

**LIFE-SKILLS CURRICULUM FOR HIGH SCHOOLS:  
ITS EFFECTIVENESS IN AIDS EDUCATION**

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**Mini-thesis submitted in partial fulfillment of the requirements for the degree of  
Magister Artium in the Department of Industrial Psychology,  
University of the Western Cape.**

**UNIVERSITY *of the*  
WESTERN CAPE**

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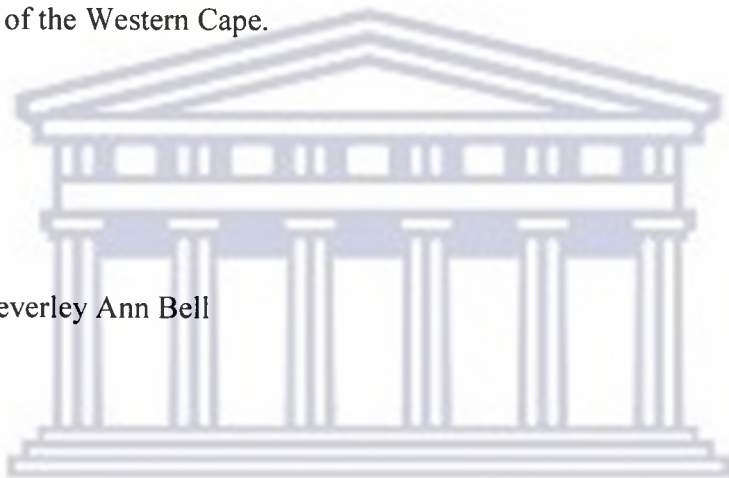
## DECLARATION

I hereby declare that “Life-skills Curriculum for High Schools: its effectiveness in AIDS education” is my own work. It has not been submitted for any degree or examination at any other institution of higher learning, all the sources I have used or quoted have been indicated by complete references. It is being submitted for the degree of Magister Artium at the University of the Western Cape.

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Signed:  .....



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## ABSTRACT

According to Page, Ebersohn and Rogan (2006) South Africa has one of the highest numbers of HIV positive citizens compared to other countries. Furthermore, epidemiological studies conducted by Pettifor, Reed, Steffenson, Hlongwa-Madikizela, Macphail, Vermaak and Kleinsmidt (2004) have shown that the peak incidence of infection occurs in young people aged 15-24. These studies are supported by Visser (2005) as her studies also showed that secondary school learners have a basic knowledge of HIV/AIDS, but that knowledge on its own is not enough to assure safe sexual behaviour. The prevention of HIV/AIDS among South African learners is therefore a priority. This study thus hopes to impart a means by which knowledge, attitudes and behaviour can be affected positively.

This study had three main aims and consequently three stages. Firstly to determine and describe for the sample of learners used: their knowledge regarding AIDS/HIV, their attitudes towards AIDS and people with AIDS. Secondly, a Life Skills Training Intervention, The Health Wise South Africa curriculum, was implemented. Thirdly, using a quasi-experimental design, the relative effectiveness of the Health Wise Life Skills curriculum on the sample of learners' knowledge, attitudes and behaviour regarding AIDS/ HIV was evaluated. A convenience sample of 235 Grade eight learners was drawn at a school in the Cape Metropolitan area. Ninety-seven (228) respondents completed the AIDS Attitude Questionnaire.

The questionnaire consisting of four sections was administered to the sample. Section A was designed to give an indication of the demographics of the participants, Section B focused on the participants' knowledge on HIV/AIDS, Section C focused on participants' attitude towards AIDS and People with AIDS (PWA) and Section D focused on participants' sexual behaviour.

The statistical analysis was conducted through descriptive statistics (mean and percentages) as well as inferential statistics (t-tests). The results revealed that the Life skills curriculum does significantly impact on learners' knowledge and attitudes however, behaviour change with regards to sexual behaviour was difficult to ascertain. It is thus recommended that a follow-up study be conducted to ascertain if the curriculum effected behaviour change as most learners indicated an intention to engage in risk-reduction sexual behaviour. The efficacy of the life skills curriculum can thus be concluded.

It is thus recommended that the curriculum become part of a multi-component programme which includes staff development, school environment, parent education and community activities. This is supported by Visser (2005) who opines that the implementation of change in schools is a long-term process which involves the participation of all stakeholders.

**Key words:** Life-skills; Health-wise; Curriculum; AIDS; HIV; Risk-reduction; Behaviour; Knowledge; Attitudes; Adolescents

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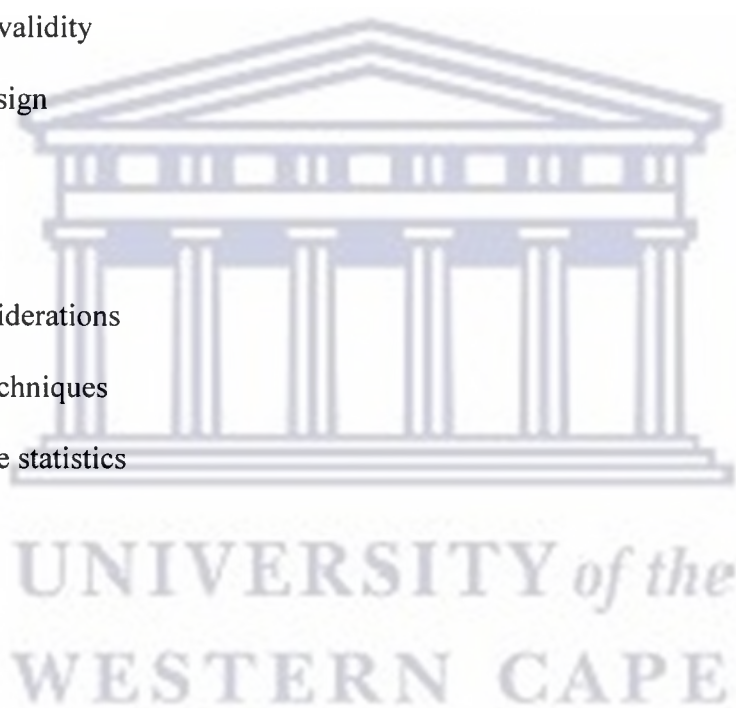
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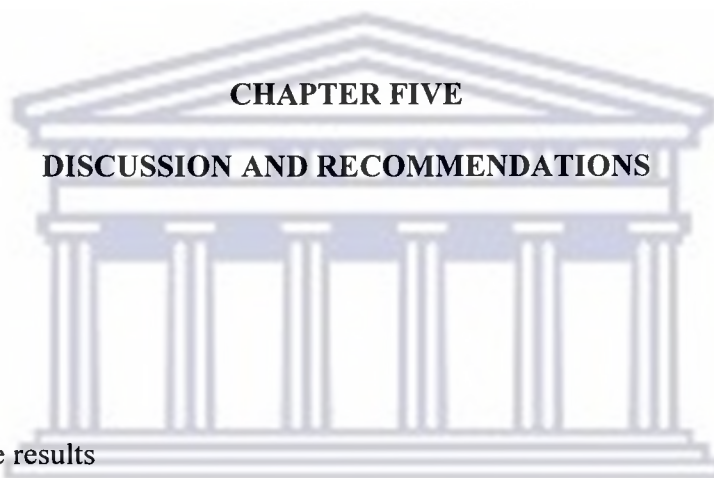
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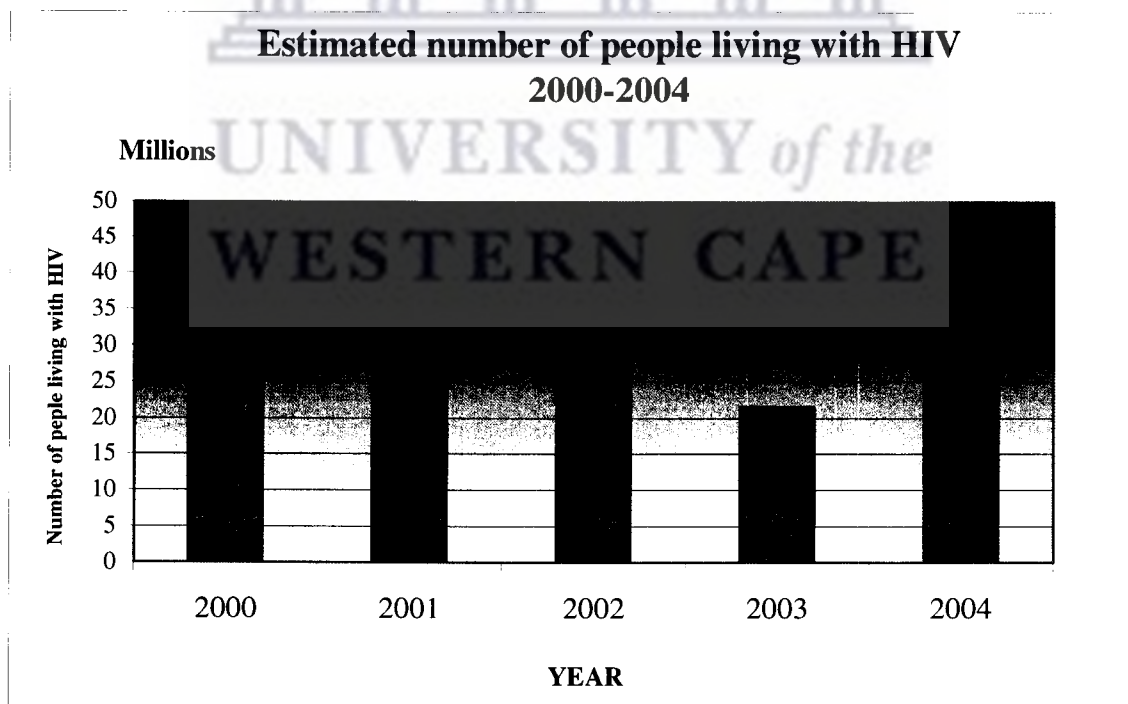
# CHAPTER 1

## INTRODUCTION

### 1.1. Introduction

Acquired Immunodeficiency Syndrome (AIDS) has been regarded as the scourge of the century and indeed one that requires a multi-disciplinary collaborative effort in order to combat its devastating effects. The disease is being spread at a rate that almost defies counter-measures. Around the world, an estimated 35.9 million – 44.3 million people became infected in 2004 and approximately 3.1 million were killed by the epidemic. This is depicted in Figure 1.1 (AIDS epidemic Update, 2004).

**Figure 1.1 Estimated number of people living with HIV (2002 –2004)**



## AIDS epidemic Update (2004)

These statistics are supported by the Global summary of the HIV/AIDS epidemic (2004), which is clearly depicted in Table 1.1

**Table 1.1 Global Summary of the HIV/AIDS epidemic**

	Adults	Women	Children under 15 years	Total
<b>Number of people living with HIV/AIDS in 2004</b>	37.2 million (33.8 – 41.7)	17.6 million (16.3 – 19.5)	2.2 million (2.0 – 2.6)	<b>39.4 million</b> <b>35.9 – 44.3</b>
<b>People newly infected with HIV in 2004</b>	4.3 million (3.7 – 5.7)	-	640 000 (570 000 – 750 000)	<b>4.9 million</b> <b>4.3 – 6.4</b>
<b>AIDS deaths in 2004</b>	2.6 million (2.3 – 2.9)	-	510 000 (460 000 – 600 000)	<b>3.1 million</b>

### AIDS epidemic update (2004)

According to the AIDS epidemic update (2004) large numbers of people are being newly infected with HIV worldwide bringing the total to approximately 4.9 million new infections. In addition, a further 39.4 million are living with AIDS of which 17.6 million are women and 2.2 million are children under the age of 15 years. In summary, the numbers of AIDS deaths are between 2.8 million – 3.5 million.

These statistics are supported by Theron (2005) who claims that approximately 22 million deaths from AIDS have been recorded and nearly 42 million people worldwide, mostly working age individuals are HIV positive. Furthermore, an increase in the number of people living with HIV in every region has been reported. It is however,

estimated that 29.4 million of the 42 million infected persons live in Sub-Saharan Africa (Theron, 2005).

**Table 1.2 HIV and AIDS statistics and features for Sub-Saharan Africa end of 2002 and 2004**

2004	25.4 million (23.4 – 28.4 million)	13.3 million (12.4 – 14.9 million)	3.1 million (2.7 – 3.8 million)	7.4 (6.9 – 8.3)	2.3 million (2.1 – 2.6 million)
2002	24.4 million (22.5 – 27.3 million)	12.8 million (11.9 – 14.3 million)	2.9 million (2.6 – 3.6 million)	7.5 (7.0 – 8.4)	2.1 million (1.9 – 2.3 million)

**UNAIDS (2005)**

According to UNAIDS (2005), Sub-Saharan Africa has just over 10% of the world's population, but is home to more than 25.4 million (60%) of all people living with HIV. Approximately 3.1 million people in the region became newly infected, while 2.3 million died of AIDS. By the end of 2004, young people aged 15-24 constituted 8.11 % living with HIV - an estimated 6.9% of women and 2.2% of men respectively. Recent population-based studies suggest that young women aged 15-24 are bearing the impact of new infections in Sub-Saharan Africa. It is evident that women, more specifically young girls are disproportionately affected as girls make up almost 57% of adults living with HIV in Sub-Saharan Africa. Moreover, 76% of young people aged 15 – 24 years living with HIV are female (UNAIDS, 2006).

**Table 1.3 Young people living with HIV in Sub-Saharan Africa**

15-24	2.2%	6.9%	8.11%
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**UNAIDS (2005)**

According to the AIDS epidemic update (2004), effective prevention among young people is essential as HIV prevalence increases as people reach their twenties. This increase is clearly depicted in a study conducted by the Reproductive Health Research Unit and the Medical Research Council, which illustrated that the HIV prevalence rate (4.8%) among 15 – 19 year-olds is low compared to the HIV prevalence rate (16.5%) among 20 -24 year-olds.

In addition, college students' attitudes and perceptions regarding HIV/AIDS have been a cause of increasing concern to researchers given their higher risk of infection compared with other age groups. People under age 25 have constituted at least half of all new HIV infections, the majority of whom are infected via sexual activity (Opt & Loffredo, 2004).

This study thus focuses on young people who have yet to make choices about their sexuality which in turn will have long term effects on our economically active population. It is thus imperative that young people be well-informed to facilitate knowledgeable decisions.

Southern Africa thus remains the worst affected region in the world with South Africa having the highest number of people living with HIV in the world. By the end of 2004 an



estimated 5.3 million people were living with HIV in South Africa – 2.9 million of them women (AIDS epidemic update, 2004).

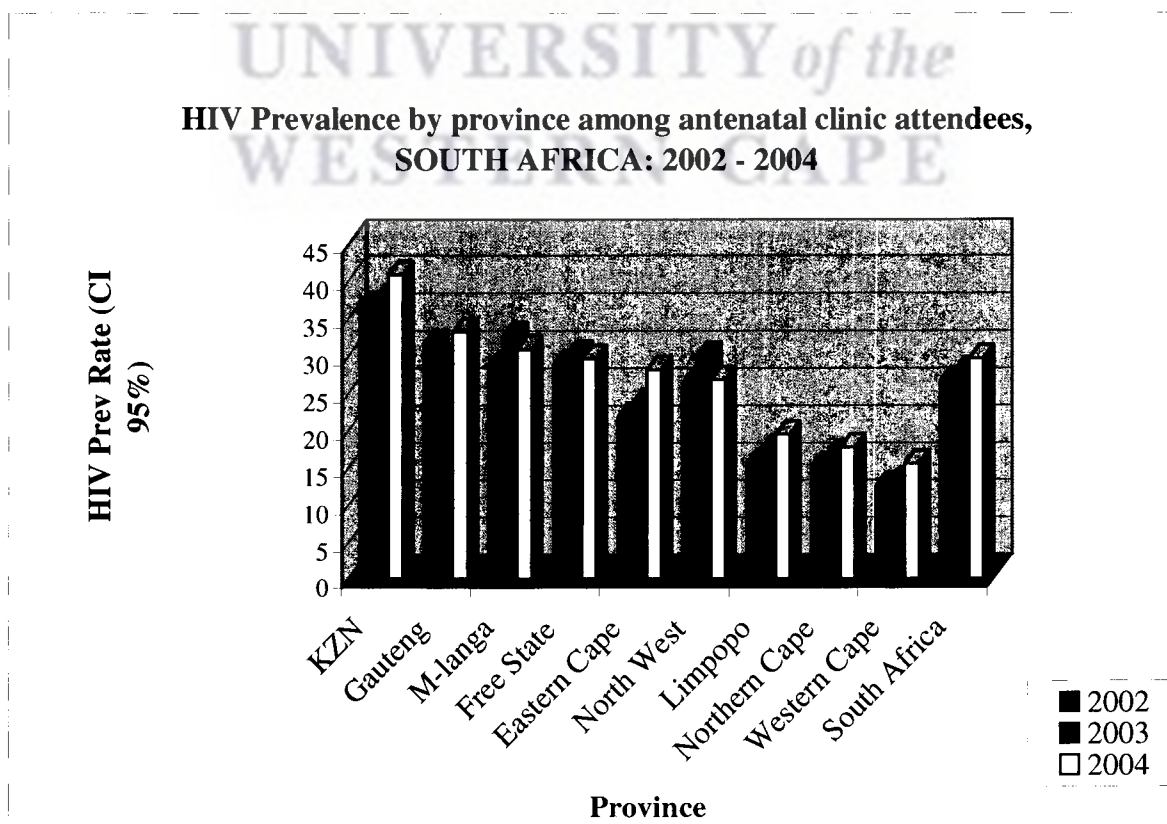
**Table 1.4 People living with HIV in South Africa**

5.3 million (4.5 – 6.2)	2.4 million (2.0-2.7)	2.9 million (2.5 –3.3)
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UNAIDS (2005)

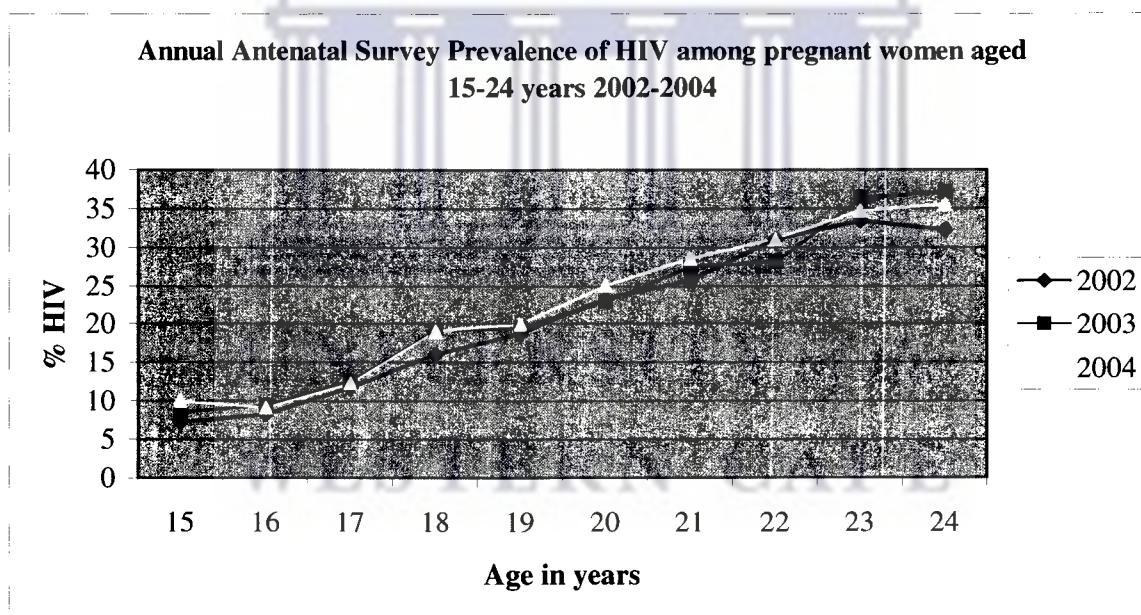
According to the Reproductive Health Research Unit (2004) the latest data suggest that prevalence levels are still increasing in all age groups except for pregnant women older than 40. The prevalence levels among pregnant women aged 15-24 years have however continued to increase. The annual report (2002 - 2004) of the Department of Health (2005) reports the following statistics as set out in the tables below.

**Figure 1.2 HIV Prevalence by Province – South Africa (Department of Health, 2005)**



It is evident from Figure 1.2 that the HIV prevalence rates continue to differ by province, with differences remaining largely stable over the years. It is however noteworthy that KwaZulu-Natal, Eastern Cape and Limpopo had statistically significant increases as opposed to the Western Cape and Northern Cape whose increases were not statistically significant. However, Gauteng, Northern Cape and Western Cape recorded higher rates compared to North West, Mpumalanga and the Free State which recorded slightly lower prevalence rates compared to 2003.

**Figure 1.3 HIV Prevalence trends by age group among antenatal attendees**



**Department of Health (2005)**

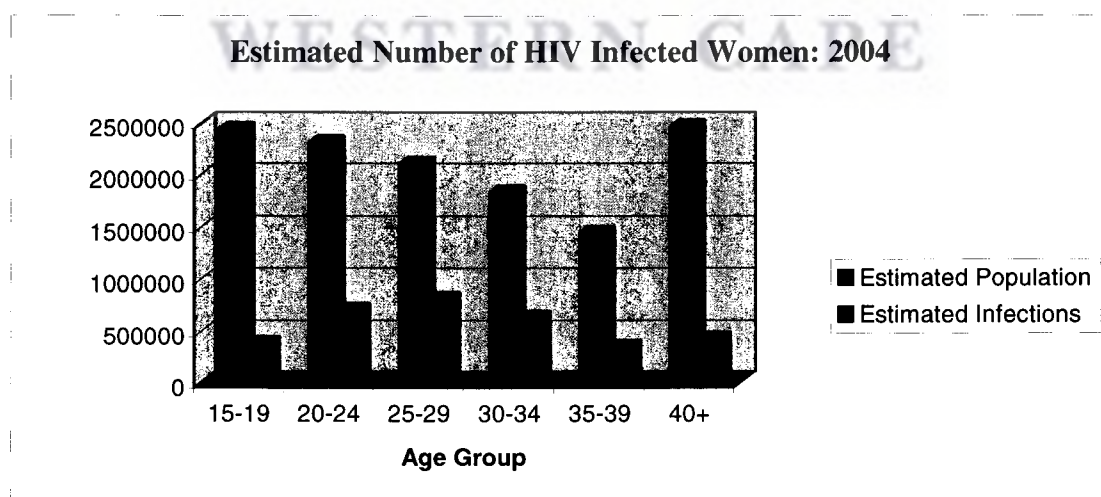
According to a survey conducted by the Department of Health (2005) there have been increases in prevalence rates across all age groups between 2003 and 2004. In addition, nearly 40% of women aged between 25 and 29 years are HIV positive with women in the

early twenties and early thirties showing rates at approximately 30% and older women presenting with lower prevalence rates below 20 %. However, there were larger increases in prevalence rates in the age groups 25-29, 30-34 and 35-39 and slight increases in the prevalence in the age groups below 15 - 19 and 20 -24.

