table 4.3.7

Perceived benefits –present behaviour relating to condom use

Question 52: Which of the following is true for you; I am sexually active and always/sometimes/never/plan to use a condom but do not yet/do not use because my partner and I are HIV-/am not sexually active

GENDER	ALWAYS	SOME-TIMES	NEVER	PLAN TO	NOT HIV+	NOT SEXUALLY ACTIVE	TOTAL NO OF RESPONDENTS
MALE (%)	33.3	26.1	4.00	2.00	4.00	28.5	84
FEMALE (%)	24.2	27.2	4.00	6.00	4.00	33.3	66
ALL GROUPS (%)	29.3	26.6	5.00	4.00	5.00	30.6	150

Worryingly only a third of the sexually active males and just under a quarter of the sexually active females always use a condom when having sex. This is an indication that sexually active members of the student populace do not have a consistent behavioural pattern regarding the use of condoms and are thus at risk of HIV/AIDS infection.

f) Cues to action – implying immediacy of threat

Responses to questions in which the respondent has seen the effect of HIV aids, in this case, death of family and/or friends.

Table 4.3.8
Cues to action

Question 16: Do you have a relative who has died from AIDS?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE %	26.9	46.4	27.3	84
FEMALE %	27.2	33.3	39.3	66
ALL GROUPS %	26.6	40.6	32.6	150

Question 19: Do you have a friend who died from Aids?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE (%)	20.2	64.2	15.4	84
FEMALE (%)	9.00	56.0	34.8	66
ALL GROUPS (%)	15.3	60.6	24.0	150

The students of both genders report to having experienced an almost equal frequency of death in their families due to HIV/AIDS. However a much higher percentage of males record witnessing the death of a friend. This frequency may be linked to the higher reported sexual activity amongst males (table 4.2.6). As this study is a representative proportion of the student population as a whole this finding can probably be extrapolated to the entire student body.

4.4 Access to information

4.4.1 The results of questions pertaining to whether an individual has access to specific mediums, which disseminate information about HIV/AIDS, are presented as percentages and shown below.

Table 4.4.1
Access to information medium - (Question 7)

ACCESS TO:	FEMALES (%) NO OF RESPONDENTS = 66	MALES (%)NO OF RESPONDENTS = 84
Television	81.0	84.5
Newspaper	72.7	73.8
Telephone	60.6	45.2
Cellphone	71.2	67.8
Magazines	68.1	67.8
M-Net	24.2	19.0
Radio	80.3	76.1
Internet	65.1	66.6

Generally students have good access to information with radio and television being the preferred mediums.

4.4.2 Reflected in the following table are the respondents' choices of preferred information givers with regard to HIV/AIDS.

Table 4.4.2
Access to information-giver

Question 9: If you had a question or wanted more information about HIV/AIDS where would you first try to get information? (Tick 2)

INFORMATION GIVERS	FEMALES (%) WHO WOULD GET INFORMATION FROM THE FOLLOWING SOURCES NUMBER OF RESPONDENTS = 66	MALES (%) WHO WOULD GET INFORMATION FROM THE FOLLOWING SOURCES NUMBER OF RESPONDENTS = 87
Parent	28.7	21.4
Nurse	37.8	34.5
Psychologist	40.9	32.2
Priest/Minister	1.00	9.53
University Clinic	16.6	14.2
Lecturer	4.01	1.02
Doctor	45.4	53.5
Relative	81.8	64.2
Friend	28.7	22.6
Other source	0	0

Interestingly relatives are listed as the first choice of information giver, but not parents. Priests and ministers are least favoured; this will be discussed in the following section together with table 4.2.5. It is noteworthy that Psychologists, Doctors and Nurses are favoured information givers. A likely explanation for this is that the university clinic and community clinic (psychology) on the University of Zululand campus are well supported by the student body and it is known that strict confidentiality is observed.

4.4.3 The table below gives an indication of the students' access to HIV/AIDS information sources in the month preceding the completion of the survey.

Table 4.4.3
Access to information – sources

Question 8: Where have you heard and seen information about HIV/AIDS in the last month?

SOURCES	FEMALES (%) WHO HAVE ACQUIRED INFORMATION FROM THE FOLLOWING SOURCES NUMBER OF RESPONDENTS = 66	MALES (%) WHO HAVE ACQUIRED INFORMATION FROM THE FOLLOWING SOURCES NUMBER OF RESPONDENTS = 87
Television	78.7	79.7
Radio	68.1	83.3
Leaflets	37.8	29.7
Posters	48.4	52.3
T/Shirts/Clothes	68.1	70.2
Plays	43.9	41.6
Meetings	34.1	33.3
Magazines	66.6	60.7
Newspapers	66.6	73.8
Painted walls	57.5	35.7
Talks	56.0	60.7
Stickers	59.0	53.5

The respondents report good access to information in the last month from a variety of different sources.

4.5 Student behaviours

The following tables are a breakdown of reported behaviours that relate to sexual and general activities amongst the respondents.

Table 4.5.1
Reported general behaviour

Question 20: If someone in the family had HIV/AIDS would you be happy to share eating utensils with them?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESPONDENTS
MALE (%)	41.6	34.5	23.8	84
FEMALE (%)	68.1	7.57	22.7	66
ALL GROUPS (%)	53.3	20.2	23.3	150

Females are more likely to share their eating utensils with PLWHA. This may be because they have more knowledge regarding HIV/AIDS transmission, or are generally more empathic to individuals who are infected with the virus.

Table 4.5.2
Reported sexual behaviour-partners

Question 40: Do you have a steady sex partner at the moment?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	27.3	72.6	84
FEMALE (%)	46.9	53.0	66
ALL GROUPS (%)	36.0	64.0	150

Question 41: Are you living together with a partner?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	5.95	94.0	84
FEMALE (%)	10.6	75.7	66
ALL GROUPS (%)	8.00	92.0	150

Question 42: Do you have more than one sex partner at the moment?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	21.4	78.5	84
FEMALE (%)	24.2	75.7	66
ALL GROUPS (%)	22.6	77.3	150

Female students participating in the study are more likely to have a steady sex partner and live in lover than the male students who filled in the questionnaire. Across both genders 22% of individuals have more than one sex partner. This is a worrying statistic as it indicates that these students (18 males and 16 females) are more at risk of contracting STD's and HIV/AIDS.

4.5.3

Reported sexual behaviour – changed

behaviour because, question 23: Have you changed your sexual behaviour because of AIDS, even a

NO NEED FOR CHANGE	NEED	YES	NO	NO NEED FOR CHANGE	TOTAL NO OF RESPONDENTS
3.57	MALE (%)	63.0	33.3	3.57	84
12.1	FEMALE (%)	45.4	42.4	12.1	66
7.33	TOTAL (%)	55.3	37.3	7.33	150

sexual behaviour. A possible explanation for this statistic is that because males in the survey report to having more sexual relations than females (table 4.2.6) they are more likely to have changed their sexual behaviours, understanding that sexual intercourse is the likely cause of HIV/AIDS infection.

Table 4.5.4

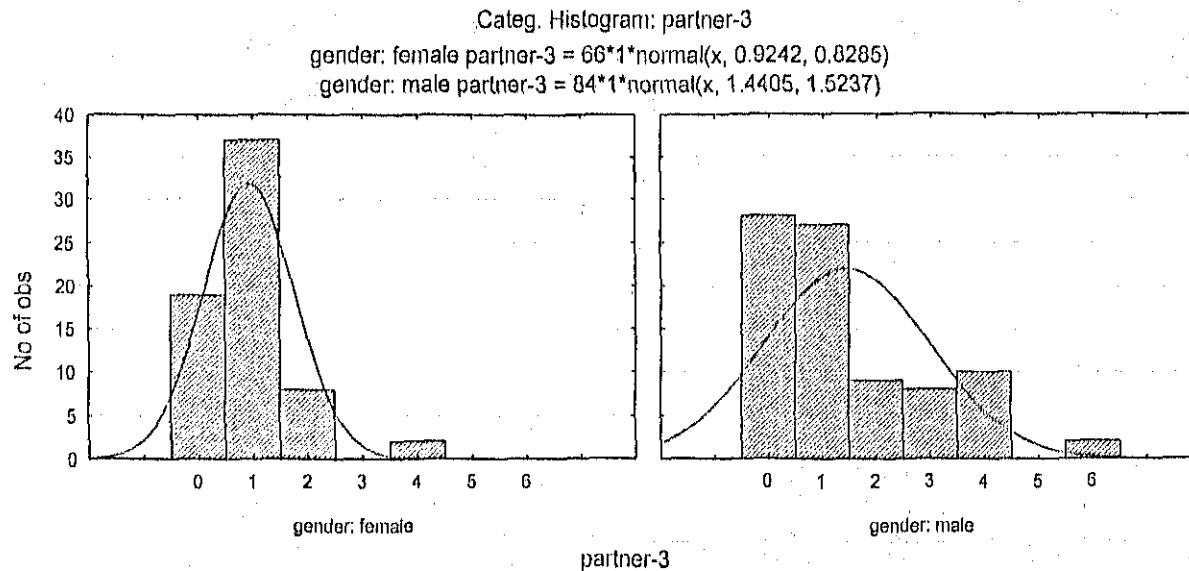
Reported sexual behaviour –number of partners in six months

Question 43: How many sex partners have you had in the last six months?