In addition to prevalence rates amongst antenatal attendees, Statistics South Africa also extrapolates the antenatal survey prevalence to the general population. The estimated number of infected people was reported as follows: 3.5 million for females, 2.95 million for males and 110134 for babies bringing the estimated total number of HIV positive individuals at the end of 2004 to 6.29 million “with AIDS “compared to 6.57 million “without AIDS”(Department of Health, 2006).

The figures below present estimates of the infection in the general population, that is among females (15 – 49), males (15-49) and babies.

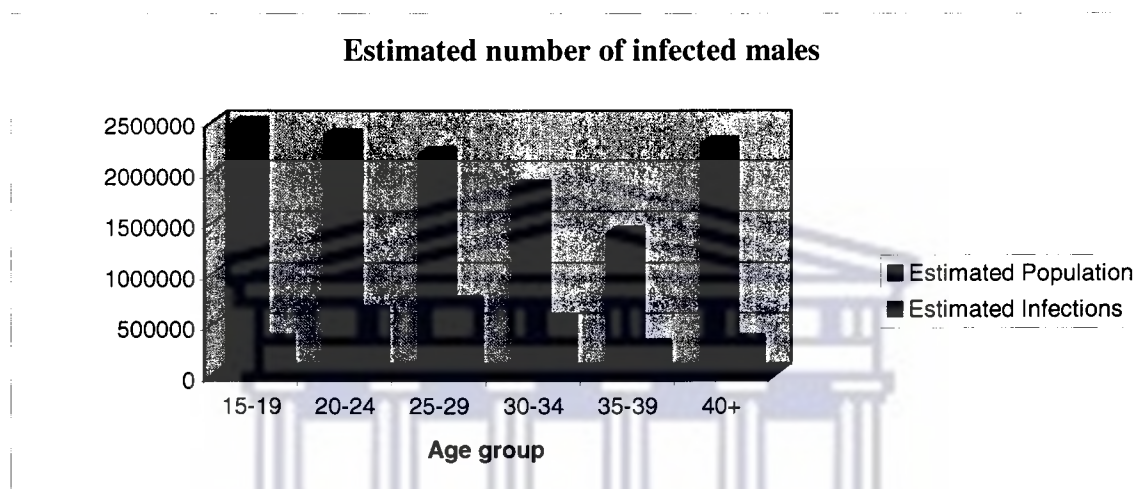
**Figure 1.4 Estimated Number of HIV Infected Women: 2004**



Department of Health (2005)

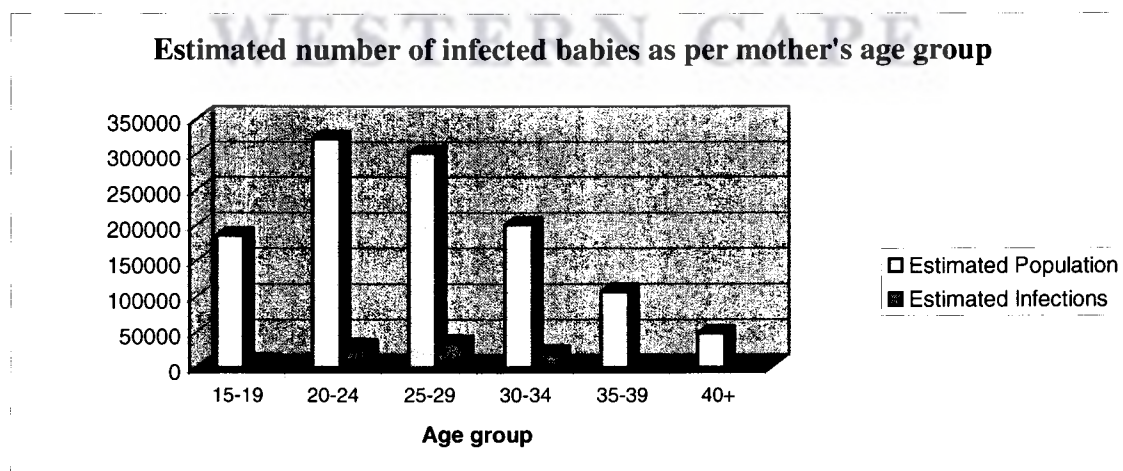
It is evident that the age group 15 -19 is the least affected and then starts to escalate as from the age group 20 years and older. It is thus crucial that learners be informed before they make decisions about their sexuality.

**Figure 1.5 Estimated Numbers of Infected Males: 2004**



Department of Health (2005)

**Figure 1.6 Estimated Numbers of Infected Babies: 2004**



Department of Health (2005)

According to Ngwena (2003), South Africa's high prevalence rate can be attributed to the fact that 1 500 people become infected with HIV/AIDS daily, with over half of these occurring in young people. In addition, it was estimated that 95 000 children aged 0-14 were infected with HIV/AIDS by 2000. The vulnerability of children to HIV/AIDS results from the fact that children are dependent, socio-economically disadvantaged and lack the information and skills that are essential for preventing or avoiding HIV/AIDS. Furthermore, they are less able than adults to access health information and health services. They are also more susceptible to peer pressure and less able to protect themselves from rape and sexual abuse or to negotiate safer sex. It is thus significant that the fastest growth of HIV/AIDS has occurred among youth.

## **1.2. Rationale for the study**

For no other group are the benefits of AIDS prevention more clear-cut than for children and young people. On the one hand, the prevalence of HIV infection and AIDS in this age group is extremely low, and, on the other hand, the behaviours that put young people in the path of HIV are alarmingly widespread. These two factors combined with the social and economic advantages of intervening before risky behaviours become well established, make AIDS education for young people a high priority (Togni, 1997).

Teaching children about HIV and AIDS should therefore be an important part of their education as they constitute the most hopeful group for AIDS education, as they are yet to take important decisions about their lifestyle including their sexual behaviour (World Bank, 2003).

Moreover, over half the world's population is under 25 years of age, with one in three people aged between 10 and 24. More young men and women are becoming sexually active during their teens and in many countries, more than half have unprotected sex before the age of 16. More than half the people with HIV infection are under 25 years with their partners often being older individuals who have been infected (Alhassan, 2003).

In addition, college students' attitudes and perceptions regarding HIV/AIDS have been a cause of increasing concern to researchers given their higher risk of infection compared with other age groups. People under age 25 have constituted at least half of all new HIV infections, the majority of whom are infected via sexual activity (Opt & Loffredo, 2004).

According to the UNAIDS Report (2002), an estimated 11.8 million young people aged 15-24 are living with HIV/AIDS. Moreover, about half of all new adult infections – approximately 6000 daily – are occurring among young people. At least one in 20 adolescents has been treated for a sexually transmitted disease (STD) and the figure may actually be higher as many young people either do not realize that they have STD or lack access to treatment.

AIDS affects youth indirectly too. Family illness and death have a major impact on young people's development and opportunities. Should older relatives become infected with the virus so too would the young person's life be affected, either through assuming increased responsibility and/or by prematurely terminating educational opportunities.

Within the next decade, it is estimated that 10 million children in Africa will be orphaned or living with other family members (Whiteside & Sunter, 2000).

According to UNAIDS (2006) over half the of the world's population is now under the age 25 years old. This age group is thus more threatened by AIDS than any other; equally it is the group that has more power to fight the epidemic than any other. Education can therefore help to fight HIV by focusing on young people.

### **1.3. Aims and Objectives**

The aim of this quantitative, evaluative study is to assess whether the Health Wise South Africa Curriculum is able to impart the necessary information needed to effect risk – reduction behaviour in terms of HIV/AIDS infection. Furthermore, it proposes to evaluate if the curriculum can promote the desired cognitive, emotional and behavioural change. In specific, the study intends to evaluate the effectiveness of refusal and delaying skills in AIDS-related attitudes and behaviour in their existing sexual behavioural patterns.

### **1.4. The Research Hypotheses**

Several studies have already followed the process of assessing knowledge, attitudes and the level of sexual activity of youth with the object of discovering the type of information which needs to be provided via educational programmes to effect change. However, a review of several surveys of young peoples' knowledge and attitudes about AIDS reveals that although most young people have some accurate information about AIDS, more

specific information is needed to enable young people to protect themselves. To this end a Life Skills Curriculum will be implemented. The aim of the study is to assess whether the curriculum is able to impart the necessary information and can promote the desired cognitive, emotional and behavioral change. In specific, the study intends to evaluate the effectiveness of refusal and delaying skills in AIDS-related attitudes and behaviour in their existing sexual behavioural patterns.

The study hypothesizes that participants who will be exposed to the Life Skills Curriculum will significantly differ from the control group.

- (i) in their level of knowledge about AIDS and HIV infection,
- (ii) in their attitude towards AIDS and People with AIDS (PWA),
- (iii) in their condom attitude and behaviour from those in the control group, and
- (iv) in their number of sexual partners.

The hypotheses will be based on the assumption that the participants who will be subjected to the curriculum will avoid unprotected sex or engage in protected intercourse only. More specifically, those participants in the experiment group will have higher knowledge of AIDS and HIV, while participants in the control group will have lower knowledge of AIDS and HIV.

#### **1.4.1. Hypotheses**

The hypotheses read as follows:

H<sub>1</sub>: The life skills curriculum will increase the level of knowledge of HIV/AIDS among learners.



H<sup>2</sup>: The life skills curriculum will improve attitudes of learners towards AIDS and People with AIDS.

H<sub>3</sub>: The life-skills curriculum will reduce risky behaviour and enhance risk-reduction behaviour among learners.

### **1.5. Overview of the Study**

Chapter 2 provides an overview of the theoretical background that provides the premise of the study. The definition AIDS and HIV are introduced and discussed and the reader are introduced to research findings on the topic. The theoretical frameworks are discussed and the model used in the study is delineated.

Chapter 3 provides perspectives on the research design used to investigate the research problem with specific reference to the design for sample selection and size, data collection methods and procedures followed and the statistical techniques employed.

Chapter 4 focuses on the results gathered from the analyses and findings that became apparent from the research study.

Chapter 5 provides an inspection of the most salient results and a discussion thereof. The chapter concludes by elaborating on the limitations of the study and provides recommendations for future research.

## **1.6. Summary of the Chapter**

In this chapter the study has been contextualised with specific reference being made to the current dilemma faced by South Africa and AIDS/HIV impact on youth. The importance of the study was highlighted as it directly and indirectly impacts on South African youth, education and finally the workplace.

The main aims of the study were delineated as well as the prevalence rates of HIV/AIDS per province. The study also aims to establish whether statistically significant difference exists in the knowledge, attitudes and behaviour of youth exposed to a Health-wise curriculum as opposed to those who do not receive exposure.

Chapter two proceeds with an overview of relevant literature vis-à-vis the research problem under investigation.

The logo of the University of the Western Cape, featuring a stylized classical building with columns and a pediment.

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## CHAPTER 2

### LITERATURE REVIEW

#### 2.1. Introduction

This section examines and explores the theoretical premise of the study. It will commence with a definition of AIDS and HIV, proceed with an overview of the AIDS epidemic followed by relevant research on AIDS in education and the workplace.

To facilitate a better understanding of the AIDS epidemic, a definition of AIDS and HIV is provided as well as the clinical progression of the disease.

#### 2.2. Definition of AIDS

AIDS is defined as a syndrome of opportunistic disease, infections and certain cancers occurring in people with acquired immune deficiency due to infection with the human immunodeficiency virus (HIV). AIDS is the name given to the final stages of infection with HIV; the damaged immune system leaves the body vulnerable to other diseases, infections and cancers which then result in death (Evian, 1993).

The acronym, AIDS stands for Acquired Immune Deficiency Syndrome.

Acquired: because this is a disease which one gets from being infected by a specific agent.

Immune: this relates to the body's defence mechanism, the immune system, which protects the body against infections by agents such as bacteria and virus. It is a complex system, orchestrated by a specific white blood cell known as the helper T4 cell.

Deficiency: meaning a lack or breakdown

Syndrome: a syndrome is a collection of signs and symptoms which together constitute a disease entity

(King, 1993).

AIDS was first recognised in the United States in 1981 by the Centers for Disease Control (CDC) when they received several reports of pneumocystis carinii pneumonia and kaposi's sarcoma occurring among male homosexuals. These homosexuals were found to have an underlying defect of their cell mediated immune systems related to depletion of the T4-helper lymphocytes (Davids, 1995).

The CDC first defined a case of AIDS as an illness characterized by one or more opportunistic diseases, also called infections and cancers. These infections are moderately predictive of an underlying defect in the T-lymphocyte mediated immunity (Davids, 1995; King, 1993).

AIDS is thus the destruction of the immune system resulting from infection with the Human Immunodeficiency Virus (HIV), a lymphotropic retrovirus. A person gradually loses immune functioning along with certain immune cells, called CD4 T-lymphocytes,

causing the infected person to become vulnerable to pneumonia, fungus infections and other common ailments. With the loss of immune function, a clinical syndrome develops over time and eventually results in death due to opportunistic infections or cancers (Whiteside & Sunter, 2000).

### **2.3. The Clinical Progression of AIDS**

The progression from the point of HIV infection to the clinical diseases that define AIDS may take from six to ten years or more. This progression can be divided into four stages: asymptomatic carrier state, symptomatic stage, AIDS - related complex (ARC) and the AIDS stage (Barnett & Whiteside, 2002; King, 1993).

#### **2.3.1. Stage 1: Asymptomatic Carrier State (HIV-Well)**

During this stage, also known as seroconversion, most people are asymptomatic, but may experience acute illness similar to infectious mononucleosis or more rarely encephalopathy and /or myelopathy. This occurs when the HIV has invaded the blood stream and the person becomes infected with the virus (usually determined by the presence of HIV antibodies in the blood). These HIV-infected people are carriers of the virus and can transmit the infection to others through the exchange of body fluids such as blood, semen and vaginal fluid. Infected individuals enter a prolonged asymptomatic phase that can last ten years or more. They remain in good health during this period, with levels of CD4 T-cells in the low to normal range (500 to 750 cells per mm of blood).

Nevertheless, HIV continues to replicate during the asymptomatic phase, causing progressive destruction of the immune system. This phase is often known as the “silent phase” (Barnett & Whiteside, 2002; Davids, 1995).

### **2.3.2. Stage II: Symptomatic Stage**

The onset of symptoms within the HIV positive person is referred to as the symptomatic stage and may progress at different rates depending on the state of health of the individual. This phase can last from a few months to several years and is characterized by rapidly falling levels of CD4 T-cells (500 to 200 cells per mm of blood). As infection increases, people infected with HIV develop signs and symptoms. Persistent generalised lymphadenopathy (PGL) is one of the most common signs. PGL is characterised by the prolonged presence of swollen lymph glands in two or more sites other than the groin for longer than three months. Some patients are healthy at this stage; others may show any of the following signs and symptoms:

- i) associated fatigue
- ii) weight loss
- iii) fever
- iv) night sweats
- v) diarrhoea

(Davids, 1995; Whiteside & Sunter, 2000).

### 2.3.3. Stage III: AIDS-Related Complex (ARC)

The individual experiences extensive immune destruction and serious illness following the symptomatic phase. This advanced stage of HIV infection is sometimes called pre-aids. ARC patients have severe immune deficiency and may exhibit any of the following illnesses. These illnesses can be categorized into five groups.

- i) Subgroup A – Constitutional disease ( AIDS –related complex) which is characterized by the following symptoms: fever, weight loss, fatigue, diarrhoea, night sweats and skin rashes.
- ii) Subgroup B – Neurological diseases namely: dementia, encephalitis, meningitis and peripheral neuropathy.
- iii) Subgroup C – Secondary infectious disease.
- iv) Subgroup D - Secondary cancers.
- v) Subgroup E - Other Conditions.

This phase can last from few months to years and the affected individual may have CD4 T-cell levels below 200 per mm<sup>3</sup> of blood along with certain opportunistic infections that define AIDS. At this stage the immune system is in a state of severe failure (Kinghorn & Steinberg, 1998; Whiteside & Sunter, 2000).

#### **2.3.4. Stage IV: Acquired Immune Deficiency Syndrome**

The individual eventually enters the AIDS phase in which CD4 T-cell numbers are below 50 per mm of blood. This phase is characterized by the depletion of the body's defences and an increase in the severity of infections, ranging from more severe infections of the lungs leading to pneumonias (especially tuberculosis and pneumocystis carinii infection), fungal infections of the mouth and intestinal tract, diarrhoeal diseases, marked weight loss and weakness and viral eye infections leading to visual disturbances. The cancers in this stage are mostly of two types- Kaposi's sarcoma (skin cancer) and Lymphoma (cancer of the lymph glands). Apart from opportunistic infections, HIV can directly infect the nervous system leading to a number of distinct neurological syndromes. Problems associated with infection or damage to the brain can also result in the gradual developing of emotional and intellectual changes (AIDS dementia) causing headaches, convulsions, memory and concentration loss, poor coordination and occasionally, personality changes and severe weakness. Other neurological manifestations include ataxia, meningitis and peripheral neuropathy (Barnett & Whiteside, 2002; Evian, 1993; King, 1993; Naidoo, 1994).

#### **2.4. Human Immune Deficiency Virus (HIV)**

**HIV is the acronym for Human Immunodeficiency Virus:**

Human : as the virus only lives inside humans



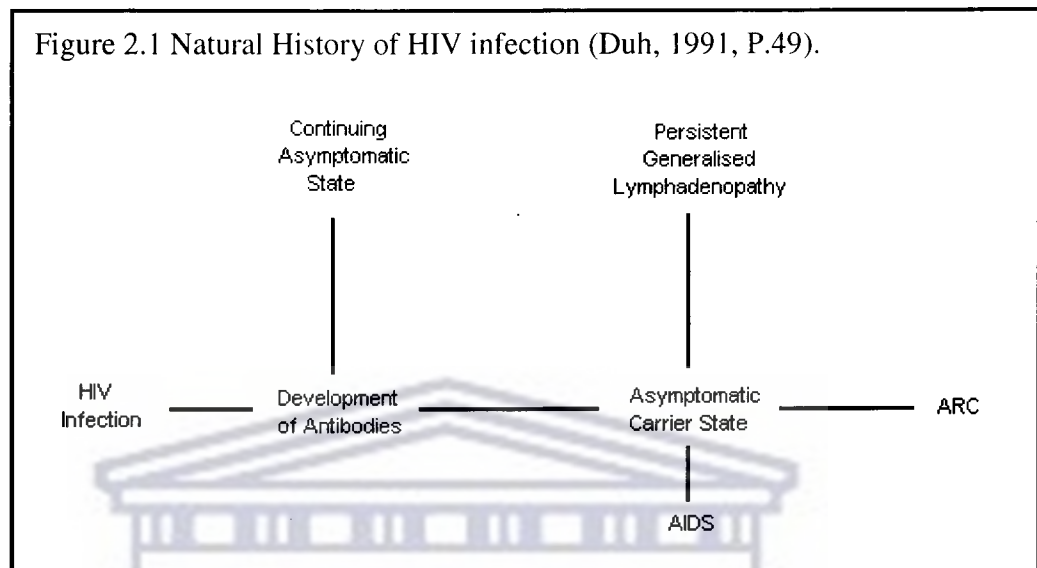
Immunodeficiency : refers to the breakdown of the body's defence system

Virus : a germ (antigen)

HIV is a retrovirus, which can undergo an unusual biological process on which genetic material, in the form of single-stranded ribonucleic acid (RNA), can be converted into double-stranded de-oxyribo-nucleic acid (DNA). Normally, DNA makes RNA. However, an enzyme, reverse transcriptase enables the virus to perform this reverse action (Barnett & Whiteside, 2002). The virus has a circular shape, its core RNA genetic material being covered by an envelope that has many small, glycoprotein projections on its surface. These projections have an attraction to certain target cells, with CD4 receptor sites. After attaching to the CD4 receptor, the viral genetic material enters the host's cell. With the reverse transcriptase reaction, the virus's DNA copy becomes incorporated into the host cell. When new virus particles are made, they bud off from the host cell, enter the blood stream and infect more cells.

In this manner, the host cells are damaged and destroyed. Researchers agree that once a person is infected with HIV, there is a progression from the initial infection to the development of AIDS (Barnett & Whiteside, 2002; Davids, 1995; Duh, 1991; Evian, 1993; Naidoo, 1994).

**Figure 2.1 Natural Progression of HIV Infection**



The future for people with HIV and AIDS is bleak and is dependent on today's medicines and the development of new effective drugs and vaccines which may prolong the asymptomatic phase of HIV infection, as well as combat some of the life-threatening infections and other conditions associated with the AIDS phase. The scale of the AIDS crisis surpasses the worst case scenarios of a decade ago. Many countries are already in the grip of serious HIV/AIDS epidemics and many more are on the brink. Below follows an overview of the prevalence of the AIDS epidemic.

## **2.5. A global overview of the AIDS epidemic**

According to the UNAIDS report (2004), more than 60 million people have been infected with the virus since the epidemic began. HIV/AIDS has been declared the fourth-biggest global killer, which claimed 3 million lives in 2003.

Despite well-documented and successful HIV-prevention programmes in a few countries, the HIV/AIDS epidemic continues to spread in Asia and the Pacific. Statistics have shown that the region as a whole is home to an estimated 6.6 million people living with HIV/AIDS with less than 30 000 people receiving antiretroviral treatment. Surveillance data on China estimated around 850 000 with reported HIV infections having risen more than 67% in the first six months of 2001. India also experienced serious localised epidemics as their national HIV prevalence rate at the end of 2001 was estimated at 3, 97 million. Indonesia has also shown an emergence of the epidemic, reporting an increase from 15.4% in 2000 to over 40% by mid-2001 at one drug treatment centre alone.

Among the Pacific Island countries and territories, Papua New Guinea has reported the highest HIV infection rates. However, Thailand and Cambodia have shown that the 'natural' course of the epidemic can be changed by the early implementation of large-scale prevention programmes, which include efforts directed at both those with high-risk behaviour and the broader population. Cambodia has demonstrated that consistent political commitment at all levels can bring the epidemic under control. In 2001, the country took another step forward by enacting a new and inclusive national AIDS strategic plan. Thailand is another example of how politically--supported prevention programmes can save millions of lives as they were able to reduce the number of new infections from 143 000 in 1991 to 29 000 in 2001(UNAIDS Report, 2002).

Similar to most countries in Asia and the Pacific, Eastern Europe and Central Asia have also reported a rapid growth in HIV/AIDS cases. In 2001, there were an estimated 250

000 new infections, bringing to 1 million the number of people living with HIV/AIDS. In this region, the Russian Federation remains at the forefront of the epidemic. Almost 83 000 new HIV-positive diagnoses were reported in 2001, raising the total number of reported HIV infections from 10 993 in 1998 to more than 173 000 in 2001. Likewise, in Estonia reported infections have soared from 12 in 1999 to 1474 in 2001. The same pattern emerged in Latvia, where new reported infections rose from 25 in 1997 to 807 in 2001. Moreover, Kazakhstan also reported 1175 HIV infections in 2001 and an estimated 250 000 people living with HIV in Ukraine (UNAIDS Report, 1998; 2002).