GENDER	0	1	2	3	4	5	6	TOTAL NO OF RESPONDENTS
MALE	28	27	9	8	10	0	2	84
FEMALE	19	37	8	0	2	0	0	66
TOTAL	47	64	17	8	12	0	1	150

Histogram 4.5.1

Number of sexual partners in 6 months



Males have had more sexual partners than females in a 6-month period. However, a worrying number of participants have had multiple sex partners in the time frame rendering them vulnerable to HIV/AIDS and other STD infection.

Table 4.5.5

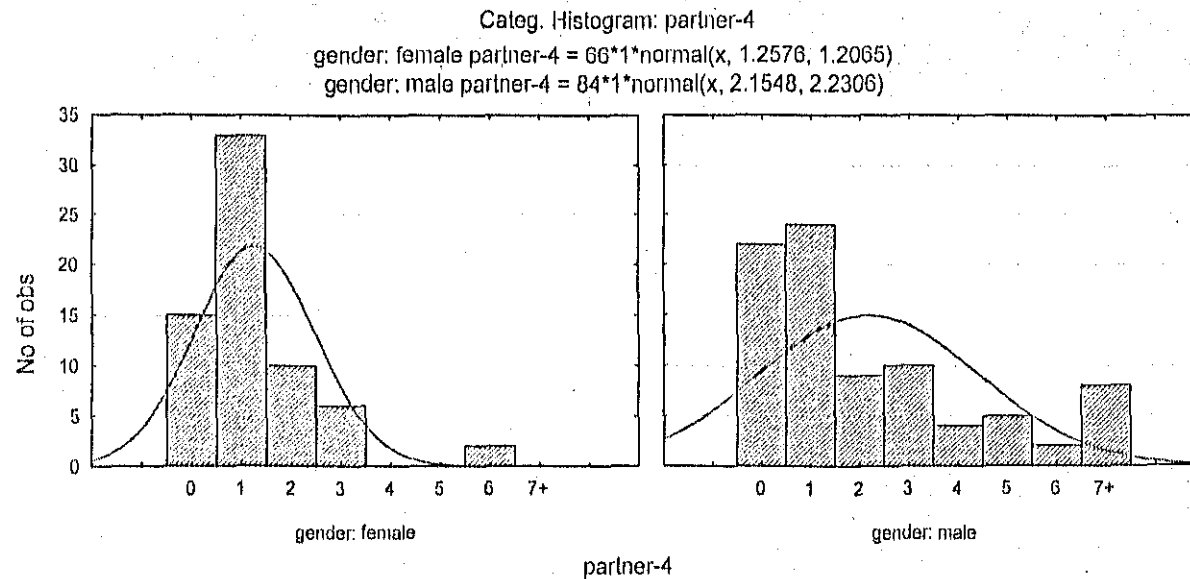
Reported sexual behaviour number of partners in the last year

Question 44: How many sex partners have you had in the last year?

GENDER	0	1	2	3	4	5	6	7+	TOTAL NO OF RESPONDENTS
MALE	22	24	9	10	4	5	2	8	84
FEMALE	15	33	10	6	0	0	2	0	66
TOTAL	37	57	19	16	4	5	4	8	150

Histogram 4.5.2

Number of sexual partners in the last year

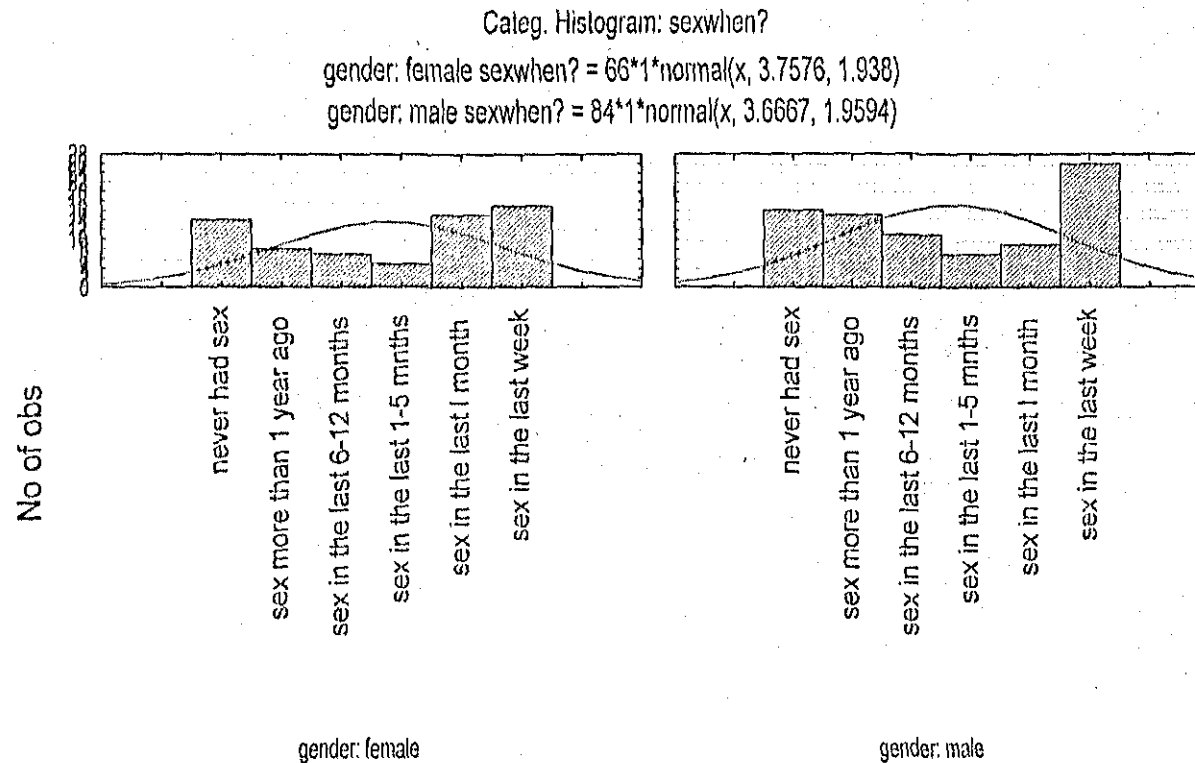


The same pattern is seen over a year as in the previous table over six months.

Table 4.5.6
Reported sexual behaviour – last sexual encounter
Question 39: When did you last have sex?

GENDER	NEVER HAD SEX	MORE THAN A YEAR AGO	IN THE PAST 6-12 MONTHS	IN THE PAST 1 – 5 MONTHS	IN THE LAST MONTH	IN THE LAST WEEK	TOTAL NO OF RESPONDENTS
MALE	16	15	11	7	9	26	84
FEMALE	14	8	7	5	15	17	66
TOTAL	30	23	18	12	24	43	150

Histogram 4.5.3
Reported frequency of sexual behaviour



The most notable statistic in table 4.5.6 is that only 30 students (20%) of the sample report to never having sex. This indicates that the other 120 (80%) of the respondents are at possible risk of HIV/AIDS infection.

Table 4.5.7
Reported sexual behaviour – general

Question 47: Have you ever been forced to have sex by a partner?