In Latin America and the Caribbean an estimated 1.9 million adults and children are reported to be living with HIV – 1.5 million in Latin America and 420 000 in the Caribbean, but only an estimated 170 000 people living with HIV/AIDS were receiving antiretroviral treatment at the end of 2001 (UNAIDS Report, 2000; 2002).

The Sub-Saharan Africa remains by far the worst affected region in the world. Seventy one percent of all the people living in the world with HIV live in Africa. Sub-Saharan Africa has just over 10% of the world's population, but is home to more than 60% of all the people living with HIV – some 25,4million. In 2004, an estimated 3,1 million people in the region became newly infected, while 2,3 million died of AIDS. Among young people aged 15 – 24 years, an estimate, 6,9 women and 2,2 men were living with HIV at the end of 2004. Across the region, HIV disproportionately affects women. Women and girls make up almost 57% of adults living with HIV in Sub – Saharan Africa. Overall, three quarters of all women with HIV worldwide live in this region. The 12.1 million

AIDS orphans in Africa represent 95% of the AIDS orphans in the world. Of the 5.6 million new infections world wide, 3.8 million occurred in Sub-Saharan Africa – the region with the fastest growing epidemic. HIV/AIDS is the leading cause of death in this region with an average life expectancy of 47 years as opposed to 62 years without AIDS (SADC, 2001; UNAIDS Report, 2006; Van Dyk, 2001).

## **2.6. AIDS and HIV infection in South Africa**

The first two cases of AIDS were identified in South Africa in 1982. For the first eight years, the epidemic was primarily located among white homosexuals, but as the number of cases rose, so the disease began spreading among other groups. By July 1991, the number of heterosexually transmitted cases equaled the number of homosexual cases (Togni, 1997; Van Dyk, 2001; Whiteside & Sunter, 2000).

Thus the myth that the disease is restricted to marginalised persons and groups such as gay persons and intravenous drug abusers, sex workers and specific cultural groups, must be set aside. AIDS is a disease of all sexual orientations - homosexual as well as heterosexual. As a result of the growth in HIV prevalence and the failure to control the spread of HIV, South Africa faces a major AIDS epidemic. Instead of being able to focus primarily on prevention activities, the country is about to have to deal with the consequences of large scale conversion from HIV to AIDS (UNAIDS Report, 2000; 2002).

At the start of the new century South Africa had the largest number of HIV-infected people of all the countries in the world (Van Dyk, 2001; Whiteside & Sunter, 2000). By the end of 1999, the estimated HIV prevalence rate among South African females between the ages of 15 and 24 had increased from 22,51% to 27,13% and from 7,56% to 15,11% among males of the same age group (UNAIDS Report, 2002). This is supported by Visser (2005) who claims that Southern Africa remains the worst affected sub-region in the world with South Africa having the highest number of people living with HIV - 2,9 million of them being women.

According to Walker, Reid and Cornell (2004) the World Health Organisation (WHO) estimated that by 2010 life expectancy in South Africa will be 43 years, seventeen years less than it would have been before the epidemic. Studies have shown that the epidemic is also having a devastating impact on the youngest members of society. A study conducted at the prenatal clinic at the Chris Hani Baragwanath Hospital in Soweto found that one in three babies born to mothers diagnosed HIV-positive within twelve months compared to one in fifty-nine babies born to HIV-negative mothers. Despite the fact that more sexually active teenage girls reported that they always used a condom during sexual intercourse, HIV prevalence among pregnant women attending antenatal clinics reached 24.8% in 2001. In 2000, it was estimated that there were 2.5 million HIV-positive women aged 15 to 49 and 2.2 million HIV-positive men aged 15 to 49 in South Africa. Recent projections of HIV-infected individuals indicate that these figures could reach 7.5 million by 2010. This represents a fifth of the population. According to the UNAIDS Report (2002,; 2006) between four and seven million South Africans may die of AIDS-

related diseases during the period 2000 to 2010. Thus a number of AIDS deaths will be much larger than the number of those due to any other single cause. It is estimated that there are an average of 1500 new infections and 600 AIDS- related deaths every day. This is supported by Visser (2005) who reported that the epidemic has reached epidemic proportions in South Africa and has serious consequences for individuals as well as the country's health resources and economy.

### **2.7. AIDS in the Workplace**

According to the South African Business Coalition on HIV / AIDS (SABCOHA, 2004) there has been limited data concerning HIV/AIDS and the workplace in South Africa. However, in the last few years a number of surveys have attempted to fill this gap thus providing a clearer picture of how the private sector is responding to HIV/AIDS.

According to a policy document of the Department of Health, 13% of South Africa's workforce in 2002 was HIV positive. According to the same report, there are a total of 4.7% HIV infections, which would account for about 10% of the total population. Other independent researchers estimated this figure to be 30% or even higher. A further study done in 1999 found that more than a third of mining employees in their late twenties and thirties were affected with HIV. It is thus imperative that HIV/ AIDS will have a tremendous impact on the South African economy over the next few years, if not already (Department of Health, 2003).

In addition, a survey was conducted at Anglo Platinum to determine the HIV prevalence rate and to assess the merits, methodology and outcomes of the survey. The sample comprised of 11 339 individuals which was representative of 18.4% of the organisation's employees. The overall prevalence rate was 24.6% translating into approximately 15 167 HIV-infected individuals. The survey data enabled the organization to plan resource allocation appropriately following their commitment to the treatment of infected employees with antiretroviral therapy (Stevens, Apolstolellis, Napier, Scott & Gresak, 2006).

In contrast to the national antenatal clinic prevalence data, it was observed that the highest prevalence was in the 30 – 39 year age group and the lowest prevalence in this mining population appeared to be in the 18 – 24 year old age group (Stevens et. al., 2006).

Evian, Fox, Macleod, Slotow and Rosen (2005) contend that the most data on HIV prevalence in low-risk populations in sub-Saharan Africa are drawn from sentinel surveys of pregnant women attending antenatal clinics and are thus not representative of formal sector workforces. To this end, they surveyed workforces in southern Africa to determine HIV prevalence among formally employed, largely male populations. A total of 44 094 employees from 34 companies were tested of which approximately 65% were South African employees from 76% firms in South Africa. Average prevalence in the surveyed companies was consistently lower than compared to the data reported from sentinel surveys. Their study identified a similar pattern of infection by age, with peak



prevalence occurring among the 30 – 39 year olds in all three countries. Moreover, contract, unskilled and semi-skilled workers had substantially higher infection rates than skilled employees, who in turn were more likely to be HIV-positive than managers. Across all countries, sectors, job levels and age groups, HIV prevalence averaged nearly 17%. In addition, in several of the workplaces, more than 1 of 4 employees was HIV-positive at the time of the survey. These figures suggest the serious financial and human resource consequences for businesses (Evian et al, 2005).

Furthermore, government states that some of the effects of the pandemic in the viable workforce will include absenteeism, loss of skills, decrease in employee morale, and an increase in medical aid costs amongst others. It also states that especially macro – economic performance will be hard hit resulting in a direct effect on consumer spending (Media Tenor, 2004)

This is supported by UNAIDS (2002b) who reports that HIV / AIDS impacts on companies in a number of ways, the primary impact being on employee's ability to work effectively as they become ill. This involves productivity of both the individual and of co-workers and raises absenteeism. Replacement of workers that die from AIDS involves recruitment and training cost, in addition to lower levels of productivity before the new employee gains experience. Other considerations, within the workplace, are the impact of AIDS illness and death.

According to Stevens et. al (2006) studies conducted in Kenya, Botswana, Zimbabwe, Malawi and South Africa found the same findings related to HIV-related costs faced by companies. These include increased employee benefit claims, increased absenteeism, and increased expenditures on recruitment and training.

Furthermore, Murray, Sonnenberg, Nelson, Shearer, Bester, Begley and Glynn (2005) demonstrated an increase in injury rates in HIV-positive individuals in their study conducted on South African gold miners. The HIV-positive cohort contained 1661 miners and the HIV-negative cohort contained 6166 miners. In sum, there were 2064 work-related injuries recorded in 1659 miners. The overall work-related injury rate was higher in the HIV-positive than in the HIV-negative miners.

On the other hand, a cross-sectional study of 383 companies with regards to issues of HIV/AIDS policies, responsibility for workplace programmes, perceived and measured impact of HIV/AIDS and the companies' response to AIDS, reports limited responses on the part of workplaces. In sum, approximately 58 per cent of companies surveyed reported having an HIV/AIDS policy, however about 44 per cent were not aware what their policies were based on. In addition, companies' perceptions on how HIV/AIDS will affect appears to be diverse. A critical point that needs to be emphasized is the lack of information about HIV/AIDS and company operations that informs management's decision-making. According to the Stevens, Weiner, Mapolisa and Dickenson (2005), this unreliability of perceptions and lack of measurement reflects widespread strategic failure on the part of South African management.

According to the Media Tenor (2004) research results on corporate communication from January to September 2003 showed that less than 1% of the total corporate communication in the media covered issue of HIV/AIDS. This is relatively little considering the major financial and economic impact on the economic sector.

Among individual companies, only Spoornet, Anglo Gold and Gold Fields contributed a more than average share of communication on the issue. However, the type of information that is covered on HIV / AIDS related business issues dealt 33.5% with general policy issues, 30.2% dealt with the 'supply of free drugs', 16.9% of all reports dealt with the attitude towards HIV positive employees and only 10.6% with economic and/or social assistance given to the employees by the companies (Media Tenor, 2004).

The reluctance to communicate on direct social and economic assistance shows that companies were apprehensive to admit that they have not found a key to accommodate the situation (Dickenson, 2004).

Despite companies' reluctance to address the situation, HIV prevalence in South Africa is measured by actuarial extrapolations of tests carried out in state antenatal clinics on an annual basis. Because of the necessary assumptions required to generate a model representing the entire population, there is room for uncertainty over the exact levels of HIV infection. The trends, however, are clear. HIV infection among those sampled in the antenatal surveys has risen from 0,8 percent in 1990, when the studies were first started,

to 24,8 percent in 2001 (Department of Health, 2003). The estimated incubation period of the HIV virus in South Africa is 6-8 years. Given historical patterns of infection, large numbers of people are now showing AIDS symptoms and are dying. This situation will continue to deteriorate, as the peak of the AIDS epidemic is not predicted to occur for some years (Peltzer, 2005).

A key concern for companies is that AIDS, because of its sexual transmission, affects those of working age. The percentage of employees who are HIV positive is, however, unclear due to the limited number of prevalence surveys conducted by companies to date but also because of the reluctance of companies to release this data when it is collected (Dickenson, 2003).

Johnson and Budlender (2002) used prevalence data from four surveys to evaluate risk factors. They concluded that skilled and managerial employees are at low or very low risk, depending on the socio-economic profile of their community, and those semi-skilled or unskilled employees are at medium or very high risk, again depending on the socio-economic profile of their communities.

According to an actuarial assessment by Metropolitan Employee Benefits prepared as part of a paper for the United Nations Development Programme, South Africa was only expected to reach 4,2 million in 2002 but 5 million people were estimated to be living with HIV/AIDS (UNAIDS Report, 1998; 2002; Whiteside & Sunter, 2000).

Vollenhoven (2003) supports this claim as he states over 5 million South Africans are infected with HIV/AIDS.

Another initiative is The National Business Initiative (NBI), a member-based organization comprising 145 active corporations who regard themselves as being both the conscience and consciousness of South African business. Their role entails determining how the private sector can contribute to the country's future in terms of the awareness and engagement of such critical issues such as HIV/ AIDS (Dickenson, 2004). In support of this, Fourie (2003) claims that the United Nations and Healthlink Bulletin predicted that, without treatment, five million South Africans in the 15 – 59 age groups would die within the next 15 years, with life expectancy dropping from 65 to 40 years by 2010. An actuarial assessment by Metropolitan Employee Benefits contends that the South African population is expected to grow by only 1.5 million people by 2015 as opposed to 10 million without HIV/AIDS. The result would be a total labour force that remains stagnant in numbers. Another systemic issue is a potential loss of leadership as the 25-49 age group constitutes the backbone of the national workforce, leadership and parenthood, and is the hardest hit by HIV/AIDS. Therefore the pool of potential future leaders might well be orphans – children who have not benefited from a stable and nurturing upbringing.

According to Stevens et. al (2006) HIV/AIDS will be affecting the workplace adversely costing South Africa 17% in Gross Domestic Product (GDP) growth by 2010. The

business sector is thus forced to reconsider its role in disease prevention and management.

Furthermore, it is estimated that between 5.3 and 6.1 million South Africans will be HIV positive by 2005, and between 6 and 7.5 million in 2010. These statistics are supported by the UNAIDS (2006) who estimated that there were five and a half million people living with HIV in South Africa, and almost 1,000 deaths occurring each day.

A table representing the basic HIV/AIDS projections for 1998-2010 follows.

Note: - Adult denotes a person 15 to 59 years old.

- Children are 0 to 14.

- Orphans are children up to 14 years old who lost their mother due to AIDS.

**Figure 2.2: Basic HIV/AIDS Projection 1998-2010**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Adult HIV prevalence rate (per cent)</b>	10.7	12.4	14.0	15.3	16.5	17.6	18.6	19.5	20.2	20.7	21.1	21.4	21.7
<b>HIV prevalence (000's)</b>													
- <b>Adults</b>	2598	3053	3475	3871	4235	4577	4887	5161	5387	5555	5675	5764	5830
- <b>Children</b>	114	144	173	201	226	250	271	291	309	326	342	354	365
- <b>Total</b>	2712	3197	3648	4072	4461	4827	5158	5452	5696	5881	6017	6118	6195

<b>AIDS cases (000's)</b>													
- <b>Adults</b>	83	118	161	213	272	336	403	469	532	588	635	674	705
- <b>Children</b>	25	33	42	50	59	67	74	81	88	93	99	104	108
- <b>Total</b>	108	151	203	263	331	403	477	550	620	681	734	778	813
<b>AIDS deaths (000's)</b>													
- <b>Adults</b>	67	93	125	161	203	246	291	334	373	408	437	460	478
- <b>Children</b>	19	25	31	36	42	47	52	56	60	64	68	71	73
- <b>Total</b>	86	118	156	197	245	293	343	390	433	472	505	531	551
<b>Orphans (000's)</b>	96	147	217	309	425	568	734	921	1123	1333	1543	1746	1936

#### Metropolitan Life (1998)

It is evident from the table that the AIDS epidemic is spreading at an alarming rate. A growing body of literature indicates that a significant proportion of adolescents are sexually active and not practicing safer sex (Buckiewicz & Carnegie, 2001; Grunseit & Aggleton, 1998; Lock, Ferguson & Wise, 1998; Sixsmith, Kelleher & Crangle, 2001; Spence & Robinson, 1995). This was evident in the UNAIDS report (2002) which indicated that the median age for HIV prevalence among pregnant women was 15 years. Children in South Africa are thus at risk of contracting HIV through two primary means. The first, among adolescents is early, unprotected sex, and the second is among children of all ages through sexual abuse (Smith, Minden & Lefebvre, 1993).

The figures for AIDS in education are thus alarming. The United Nations Economic Commission for Africa (UNECA) suggests that the educational sector put strategies in place to harness the impact of HIV/AIDS on the classroom. Most countries acknowledge that education and training is the cornerstone for achieving lasting and sustainable development as it is the sector that provides skills and builds the necessary human capital vital for economic and social development. The HIV/AIDS epidemic affects people of all ages; however, it is more prevalent among the young population between the ages of 15 – 29, the group that is trainable and at its most productive stage. Moreover, this section of the population is the group, which is also at the peak of childbearing, particularly for females (SADC, 2001).

According to the Ministry of Health, there are heartening signs that positive trends might be taking hold among adolescents in terms of condom usage. This they attribute to large-scale information campaigns and condom distribution programmes which appear to be bearing fruit (UNAIDS Report, 2002).

Education of the population is thus the most potent means of fighting the spread of the disease. Main, Iverson, McGloin, Banspach, Collins, Rugg & Kolbe (1994), contend that schools represent a potentially effective vehicle for delivering HIV prevention programs to youth as they have direct access to more adolescents than other systems. Evidence continues to emerge that school – based health education programs can influence adolescent behaviour. In order to ensure its success, HIV/AIDS education must be undertaken by the family at a primary level, while the state and its agencies must play a



key role in the mass communication of HIV/AIDS information to the public through every means at its disposal (Buczkievicz & Carnegie, 2001; Grunseit & Aggleton, 1998; Kingman, 1994; Main et al., 1994; Sixsmith, Kelleher & Crangle, 2001; Spence & Robinson, 1995; Togni, 1997).

## **2.8. AIDS and Education**

According to UNAIDS (2001) education of children and youth merits the highest priority in a world afflicted by HIV/AIDS because a good basic education ranks among the most effective and cost effective means of HIV prevention. It also merits priority because the very education system that supplies a nation's future is being gravely threatened by the epidemic, particularly in areas of highest or rising HIV prevalence. Thus countries face an urgent need to strengthen their education systems, which offer a window of hope unlike any other for escaping the grip of HIV/AIDS. Vigorous pursuit of Education for All (EFA) goals is imperative, along with education aimed at HIV prevention.

According to World Bank (2001a) countries need to accelerate their efforts toward achieving EFA goals, both because of the importance of education for a country's viability and because of the critical role it can play in preventing HIV/AIDS. Prioritizing education is crucial as it is a major engine of economic and social development because it drives a country's future. Thus economic prosperity and the reduction of global poverty cannot be accomplished unless all children in all countries have access to and can complete a primary education of adequate quality. Education thus has powerful poverty-

reducing synergies: one year of schooling for women lowers fertility by about 10 percent, while one or two years of schooling for mothers reduces child mortality by 15 percent.

The World Bank (2001c) claims that education has an important preventative impact as it can equip children and youth to make healthy decisions concerning their own lives, bring about long-term healthy behaviours and give people the opportunity for economic independence and hope. In addition, it is among the most powerful tools for reducing girls' vulnerability as it slows and reverses the spread of HIV by contributing to female economic independence, delayed marriage, family planning and work outside the home. Furthermore, education offers a ready-made infrastructure for delivering HIV/AIDS prevention efforts to large numbers of the uninfected population – schoolchildren - as well as youth, who in many countries are the age group

United Nations Programme on HIV/AIDS (UNAIDS) estimates a loss of more than 20 percent of gross domestic product in the worst-affected countries by 2020. Most devastating and far-reaching, is the epidemic's impact on education systems. HIV/AIDS is draining the supply of education, eroding its quality, weakening demand and access, drying up the countries' pools of skilled workers, and increasing the sector's costs. The full scope of the epidemic's impact on education becomes apparent when viewed in the context of the formidable challenges already confronting the sector. More than 113 million school-age children are out of school in developing countries, two-thirds of them girls. Of those who enter school, one out of four drops out before attaining literacy. At

least 55 of the poorest countries seem unlikely to achieve EFA 2015 (World Bank, 2001a).

According to Schimdt (2006) AIDS educators face an uphill battle in South Africa. He quoted the challenges that peer educators face in schools in Phillipi, Cape Town where most of the 500, 000 residents are unemployed and teens face sexual pressures from an early age. The youth culture inherent in these communities pushes boys and girls towards high-risk behaviour. According to Catherine Campbell as quoted by Schimdt (2006) they remove themselves from facing the fear of AIDS by denial. Furthermore, she claims that any discussion of sexuality is completely taboo. To this end an initiative by President Bush to establish “the Southern African Center for the Study and Support of Peer Educators” scheduled to open in 2007.

On the other hand, firm data on the loss of human resources throughout the education sector are lacking. The level of absenteeism across the sector, at all levels of education and across skill and experience categories, caused directly and indirectly by the epidemic, are unknown. The erosion of human resource capacity cannot be replaced through formal training alone as loss of experience and organizational capacity cannot simply be replaced in the face of premature deaths of senior teachers, teacher trainers and administrators (Cohen, 2002).

According to projections of primary school age population and of projected mortality in four African countries (Zimbabwe, Zambia, Kenya and Uganda) the picture presented is

extremely dismal. In Zimbabwe, reductions of the primary age school population by 2010 were estimated at 24%, 20% reduction in Zambia, 14% reduction in Kenya and 12% reduction in Uganda (World Bank, 2002).

The losses of teachers due to AIDS between 2000 and 2010 for the same countries are estimated annually at 2.1%, 1.7%, 1.4% and 0.5% respectively. This results cumulatively to very large losses (Cohen, 2003).

The challenges facing education systems are thus complex, but there are some experience to build on which needs to be utilized as education is highly cost-effective as a prevention mechanism, because the school system brings together students, teachers, parents and the community. Preventing AIDS through education avoids the major AIDS-related costs of health care and additional education supply (Cohen, 2003; Dickenson, 2004; World Bank, 2002).

An educated population and work force are fundamental to national health. Combined with sound macroeconomic policies, education is generally a key factor in promoting social well-being and poverty reduction, because it directly affects national productivity, which in turn determines living standards and a country's ability to compete in the global economy. To participate in knowledge-driven development, countries need to build their human capital. Moreover, global poverty cannot be reduced unless all children in all countries have access to, and can complete, a primary education of adequate quality (World Bank, 2001a).

Much of the macro – and microeconomic literature emphasizes the role of education in economic growth. The evidence points to a positive association between economic growth and change in education: growth increases with more education, and declines with less. The World Bank (2001b) expounds that no country has first achieved economic growth without first assuring the education of its population. Investment in education is therefore vital, because it promotes achievement of six of the eight Millennium Development Goals: reducing poverty, achieving universal primary education, improving gender equality, reducing infant and child mortality, improving gender equality, reducing infant and child mortality, improving maternal health and lowering the prevalence of HIV/AIDS.

According to the World Bank (2002), substantial evidence shows that education profoundly affects young people's reproductive lives. Better educated women are more likely, in comparison with their peers, to delay marriage and childbearing, have fewer children and healthier babies, enjoy better earning potential, have stronger decision making and negotiation skills as well as higher self-esteem and avoid commercial sex.

For boys and girls, education has shown to provide protection against HIV infection. A basic education has a general preventive impact, it can inform children and youth and equip them to make decisions concerning their own lives, bring about a long-term behavioural change, and give them the opportunity for economic independence (World Bank, 2001b).

In addition, instruction focussed on HIV/AIDS prevention is crucial to closing persistent fundamental gaps in knowledge. The latest report by the United Nations Programme on HIV/AIDS (UNAIDS) shows that millions of young people, even in badly affected countries, are ignorant or have misconceptions about the disease (UNAIDS 2006).