GENDER	YES	NO	NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	0	65.4	34.5	84
FEMALE (%)	16.6	75.7	7.57	66
ALL GROUPS (%)	7.33	89.3	3.33	150

Question 48: Have you ever had sex when you were drunk?

GENDER	YES	NO	NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	50.0	48.8	1.1	84
FEMALE (%)	15.1	53.0	31.8	66
ALL GROUPS (%)	34.6	50.6	14.6	150

Question 49: Are you able to say no to sex if you don't want it?

GENDER	YES	NO	NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	29.7	41.6	28.5	84
FEMALE (%)	0.00	60.6	39.3	66
ALL GROUPS (%)	16.6	50.0	33.3	150

Question 50: Have you ever had sex with someone who refused to wear a condom?

GENDER	YES	NO	NOT APPLICABLE	TOTAL NO OF RESPONDENTS
MALE (%)	2.38	84.5	13.1	84
FEMALE (%)	36.3	53.0	10.6	66
ALL GROUPS (%)	17.3	70.6	12.0	150

These responses appear to testify to female students powerlessness with regard to sexual behaviours. More females have been forced to have sex, are not able to say no to sex and many more have experienced a male partners refusal to wear a condom. This makes them vulnerable to HIV/AIDS infection. Males in the study are more likely to have sex when drunk which may be, in part an explanation for their inappropriate sexual behaviours.

4.6 Respondents attitudes

The results regarding the respondent's attitudes towards their own ability to change sexual behaviours and to people living with HIV/AIDS.

Table 4.6.1
Attitude toward sexual behaviour change

Questions 53 - 57: Which of the following applies to you, concerning changes one's sexual behaviour because of HIV/AIDS? (Tick only 1)

WHICH OF THE FOLLOWING APPLIES TO YOU?	MALES (%) 84	FEMALES (%) 66	ALL GROUPS (%)
I have NO NEED TO CHANGE Because I do not practice sex or my partner and I think we are HIV free	23.8	31.8	27.3
I have NOT REALLY THOUGHT about changing	29.7	13.6	22.6
I have decided to change BUT NOT CHANGED YET	8.33	13.6	10.6
I have actually changed my behaviour SOMETIMES	14.2	16.6	15.3
I have definitely CHANGED MY BEHAVIOUR ALL THE TIME	23.8	24.2	24.0

Only 24% (36) of the students have changed their sexual behaviour all of the time, which, in terms of the HIV/AIDS pandemic is a pessimistic statistic in terms of preventing HIV/AIDS transmission.

Table 4.6.2
Attitude toward PLWHA - confidentiality

Question 21: If you were infected with HIV/AIDS would you keep it a secret from everyone?

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESONDENTS
MALE (%)	19.0	57.1	23.8	84
FEMALE (%)	31.8	24.2	43.9	66
ALL GROUPS (%)	24.6	42.6	32.6	150

Question 59: Are you embarrassed to talk about HIV/AIDS?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	89.2	5.95	3.52	1.12	84
FEMALE (%)	84.8	7.53	4.53	3.01	66
ALL GROUPS (%)	87.3	6.6	4.01	2.04	150

Question 59: Do you think condoms would be embarrassing to use?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	82.1	8.33	4.73	4.71	84
FEMALE (%)	78.7	3.02	4.54	13.6	66
ALL GROUPS (%)	80.6	6.01	4.60	8.64	150

Question 63: Would you be willing to undergo HIV/AIDS testing on campus?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	66.6	33.3	84
FEMALE (%)	63.6	36.3	66
ALL GROUPS (%)	65.3	34.6	150

Forty two percent of the sample group would not keep HIV/AIDS infection a secret; interestingly females are less likely to reveal infection. This may be because of their perceived powerlessness with regard to sexuality in general (table 4.5.7). Both genders seem generally willing to talk about the topic and report not being embarrassed to use condoms. A third of students would not be willing to undergo HIV/AIDS testing on campus possibly because of the fear of non-confidentiality.

Table 4.6.3
Attitude toward PLWHA - support

Question 59: Do you feel supportive if/when asked to wear a red ribbon on HIV/AIDS day?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	27.3	23.8	13.0	35.7	84
FEMALE (%)	1.01	18.1	7.52	72.7	66
ALL GROUPS (%)	16.0	21.3	24.2	52.0	150

Question 59: Do you feel irritation when you see AIDS/HIV posters around campus?

GENDER	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH	TOTAL NO OF RESPONDENTS
MALE (%)	69.0	17.8	3.53	9.51	84
FEMALE (%)	78.7	9.00	0.00	12.1	66
ALL GROUPS (%)	73.3	14.0	4.52	10.6	150

These statistics indicate that females who participated in the study are generally more supportive of PLWHA than males.

Table 4.6.4
Attitude toward PLWHA– empathy

Question 11: Would you wear the red ribbon, which is the HIV/AIDS symbol, and show that you are empathetic to People Living With HIV/AIDS (PLWHA)?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	78.5	21.4	84
FEMALE (%)	92.4	7.50	66
ALL GROUPS(%)	84.6	15.3	150

Question 24: Has your attitude to People Living with HIV/AIDS (PLWHA) changed over time?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	53.5	46.4	84
FEMALE (%)	54.5	45.4	66
ALL GROUPS(%)	96.4	46.0	150

Question 22: People with AIDS deserve to die, they are to blame.

GENDER	YES	NO	NOT SURE	TOTAL NO OF RESONDENTS
MALE (%)	17.8	82.1	0	84
FEMALE (%)	16.6	77.2	6.0	66
ALL GROUPS (%)	30.9	80.0	2.6	150

Female students are more likely to display their empathy by wearing the HIV/AIDS ribbon than their male counterparts. However 96/4% of both groups report an overall

attitude change to PLWHA. This could be a result of many of them witnessing HIV/AIDS infection, illness and death in family and friends (tables 4.3.5 & 4.3.8).

Table 4.6.5
Attitude toward PLWHA – advice

Question 25: Have you in the last month been given any advice about HIV/AIDS?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	52.3	47.6	84
FEMALE (%)	60.6	39.3	66
ALL GROUPS(%)	56.0	44.0	150

Question 26: Have you in the last month given any advice to anyone about HIV/AIDS?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	61.9	38.0	84
FEMALE (%)	46.9	53.0	66
ALL GROUPS(%)	55.3	44.6	150

Question 27: Have you ever been in the same room or listened to a talk given by a person who you know is HIV infected?

GENDER	YES	NO	TOTAL NO OF RESPONDENTS
MALE (%)	40.4	47.6	84
FEMALE (%)	80.3	19.6	66
ALL GROUPS(%)	58.0	35.3	150

Around 55% of both genders report to giving and receiving advice in a four-week period. Fifty eight percent of the respondents have been in close proximity with PLWHA. These statistics indicate that over half the students who filled in the questionnaire actively discuss HIV/AIDS and have met/seen a PLWHA. These statistics, in terms of the study, can probably be extrapolated to the student body as a whole.

4.7 Differences across gender – Chi square statistic

Table 4.7.1

Statistically significant difference and response direction across genders (chi square statistic)

Marked effects significant if $p = < 0.0500$

Question	Response Direction		Significance Level	Chi Square
	Male	Female		
Attitude – empathy: Question 11: Would you wear the red ribbon which is the HIV/AIDS symbol, and show you are empathetic to PLWHA?	NO	YES	$p = .01942$	$X = 5.46$
Attitude – confidentiality: Question 21: If you were infected with HIV/AIDS would you keep it a Secret from everyone	NO	YES	$p = .00027$	$X = 16.40$

Marked effects significant if $p = < 0.0500$

Question	Response Direction		Significance Level	Chi Square
	Male	Female		
Perceived barriers Question 35: Do you have a condom where you can easily get it if you need it?	YES	NO	$p = .00114$	$X = 13.5$
Question 36: Do you think condoms protect you 100% against HIV/AIDS?	NO	YES	$p = .04011$	$X = 6.43$
Question 37: Are you shy to have a condom in your possession?	NO	YES	$p = .00001$	$X = 22.3$
Question 38: Are you shy to get a condom?	NO	YES	$p = .00000$	$X = 36.7$