The evidence that education itself protects against HIV is strong. Data has shown a positive correlation between level of education and rates of infection. A study in conducted in Ghana for example, found a marked decline in HIV prevalence rates in 15-19 year old boys and girls with a medium to higher level of education, but an increase among those with lower educational levels. Noteworthy is the fact that impact of education on behaviour is strongest among the young, which may reflect the relative effectiveness of ensuring that a child grows up to practice good health behaviours versus efforts to achieve behaviour change among adults with established risky behaviours (Asamoah, 2004).

## **2.9. Background to the study**

In an attempt to encourage the creation of a sustained, comprehensive and successful AIDS education programme in schools, the Department of National Health through the Aids unit and the Medical Research Council (MRC) called for tenders in 1991 for the development of pilot education programmes. Five tenders, each worth R50 000, were awarded: one to Natal, one to Lebowa, and the remaining three to the Human Sciences

Research Council (HSRC). Strangely, not one of the tenders was awarded to anyone working in AIDS or with experience of developing AIDS education. The Department of Health obtained the permission of the relevant education departments to introduce the projects for evaluation in five schools during 1991, after which a programme was introduced nationally (Crewe, 1992).

In 1992 the National AIDS Co-ordinating Committee of South Africa (NACOSA) was launched with a mandate to develop a national strategy. This strategy was formulated as the NACOSA National AIDS Plan and was endorsed by the then Minister of Health, Dr. Nkosazana Zuma, in 1994. The strategy highlights specific areas for consideration, including the training of all social service providers in HIV/AIDS education and counselling. It stresses the need to incorporate such training into the curriculum of all educational and training institutes.

According to Togni (1997) the need for school education as a strategy for the prevention of HIV transmission has been recognized as crucial. The success of a prevention and education strategy warrants pure detailed attention and explanation. To this end, sexuality education - thus needs to be identified as a priority for AIDS intervention to succeed.

- This requires a context of values and must include “Life Skills”
- Education must be relevant to the needs of the people receiving it
- Education needs to be adequately and competently prepared.
- The methodology of education is critical to its success as the goal is behavioural

change.

- Recipients of education must be involved in its development.
- Trainers/educators must be well-prepared for their role and non-judgmental.
- Education needs to be evaluated on an ongoing basis.

Shermann (1993) maintains that with proper training teachers can play a vital role in assisting adolescents in protecting themselves against HIV and AIDS. To this end the Department of Community Medicine at the University of Zimbabwe piloted a training programme for teachers in 17 schools. The workshop was aimed at enabling the teachers to talk freely about relationships with young adolescents, providing accurate information on AIDS and sexually transmitted diseases (STDs) and developing ways of strengthening ties within the Community in the fight against AIDS. The participatory approach used encourages the formation of student drama groups and resource centres.

In addition, a national commitment to fight AIDS at successive levels will enable leaders to alert other Heads of State to the threat AIDS poses to development and to encourage them to tackle the epidemic. This is an example of peer education at the highest level (UNAIDS Report, 2002; Togni, 1997). In South Africa, the National AIDS Plan was a political commitment being translated into action as institutional structures were reorganized and mobilized to respond effectively to the epidemic.



### 2.9.1. NACOSA'S National AIDS plan for South Africa

The National Aids Plan prepared a strategy document dedicated to the struggle against the disease. Recommendations included the following:

- Human Rights for all
- Integration of HIV/AIDS activities into Primary Health Care (PHC) Services.
- The development of socio-economic strategies for the improvement of the quality of life for all South Africans.

The conference further suggested that the National strategy should concentrate on education, counselling, prevention, health care, welfare, research, human rights and law reform and socio-economic issues. In support of the National AIDS Plan, Circular 0077/97 was sent out to all principals of school clinics and secondary schools to ensure that all pupils receive education on this subject.

In addition, a proposed draft bill to prohibit unfair discrimination in general and in certain specified fields of acting against People with AIDS (PWA) and to provide for the protection of uninfected members of the public, and to promote for matters connected therewith were enacted by the Parliament of the Republic of South Africa.

With specific reference to Schools the following were proposed:

- 1) The educational authority concerned shall ensure that the curricula of a Primary and secondary schools make adequate provision for instructing and educating pupils with

regard to HIV and AIDS, including the nature of HIV infection, its transmission and prevention.

- 2) A parent or legal guardian of a pupil who is a minor and who does not wish Such pupil to receive instruction and education as contemplated in subsection 1 shall give written notification to that effect to the head of the school concerned, who shall exempt the pupil concerned from receiving such instruction and education.
- 3) The admission of a pupil to or his or her attendance at school shall not be made subject to any medical procedure with a view to establishing whether or not such pupil is an infected person.
- 4) No pupil shall be barred from attendance at a school solely by reason of the fact that he or he is or is believed or suspected to be an infected person unless in the opinion of the head of the school, confirmed by the written opinion of a medical practitioner, the continued attendance at the school to such pupil would be likely to pose a substantial health risk (Togni, 1997).

Thus, the movement to fully establishing schools as effective health promoting institutions was highlighted at the Health Promoting Schools Conferences held in Cape Town, 17-19 January 1996. According, to Dr. Olive Shisana, the Director-General of Health at that time, South Africa had one of the highest rates of teenage pregnancy in the world. She said that teenage pregnancy had increased because more and more girls were sexually active in their mid-teens. This has serious repercussions for the spread of the HIV infection and AIDS. Dr. Shisana also suggested that one strategy for addressing the

problem was to allow these teenagers to finish school and another strategy was education through condom use.

The idea of health promoting schools is to advance the health of school children and through them to advance the health of the community. Amongst the many ways and ideas to begin moving your community toward a health promoting school is the initiation of a health education curriculum or a Life Skills Curriculum. The Life Skills Curriculum is an aspect of education support services, which relates to the principle of curriculum infusion. This principle articulates the need for the promotive developmental aspects of education support services to be integrated in/across the general curriculum. Life Skills would be offered as one of the core subjects in the General Education Curriculum (ANC Draft Education Policy Framework Document, 1994 CEPD General Education Curriculum Framework Draft Document, 1994) and it would be infused into other core subjects (Gordon, 1995).

In 1998 the education sector and the South African Departments of Education, Health and Welfare embarked on a multi-sectoral strategy involving community mobilisation as part of the strategy to combat HIV/AIDS (Ngwena, 2003). In this partnership against AIDS the central role of the education sector is underscored in the national strategy to combat HIV/AIDS, namely the HIV/AIDS Strategic Plan for South Africa 2000 – 2005. One of its primary goals is to reduce the number of new infections, especially among youth by promoting health-seeking behaviour and adopting safer sex practices. Thus the

Department of Education was given the responsibility to incorporate HIV/AIDS training into life skills education in all primary and secondary schools.

### **2.9.2. Life skills and AIDS**

According to Ngwena (2003), life skills education is intended to equip learners with the knowledge and skills required to negotiate all situations in life positively and effectively. Life skills education is premised on the belief that the skills for coping with undermining and oppressive situations are not acquired naturally by all children in the course of growing up, but should be taught and practised in class as part of the of outcomes-based education. In essence, life skills education represents an acknowledgement that children form a vulnerable group and that their vulnerability increases when they are denied the information and skills vital to their survival and development (Department of Health, 2004).

Life skills education forms part of life Orientation – one of the eight learning areas in the new curriculum and a core learning area in the Further Education Training (FET) phase. Life Orientation is intended to nurture intellectual, physical, personal, social, spiritual and emotional growth in the context of a society aspiring towards the values of freedom, democracy, stability and a prosperous economy. Thus Life Orientation underscores the values promoted by the Constitution, including the advancement of human rights and liberties (Department of Health, 2004).

Ngwena (2003) argues that life skills should respond to real-life situations such as drug abuse, rape, sexual exploitation, teenage pregnancy and HIV/AIDS to be really effective. However, the HIV/AIDS epidemic has given sexuality education special significance and urgency, but simultaneously engenders controversy when parents, educators and governing bodies seek to negotiate the legitimate parameters of engaging learners in sexuality education.

The Life Skills Curriculum has particular focus on areas such as sexuality education, which includes AIDS. The Department of Health (2004) draws a distinction between sex education and sexuality education stating that sex education is information about the raw biological facts of male or female as well as the sexual act. It is thus devoid of values and norms as it is not about teaching the skills essential for developing caring, considerate relationships. On the other hand, sexuality education is about acquiring the necessary skills to make responsible, informed choices about sexual and reproductive matters.

According to the Department of Education (2004) the aims and objectives of sexuality education draws on the values that underpin life skills education in general, but has a particular application to sexuality. The specific aims and objectives of sexuality education involve the following outcomes: enhancing self-esteem and self-awareness, seeing sexuality as a natural and positive part of life, acquiring accurate information, developing skills needed to make informed, responsible decisions including those relating to sexual relationships, exploring various values and attitudes in order to help each

learner develop his/her own moral framework, acting in accordance with own values, understanding, tolerating and respecting different sexual needs, orientations and values, behaving responsibly and in a caring, respectful way in all relationships, protecting oneself from exploitation, and not exploiting others, communicating and expressing one's needs and feelings and using health services and being able to access the information one needs. It is thus apparent from these above outcomes that empowerment is a key outcome of Life Orientation. This means that the learner must both possess knowledge and develop survival and coping skills.

According to the World Health Organisation's review of programmes on reproductive and sexual health for adolescents, life skills education has shown to be essential for responsible, safe sexual behaviour (UNAIDS, 2004).

Life skills education, in particular AIDS Education has therefore been identified as crucial for the well-being of the nation. To this end, steps have been taken to remedy the situation, the aim to increase learners' knowledge of AIDS/HIV infection to facilitate informed decisions concerning their sexuality (Department of Education, 2004).

In 1998 an attempt to implement a school- based program was initiated. This program was referred to as Life Skills Training and was supported by Planned Parenthood, USAID and the Department of International Development of the United Kingdom. Subsequently, in the 2000 academic year, an HIV Emergency document, "Guidelines for Educators", was forwarded to all schools. These guidelines were based on the National Policy on

HIV/AIDS for learners and educators in Public Schools, and students and educators in further education and training institutions of the Department of Education (Department of Education, 2000).

During March 2001, the National Institute of Drug Abuse (NIDA) funded a conference on “Youth Risk Reduction in South Africa” in Durban. NIDA supports efforts to develop effective HIV prevention and treatment approaches to curtail the spread of HIV and its health consequences. As a follow-up to the conference a supplement grant to implement a pilot life skills programme was requested. This implementation trial is yet another prevention effort which will be integrated to provide a single curriculum, “Health Wise South Africa”, with the aim of reducing sexual and drug-related risk behaviours of South African youth (Hanson, 2002).

This means of reducing risk behaviours was supported by Whiteside and Sunter (2000) as they proposed that schools need to be used for AIDS education and that the programmes should be aimed at teaching life skills rather than focussing on HIV and AIDS alone. They also recommend that learners should get exposure to such programmes from a very early age.

Recent years have witnessed much debate about the effects and effectiveness of health education and health promotion. Questions have been raised about the ability of HIV/AIDS and sexuality education for young people to modify behaviour, its potential for producing undesirable effects and the dubious rigour in evaluating it. A review of the

literature concerning the impact of HIV and sexuality education for young people follows.

Studies have shown that although the mechanisms of transmissions of the HIV infection are well known, the elimination of HIV infection remains a major social problem. It has been reported that traditional education techniques have been effective in increasing knowledge levels; however, they have not been adequate in changing attitudes and sexual behaviour (Biddington, 1997).

A study conducted by Yarber and Torabi (1997) evaluated the efficacy of a theory-based school HIV/STD curriculum on eighth graders. The pre-testing and post-testing of students who were assigned to either intervention or comparison conditions indicated that the curriculum effectively improved HIV/STD related attitudes but barely impacted knowledge. These findings, therefore, refute the assumption that educational techniques can only effectively increase knowledge levels. This is supported by Quek and Li (2002) who claim that results of school – based sexuality programmes have shown an increase in skills related to contraceptive use and communication with potential partners, delayed onset of sexual intercourse and a reduction in unintended pregnancies.

In addition, a literature review identified twelve studies reporting the impact of HIV/AIDS intervention programmes. Ten studies reported positive effects on knowledge and attitudes. However, given the fact that few had control or comparison groups and the



small number of studies, the literature based on these studies was clarified as weak (Wilson, 1996).

Another study conducted by Miller and Gilman (1996) evaluated a peer-led intervention programme with university students to increase knowledge and attitudes of HIV/AIDS infection and transmission. Subjects were students from an undergraduate psychology class. A pre-test/post-test questionnaire was administered immediately pre-eding and following the presentation to assess differential changes in HIV/AIDS related attitudes and knowledge. The results show significant improvement from pre-test to post-test.

Moreover, a review of the literature conducted for the World Health Organisation's global programme on AIDS found good support for the efficacy of the HIV/AIDS and sex education in reducing unwanted outcomes of young people's sexual behaviour. Fifty-three of the studies focused on the outcomes of specific HIV/AIDS or sexuality education interventions, fifty of these studies employed pre- and post-test randomised controlled designs, and the remaining thirty-eight either did not have a control group or did not randomise subjects to treatment and control conditions. Of the fifteen experimental design studies, six reported no change in the occurrence of sexual intercourse, contraceptive or condom use of the recipients of education compared with the control group. Three studies reported a delay in first intercourse; two reported reduced pregnancy and one reported reduced frequency of intercourse. In addition, one reported greater monogamy; one reported reduced number of sexual partners among those who had

received education compared to those who did not (Grunseit & Aggleton, 1998; Kirby, 1997; Main et al. 1994; Quek & Li, 2002).

Of the thirty-eight studies using non-experimental designs, twenty-one reported no changes in sexual intercourse as opposed to fourteen which found reductions in sexual activity, pregnancies, births or abortions post-intervention. Furthermore, seven studies demonstrated increased contraceptive use; six studies indicated greater uptake of condoms among recipients of an intervention and four studies found no such increase in condom use. Another review focusing exclusively on adolescent HIV/AIDS intervention literature identified forty studies which described the impact of HIV/AIDS education on knowledge, attitudes and behaviour (Grunseit & Aggleton, 1998). Thirty out of thirty-four studies reported improvements in HIV/AIDS knowledge; seven out of twelve found an improvement in attitudes towards personal preventive behaviour and six out ten demonstrated improvements in intention to use condoms post-intervention. With respect to behavioural change: two out of six studies cited greater abstinence; seven out of eleven studies showed a reduction in the number of sexual partners and eleven out of fifteen studies reported increases in condom use after exposure to an AIDS risk-reduction intervention (Kingman, 1994; Kirby, 1997; Main et al., 1994; Quek & Li, 2002). It is thus apparent that education may have greater success when it comes to changing attitudes and increasing levels of factual knowledge than in modifying sexual practice.

According to Barth (1993) researchers have developed numerous sex education curricula, but most of them have not been evaluated, or when they have been evaluated, the results

have indicated that the curricula did not significantly reduce unprotected intercourse. Davids (1995) asserts that the Barth Assertiveness Package is one of the few AIDS education curricula that has been evaluated and has been found to significantly reduce risky sexual behaviour amongst adolescents in junior and senior high schools. The results showed that the package significantly increased the knowledge of almost all the pupils and that the pupils retained this knowledge for at least eighteen months. The major objective of the package was to change norms about unprotected sex and to change pupils' perception that everyone is sexually active (Barth, 1993; Davids, 1995).

Differences in behaviour are, indeed, the key to thinking that people can modify what they do in the light of advice on healthy lifestyles. Kingman (1994) opines that if sexuality were solely biologically determined, then forms of sexual expression would vary little between cultures and during different historical periods – whereas, in practice, they do. She claims that it is in this potential of sexuality for diversity rather than uniformity that the seeds of hope may be found in the selection of sexual health strategies. She argues that if sexual expression were fixed in nature, there would be no possibility for change or choice. However, in the search for healthy sexual lifestyles, a perspective that sees potential for change, choice and diversity may be of greater value than one that sees sexual behaviour as simply biologically determined.

Main et al (1994) used this point of departure when they evaluated the effectiveness of a school-based HIV prevention intervention on students' knowledge, attitudes, and behaviour related to HIV infection. They conducted their research within seventeen

schools in six Colorado districts. These schools were either assigned to intervention or comparison conditions. Students in ten schools received a 15-session, skills-based HIV prevention curriculum implemented by trained teachers. Intervention students exhibited greater knowledge about HIV and greater intent to engage in safer sexual practices than the comparison students. Among sexually active students at the 6-month follow-up, intervention students reported fewer sexual partners within the past two months, greater frequency of using condoms, and greater intentions to engage in sex less frequently and to use a condom when having sex. Intervention students were also more likely to believe that adolescents their age who engage in HIV risk behaviours are vulnerable to infection. It can thus be concluded that skills-based risk reduction programs can have an effect on student behaviour as the evidence suggests that school-based interventions can reduce behaviour associated with the risk of HIV infection. Furthermore, Grunseit and Aggleton (1998) assert that education programmes appear to have greater success if given prior to first sexual intercourse that behaviour that protects health may be easier to establish rather than modifying pre-existing practices.

This is supported by Peltzer (2003) who conducted a study on a rural adult population to evaluate data on behavioural indicators in relation to HIV/AIDS/STD prevention. The data showed that some misconceptions and myths about HIV/AIDS are still held by a sizable minority and that a weak link exists between the high levels of knowledge found among the majority of the participants and their behaviour. According to the Peltzer (2005) there is thus a need for continued and increased efforts towards providing HIV intervention programmes for adults aged between 24 to 29 years.

According Albaracin, Gillette, Earl, Glasman, and Duranti (2005) who conducted a study on the major theoretical assumptions about behaviour change by examining the outcomes and mediating mechanisms of different preventive strategies, it was concluded that the most effective interventions were those that contained attitudinal arguments, educational information, behavioural skills arguments and behavioural skills training. The preventive strategies that were the least effective were those that attempted to induce fear of HIV.

It is thus noteworthy that the methodology of education is critical to its success as the goal is behaviour change. Recipients of education must be involved in its development and trainers must be well prepared for their role and non-judgmental. Coyle (1996) suggests a multi component programme to change behaviours, which lead to HIV infection and STDs. Components include a school health promotion council, curriculum and staff development activities, school environment activities implemented by peer educators, parent education activities and school community linkage activities. The growing body of research on the behavioural aspects of HIV/AIDS prevention has encompassed the application and critical analysis of various conceptual frameworks.

## **2.10. Theoretical underpinnings of the “Health Wise SA” Life Skills Training**

No single theory is adequate to explain, predict and control the wide variety of behaviours that are linked to health status, especially the sensitive and complex behaviours that puts one at risk of HIV infection and AIDS (Davids, 1995).

According to Hanson (2002), the Health Wise SA Life Skills Training is based on several interrelated Theories – Social Psychological theories and Cognitive Behavioural theories. The present study considered focussed primarily on the Health Belief Model, Theory of Reasoned Action and the Social Learning Theory.

### **2.10.1. The Health Belief Model**

Inspired by field theory and symbolic interaction the Health Belief Model (HBM) focuses on subjective perception and motivation and proposes that the main triggers of preventive action are: perceived personal susceptibility to the health problem; perceived seriousness of the problem and the subjective perception of barriers to and benefits of a given preventive action (Quah, 1998). To facilitate a better understanding of the HBM the author will explain the families of variables contained in the model. The variables that predict behaviour are:

- (a) Perceived susceptibility – This refers to a person’s subjective perception of a health threat, or his/her personal vulnerability to a health threat.
- (b) Perceived severity - This refers to a person’s perception of the consequences of a disease or health threat.
- (c) Perceived effectiveness – This refers to a person’s perception that he/she is capable protective action.
- (d) Perceived costs of or barriers to protective actions – The protective behaviour may have negative aspects, which act as obstacles to undertaking the desired behaviour.

For example, a person with AIDS may stop using medication due to an increase in costs.

- (e) Cues to action – A stimulus (such as symptoms) is necessary to trigger the decision-making process.
- (f) Demographic, structural and sociopsychological factors – It is believed that these factors may influence a person's perception and thus indirectly influence the protective or health –related behaviour.

It has been argued that these factors are hypothesized to have multiplicative relationship with each other. For example, the likelihood of condom use as a means of preventing HIV infection will be greater when people perceive themselves as susceptible to HIV infection, perceive protective action as very effective, see few costs or barriers to self-protection, have a cue to action and are enabled to protect themselves (Davids, 1995; Quah, 1998; Vanlandingham, Suprasert, Gandjean & Sittitrai, 1995).

The application of the HBM to the study of preventive behaviour has highlighted several of its strengths and weaknesses. Among the most relevant findings are the positive influence of knowledge of the health problem; the impact of self-efficacy in carrying out preventive actions; the uncertain role of perceived personal susceptibility to the disease in promoting prevention and the importance of acknowledging cultural variations in the dynamics of preventive behaviour. Empirical tests of the Health Belief Model confirm that knowledge on the etiology of HIV infection and self-efficacy are part of the spectrum of factors facilitating preventive behaviour (Quah, 1998).

Another conceptual consideration is the predictive value or the belief specificity of the model. Quah (1998) argues that if an action is regarded as an effective preventive measure against a health problem, then taking the action should reduce the perceived susceptibility to that health problem. Yet, findings from HIV/AIDS research reveal that the dynamics of the disease from the time of HIV infection to the onset of full-blown AIDS is characterized by great uncertainty on the outcome of one's risk-taking and preventive actions. Uncertainty increases the person's subjective perception of personal susceptibility or risk of contracting HIV/AIDS even after ceasing risk-taking behaviour (Vanlandingham et al., 1995).

The impact of cultural variations should also be acknowledged as the biomedical aspect of HIV and AIDS is characteristically uniform across geographical regions, but the cultural dimension of HIV/AIDS prevention is undeniably diverse. For example, in the diverse African cultures, the passage from childhood into adulthood is marked with a variety of rites and specific customs, which put them at risk for contracting the disease. Another example is the Luo in Kenya who attribute the disease to a curse (Chira) which is acquired when one fails to observe certain traditional norms. Cross-cultural differences in collective and individual perception of the seriousness of the disease, susceptibility to the disease, information on preventive measures and responses to the HIV/AIDS threat need to be identified and incorporated in preventive programmes (Quah, 1998; Van Dyk, 2001).



However, the analysis of specific preventive actions is problematic as the targeted preventive action in most studies on HIV/AIDS is sexual behaviour and, in particular, condom use. In some communities, the collective perception of sexual activity as a fundamentally private activity compels people to deflect questions on the subject, to provide socially accepted responses, or to avoid discussing the matter altogether. Consequently, specific questions on prevention such as condom use, and /or asking questions in a public setting, may not elicit reliable information (Vanlandingham et. al., 1995).

Bowser (2002) argues that social psychological theories, like the HBM, have their limitations as they focus on the individual as the unit of change and prevention. He posits that the individual is not the appropriate level of social organization and analysis to conceptualize the scope of change necessary to affect the AIDS epidemic. The HBM poses that individuals who have beliefs consistent with specific healthy behaviours are more or less likely to practice those behaviours. Thus in health belief theory, behaviours are outcomes of individual beliefs and are limited as a tool to understand social change.

Bowser (2002) focuses on the social dimensions of the AIDS epidemic and opines that the social norm is the most effective way to gain widespread compliance to AIDS prevention goals. He believes that thousands of individual's change their behaviour when motivated out of their community identity and membership. These individuals in community will remain compliant to the new norm as long as the threat remains visible and immediate. Then if the threat and new norm stay in place long enough, the old high-

risk behaviour can be passed to subsequent generations as ritual. He cites the following examples to support his claim: the necessity for kosher foods and cooking utensils in Judaism, circumcision in Christianity and using only the left hand to handle body waste in Islam.

Although, the HBM has value, other models should also be explored since a recurrent finding in health promotion studies is that information alone is often inadequate to effect behavior change.

#### **2.10.2. The Theory of Reasoned Action (TRA)**

The theory of reasoned action is a cognitive model developed by Fishbein and Ajzen (1975) as quoted by Perkel (1992), which provides information about the linkages between knowledge, beliefs, attitudes and behaviour. The emphasis of the TRA is on the person's intentions, which are assumed to be the immediate determinants of behaviour. In general the TRA assumes that individuals will use all information available to them to influence and guide their behaviour. According to Perkel (1992), the TRA is useful in predicting behaviour and identifying the determinants of intentions. There are two factors, which affect this intention. Firstly, of a personal nature, the intention is affected by the person's attitude toward the behaviour and the person's belief about that behaviour. Secondly, the intention to act is influenced by social factors, for example, a person's perception of subjective norms and the value the person places on approval by others (Perkel, 1992; Vanlandinham et. al, 1995).

According to Davids (1995), the TRA and the HBM are similar in that both regard behaviour as the person's perception of and/or belief about the outcome of that specific behaviour. They claim that the TRA has an added function in that it not only predicts behaviour, but it recognizes the influence of subjective norms – albeit in a totally cognitive, information-processing way. However, Bowser (2002), states that only the intent to perform a specific behaviour is predicted in the theory of reasoned action and not an actual behaviour itself. In this sense, the theory has been found to be statistically predictive, but it is not predictive of the behaviour of actual individuals nor can it determine how long another person might maintain that behaviour.

Bowser (2002) opines that the social learning theory as posed by Albert Bandura comes closest to providing a framework to explain and predict behaviour based upon an integration of internal psychological processes, cognition, modeling of observed behaviour and environmental stimulants.

### **2.10.3. Social Learning Theory**

According to Miller and Gilman (1996) social learning theory has its roots in classical learning theory. The work of Watson and Skinner was instrumental in the development of social learning theory. Watson, for example believed that by changing the environment, one could actually change the individual's behaviour. Skinner, on the other hand, believed that behaviour could be shaped and controlled by rewarding only those

behaviours that are desired and not those behaviours that are undesirable. They thus believed that an individual's behaviour is shaped through the process of socialization. Furthermore, Miller and Gilman (1996) contends that modern learning theorists continued to focus on learning, but extended the notion of learning in two ways: (a) social behaviour, and (b) the social context of behaviour. They also acknowledged the importance of observational learning, which is the acquirement of new skills or information or altering old behaviours simply by watching others. The features of observational learning are that a child need not produce the behaviour right away and that the model need not be reinforced in order for the observer to learn. Observational learning is, therefore, of particular importance for explaining how complex behaviours such as refusal and delaying skills are acquired. A refusal skill is a skill, which enables adolescents to effectively say "no" to request for sex, while a delaying skill is used to delay request for sex by suggesting an alternative action like playing cards instead of sexual intercourse (Barth, 1993).

### **2.11. Summary of the Chapter**

The definitions of AIDS and HIV were introduced and explained and the clinical progression of AIDS outlined. An overview of AIDS was given in addition to reviews of literature pertaining to studies on AIDS. In addition the implications of AIDS on education and the workplace were discussed. From the literature review it was apparent that education on AIDS is of vital importance to curtail the spread of AIDS and the HIV infection.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### **3.1. Introduction**

This chapter presents the research design and methodology utilised in the study, defines the population from which the sample was drawn, the sample and discusses the measuring instruments used in the study as well as the sampling procedure followed to collect the data. A brief overview is provided about the use of the different statistical techniques used to analyse the data.

#### **3.2. The Population**

The population from which the sample was selected was high school learners from a high school in the Cape Metropolitan area. The population included both male and females between the ages of 12 – 22 with predominantly three home languages: English, Afrikaans and Xhosa. This High School was a Reconstruction and Development Programme initiative with a current student population of 1 335 with a 1.2 female to male ratio. The racial distribution of the population follows.

## CHAPTER 3

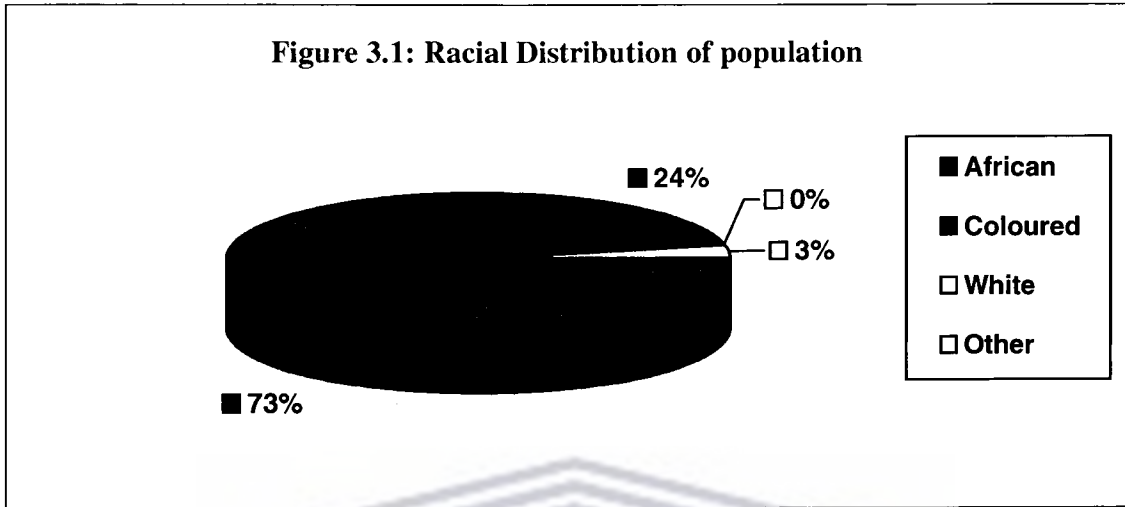
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As illustrated in Figure 3.1, the racial composition of the population comprises 74.1 % (n = 928) black respondents, 24% (n = 307) coloured respondents, 0.37% (n = 5) white respondents and 3% (n = 41) foreigners.

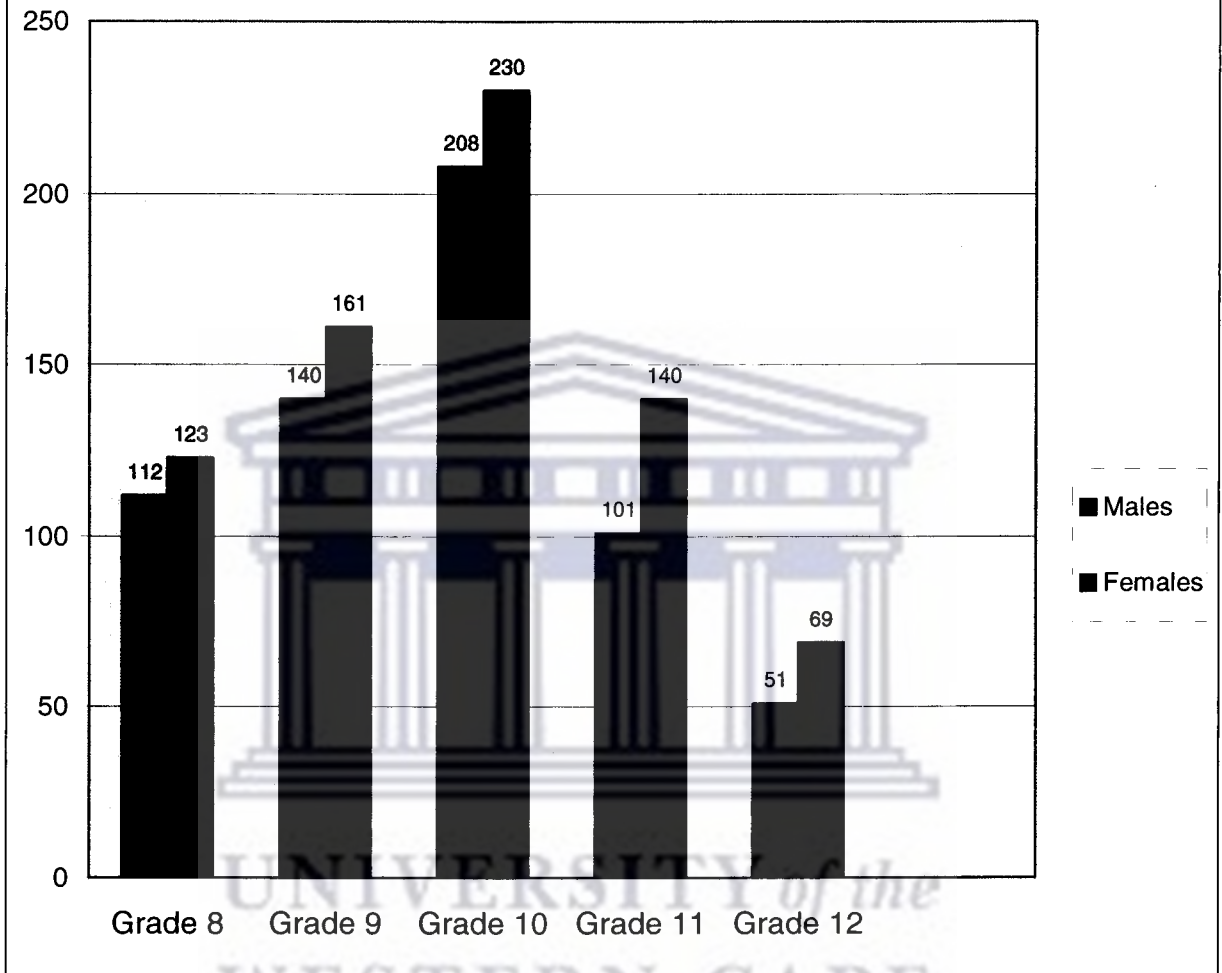
**Table 3.1 Student Population by Grade**

112	140	208	101	51	612
123	161	230	140	69	723
235	301	438	241	120	1335

**Western Cape Education Department Statistics (2005)**

It is apparent from the table above that there are consistently more females in each grade as opposed to males. The females comprised 54.2% (N = 723) of the population as opposed to the males who constituted 45.8% (N = 612). The gender distribution of the population is clearly illustrated in Figure 3.2.

**Figure 3.2. Gender Distribution of Population**



It is evident from Figure 3.2 that there are consistently more girls in each grade.

In grade eight 8.3% (N =112) of the respondents are male and 9.2% (N = 123) of the respondents are female. In grade nine 10.1% (N =140) of the respondents are male and 12% (N = 161) of the respondents are female. In grade ten 15.5% (N =208) of the respondents are male and 17.2% (N = 230) of the respondents are female. In grade eleven 7.56% (N = 101) of the respondents are male and 10.4% (N = 140) of the



respondents are female. In grade twelve 3.82% (N = 51) of the respondents are male and 5.16% (N = 69) of the respondents are female.

The population also included learners from other provinces and countries who have never been registered at any school in the Western Cape. The learner distribution for other provinces per grade is depicted in Table 3.2.

**Table 3.2 Learner Distribution from Other Provinces and Countries**

0	0	1	0	0	1
0	1	0	1	0	2
2	0	4	0	0	6
6	6	16	8	0	36
0	1	0	0	0	1
0	1	0	0	0	1
1	1	0	0	0	1
0	1	0	0	0	1
1	1	0	0	0	1
2	5	0	0	0	5
12	17	21	9	0	59

**Western Cape Education Department Statistics (2005)**

It is evident from Table 3.2 that learners that come from other provinces are predominantly from the Eastern and Northern Cape. Learners from other countries include those as far a field as Congo. . These learners constitute 4.41% (N = 59) of the population. This gives an indication that learners from different home languages are also represented although it is a dual-medium school. Thus, learners are either taught in English or Afrikaans as their medium of instruction depicted in Table 3.3.

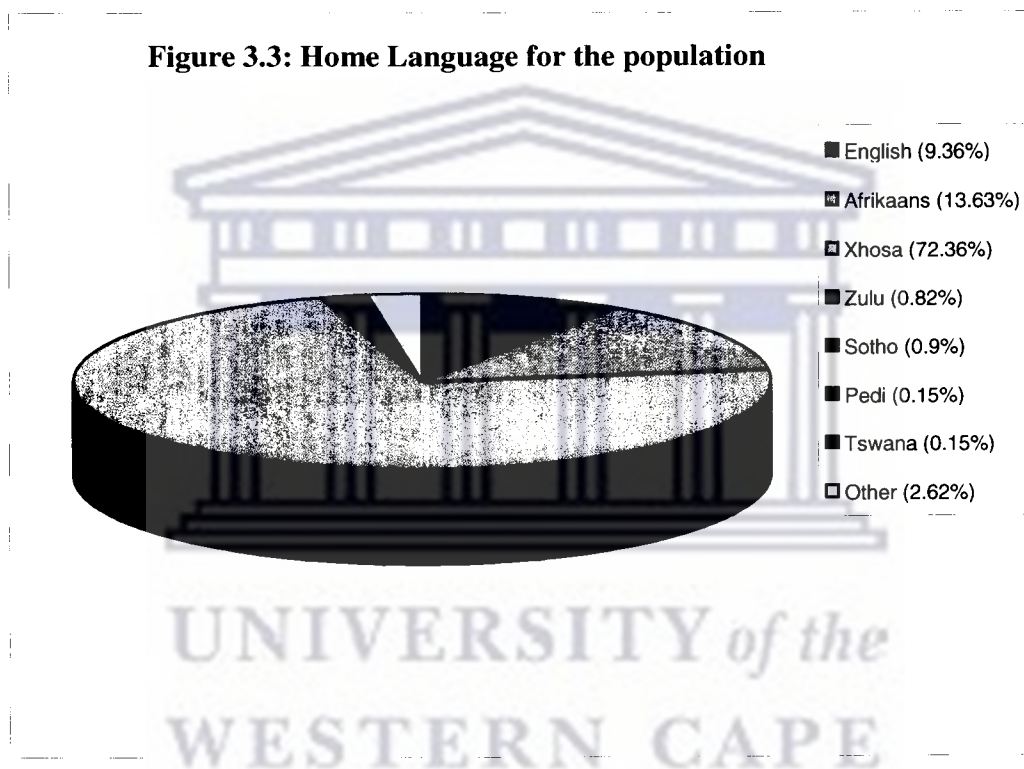
**Table 3.3 Medium of Instruction per Grade**

39	36	49	37	11	172
196	265	389	204	109	1163
235	301	438	241	120	1335

**Western Cape Education Department Statistics (2005)**

It is evident from the table above that the majority of learners 87.1% (N= 1163) receive their tuition in English and 12.8% (N = 172) receive their tuition in Afrikaans. In grade eight 2.92% (N = 39) of the respondents receive tuition in Afrikaans and 14.6% (N = 196) of the respondents receive tuition in English. In grade nine 2.69% (N = 36) of the respondents receive tuition in Afrikaans and 19.8% (N = 265) of the respondents receive tuition in English. In grade ten 3.67% (N = 49) of the respondents receive tuition in Afrikaans and 29.1% (N = 389) of the respondents receive tuition in English. In grade eleven 2.77% (N = 37) of the respondents receive tuition in Afrikaans and 15.2% (N = 204) of the respondents receive tuition in English. In grade twelve 0.82% (N = 11) of the

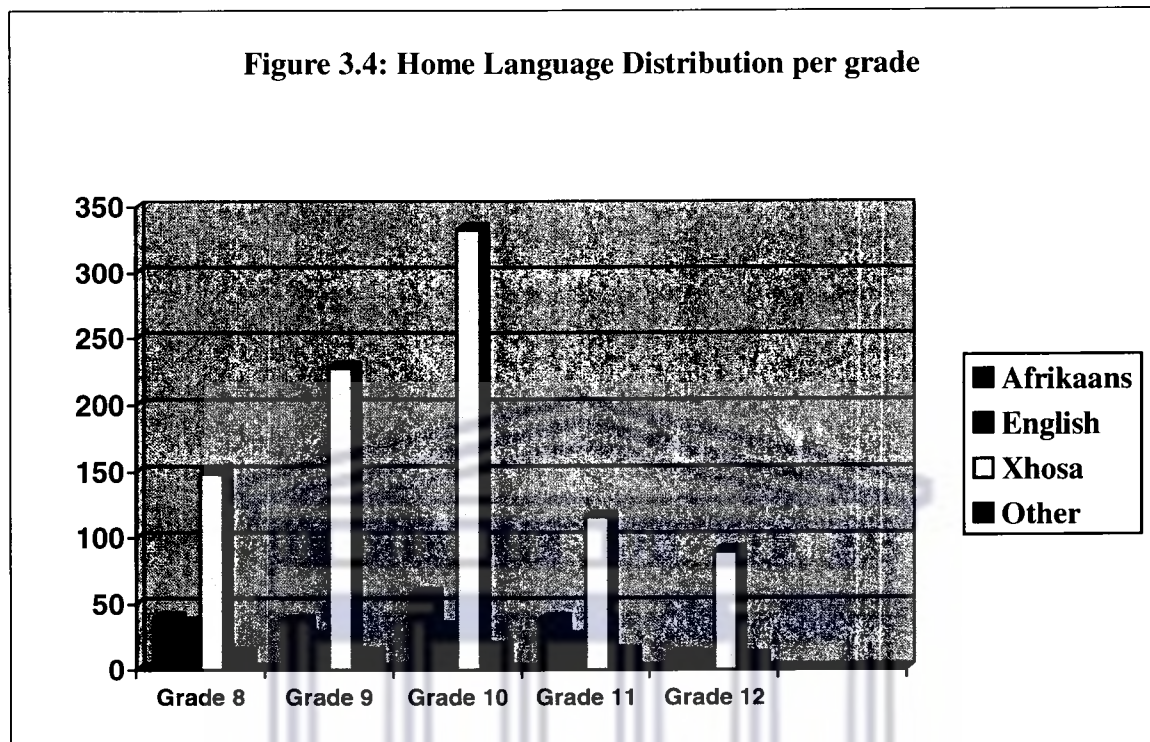
respondents receive tuition in Afrikaans and 8.16% (N = 109) of the respondents receive tuition in English. It is, however, noteworthy that all learners do receive English as either their Primary Language or Additional Language. The home language for the population follows in Figure 3.3.



**Western Cape Education Department Statistics (2005)**

Figure 3.3 illustrates respondents home language, 966 of the respondents (72.3%) have Xhosa, 182 of the respondents (13.6%) have Afrikaans, 125 of the respondents (9.3%) have English, 0.82% of the respondents (11) have Zulu, 12 of the respondents (0.9%) have Sotho, 2 of the respondents (0.15%) have Pedi, 2 of the respondents (0.15%) Tswana and 35 of the respondents (2.62%) have other languages as their home language.

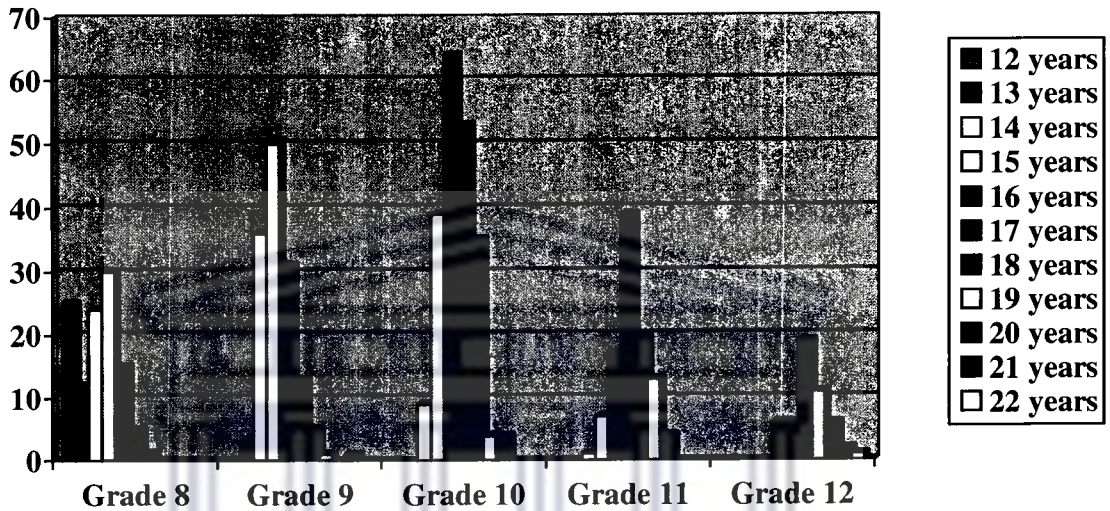
**Figure 3.4: Home Language Distribution per grade**



Western Cape Education Department Statistics (2005)

It is evident from Figure 3.4 that majority of respondents namely 966 (72.3%) have Xhosa as their home language. They are as follows: 149 respondents (11.1%) in grade eight, 228 respondents (17.07%) in grade nine, 333 respondents (24.9%) in grade ten, 116 respondents (8.68%) in grade 11 and 90 respondents (6.74%) in grade twelve. The majority of learners are thus receiving their tuition in their second or third language.