Marked effects significant if $p = < 0.0500$

Question	Response Direction		Significance Level	Chi Square
	Male	Female		
Behaviour – changed? Question 23: Have you changed your sexual behaviour because of AIDS, even a little?	YES	NO	$p = .03742$	$X = 6.58$
Behaviour – sexual Question 40: Do you have a steady sex partner at the moment?	NO	YES	$p = .01310$	$X = 6.15$
Behaviour – no of partners Question 43: How many sex partners have you had in the last 6 months?	YES – have had multiple sex partners	NO	$p = .00764$	$X = 17.4$
Question 44: How many sex partners have you had in the last year?	YES – have had multiple sex partners	NO	$p = .00848$	$X = 18.9$

Marked effects significant if $p = < 0.0500$

Question	Response Direction		Significance Level	Chi Square
	Male	Female		
Behaviour – general Question 47: Have you ever been forced to have sex by a partner	NO	YES	$p = .00000$	$X = 26.3$
Question 48: Have you ever had sex when you were drunk?	YES	NO	$p = .00000$	$X = 34.4$
Question 49: Are you able to say no to sex if you don't want it?	YES	NO	$p = .00001$	$X = 23.5$
Question 50: Have you ever Had sex with someone who refused to wear a condom?	NO	YES	$p = .00000$	$X = 30.0$

Marked effects significant if $p = < 0.0500$

Question	Response Direction		Significance Level	Chi Square
	Male	Female		
Knowledge: Question 10. Have you ever Heard of the AIDS helpline?	YES	NO	$p = .07749$	$X = 3.11$

4.8 Differences across gender –independent t - test statistic

The ensuing table and graph displays the results of questions where there is a statistically significant difference between the proportions of male and female respondents. The group mean comparisons and comparison of variability, where relevant will be presented for the male and female sub-groups. A Box and whisker plot, plotting the mean and standard deviation is included so that significant difference in variability can be seen.

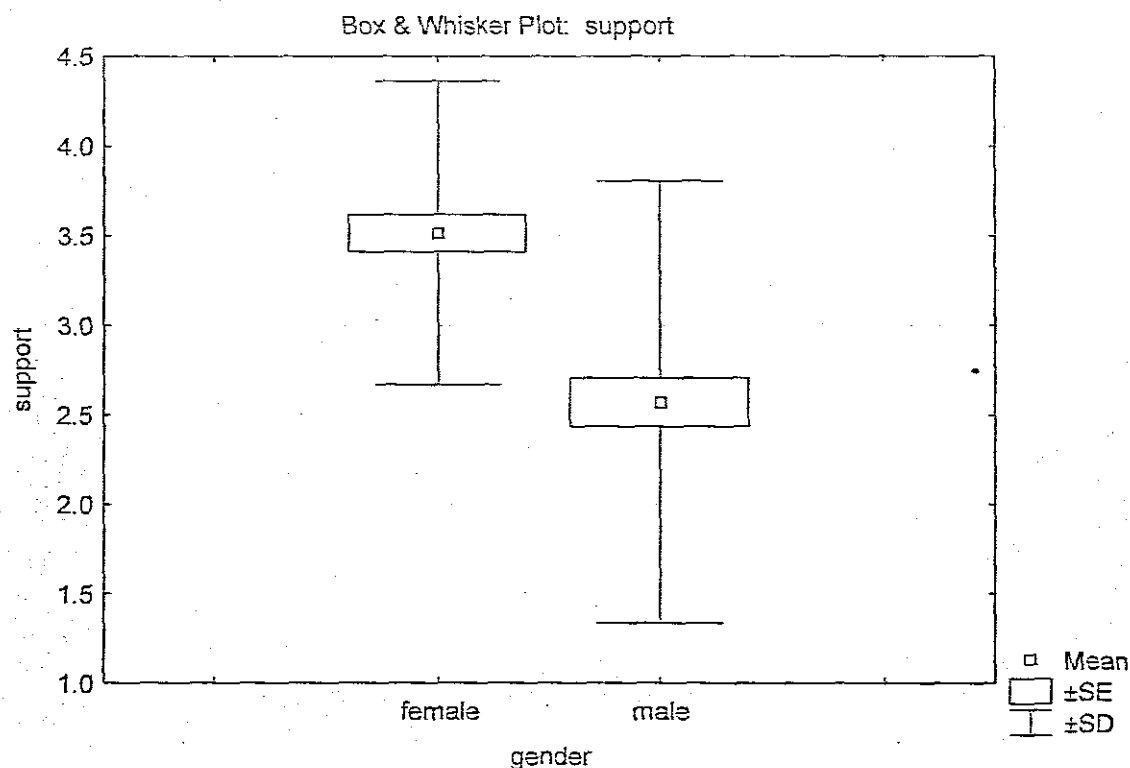
Table 4.8.1

Comparison of Means (t-statistic) and Standard Deviations (f-statistic) Females versus Males

Marked effects significant if $p = < 0.05000$ * = Significant means scores + = significant variance scores

Question 59: Do you feel supportive if asked to wear a red ribbon on HIV/AIDS day?

[illegible]



Graph 4.8.1

Variability males vs. female

Question 59: Do you feel supportive if asked to wear a red ribbon on HIV/AIDS day?

Box and whisker plot illustrating variability (Levene's) pertaining to Question 64.

This result indicates that the female sub-group as a whole is more likely to be supportive towards individuals wearing the HIV/AIDS ribbon. The above variability indicates that there is a greater spread of replies from the male participants from those who were not at all supportive to those who were very much supportive of the initiative. This would suggest that male sub group, as a whole, does not support the wearing of ribbons as much as the female sub group. This result underpins the statistic in table 4.7 (Attitude – Empathy).

4.6 Qualitative questions

Question 12: Explain why you would not wear a red ribbon, which is the HIV/AIDS symbol to show that you are empathetic to PLWHA.

Only 15.3% of the total respondents said they would not wear the HIV/AIDS ribbon. However, only 2 of these gave a reply to the qualitative question. Both were male and they replied that they were 'embarrassed' and 'shy' to wear the symbol as people may think that they are HIV positive.

Question 62 -63: Would you be willing to undergo HIV/AIDS testing on campus.

If no, why not?

Of the respondents 34.6% would not be willing to undergo HIV/AIDS testing on campus. Twenty people answered the qualitative part of the question, twelve men and eight women. Sixteen replied that they did not think it would be confidential. Four students felt that they would be asked to leave the university if they were found to be HIV positive. All of the respondents wrote that they would be too scared to find out if they were HIV positive or wrote the word fear in their replies.

At the end of the questionnaire respondents were asked to write a few points about how they felt about participating in the survey. Several themes common to those who answered this question are:

- I think more surveys should be undertaken like this
- I feel it is worthwhile
- Thank you for taking the time to do such a survey
- This really made me think about my life
- It made me feel a bit scared
- I would like to be tested on campus but don't know if other people are told - is it confidential?

Resumé

The quantitative results show specific trends such as greater empathy and support for PLWHA amongst female students and more inappropriate sexual behaviour amongst male students. The quantitative results will be discussed in more detail with reference to the predictions (p. 45) underpinning the study and the six components of the HBM model.

The qualitative results highlighted themes such as embarrassment, fear and shyness. This may well indicate that HIV/AIDS is still a topic, which cannot be discussed in an open and honest manner. A brief discussion on the reported themes will be undertaken.

CHAPTER 5: DISCUSSION OF RESULTS

5.1 Introduction

This study was undertaken to investigate HIV/AIDS related knowledge, behaviour and attitudes amongst a specific high-risk group of individuals, those from 15 – 24 years of age. This spectrum includes most members of the student population at the University of Zululand campus. It was hypothesised that women students would be more conservative in sexual behaviour, which appears generally to be the case; that women students would show more empathy to PLWHA, which the results appear to validate. The predicted dissonance between attitudes, knowledge and behaviour is also born out in terms of the study, as are some significant gaps in knowledge about how HIV/AIDS is transmitted.

Quantitative results will be discussed in terms of the six components of the HBM underpinning the questionnaire, access to information, student behaviours and students attitudes, followed by a brief discussion of qualitative results. Reference will also be made to the prevailing societal paradigm that is patriarchy, as the results of the study must be contextualised within prevailing South African societal norms.