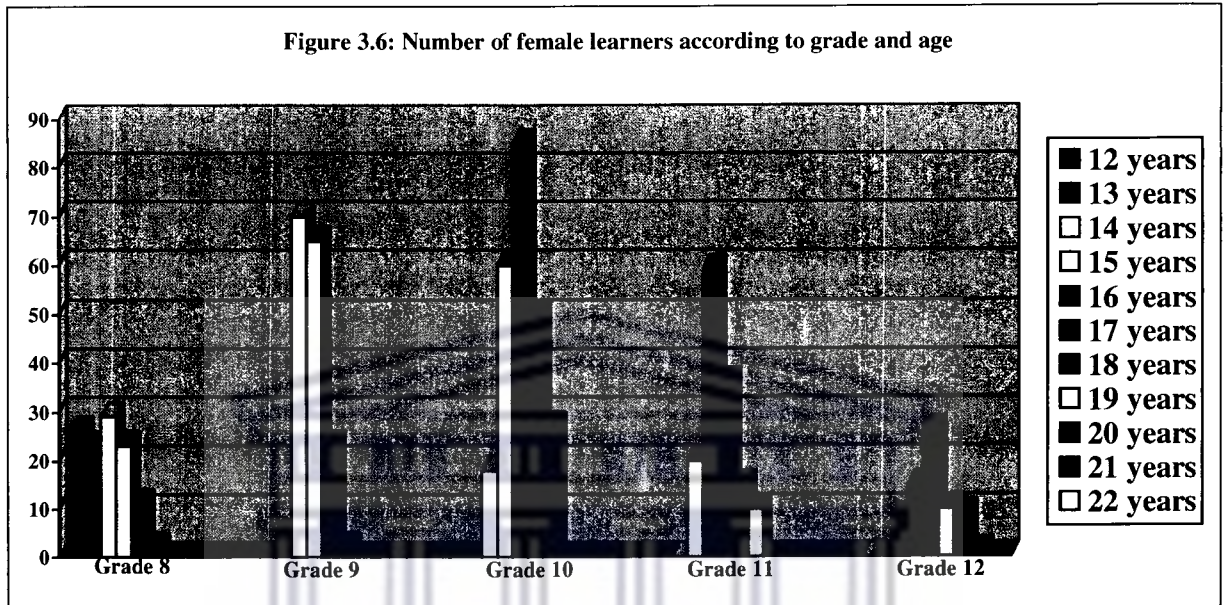
**Figure 3.5: Number of male learners according to grade and age**



Western Cape Education Department Statistics (2005)

According to the statistics depicted in Figure 3.5 the predominant age groups for males in the different grades are as follows: In grade eight the majority of male respondents (26.7%; N = 30) fall in the 15 year age group. In grade nine the majority of male respondents (35.7%, N = 50) fall in the 15 year age group. In grade ten the majority of male respondents (30.7%; N = 64) fall in the 16 year age group. In grade eleven the majority of male respondents (38.6%; N = 39) fall in the 17 year age group. In grade twelve the majority of male respondents (37.2%; N = 19) fall in the 18 year age group. The statistics for the female learners per age and grade follow in Figure 3.6

Figure 3.6: Number of female learners according to grade and age



#### Western Cape Education Department Statistics (2005)

It is indicated in Figure 3.6 that in grade eight the majority of female respondents (25.4%; N = 29) fall in the 14 year age group. In grade nine the majority of female respondents (42.4%; N = 70) fall in the 14 year age group. In grade ten the majority of female respondents (35.4%; N = 85) fall in the 16 year age group. In grade eleven the majority of female respondents (42.1%; N = 59) fall in the 16 year age group. In grade twelve the majority of female respondents (37.6%; N = 26) fall in the 18 year age group.

### 3.3. The Sample

For the purpose of this study only grade eight learners could be used as the pilot study was applicable to grade eight learners only. Thus the sample comprised of 235 Grade eight learners from a conveniently selected school in the Cape Metropolitan Area. For the purpose of this research 235 questionnaires were administered and returned during the pre-test phase. However, during the post-test phase only 228 questionnaires were administered and returned due to 7 learners dropping out of school.

According to Sekaran (2000) a response rate of thirty percent (30%) is considered acceptable for most research purposes. The response rate for both testing sessions was 100 percent (100%). The sample group (n = 228) consisted of male and female grade eight learners in the age group 12 – 18 years. Participants were selected from both the English primary and secondary language classes. One group was assigned to intervention conditions (Group 1) and the other group served as the comparison/ control group (Group 2). The selection criteria for participants were as follows:

- The age-group of 12 to 18 years,
- Grade eight
- Literacy in English.

In order to reduce error variance, only learners from Grade eight were selected.

### **3.3.1. Convenience Sampling**

According to the Penguin Dictionary of Psychology (2001) convenience sampling refers to a sample based not on representivity but on convenience. This means that the sample was not drawn from the population at large, but from a convenient subset of the population. For the purpose of this study a non-probability sampling design was utilized in the form of convenience sampling as the pilot study was only limited to the grade eight learners. However, non-probability sampling has both advantages and disadvantages (Welman & Kruger, 2003).

#### **3.3.1.1. The advantages of convenience sampling**

According to Sekaran (2000) non-probability sampling is less complicated than probability sampling, incurs less expense and may be done to take advantage of the available respondents without the statistical complexity of a probability sample. This is supported by Kerlinger (1986) who claims that convenience sampling involves collecting information from members of a population who are easily accessible and conveniently available to provide the required information.

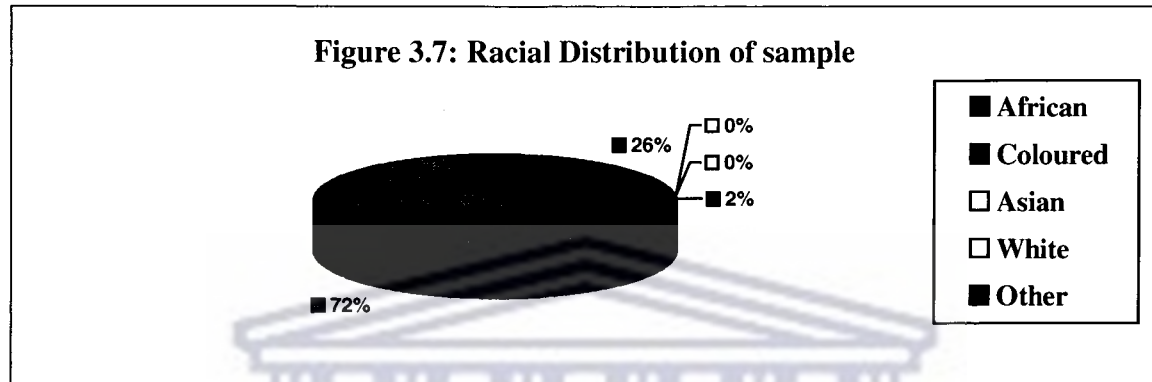
#### **3.3.1.2. The disadvantages of convenience sampling**

According to Leedy (1993) convenience sampling is not necessarily representative of the population therefore the results cannot be generalised to other organizations.



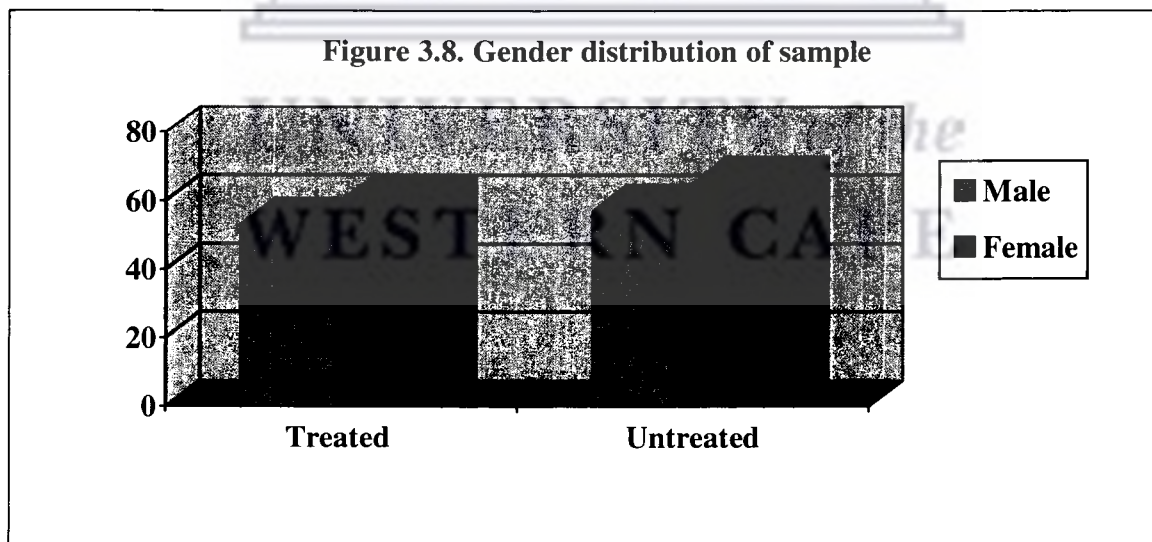
### 3.3.2. Sample Characteristics

The biographical information of the 235 grade eight learners who participated in the study is presented in graphical format and explained.



Western Cape Education Department Statistics (2005)

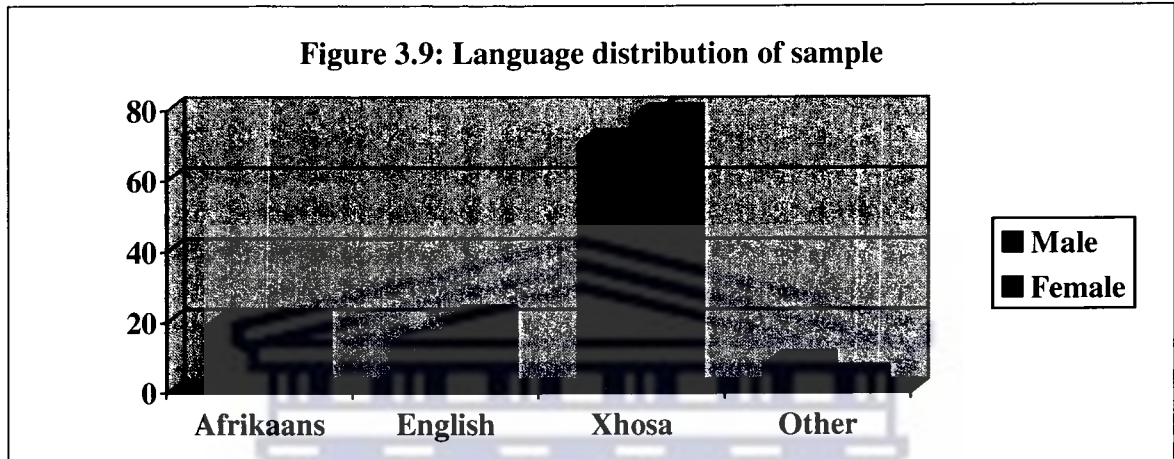
As illustrated in Figure 3.7, the racial composition of the sample comprises 72 % (n =164) black respondents, 26% (n = 59) coloured respondents and 2% (n = 4) other.



Western Cape Department of Education (2005)

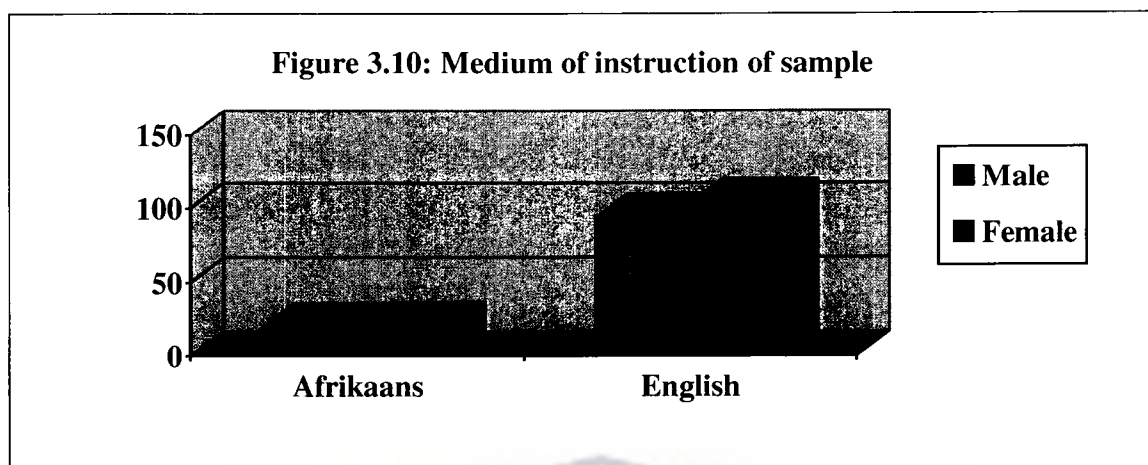
It can be viewed in Figure 3.8 that 46.8% (n = 110) of the respondents in the sample are male and 53.19% (n = 125) of the respondents are female. The treated group comprised of 53.1% (n = 60) female respondents and 46.9% (n = 53) male respondents. The

untreated group comprised of 53.2% (n = 65) female respondents and 46.7% (n = 57) male respondents.



Western Cape Education Department Statistics (2005)

Figure 3.9 illustrates the sample's home language, 149 of the respondents (63.4%) have Xhosa, 39 of the respondents (16.5%) have Afrikaans, 35 of the respondents (14.8%) have English and 12 of the respondents (5.1%) have other languages. The 63.4 % (n = 149) who has Xhosa as their home language comprised of 71 male respondents (30.2%) and 78 female respondents (33.1%). The 16.5 % (n = 39) who has Afrikaans as their home language comprised of 19 male respondents (8.08%) and 20 female respondents (8.51%). The 14.8 % (n = 35) who has English as their home language comprised of 14 male respondents (5.9%) and 21 female respondents (8.9%). The 5.1% (n = 12) who has Other languages as their home language comprised of 8 male respondents (3.4%) and 4 female respondents (1.7%).



Western Cape Education Department Statistics (2005)

As illustrated in Figure 3.10, the sample's medium of instruction as follows:

The majority (83.4%) of the respondents ( $n = 196$ ) receive their instruction in English. The 83.4% who receive English as their medium of instruction comprise of 93 male respondents (39.5%) and 103 female respondents (43.8%). Only 16.5% of the respondents ( $n = 39$ ) receive their instruction in Afrikaans. The 16.5% ( $n = 39$ ) who has Afrikaans as their home language comprise of 19 male respondents (8.08%) and 20 female respondents (8.51%).

### 3.4. Measuring Instrument

#### 3.4.1. Section A

A questionnaire originally developed by Shrum, Turner and Bruce (1989) was used to measure knowledge; attitudes and sexual behaviour concerning AIDS (see Appendix A).

The questionnaire consisted of five separate sections.

Section A contained five questions, which were concerned with biographical information such as age, sex, standard at school, name of school and home language.

### **3.4.2. Section B**

Section B was the knowledge section of the questionnaire which followed a forced-choice style with response choices of YES and NO. It consisted of 23 questions addressing the broad domains of the nature of AIDS and HIV, the transmission of HIV and an option of choosing from where they most likely are to gain knowledge in the future.

### **3.4.3. Section C**

Section C focused on attitudes towards the disease and infected persons and utilised the AIDS Attitude Scale (AAS) as drawn up by Shrum et al. (1989). The questions were closed and involved a 5-point Likert scale ranging from STRONGLY AGREE to STRONGLY DISAGREE.

The AAS isolated three factors, namely:

#### Factor 1

Included items relating to proximity to people with AIDS - Questions 29, 31, 32, 33, 34, 35, 36, 37, 40, 41, 42, 43, 44, 49, 52, 53, 54, 59, 60, 62, 64, 65, 78, 80 and 81.

#### Factor 2

Included moral and judgmental attitudes towards AIDS - Questions 30, 38, 39, 45, 47, 51, 56, 57, 58, 61, 63, 66, 67, 70, 75, 76, 79 and 82 (Shrum et al., 1989).

### Factor 3

Reflected social welfare and legal issues - Questions 46, 48, 50, 55, 68, 69, 71, 72, 73, 74 and 77.

For Section C, an overall score out of 100 was computed for each of the three factors as an index of the attitude held after readjusting weights for negative attitudes and scores above 50 reflecting positive attitudes as recommended by Shrum et al. (1989).

#### **3.4.4. Section D**

Section D, the final section, was concerned with sexual behaviour and involved forced-choice responses. This was compiled to assess specific information regarding sexual activity and methods of prevention, if any presently being taken against AIDS.

According to Shrum et al. (1989), the AAS was demonstrated to have content validity and reliability and can therefore be used to assess attitudes towards AIDS. The AAS was compiled by Shrum et al., from an extensive collection of statements about AIDS by undergraduate students at an American university and tested on university students. The AAS has also been successfully utilised in South Africa (Naidoo, 1994).

### 3.4.5. Reliability

According to Elmes, Kantowitz and Roediger (1999), reliability refers to the consistency of the measures of behaviour. The reliability of the results of tests and other descriptive measures of behaviour is often checked by taking measures under the same conditions on successive occasions. Three procedures to determine test reliability are as follows:

- Test –retest method
- Parallel forms
- Split-half method

For this particular questionnaire the test –retest method was employed.

A consolidation of studies that have used the AAS shows clear support for its reliability and validity (Bruce & Reid, 1998; Froman & Owen, 1997). The internal consistency estimates using the factor structure with an empathy scale and avoidance scale were 0.83 and 0.87 respectively (Froman & Owen, 1997).

The advantages of using questionnaires are outlined by Rosnow and Rosenthal (1996):

- It can be administered to large numbers of individuals
- The method also allows anonymity
- It is relatively more economical to use

Rosnow and Rosenthal (1996) add that

- Since self-evaluation questionnaires are normally quantified, it is easier to compare the scores of different individuals”.

- The analysis of questionnaires is easy due to the structured information in the questionnaire with few open-ended questions.

According to Sekaran (2000) questionnaires can be employed in various forms for example the Semantic scale and the Likert scale.

The main problems experienced by using questionnaires involve poor levels of response and the drawback of not being able to test the given responses for accuracy (Kerlinger, 1986). According to Sekaran (2000) a problem with questionnaires includes questionnaires being limited to respondents that are literate.

#### **3.4.6. Content Validity**

According to Aamodt (1996) face validity and logical validity are indicators of content validity. Face validity indicates the degree to which a test appears to be valid. He adds that tests takers and test administrators will not have confidence in the results if a test or its items do not appear valid. "Face validity does not refer to what the questionnaire actually measures, but to what the items apparently measure". According to Shrum et al. (1989), the AAS was demonstrated to have content validity and reliability and can therefore be used to assess attitudes towards AIDS.

### **3.4.7. Construct Validity**

According to Posavac and Carey (1992) construct validity refers to that measure accurately reflecting the general understanding of its variables based on former experimental findings, underlying theories and established characteristics. Construct validity concerns the extent to which a test/questionnaire measures a theoretical construct or trait. According to Elkonin (1992) the AAS does have construct validity.

### **3.5. Research Design**

According to Elmes et al.(1999), quasi-experimental designs refer to experimental situations in which the experimenter does not directly manipulate variables. Furthermore, Posavac and Carey (1992) opine that quasi-experimental evaluations are basically concerned with the evaluation of a control group(s) and experimental group(s). According to Posavac and Carey (1992) the methods used in quasi-experimental approaches has greater validity than those used in non-experimental approaches. A quasi-experimental design was employed to evaluate the impact of a specially designed life skills curriculum.

The Untreated Comparison Group Design with Pretest and Posttest was employed via two groups on which the pretest was taken following the treatment of the one group and both groups received a posttest, which was the dependent variable. Both groups were therefore administered a pretest, which provided some information as to their equality



prior to the administration of the experimental treatment (McGuigan, 1997). The primary aim of the study was to determine whether a skills-based HIV intervention curriculum can postpone the onset of sexual intercourse and reduce the percentage of learners currently engaging in sexual behaviours that place them at risk for HIV infection. The study proposed to achieve this by changing learners' knowledge and attitudes regarding AIDS and HIV transmission, as well as their present sexual behaviour and precautionary measures, if any. The advantage of such a study was the amount of information that can be gathered and also the cause effect relationship.

The introduction of the Health Wise Life Skills Curriculum might seem successful because of its suggestive (placebo) effect. The explanation being that merely doing anything new or different may heighten or raise their awareness. This is supported by Elmes et al.(1999), who claim that most quasi-experiments of the general form observation-treatment-observation cannot be true reversal designs for two reasons: (1) the treatment is not under the experimenters' control; and (2) most natural treatments, such as curriculum implementation are likely to have long-term carryover effects. In addition, changes in the participants themselves with regards to age, more experience in school, better social adjustment or biological maturation can confound the results of the research. According to Elmes et al. (1999), these changes which are called maturation can confound the results of research concerned with natural treatments such as curriculum implementation. In addition, in a classroom setting, numerous outside influences could affect the results as the researcher does not have direct control over the setting. This source of confounding is called history by Cook and Campbell (1979) cited by Elmes et

al. (1999). Thus the two threats to internal validity are the history of the participant and any changes in the participant that occur over time. Another disadvantage of this design is the problem of selection bias as participants were not randomly selected. Thus we have no guarantee that our selection was as unbiased as randomization (Posavac & Carey, 1992).

Finally, there might also have been an improvement in the dependent variable values regardless of the treatment intervening between the pretest and the posttest. This can be attributed to the pretest itself being a learning experience so that learners perform better on the posttest only because of practice on the pretest.

### **3.6. Intervention**

The purpose of the Health Wise Life Skills Training was to engage youth in a 17-week curriculum that addressed important issues and choices they make as an adolescent. It is based on the premise that most adolescents have a lot of free time- time that is not spent in school or at work. During this time youth are free to engage in a number of activities, from chores, sports, spending time with friends and family or going to church. In free time, youth can engage in many positive things that are good for them and their communities. However, free time can also be a time where unhealthy choices are made. Youth may consume alcoholic beverages, use other drugs like marijuana, and engage in unsafe sexual behaviours (Hanson, 2002).

According to Smith and Caldwell (2003) this curriculum was designed to encourage positive free time behaviour and to reduce unhealthy behaviours among youth. It do not teach them to “just say no”, instead it provides a sequential set of activities to teach youth:

- (i) How to use free time in ways that will be beneficial to themselves, their families and friends, and their community,
- (ii) Specific skills to make good decisions, control their emotions, resolve conflicts and overcome boredom,
- (iii) Specific facts about causes and effects of drug use and sexual risk taking behaviours,
- (iv) Specific ways to avoid peer pressure and to take responsible action in their free time,
- (v) How to link with community resources.

The set of instructional materials was designed to reinforce the themes of the Life Skills Curriculum, which was organized around three primary theoretical formulations: social cognitive theory, the health belief model and the theory of reasoned action. The sessions were written to address major components of these theories; most lessons emphasized the acquisition of skills that could be used in HIV-risk situations. Three of the 17 lessons focused on HIV-related functional knowledge (that is knowledge that can be used by the learner to reduce risk), two focused on teen vulnerability to HIV, three focused on the normative determinants of risky behaviour, one focused on condom use, and eight

focused on the development skills designed to help students identify, manage, avoid, and leave risky situations.

Smith and Caldwell (2003) claim that the Health Wise curriculum is unique for a number of reasons. Firstly, it is a comprehensive approach that addresses all aspects of how youth spend their time. This is important because it helps to identify the multiple reasons youth engage in healthy and unhealthy behaviours, and thus teaches youth to think about their lives in a holistic fashion. Secondly, this curriculum focuses on positive aspects of youth's lives, and builds on this positive foundation to help youth reach their full potential. Finally, this curriculum incorporates a community approach – youth are introduced to members of their school and local communities who can assist them in making important decisions and helping solve problems.

### **3.7. Procedure**

Permission to conduct the study was granted by the Western Cape Education Department (WCED). Teachers from the intervention schools attended a 3-day, 32-hr training program that was designed to enhance teacher fidelity to the written curriculum. Training included trainer modeling of all lessons, with an emphasis on including all activities as written, teacher practice of lessons, with continuous feedback about curriculum fidelity. Subsequently draft letters were sent to the parents/guardians of the Grade eight learners requesting their permission to allow their child/ward to participate in this study. Five grade eight classes at a school in the Cape Metropolitan area were used. Three classes

were assigned to intervention conditions and the other two served as the comparison/control group. Three classes were exposed to the curriculum whilst the other two classes continued with the curriculum prescribed by the WCED.