5.1.1 Discussion of results with reference to the HBM and access to information

With regard to knowledge the majority of students are aware that unprotected sexual intercourse and mother to child transmission are the most common routes of HIV/AIDS transmission. However, even these categories did not receive a 100% response rate amongst the sample group. There is also some confusion about common modes of HIV/AIDS transmission as for instance, mosquito bites, and sharing cutlery are noted as likely methods by some participants. Although the student body is generally aware that motor vehicle accidents are not a common cause of infection, some respondents note it as a standard means of infection. As most of the sample group has reportedly received information about the pandemic during a period of four weeks prior to the study and has good access to information mediums these gaps in knowledge are disquieting. It may be that information about HIV/AIDS is not imparted in a manner that catches the attention of the sample group and student populations generally. For instance, the focus on sexual abstinence in many of the campaigns in recent years may not have had an enthusiastic response amongst young people, which could have resulted in them ignoring other pertinent information

Thirty eight percent of the students feel that their knowledge of the HIV/AIDS is not as good as it should be this points towards a problem in communicating the facts about the illness. On the University of Zululand campus for instance,

information is available but is not prominently displayed, in the library, in toilets and on notice boards. As some students may feel embarrassed to ask about the virus the omission of readily accessible information pamphlets providing detailed information at different venues throughout the university could, in part, account for this lack of knowledge. This deficit of knowledge in over a third of the students who responded may be problematic as it is possible that ignorance about HIV may lead to discriminatory behaviour thus leading to stigmatisation of PLWHA. It is likely that this observation is true of student populations generally if they do not have HIV/AIDS information that is well displayed and easily accessed.

Broadly the sample group have good access to information with radio and television being the usual means of acquiring data. This could account for reported lack of knowledge in certain areas as television, radio programmes and adverts do not cover all risk areas associated with the virus due to programming and space constraints.

Respondents report relatives as their first choice of information giver about HIV/AIDS. This may be a contributing factor to lack of knowledge, as relatives may not have accurate and detailed knowledge themselves. Interestingly ministers and priests are not favoured information givers. This may be because although the majority of the respondents report to having a religious affiliation they may not be active churchgoers. Alternately many churches and religious groupings promote sexual abstinence as prevention to the HIV/AIDS pandemic this may give a negative message to those who seek support and information.

Essentially, the individual may feel that s/he would be regarded as promiscuous and stigmatised as such.

Both genders report to having good access to information sources pertaining to HIV/AIDS in the month preceding the survey however having access does not mean that the respondents take proper note and understand the material they are exposed to.

Female students are more familiar with the acronym PLWHA possibly because they are better acquainted with the university clinic which offers pre- and post test HIV/AIDS counselling and where it is prominently displayed. Males are not as familiar with this acronym but are more aware than female students of the AIDS helpline. The inference is that as this is a more impersonal approach, which does not require face-to-face interaction males are more likely to use it. This is underpinned by the result that there is a statistically significant difference across genders indicating that more males have heard of the AIDS helpline than females. In traditional patriarchal societies males are disempowered in terms of being able to express emotion and empathy on a face-to face basis. The aforementioned result underpins this interpretation the broader inference is that males would thus be less likely to display supportive and empathic behaviour to PLWHA than females.

An unusual response to methods of transmission under *other (methods of transmission)* is undize. According to the respondent this is a traditional game played on the African continent, it has a variety of different names according to

the country and culture. Pre-adolescent boys and girls play the game. In the traditional form a young girl hides from a youth who finds her and they indulge in mutual masturbation but not sexual intercourse. However, according to the respondent in recent years sexual intercourse often takes place and is a potential cause of HIV infection. This is an interesting comment and could be a focus for future research.

In terms of both personal and societal susceptibility both genders perceive that the HIV/AIDS pandemic is a threat to society. Males are particularly vulnerable to worrying about the possibility of existing (but unknown) and possible infection. A possible explanation is that the males in the study show a tendency to be more promiscuous than females. The inference is that they are aware that having multiple sexual partners is likely to put them at risk of HIV/AIDS infection. It is entirely possible that the worry they experience could cause depression and related psychological illnesses, which may impact upon academic performance.

Condoms as an item can be perceived as a barrier as usage can be associated with a negative outcome. The study noted negative outcomes for males as being teased by their friends for using condoms. This type of peer pressure may be a contributing factor toward individuals not always using a condom when having sexual intercourse. The results of the survey note that females still feel inhibited when it comes to buying a condom or having one in their possession. This is supported by the result that there is a statistically significant difference across

genders indicating that females are reticent to buy a condom and to have one in their possession. Another statistically significant difference in response direction across genders indicates that females do not have a condom where it is easily available. This would suggest that females feel that they cannot be assertive in sexual relationships, which implies that as we enter the 21st century there is still evidence of a patriarchal society. This is underpinned by the finding that more females than males consider condoms to be 100% effective against HIV/AIDS transmission. There is a statistically significant difference in knowledge across genders pertaining to whether condoms are a hundred percent effective against HIV/AIDS infection with females indicating that they are more likely to believe this is true. This is erroneous and worrying in terms of incorrect knowledge. It would suggest that females would be more assertive about condom use, which is not supported by the study probably because of their inferred powerlessness in sexual relationships. Other barriers might be that ninety six percent of both genders know that condoms can break during sex and two thirds of the group are aware that condoms are not 100% effective against transmission of the virus. This could lead to irresponsible or apathetic behaviours amongst the student body with regard to sexual practices.

Although condoms can be construed as a perceived barrier they can also be viewed in terms of a perceived benefit. They can be seen as a successful means of preventing HIV/AIDS, STD transmission and be effective in preventing pregnancy. A marked dissonance in knowledge and behaviour is noted in the

study as although sixty two percent of both genders are aware of the benefits only fifty percent of the sexually active respondents used a condom in their last sexual encounter. This again underpins a reckless or apathetic attitude toward sexual behaviours by a proportion of the respondents, which might be extrapolated to student populations generally. This is further underscored by the result that two thirds of the sexually active males and nearly sixty percent of the sexually active females do not always use a condom when having sex. This type of behaviour is not consistent with their reported knowledge and understanding of condoms as a perceived benefit in sexual practice. This underpins one of the premises of the study namely that there is a dissonance between reported knowledge and sexual behaviour.

A percentage of both genders have reported witnessing HIV/AIDS infection and illness in friends or family members, which means they have been eyewitness to financial constraints and the challenges faced by families who have members that are repeatedly hospitalised. These individual's may well be the respondents who show more empathy toward PLWHA. More males than females report to not having had this experience, which may be because they, in terms of the study, are inferred to have less empathy towards PLWHA. As HIV/AIDS is a widespread pandemic it would be expected that both genders would share this type of experience in a comparable way. It may be that males in traditional patriarchal societies are unlikely to be able to discuss issues dealing with emotions or be involved in care-giving as would be expected in more free-

thinking societies. This is further underpinned by the result that both genders report an almost equal percentage of frequency of death in their families from HIV/AIDS. The inference is that a percentage of males become aware of the illness only when death results which would seem to be consistent with the aforementioned statements. Interestingly a higher proportion of the males in the study report to having witnessed the death of a friend, which could well, be linked to their propensity for having more sexual partners than the females in the study. This would render them more susceptible to HIV/AIDS infection. They may also be unaware that individuals who are HIV positive, and who are in a monogamous sexual relationship, should wear condoms when having sex as repeated exposure to the virus results in a continual degradation of the immune system.

5.1.2 Student behaviours

The hypothesis that females would be more empathic than males appears to be underscored by the reported behaviour that they are more likely to share eating utensils with PLWHA. This is consistent with a non-judgemental attitude. Another supposition is that in a patriarchal society females are regarded as caregivers and are brought up in a manner consistent with that paradigm which means they are expected to show more empathy and care than men. A further interpretation is that because in patriarchal societies women lack power in sexual relationships they try and compensate for this discrepancy by becoming more

knowledgeable about the virus generally, one can relate this to the saying *knowledge is power*.

In terms of behaviours both genders report actions that are not consistent with safe sexual practise. For instance, twenty two percent of the survey respondents report having had more than one sex partner. Females appear more conservative in terms of sexual practise and are more likely to have one steady sex partner. On the other hand males are more likely to have changed their sexual behaviour possibly because many of them have had more reason to change. This can be understood in terms of the study by males reporting that they are more likely to have had multiple sexual partners during a twelve month period than the female respondents. Underpinning this interpretation is the statistically significant difference in response direction across genders signifying that more females have a steady sex partner and do not generally have multiple sex partners. This suggests that male students may be more promiscuous sexually and thus have more reason to make behavioural changes, which is indicated by the survey. There is also a statistically significant difference in response direction across genders illustrating that some males in the study have changed their behaviours because of HIV/AIDS. However, it must be stated that a worrying number of both sexes report having multiple sex partners.