It was proposed that the outcomes of the Life-skills Curriculum will enable learners to understand and explain what HIV /AIDS is, distinguish between practices that spread AIDS and those that do not, understand and explain how AIDS is transmitted, describe and recognise the symptoms of AIDS, discover their attitudes and feelings towards an AIDS victim, recognise discriminations and refute myths about AIDS, understand the importance of safer sex and finally to make an informed decision about their sexuality.

The study was conducted in three stages:

The first stage comprised the administering of a structured questionnaire - the pretest, which was completed in the first week of the first school quarter.

The second stage involved the implementation of the Health Wise South Africa Curriculum taught to the learners by trained teachers. This stage spanned over 17 weeks starting in January and ending in June.

Stage three involved an evaluation of the effectiveness of Stage 2 (the intervention) by repeating Stage 1 (re-administering the questionnaire). This stage was administered after the 17-week curriculum had been completed. These scores prior to the intervention were statistically compared with the scores following the intervention.

### **3.8. Ethical Considerations**

Informed consent meant that all the participants were informed about the study and agreed to serve in the study. All relevant aspects of the research were explained to participants and all misconceptions clarified. At no time were participants forced to participate instead they had the freedom to decline or to withdraw from the research at anytime. Participants were made aware that all information was kept strictly confidential.

### **3.9. Statistical Techniques**

Statistical analyses involved both descriptive and inferential statistics which included t-tests.

#### **3.9.1. Descriptive statistics**

According to Elmes et al (1999) descriptive statistics provide us with the summarizing and systematizing function. The two main types of descriptive statistics are measures of central tendency and measures of dispersion (variability). For the purpose of this study measures of central tendency, specifically the mean were utilized to access respondents knowledge of AIDS/HIV. According to Welman & Kruger (2003), the mean is by far the most useful measure of central tendency.

### 3.9.2. T- tests

According to Elmes et al. (1999), the most popular test for difference between two means in psychological research is the t-test. The t-test is able to assess the reliability of a difference between two groups. Thus this statistical method is used to establish if a statistically significant relationship exist between an improvement in participants attitude towards AIDS and PWA and the Health-wise curriculum.

### 3.10. Conclusion

This chapter outlined the description of the research design, which included the research sample, and description of sample characteristics. The procedure that was followed in the execution of the research was presented together with descriptions of the research instruments used. Statistical analyses employed involved both descriptive and inferential statistics. The techniques were introduced and relevance in testing the hypotheses explained.

## **CHAPTER 4**

### **RESULTS**

#### **4.1. Introduction**

This chapter focuses on the findings of the study and provides an explanation thereof. Statistical analyses involved both descriptive and inferential statistics. The data obtained from the AIDS Attitude Scale (AAS) were statistically analysed by means of the Statistical Package for the Social Sciences (SPSS). The alpha level of .01 was selected a priori for tests of significance throughout the statistical analyses.

#### **4.2. Results**

The results of the statistical analyses are presented below. The presentation commences with the biographical data of the sample, percentages of participants knowledge, mean scores of their attitudes and concludes with a summary of participants' sexual behaviour and condom usage.

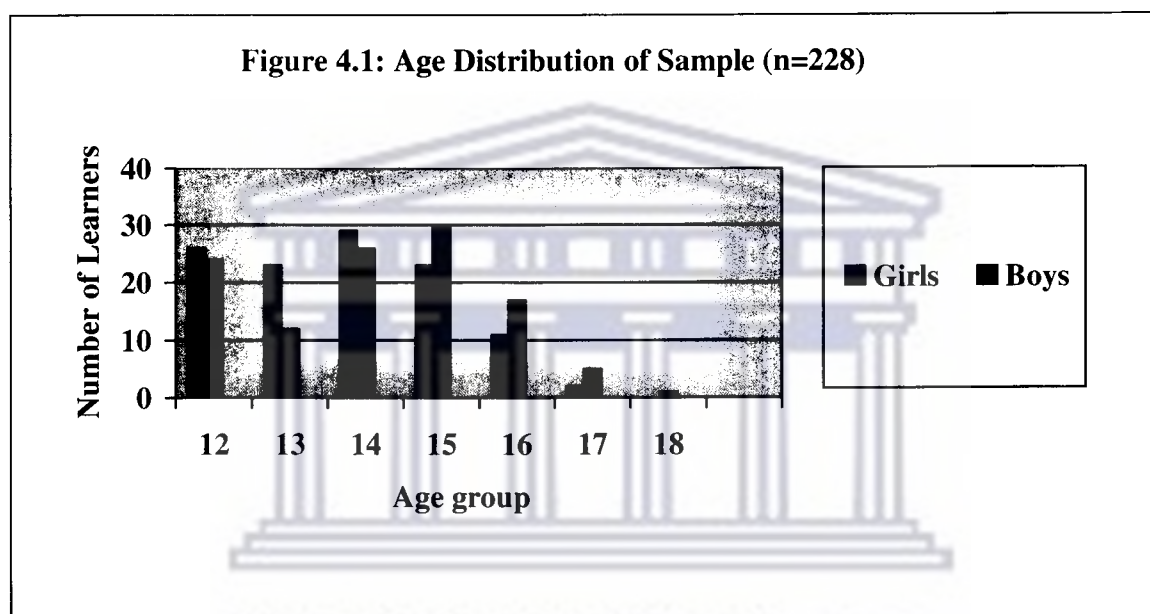
##### **4.2.1. Descriptive statistics**

##### **4.2.1.1. Demographic information regarding the sample**

Section A of the AAS contained five questions, which were concerned with biographical information such as age, sex, standard, name of school and home language.



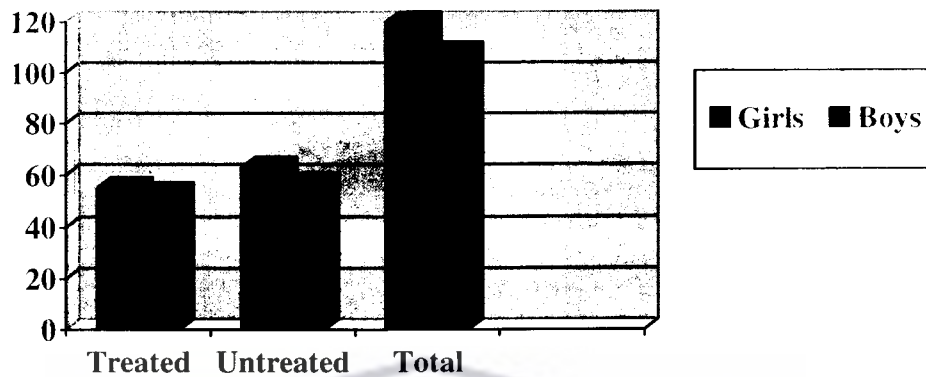
According to the information obtained from Section A of the questionnaire the age most frequently recorded was fourteen years. The median age for this sample is fifteen years. The age least represented was eighteen. Figure 4.1 depicts the age distribution of the sample.



It is evident from the table that the girls are more highly represented in the younger age groups of 12 – 14 as opposed to the boys who to a great extent are represented in the age groups 15 – 18. The median age for this sample is fifteen years.

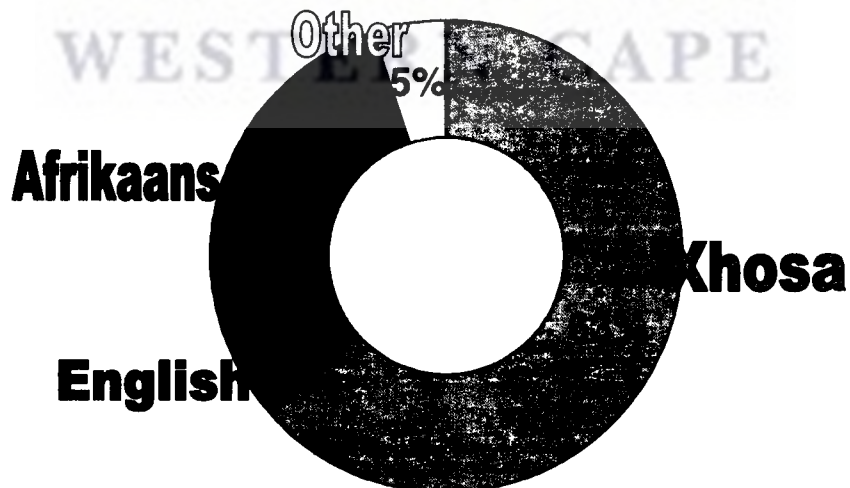
According to the information obtained from Section A of the questionnaire the sample had more female participants as opposed to male participants. Figure 4.2 depicts the gender distribution of the sample.

Figure 4.2: Gender Distribution of Sample (n=228)



It is apparent that both the treated and untreated group comprised of slightly more girls than boys. This is however, representative of the population of the school. However due to incomplete questionnaires the numbers were reduced to 108(55 girls; 53 boys) for the Untreated Group and 120(63 girls; 57 boys) for the Treated Group. The two groups combined totaled a sample of 228 learners.

Figure 4.3: Language Distribution of Sample  
n = 228



The sample's home language was predominantly Afrikaans and Xhosa, however both groups were taught English as either their primary or secondary language. The home language was accounted as follows: Xhosa – 63% (n=149), Afrikaans – 17% (n=39), English – 15% (n=35) and other languages – 5% (n=12).

#### **4.2.2. Inferential Statistics**

##### **Hypothesis 1**

The life skills curriculum will significantly increase the level of knowledge of HIV/AIDS among learners.

##### **4.2.2.1. Levels of knowledge of AIDS and HIV Transmission**

The specific aim for Section B of the questionnaire was to describe the level of knowledge regarding AIDS and HIV transmission. These results are depicted in Table 4.1. According to this table the overall knowledge was relatively low in the pre-test with about half of the participants giving correct responses. Table 4.1 indicates correct responses to individual statements made by the total sample (n = 228)

**Table 4.1 – Percentage of participants giving correct responses to individual statements on knowledge of AIDS**

AIDS and HIV infection is the same thing.	35% n = 39	35% n = 38	40% n = 44	90% n = 97
Is there a cure for AIDS?	95% n = 104	92% n = 99	99% n = 109	100% n = 108
<b>AIDS/HIV can be transmitted in the following ways:</b>				
Male/male sexual intercourse with an AIDS infected person	70% n = 77	69% n = 75	80% n = 88	100% n = 108
Male/female sexual intercourse with an AIDS infected person	42% n = 46	40% n = 43	42% n = 42	94% n = 102
From sharing cups and plates with an AIDS infected person	26% n = 29	28% n = 30	25% n = 28	100% n = 108
From being bitten by mosquitoes or bedbugs	35% n = 39	31% n = 33	35% n = 39	96% n = 103
Through physical contact sport like soccer or rugby	28% n = 30	27% n = 29	23% n = 25	97% n = 105
An HIV infected mother can pass on AIDS through breast milk	74% n = 81	78% n = 86	75% n = 82	100% n = 108
Through oral sex with an infected person	33% n = 36	37% n = 40	35% n = 39	100% n = 108
Through hugging or being close to an infected person	25% n = 28	24% n = 26	28% n = 30	100% n = 108
From a toilet seat	23% n = 25	25% n = 27	23% n = 25	98% n = 106
By swimming in the same pool as an infected person	37% n = 41	35% n = 39	39% n = 43	96% n = 103
By kissing	25% n = 28	27% n = 29	20% n = 22	94% n = 102
From being in the same room as an AIDS patient	23% n = 25	29% n = 31	23% n = 25	95% n = 102
From infected blood transfusions	98% n = 106	94% n = 102	95% n = 103	100% n = 108
Using a condom during sex can lower the risk of getting AIDS	95% n = 104	96% n = 103	95% n = 104	100% n = 108
Most people who get AIDS die from the disease	98% n = 106	98% n = 106	96% n = 104	100% n = 108
There are always visible signs when someone is infected	35% n = 39	40% n = 43	42% n = 46	92% n = 102

According to this table the overall knowledge for both groups were relatively low in the pre-test phase. There was no significant difference between the pretest scores of knowledge obtained by both groups. The treated group obtained 39.3%, 905 correct responses and the untreated group obtained 38.9%, 897 correct responses during the pre-test phase.

A closer examination of participants' responses confirmed that the sample was ill - informed with regards:

- ❖ **casual contact and how HIV can be transmitted.**
- ❖ **uncertain about the transmission of HIV via female/male contact than they were about the transmission via male/male contact**
- ❖ **confused regarding the transmission of HIV via oral sex, mosquitoes, bedbugs and kissing**

**However, the majority of participants realized that there is no cure for AIDS and was aware that condom-usage lowers HIV transmission.**

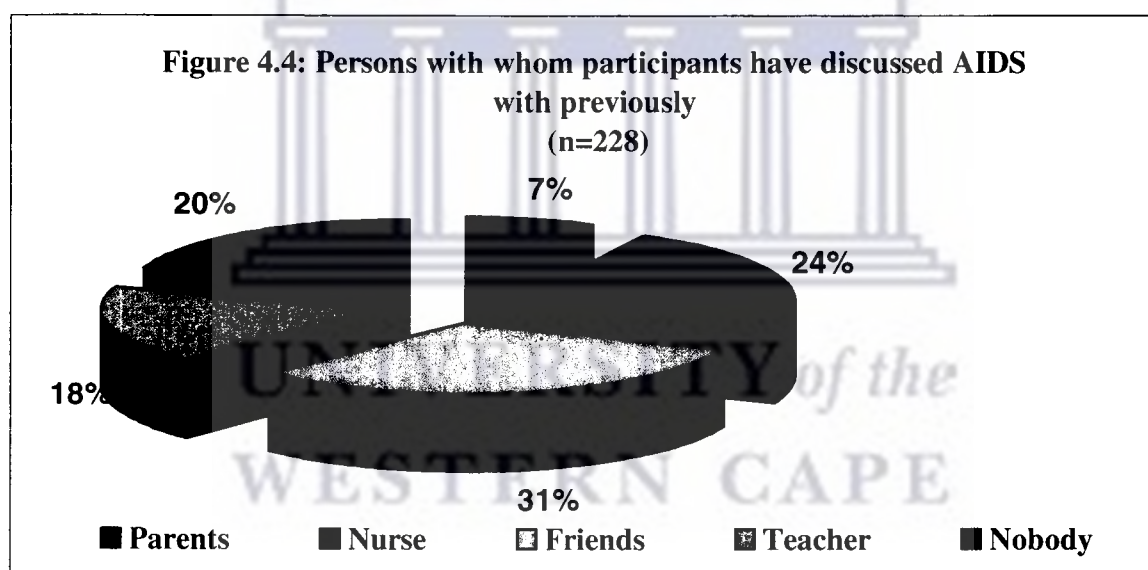
However, after the intervention the Treated Group showed a significant change from 39.3% correct responses to 76.1%, 1 752 correct responses on the knowledge of AIDS and HIV transmission. In contrast the Untreated Group showed a minor change from pre-test, 38.9% correct responses to 39.8%, 916 correct responses during the post-test phase.

#### 4.2.2.2. Previous sources of knowledge and future preferences.

The specific aims for this section were to:

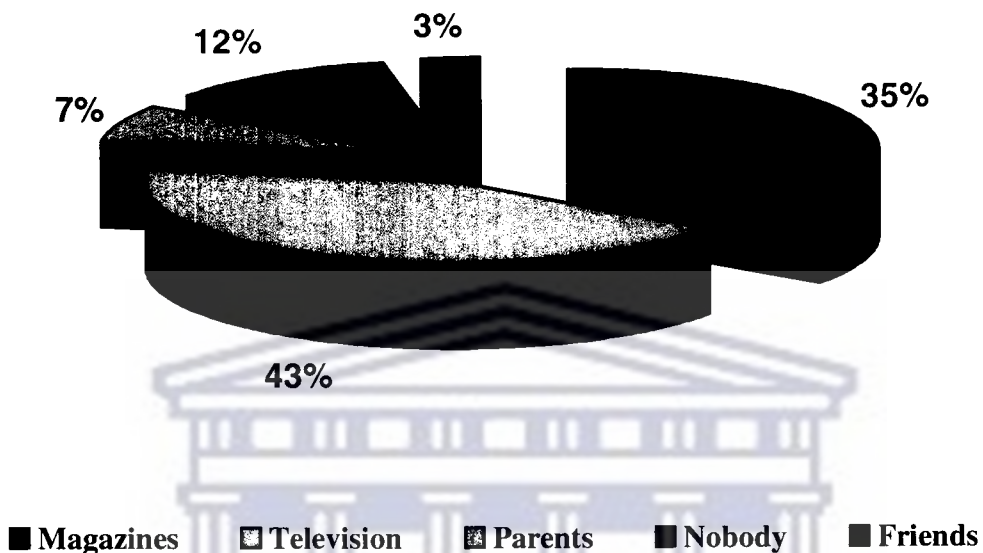
- determine and describe with whom participants had previously discussed AIDS,
- determine and describe where participants have previously acquired their knowledge of AIDS from,
- determine and describe where they would prefer to receive AIDS information from in future

The participants' responses are depicted in Figure 4.4.



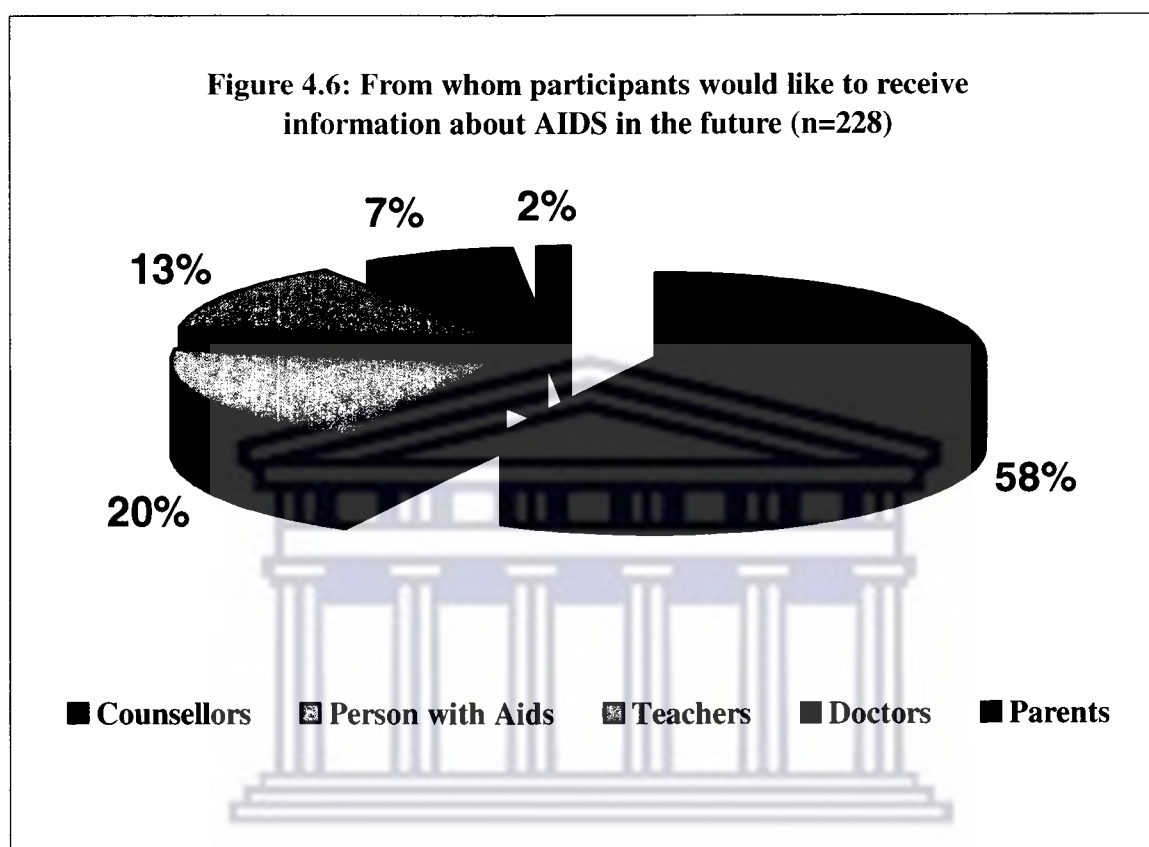
This figure reflects the total sample's responses as the persons they had discussed AIDS with previously. It is interesting to note that the largest number of participants had done so with friends which accounts for 31% (n=71) of the responses. Also noteworthy is the fact that 20% (n=45) of the sample had not discussed the issue with anyone previously while only 7% (n=17) had done so with parents.

**Figure 4.5: Where participants had previously obtained their knowledge of AIDS (n=228)**



This figure reflects where participants had previously obtained their knowledge of AIDS. It is evident that the media has great influence in informing our youth about AIDS, both visual presentation and written form. The media accounts for 78% (n=177) of participants' source of knowledge; comprising of magazines 35% (n=80) and television 43% (n=97). More alarming, is the fact that parents account for only 7% (n= 16) of participants' source of knowledge thus indicating that parents do not play a significant role in informing their children about AIDS.

Figure 4.6



It is noteworthy that 58% (n=132) participants preferred to receive future AIDS information from trained counselors. A further 20% (n=45) indicated that they will prefer to receive AIDS information from a person with AIDS as opposed to 2% (n=4) who would like to receive future AIDS information from parents.

### Hypothesis 2

The life skills curriculum will improve attitudes of learners towards AIDS and People with AIDS.



#### 4.2.2.2. Attitude towards AIDS and people with AIDS

The specific aim of this section was to determine and describe the attitudes held by participants towards AIDS and People with AIDS across three factors as measured by the AAS. The three factors were as follows:

- a) attitudes towards proximity to people with AIDS
- b) the moral and judgmental dimensions of attitudes
- c) attitudes reflecting social welfare and legal issues.

Table 4.2 presents detailed data obtained from this section of the questionnaire during the pre-test phase.