Some pundits (Shell, 2001) have called for abstinence from sexual practise unless in a committed relationship. This method of dealing with the pandemic

does not appear to have much credibility amongst the student body as only twenty percent of the sample report to never having had sex.

Female students attest to more behaviour(s) predicated by their powerlessness in relationships of a sexual nature. This appears to be a result of the prevailing patriarchal society, which still exists in South Africa today. This society, which has its historical roots not only in colonialism and apartheid but also traditional tribal culture essentially, regards woman as child and man as parent. This gives females limited power in voicing their opinions in roles related to for instance, sexual relationships. This interpretation is underpinned by the results of statistically significant difference across genders with regard to females more likely to having been forced to have sex by a male partner, being unable to say no if they don't want sex and having sex with someone who refused to wear a condom. A further rationale for the interpretation is that there is a statistically significant difference across genders indicating that males are more likely to have had sex when drunk.

Broadly speaking the paradigm of patriarchy, which was beginning to shift in global terms, has after 9/11 become more entrenched. This date is the inclusive term for referring to the destruction of the Trade Towers, New York, by an act of terrorism in 2001. This act entrenched a patriarchal, authoritarian stance in the United States of America, which because of its status as the only world superpower influences opinions and attitudes globally.

Women are thus more at risk, not only in a biological sense (bigger area of exposed membrane in the vagina) but also in societal terms because of their positioning and expected roles dictated by the prevailing global paradigm. Females are also less likely to reveal HIV/AIDS infection which would seem to underpin their perceived powerlessness to sexual behaviours in terms of societal norms generally. As noted males are disempowered in terms of the prevailing paradigm by not being able to show empathy and emotion in an appropriate manner. The saying *big boys don't cry* is still entrenched in societal norms. This may be a reason why more males were willing to fill in the survey questionnaires. Essentially by filling in the protocol they are, in some sense, taking back power. They are thus able to experience feelings that they otherwise cannot express. Females, conversely, were not as willing to fill in the protocols. This is most likely related to their general feelings of powerlessness in issues related to sexuality.

5.1.3 Respondents attitudes

Only twenty four percent of the respondents have made changes to their sexual behaviour all the time, which is a disturbing statistic, especially if it is extrapolated to student populations generally. Essentially, it denotes that the current and past HIV/AIDS awareness programmes are not having the desired outcome in terms of teaching individuals to have positive responses and actions to behaviour change, which will help slow or stop HIV/AIDS transmission.

A third of the sample group would not want to be tested for HIV/AIDS at the campus clinic this infers a negative attitude toward testing. It is likely that students worry about issues pertaining to confidentiality. This was a common theme of concern in the qualitative responses. The study suggests that females are more likely to worry about issues of confidentiality than males. There was a statistically significant difference across genders indicating that female students were more likely to keep HIV/AIDS infection a secret than males. This would suggest that they are afraid that disclosure would not be confidential. It may also infer that they have a fear of being stigmatised. A positive finding in the survey is that both genders are mostly willing to talk about HIV/AIDS and report not being embarrassed to use condoms. When one compares this finding with condoms seen as a perceived barrier there is a dissonance between attitude and behaviour. It seems that students may be able to state that they do not feel embarrassed to use condoms but are not always able to apply these thoughts and actions to the sexual act.

Females in the study are more supportive when asked to show solidarity with PLWHA by wearing the HIV/AIDS ribbon and show less irritation toward posters giving HIV/AIDS information. There is a statistically significant difference in response direction across genders illustrating that females are more likely to wear a red HIV/AIDS ribbon than males. This indicates that they are generally more empathic than males. This is supported by the statistically significant difference across groups with females ($p < 0.019$) being more supportive about

wearing red ribbons on HIV/AIDS day. It can be inferred that there is more of an extreme reaction amongst males to supporting or not supporting the wearing of a red ribbon on HIV/AIDS day. This is indicated by the greater spread of replies amongst the male respondents indicating that some were very supportive and some were not at all supportive of the initiative.

A high percentage of both genders (94%) report that overtime they have changed in attitude to PLWHA. Attitudinal changes are often related to personal circumstance. The assumption is that change occurred because respondents have witnessed illness and death in friends and family. The study also highlights the fact that HIV/AIDS is discussed regularly by students of genders, 55% of both groups report having been given and/or receiving advice about the topic during the month prior to the survey. This would indicate that the sample group are interested in learning more about HIV/AIDS and that they talk about it amongst themselves. This is a strong motivator for training not only peer group counsellors but also peer group educators. An educator imparts information and is trained to do so but does not have to counsel. This is an important distinction as there are some students who are good at imparting knowledge but who do not want to counsel. Essentially, all areas of expertise should be utilised in any HIV/AIDS awareness/prevention programme.

5.1.4 Qualitative questions

The answers to these questions underpin results of the quantitative survey. Males are less likely to wear a red ribbon to show that they are empathic to PLWHA. The replies also highlight the issue of confidentiality and apprehension at being exposed as HIV positive. The themes reported when respondents were asked how they felt about filling in the questionnaire were essentially those associated with fear and stigmatisation, which it seems, is still associated with HIV/AIDS infection.

Resumé

The study had certain assumptions, which have been supported by the results of the survey. It was postulated that women students would be more conservative in sexual behaviour than male students and that females would be more accepting and empathetic towards PLWHA. The study also predicted that there would be a segment of the student population who would reveal a dissonance between attitudes, knowledge and behaviours and also that a proportion of students of both sexes would reveal significant gaps in their knowledge about how HIV/AIDS is transmitted. These predictions are underpinned by the results and discussion thereof, which places them within the context of early 21st century South African society.

CHAPTER 6: IMPLICATIONS AND RECOMMENDATIONS

6.1 Implications of this research and recommendations

The results of this research indicate that students have some knowledge about HIV/AIDS but that there are worrying gaps in their database. It also suggests that women are more vulnerable both physically and in societal terms to the pandemic. The broader implication is that all campaigns mounted at great cost by government and non-government organisations have not been effective in imparting knowledge and persuading people to change their sexual behaviours. It is likely that this study can be extrapolated to student populations generally, which is a cause for great concern in terms of future control of the pandemic.

Recommendations are:

- Broadly – Government and other organisations should review the efficacy of HIV/AIDS awareness campaigns as a matter of urgency – it may be pertinent to provide both males and females with a more holistic understanding of how they are placed in society-
- Specifically – The University of Zululand should review its mode of communication pertaining to HIV/AIDS related issues
- More peer group educators as well as counsellors should be trained

6.2 Research Evaluation – methodological strengths of the study:

1. The study was conducted with a sample group, which was drawn from a population generally well matched in terms of two key variables level of education, and homogeneity within a specific age range (Steele, 2001).
2. The questionnaire was well balanced and researched, based on a protocol used by Harvey (1997).
3. The chi squared test and independent t-test are consistent with statistical analysis used in other studies pertaining to HIV/AIDS (Harvey, 1997; Partington, et al., 2001)

6.2.1 Research Evaluation – Methodological weaknesses of the study:

1. Sample size - A larger sample would have been better in terms of reliability and validity.
2. A correlational study across different universities would indicate any cultural differences pertaining to knowledge, behaviours and attitudes to HIV/AIDS
3. Qualitative questions – more qualitative questions aimed at finding out why students till indulge in risky behaviours, etc.

6.3 Recommendations for future research

1. A broader based study across several universities
2. An investigation of the undize phenomenon
3. An investigation at the University of Zululand campus into why male students appear more willing to complete surveys about HIV/AIDS than female students
4. A meta analysis of all HIV/AID studies undertaken in South Africa
5. How entrenched is the myth of the virgin cure in South African society

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Glossary of terms

Definition of Key terms

AIDS = Acquired Immune Deficiency Syndrome, an infectious viral disease that is incurable. It causes irreparable damage to the immune system, which allows opportunistic diseases to take hold and eventually kill the individual.

Acquired: This means that the disease is passed from one person to another. It is not hereditary in nature.

Immune: Refers to the body's defence system, which normally protects individuals from disease.

Deficiency: This refers to the fact that the body's defence system is not working.

Syndrome: A group of symptoms which, when they occur together, means that an individual has a particular disease or condition.

Antibodies: A specific type of protein, which binds a particular antigen, which leads the immune system to attack an alien to the organisms system.

Antigen = This is a substance/molecule against which a particular immune response is raised.

AZT (AZT) = Azidothymidine, also known as Zidovudine Retrovir. This is an antiviral drug that has proved effective in treating HIV infection.

Deoxyribonucleic acid (DNA): An acid found in the nucleus of all living cells. It is the substance of which most genes are made.

Helper T-lymphocytes = These help T and B-lymphocytes respond to antigens. Destruction of these lymphocytes is the primary problem in AIDS.

HIV = Human Immunodeficiency Virus

Killer or cytotoxic T-lymphocytes = T lymphocytes that kill target cells that they attach themselves to.

Lymphocytes = Cells of the immune system that respond to alien substances that enter the system.

Nevaripine = An anti-retroviral drug typically given to pregnant mothers to try and prevent mother to child infection

NGO = Non Governmental Organisation

OI'S = Opportunistic infections

Opportunistic infection = Infections by common microorganisms that do not usually cause problems in healthy individuals.

PLWHA = People living with HIV/AIDS

Red Blood cells (erythrocytes) = Blood cells that for carry oxygen and carbon dioxide to and from the tissues.

Retrovirus: A virus with the ability to take over a cell and while reproducing is able to change the RNA to DNA, which is the reverse of most genetic messages. It is this backward flow of information that gives rise to the name retrovirus.

Ribonucleic acid (RNA): A complex chemical compound, which carries the instructions from the genes to the building sites within the body, where it directs the assembly of proteins.

T – Lymphocytes = T – lymphocytes do not release antibodies, but they identify and bind foreign antigens. Two main types exist, T killer and T helper lymphocytes.

UNAIDS = United Nations Programme on HIV/AIDS

Viruses = Small infectious agents, parasites that must grow inside cells.

White Blood cells (leukocytes) = All blood cells except red blood cells.

WHO = World Health organisation

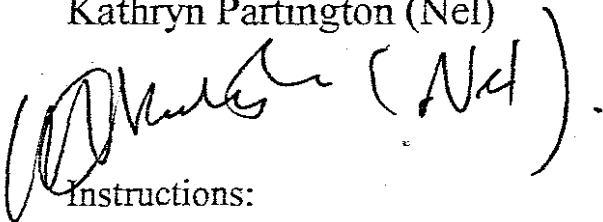
APPENDIX 1

**A SURVEY OF STUDENTS' KNOWLEDGE,
BEHAVIOUR AND RESULTANT ATTITUDES
TOWARDS HIV/AIDS ON THE UNIVERSITY
OF ZULULAND CAMPUS**

This survey is being undertaken as part of a Masters in Counselling Psychology. The information obtained will be used to complete a dissertation that will add to the research base on the subject undertaken at South African Universities. **You must not write down your name to ensure that the material is completely anonymous.** The research is conducted in an ethically appropriate manner under the auspices of the Psychology Department of the University of Zululand. **It is really important that you be honest when you fill in the questionnaire otherwise the study will be of little worth.**

Thank you for your co-operation,

Kathryn Partington (Nel)



Instructions:

**READ EACH QUESTION CAREFULLY AND
MAKE A TICK IN THE BOX NEXT TO YOUR
CHOICE OF ANSWER, OR WRITE THE ANSWER
THAT IS REQUIRED IN THE GIVEN SPACE.**

**PLEASE TURN THE PAGE OVER AND BEGIN.
THERE ARE 63 QUESTIONS, PLEASE ANSWER
ALL OF THEM.**

1. Are you between 15 and 24 years?

YES	NO

**If you are older than 24yrs or younger than 15yrs DO NOT
FILL IN THE QUESTIONNAIRE**

2. What is your racial grouping?

African (South African)	Coloured	Indian	White	Other

3. Are you Male or Female?

Male	Female

4. What is your home language?

Afrikaans		IsiXhosa	
English		IsiZulu	
Sesothwana		Tshivenda	
Sepedi		Xitsonga	
Sesotho		Other	

5. Religious group? (Please Specify e.g., Catholic, Zionist, etc.)

--

6. What is your sexual Orientation?

Heterosexual	Homosexual (Gay)	Bisexual

7. I have access to: (tick all of those which are true)

Television		Magazines	
Newspapers		M-Net	
Telephone		Radio	
Cell-phone		Internet	

8. Where have you heard and seen information about HIV/AIDS in the past month? (recently) Tick all of those that are true.

Television		Meetings	
Radio		Magazines	
Leaflets		Newspapers	
Posters		Painted walls	
T/shirts/clothes		Talks	
Plays		Stickers	

9. If you had a question or wanted more information about HIV/AIDS where would you first try to get information from? Choose two –TICK

Parent		Lecturer	
Nurse		Doctor	
Psychologist		Relative	
Priest/Minister		Friend	
University Clinic		Other	

10. Have you ever heard of the Aids helpline?

YES	NO

11. Would you wear the red ribbon, which is the HIV/AIDS symbol, and show that you are empathetic to People Living With HIV/AIDS (PLWHA).

YES	NO

12. If NO, why not?

--

13. Have you seen the acronym PLWHA (People Living With HIV/AIDS) before?

YES	NO

Yes Not Sure No

14. Do you have a relative who is HIV-Positive?			
15. Do you have a relative who is sick with AIDS?			
16. Do you have a relative who has died from AIDS?			
17. Do you have a friend who is HIV – Positive?			
18. Do you have a friend who is sick with AIDS?			
19. Do you have a friend who died from AIDS?			
20. If someone in the family had HIV/AIDS would you be happy to share eating utensils with them?			
21. If you were infected with HIV/AIDS would You keep it secret from everyone?			
22. People with AIDS deserve to die, they are to blame.			

23. Have you changed your sexual behaviour because of AIDS, even a little?

YES	NO	No need for me to change – no risk

24. Has your attitude to people living with HIV/AIDS (PLWHA) changed over time?

YES	NO

25. Have you in the last month been given any advice about HIV/AIDS?

YES	NO

26. Have you in the last month given any advice to anyone about HIV/AIDS?

YES	NO

27. Have you ever been in the same room or listened to a talk given by a person who you know is HIV infected?

YES	NO

	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MUCH
28. HIV/AIDS is a threat to our society?				
29. Have you worried that you may have the HIV virus?				
30. What do you think your chances are of becoming HIV infected?				

31. Have you ever had sexual intercourse?

YES	NO

32. Have you ever used a condom?

YES	NO

	YES	NO
33. Did you use a condom the last time you had sex?		

	YES	NO	Only 1 partners and no HIV risk	Not sexually active
34. Have you been teased by friends for using condoms?				
35. Do you have a condom where you can easily get it if you need it?				
36. Do you think condoms protect you 100% against HIV/AIDS?				

	I do not need condoms	YES	NO
37. Are you shy to have a condom in your possession?			
38. Are you shy to get a condom?			

39. When did you last have sex – tick only 1	
- I have not had sex before	
- More than 1 year ago	
- In the last 6 – 12 months	
- In the last 1 – 5 months	
- In the last month	
- In the last week	

40. Do you have a steady sex partner at the moment?

YES	NO

41. Are you living together with a partner?

YES	NO

42. Do you have more than one sex partner at the moment?

YES	NO

43. How many sex partners have you had in the last 6 months?

0	1	2	3	4	5	6	More – write number

44. How many sex partners have you had in the last year?

0	1	2	3	4	5	6	More – write number

45. How old were you when you first had sexual intercourse? Write down age in years or tick never (had sex)

Never	Age

46. Have you ever discussed the risk of HIV/AIDS with your boyfriend/girlfriend/sexual partners?

YES	NO	Not applicable

YES NO N/applicable

47. Have you ever been forced to have sex by a partner?

48. Have you ever had sex when drunk?

49. Are you able to say no to sex if you don't want it?

50. Have you ever had sex with someone who refused to wear a condom?

51. Do you think condoms can break during sex?

52. Which of the following is true for you? (tick only 1)

I am sexually active and always use a condom for protection	
I am sexually active and sometimes use a condom for protection	
I am sexually active and never use a condom for protection	
I am sexually active and plan to use condoms for protection but do not use them yet	
I am sexually active and do not use condoms because me and my partner are not HIV infected	
I am not sexually active	

Which of the following applies to you, concerning changing one's sexual behaviour because of HIV/AIDS. (tick only 1)

53. I have no need to change because I do not practice sex or because My partner and think we are HIV free	
54. I have not really thought about changing	
55. I have decided to change but have not changed yet	
56. I have actually changed my behaviour sometimes	
57. I have definitely changed my behaviour all the time	

58. Which of the following do you believe commonly leads to the transmission of HIV/AIDS – tick all the applicable blocks

Unprotected sexual intercourse	
Mosquito bites	
Kissing	
Oral sex	
Sharing razors	
Blood transfusion	
Sharing needles	
Sharing cutlery	
Mother to child transmission	
Other – please specify	

59. Please tick the block which best describes your response to the following questions

	NOT AT ALL	A LITTLE	QUITE A LOT	VERY MU
Do you feel supportive if/when you are asked to wear a red ribbon on HIV/AIDS day?				
Do you feel irritation when you see AIDS/HIV posters around campus?				
Are you embarrassed to talk about HIV/AIDS?				
Do you think condoms would be embarrassing to use?				

60. Do you think you have good knowledge about HIV/AIDS generally?

YES	NO

61. Do you know where to get HIV/AIDS counselling and testing on campus?

YES	NO

62. Would you be willing to undergo HIV/AIDS testing on campus?

YES	NO

63.If NO, Why not?

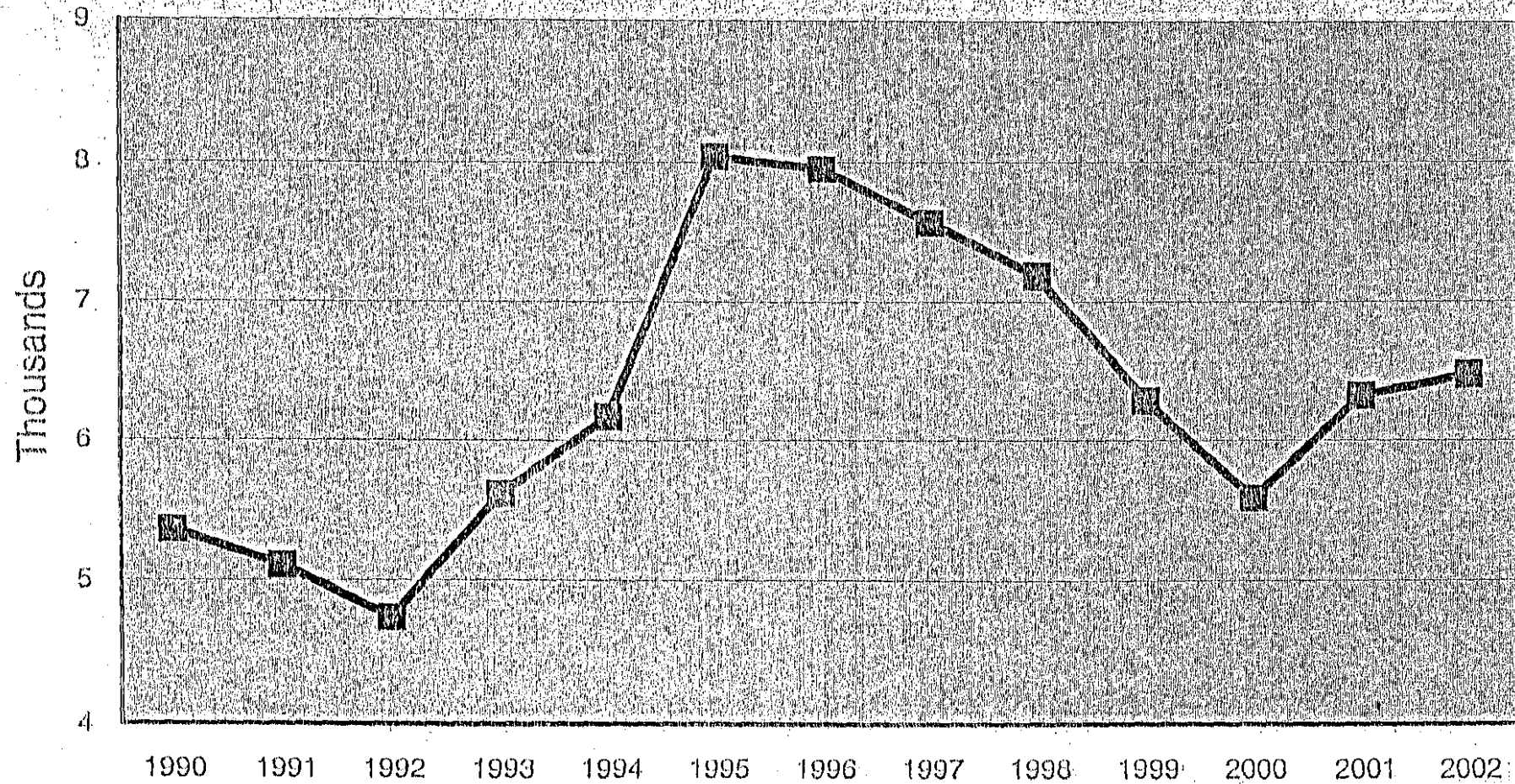
THIS IS THE END OF THE QUESTIONNAIRE - HOWEVER, I WOULD BE INTERESTED IN ANY COMMENTS YOU HAVE ABOUT THE SURVEY. HOW DID FILLING IN THE QUESTIONNAIRE MAKE YOU FEEL? PLEASE WRITE A FEW POINTS (on the other side of the paper, that is page 10) THANK YOU FOR YOUR HELP AND CO-OPERATION.

[illegible]

THE END, THANKS.

APPENDIX 2

HEADCOUNT



Prepared by Dept of Performance Data & Research Administration

NUMBER OF STUDENTS PER FACULTY - 1990 TO 2002

FACULTY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Arts	2170	2072	1948	2438	2540	3106	3367	3283	3019	2421	1807	1912	1884
Commerce	396	403	411	570	722	970	1003	906	1111	1114	1073	1188	1396
Education	2160	2052	1756	1887	2156	2910	2505	2263	1841	1301	1192	1589	1344
Law	278	277	294	313	307	339	467	491	503	548	513	451	408
Science	298	274	285	362	397	447	530	536	544	719	831	1014	1233
Theology	42	17	19	16	16	20	13	14	86	115	133	155	202
Scienceosp	0	0	2	0	0	87	43	42	54	29	11	0	0
Non degree	19	16	31	24	22	21	24	20	23	34	27	11	0
TOTAL	5363	5111	4740	5610	6168	8042	7952	7355	7181	6201	5587	6320	6467

ared by Dept of Performance Data & Research Administration

2002	ARTS		COMMERCE		EDUCATION		LAW		SCIENCE		THEOLOGY		SCIENCESP		NON-DEGREE		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Main Campus	414	1067	484	586	214	421	184	134	753	466	39	8	0	0	0	0	2088	2682
Full-time	347	923	433	530	135	288	177	133	738	446	6	2	0	0	0	0	1836	2322
Evening	4	7	9	14	2	1	1	0	0	1	0	0	0	0	0	0	16	23
Part-time	63	137	42	42	77	132	6	1	15	19	33	6	0	0	0	0	236	337
Colleges	17	32	0	0	31	87	0	0	0	0	0	0	0	0	0	0	48	119
Johannesburg											44	8					44	8
Bononi											18	2					18	2
Ulundi	1	2	44	62	4	12	0	0	0	0	0	0	0	0	0	0	49	76
Durban											8	5					8	5
Port Shepstone		1			117	336	0	0	0	0	0	0	0	0	0	0	117	337
Jmlazi	72	278	91	120	47	59	51	39	12	2	3	1	0	0	0	0	276	508
Bethesda											13	9					13	9
Unisa					6	10											6	10
Sals											14	3					14	3
Ebc											5	4					5	4
Trinity											8	1					8	1
Union	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	8	1
GRAND TOTAL	504	1380	619	777	419	925	235	173	765	468	160	42	0	0	0	0	2702	3765