**Table 4.2: Responses to statements (Pre-test)**

Limiting the spread of aids is more important than trying to protect the rights of people with AIDS	2.84	0.77	1.33	0.63	0.06
I would consider marrying someone with AIDS	4.77	0.83	4.50	1.12	0.01
I would rather change schools than be in the same class with someone who has AIDS	1.07	0.09	1.33	1.25	-0.009
People should not be afraid of catching AIDS from casual contact, like hugging or shaking hands	4.46	0.80	4.66	0.67	-0.005
I would like to feel at ease around people with AIDS	2.92	2.17	2.33	0.42	0.03
People who receive positive results from the AIDS blood test should not be allowed to get married	1.74	0.44	1.16	0.81	0.02
I would prefer not to be around homosexuals for fear of catching AIDS	1.07	0.28	1.04	0.20	0.001
Being around someone with AIDS would not put my health in danger	4.83	0.42	4.79	0.43	0.001
People with AIDS should not avoid being around other people	3.74	0.44	3.83	0.41	0.008
People should avoid going to the dentist because they might catch AIDS from dental instruments	2.92	0.17	2.75	1.02	0.005

The thought of being around someone with AIDS does not bother me	4.74	0.44	4.66	0.53	0.002
People with AIDS should not be prohibited from working in public places	4.48	0.76	4.66	0.53	-0.005
I would not want to be in the same room with someone who I knew had AIDS	1.07	0.28	1.04	0.20	0.009
I would go out with a person with AIDS	4.74	0.45	4.66	0.53	0.004
It would not bother me to attend class with someone with AIDS	4.66	0.43	4.74	0.39	-0.004
An employer should have the right to fire an employee with AIDS regardless of the type of work s/he does	2.92	2.17	2.75	0.43	0.009
I would allow my children to play with the children of someone known to have AIDS	4.48	0.77	3.83	0.41	0.03
Health care workers should not refuse to care for people with AIDS regardless of their personal feelings about AIDS	1.25	1.43	1.20	0.42	0.009
Children who have AIDS should not be prohibited from going to schools or day care centres	4.46	0.80	4.66	0.67	-0.005
AIDS blood test results should be confidential to avoid discrimination against people with positive results	4.48	1.60	4.79	0.50	-0.007
I would not be afraid to take care of a family member with AIDS	2.92	2.17	2.16	0.41	0.05
If I discovered that my roommate at a boarding school had AIDS I would move out	1.25	1.43	1.25	0.59	0.00
People with AIDS should be sent to special hospitals to protect others	1.07	0.28	1.25	0.59	0.01
Hospitals and nursing homes should not refuse to admit patients with AIDS	1.33	0.33	1.25	0.59	0.01
I would not avoid a friend if s/he had AIDS	1.25	1.43	1.20	0.42	0.01
Support groups for people with AIDS would be very helpful to them	1.07	0.28	1.16	0.40	0.01
Only disgusting people get AIDS	2.25	2.39	2.83	0.38	-0.02
I think that people with AIDS get what they deserve	2.92	2.17	1.16	0.4	0.1.0
AIDS is a homosexual disease	2.25	0.48	2.83	0.38	-0.03
People should not be afraid to donate blood because of AIDS	4.92	0.36	4.83	0.42	0.001
No one deserves to have a disease like AIDS	1.07	0.28	2.16	0.41	-0.05
People with AIDS should not be looked down upon by others	2.07	2.55	2.16	0.41	-0.006
I could tell by looking at someone if s/he has AIDS	2.92	2.17	2.66	1.03	0.009
AIDS is a disease which only affects the black population of South Africa	4.92	0.31	4.83	1.67	0.006

Children who have AIDS probably have a homosexual parent	3.25	0.48	2.16	0.41	0.03
AIDS is punishment for immoral behaviour	1.07	0.28	1.16	0.81	-0.02
I would contribute money to an AIDS research project if I were making a charitable contribution	1.33	0.33	1.33	0.48	0.00
The best way to get rid of AIDS is to get rid of homosexuality	2.07	1.00	2.83	0.38	-0.02
Money being spent on AIDS research should instead be spent on diseases that affect innocent people	1.92	0.30	2.83	0.38	-0.03
People with AIDS are not worth getting to know	2.12	0.52	1.66	1.52	0.02
I have no sympathy for homosexuals who get AIDS	2.07	2.55	2.16	0.41	0.002
People would not be so afraid of AIDS if they knew more about the disease	1.07	0.28	1.16	0.81	-0.02
The spread of AIDS in our society illustrates how immoral the South Africans has become	2.92	2.17	2.16	0.41	0.02
People who give AIDS to others should face criminal charges	1.07	0.28	1.16	0.81	-0.08
A list of people who have AIDS should be available to anyone	1.02	0.20	1.16	0.81	-0.02
People should not blame the homosexual community for the spread of AIDS in South Africa	4.74	0.44	4.25	0.43	0.03
People get AIDS by performing "strange" sex acts	1.02	0.20	1.25	0.59	-0.01
Churches should take a strong stand against drug abuse and homosexuality to prevent the spread of AIDS	1.07	0.28	1.16	0.81	-0.02
Insurance companies should not be allowed to cancel insurance policies for AIDS-related reasons	4.25	0.52	4.75	0.43	-0.01
A person who gives AIDS to someone else should be legally liable for any medical expenses	1.25	1.43	1.25	0.59	0.00
The spread of AIDS in South Africa is proof that homosexual behaviour should be illegal	1.07	1.57	1.25	0.59	0.04
A list of people who have AIDS should be kept by the government	1.02	0.20	1.16	0.40	0.00
I could comfortably discuss AIDS with others	3.85	0.53	4.00	1.41	0.005
Parents who transmit AIDS to their children should be prosecuted as child abusers	1.07	0.28	1.16	0.40	0.004

\*  $p < 0.01$

1 = strongly agree and 5 = strongly disagree

The pretest data shows that overall both groups held negative attitudes as regards proximity towards people with AIDS but displayed more tolerance as regards moral and judgmental attitudes. However, the sample showed total intolerance as regards social welfare and legal issues concerning people with AIDS. The findings in terms of above table are as follows:

Factor 1 – Attitude towards proximity to people with AIDS

The majority of participants of both groups agreed with the following statements:

- ❖ **It is more important to limit the spread of AIDS than protect the rights of People with AIDS**
- ❖ **I would rather change schools than be in the same class with someone who has AIDS**
- ❖ **I would like to feel at ease around people with AIDS**
- ❖ **People who received positive results from the AIDS blood test should not be allowed to get married**
- ❖ **I would prefer not to be around homosexuals for fear of catching AIDS**
- ❖ **People should avoid going to the dentist because they might catch AIDS from dental instruments**
- ❖ **I would not want to be in the same room with someone who I knew had AIDS**
- ❖ **An employer should have the right to fire an employee with AIDS regardless of the type of work s/he does**
- ❖ **Health care workers should not refuse to care for people with AIDS regardless of their personal feelings**

- ❖ **I would not be afraid to take care of a family member with AIDS**
- ❖ **If I discovered that my roommate at a boarding school had AIDS I would move out**
- ❖ **People with AIDS should sent to special hospital to protect others**
- ❖ **Hospitals and nursing homes should not refuse to admit patients with AIDS**
- ❖ **I would not avoid a friend is s/he had AIDS**

The majority of participants of both groups disagreed with the following statements:

- ❖ **I would consider marrying someone with AIDS**
- ❖ **People should not be afraid of catching AIDS from casual contact, like hugging or shaking hands**
- ❖ **People with AIDS should not avoid being around other people**
- ❖ **The thought of being around people someone with AIDS does not bother me**
- ❖ **People with AIDS should not be prohibited from working in public places**
- ❖ **I would go out with a person with AIDS**
- ❖ **It would not bother me to attend class with someone with AIDS**
- ❖ **I would allow my children to play with children of someone known to have AIDS**
- ❖ **Children who have AIDS should not be prohibited from going to schools or day care centres**
- ❖ **AIDS blood test results should be confidential to avoid discrimination against people with positive results**

Factor 2 – Moral and Judgmental attitudes regarding people with AIDS

The majority of participants of both groups agreed with the following statements:

- ❖ **Support groups for people with AIDS would be very helpful to them**
- ❖ **Only disgusting people get AIDS.**
- ❖ **AIDS is a homosexual disease**
- ❖ **No one deserves to have a disease like AIDS**
- ❖ **People with AIDS should not be looked down upon by others**
- ❖ **AIDS is a punishment for immoral behaviour**
- ❖ **I would contribute money to an AIDS research project if I were making a charitable contribution**
- ❖ **The best way to get rid of AIDS is to get of homosexuality**
- ❖ **Money being spent on AIDS research should instead be spent on diseases that affect innocent people**
- ❖ **I have no sympathy for homosexuals who get AIDS**
- ❖ **People would not be so afraid of AIDS if they knew more about the disease**

The majority of participants of both groups disagreed with the following statements:

- ❖ **People should not be afraid to donate blood because of AIDS**
- ❖ **AIDS is a disease that only affects the Black population in South Africa**

Factor 3 – Social welfare and legal issues regarding people with AIDS

The majority of participants of both groups agreed with the following statements:

- ❖ **People who give AIDS to others should face criminal charges**

- ❖ **A list of people who have AIDS should be available to anyone**
- ❖ **People get AIDS by performing “strange” sex acts**
- ❖ **Churches should take a strong stand against drug abuse and homosexuality to prevent the spread of AIDS**
- ❖ **A person who gives AIDS to someone else should be legally liable for any medical expenses**
- ❖ **The spread of AIDS in South Africa is proof that homosexual behaviour should be illegal**
- ❖ **A list of people who have AIDS should be kept by the government**
- ❖ **Parents who transmit AIDS to their children should be prosecuted as child abusers**

The majority of participants of both groups disagreed with the following statements:

- ❖ **People should not blame the homosexual community for the spread of AIDS in South Africa**
- ❖ **Insurance companies should not be allowed to cancel insurance policies for AIDS-related reasons**
- ❖ **I could comfortably discuss AIDS with others**

According to Table 4.3 both groups showed negative attitudes with regards to proximity towards PWA and showed intolerance as regards their social welfare and legal issues. However, a significant change was reflected in the Treated Groups' attitude after the intervention. Interesting enough the Untreated Group also showed some improvement in

their attitudes. This can be attributed to the questionnaire in itself raising their awareness about these issues and thus stimulating an interest and a quest to find out more about issues related to AIDS and HIV. A detailed table of the data obtained during the post-test phase follows.

**Table 4.3: Responses to statements (Post-test)**

Limiting the spread of aids is more important than trying to protect the rights of people with AIDS	4.88	0.77	1.33	0.76	0.12
I would consider marrying someone with AIDS	2.07	0.67	4.50	1.80	-0.09
I would rather change schools than be in the same class with someone who has AIDS	3.92	0.52	1.33	0.24	0.09
People should not be afraid of catching AIDS from casual contact, like hugging or shaking hands	1.51	0.78	4.50	1.80	-0.06
I would like to feel at ease around people with AIDS	1.33	0.33	2.58	0.70	-0.06
People who receive positive results from the AIDS blood test should not be allowed to get married	3.66	0.65	1.33	0.48	0.09
I would prefer not to be around homosexuals for fear of catching AIDS	4.38	0.64	1.16	0.40	0.11
Being around someone with AIDS would not put my health in danger	1.59	0.98	4.66	0.67	-0.09
People with AIDS should not avoid being around other people	1.33	0.33	3.50	2.04	-0.08
People should avoid going to the dentist because they might catch AIDS from dental instruments	4.85	0.53	2.75	0.43	0.07
The thought of being around someone with AIDS does not bother me	2.24	1.20	4.50	1.08	-0.06
People with AIDS should not be prohibited from working in public places	1.61	0.75	4.50	1.80	-0.08
I would not want to be in the same room with someone who I knew had AIDS	4.38	0.64	1.16	0.81	0.11
I would go out with a person with AIDS	3.66	0.65	4.26	1.32	-0.01
It would not bother me to attend class with someone with AIDS	2.16	0.41	4.50	1.80	-0.06



An employer should have the right to fire an employee with AIDS regardless of the type of work s/he does	3.75	0.63	2.75	0.43	0.05
I would allow my children to play with the children of someone known to have AIDS	1.07	0.28	4.83	0.42	-0.11
Health care workers should not refuse to care for people with AIDS regardless of their personal feelings about AIDS	1.07	0.28	1.25	0.59	-0.01
Children who have AIDS should not be prohibited from going to schools or day care centres	1.03	0.22	4.66	0.67	-0.11
AIDS blood test results should be confidential to avoid discrimination against people with positive results	1.24	0.58	4.66	0.67	-0.10
I would not be afraid to take care of a family member with AIDS	1.02	0.20	2.16	0.41	-0.08
If I discovered that my roommate at a boarding school had AIDS I would move out	3.38	0.90	1.25	0.59	0.09
People with AIDS should be sent to special hospitals to protect others	4.11	0.50	2.66	0.82	0.18
Hospitals and nursing homes should not refuse to admit patients with AIDS	1.02	0.20	1.25	0.59	-0.03
I would not avoid a friend if s/he had AIDS	1.04	0.20	1.04	0.20	0.00
Support groups for people with AIDS would be very helpful to them	1.07	0.28	1.16	0.81	-0.01
Only disgusting people get AIDS	4.11	0.50	3.00	1.52	0.04
I think that people with AIDS get what they deserve	4.74	0.44	2.16	0.41	0.07
AIDS is a homosexual disease	3.90	0.52	2.83	0.38	0.06
People should not be afraid to donate blood because of AIDS	1.02	0.20	4.83	0.42	-0.12
No one deserves to have a disease like AIDS	1.07	0.28	2.16	0.41	-0.08
People with AIDS should not be looked down upon by others	1.25	1.43	2.08	1.15	-0.04
I could tell by looking at someone if s/he has AIDS	4.57	0.65	2.75	1.02	0.06
AIDS is a disease which only affects the black population of South Africa	4.92	0.36	4.83	0.42	0.001
Children who have AIDS probably have a homosexual parent	4.57	0.65	2.16	0.41	0.08
AIDS is punishment for immoral behaviour	4.48	0.76	1.16	0.81	0.10
I would contribute money to an AIDS research project if I were making a charitable contribution	1.07	0.28	1.33	0.48	0.03
The best way to get rid of AIDS is to get rid of homosexuality	4.87	2.94	2.16	0.41	0.10
Money being spent on AIDS research should instead be spent on diseases that affect innocent people	4.79	0.58	2.16	0.41	0.08

People with AIDS are not worth getting to know	4.92	0.36	1.66	1.52	0.12
I have no sympathy for homosexuals who get AIDS	4.79	0.58	2.16	0.41	0.08
People would not be so afraid of AIDS if they knew more about the disease	1.07	0.28	1.16	0.81	-0.01
The spread of AIDS in our society illustrates how immoral the South Africans has become	4.40	0.77	1.16	0.81	0.10
People who give AIDS to others should face criminal charges	2.12	0.52	1.66	1.52	0.02
A list of people who have AIDS should be available to anyone	4.79	0.58	2.16	0.25	0.08
People should not blame the homosexual community for the spread of AIDS in South Africa	1.70	0.60	4.16	1.03	-0.07
People get AIDS by performing "strange" sex acts	4.40	0.77	1.50	1.15	0.09
Churches should take a strong stand against drug abuse and homosexuality to prevent the spread of AIDS	2.70	1.41	1.58	1.12	0.05
Insurance companies should not be allowed to cancel insurance policies for AIDS-related reasons	1.88	1.17	4.16	1.03	-0.07
A person who gives AIDS to someone else should be legally liable for any medical expenses	1.79	1.19	1.25	0.43	0.03
The spread of AIDS in South Africa is proof that homosexual behaviour should be illegal	4.92	0.36	1.25	0.61	0.11
A list of people who have AIDS should be kept by the government	4.87	2.94	1.16	0.38	0.15
I could comfortably discuss AIDS with others	1.68	1.10	4.00	1.41	-0.07
Parents who transmit AIDS to their children should be prosecuted as child abusers	2.88	1.01	1.16	0.38	0.08

\*  $p < 0.01$

1 = strongly agree and 5 = strongly disagree

There is a significant mean difference in the treated group's attitude with regards to proximity to people with AIDS compared to the untreated group ( $p < 0.01$ ). With regards to limiting the spread of AIDS as more important to protecting the rights of people with AIDS, the treated group reported higher levels of disagreement with this statement (Mean = 4.88, SD = 0.77) as opposed to the untreated group who reported more 'strongly agreed' responses (Mean = 1.33, SD = 0.63). With regards to considering marriage to

someone with AIDS the treated group reported higher levels of agreement (Mean = 2.07, SD = 0.67) than the untreated group who reported higher levels of disagreement (Mean = 4.50, SD = 1.80). With regards to changing schools as opposed to being in the same class with someone who has AIDS, the treated group disagreed (Mean = 3.92, SD = 0.52) as opposed to the untreated group who strongly agreed (Mean = 1.33, SD = 0.24) that they would change schools. With regards to statement 'People should not be afraid of catching AIDS from casual contact', the treated group strongly agreed (Mean = 1.51, SD = 0.78) as opposed to the untreated group who disagreed (Mean = 4.50, SD = 1.80) with this statement. With regard to preferring not to be around homosexuals for fear of catching AIDS, the treated group reported more disagreement the statement (Mean = 4.38, SD = 0.64) compared to the untreated group who reported more agreement with the statement (Mean = 1.16, SD = 0.40). With regards to being around someone with AIDS not putting your health in danger, the treated group agreed with statement (Mean = 1.59, SD = 0.98) as opposed to the untreated group who agreed with this statement (Mean = 4.66, SD = 0.67). With regard to the statement 'People should avoid going to the dentist because they might catch AIDS from dental instruments', the treated group reported more disagreement responses to this statement (Mean = 4.85, SD = 0.53) than the untreated group who reported more responses in disagreement with the statement (Mean = 2.75, SD = 0.43). With regards to the statement 'The thought of being around someone with AIDS does not bother me', the treated group reported more responses in agreement with the statement (Mean= 2.24, SD = 1.20 than the untreated group who reported more responses in disagreement with the statement (Mean = 4.50, SD = 1.08). With regards to "People with AIDS should not be prohibited from working in public places, the treated group

reported more responses in agreement with the statement (Mean = 1.61, SD =0.75) as to the untreated group who reported more responses in disagreement with the statement (Mean = 4.50, SD =1.80). With regards to the statement, 'I would not want to be in the same room with someone who I knew had AIDS', the treated group reported more response in disagreement with the statement (Mean = 4.38, SD =0.64) as opposed to the untreated group who reported more responses in agreement with the statement (Mean = 1.16, SD =0.81). With regards to the statement, 'It would not bother me to attend class with someone with AIDS', the treated group reported more responses in agreement with the statement (Mean = 2.16, SD =0.41) compared to the untreated group who reported more responses in disagreement with this statement (Mean = 4.50, SD =0.43). With regards to the statement, 'I would allow my children to play with the children of someone known to have AIDS', the treated group reported more responses in agreement (Mean = 1.07, SD =0.64) as opposed to the untreated group who reported more responses in disagreement (Mean = 4.83, SD =0.42). With regards to the statement, 'Children who have AIDS should not be prohibited from going to schools or day care centres', the treated group reported more responses in agreement (Mean = 1.03, SD = 0.28) compared to the untreated group who reported more disagreement (Mean = 4.66, SD = 0.67). With regards to the statement, 'AIDS blood test results should be confidential to avoid discrimination against people with positive results', the treated group reported more responses in agreement (Mean = 1.24, SD = 0.58) in contrast to the untreated group who reported more responses in disagreement (Mean = 4.66, SD = 0.67). With regards to the statement, 'People with AIDS should be sent to special hospitals to protect others', the treated group reported more responses in disagreement (Mean = 4.11, SD = 0.50) as

opposed to the untreated group who reported more responses in agreement (Mean = 2.66, SD = 0.82).

It is evident from the results on Factor 1 (attitudes towards proximity to people with AIDS) that the treated group had shown significant improvement from pre-test to post-test as opposed to the untreated group whose results closely resembled those obtained in the pre-test phase. It is, however, noteworthy that both the treated group (Mean = 3.66, SD = 0.65) as well as the untreated group (Mean = 4.26, SD = 1.32) disagreed with the statement that they would go out with a person who has AIDS.

In addition both groups agreed on the following statements:

- Health care workers should not refuse to care for people with AIDS regardless of their personal feelings about AIDS – treated group (Mean = 1.07, SD = 0.28) and untreated group (Mean = 1.25, SD = 0.59 )
- I would not be afraid to take care of a family member with AIDS - treated group (Mean = 1.02, SD = 0.20) and untreated group (Mean = 2.16, SD = 0.41 )
- Hospitals and nursing homes should not refuse to admit patients with AIDS - treated group (Mean = 1.02, SD = 0.20) and untreated group (Mean = 1.25, SD = 0.59)
- I would not avoid a friend if s/he had AIDS - treated group (Mean = 1.04, SD = 0.20) and untreated group (Mean = 1.16, SD = 0.81)

There is a significant mean difference in the treated group's attitude with regards to the moral and judgmental dimensions of AIDS compared to the untreated group ( $p < 0.01$ ).

With regards to the statement, 'I think that people with AIDS get what they deserve', the treated group reported more responses in disagreement with the statement (Mean = 2.66, SD = 0.82) in contrast to the untreated group who reported more responses in agreement with the statement (Mean = 2.16, SD = 0.41). With regards to the statement, 'People should not be afraid to donate blood because of AIDS', the treated group reported more responses in agreement (Mean = 1.02, SD = 0.65) as opposed to the untreated group who reported more responses in disagreement with the statement (Mean = 4.83, SD = 0.74). With regards to the statement, 'I could tell by looking at someone if s/he has AIDS', the treated group reported more responses in disagreement (Mean = 4.57, SD = 0.65) compared to the untreated group who reported more responses in agreement with the statement (Mean = 2.75, SD = 1.02). With regards to the statement, 'Children who have AIDS probably have a homosexual parent', the treated group reported more responses in disagreement (Mean = 4.57, SD = 0.53) as opposed to the untreated group who reported more responses in agreement (Mean = 2.16, SD = 0.41). With regards to the statement, 'The best way to get rid of AIDS is to get rid of homosexuality', the treated group reported more responses in disagreement (Mean = 4.87, SD = 2.94) in contrast to the untreated group who reported more responses in agreement (Mean = 2.16, SD = 0.41). With regards to the statement, 'Money being spent on AIDS research should instead be spent on diseases that affect innocent people', the treated group reported more responses in disagreements (Mean = 4.79, SD = 0.58) compared to the untreated group who reported more responses in agreement (Mean = 2.16, SD = 0.41). With regards to the statement, 'People with AIDS are not worth getting to know', the treated group reported more responses in disagreement (Mean = 4.92, SD = 0.36) as opposed to the untreated

group who reported more responses in agreement (Mean = 1.66, SD = 1.52). With regards to the statement, 'I have no sympathy for homosexuals who get AIDS', the treated group reported more responses in disagreement (Mean = 4.79, SD = 0.58) as opposed to the untreated group who reported more responses in agreement (Mean = 2.16, SD = 0.41). With regards to the statement, 'The spread of AIDS in our society illustrates how immoral the South Africans has become', the treated group reported more responses in disagreement (Mean = 4.40, SD = 0.77) as opposed to the untreated group who reported more responses in agreement (Mean = 1.16, SD = 0.81).

It is, however, noteworthy that both groups disagreed with the statement, 'AIDS is a disease which only affects the black population of South Africa, with both groups reporting responses as follows: the treated group (Mean = 4.92, SD = 0.36) comparable to the untreated group (Mean = 4.83, SD = 0.42).

Moreover, both groups agreed on the following statements:

- Support groups for people with AIDS would be very helpful to them – untreated group (Mean = 1.07, SD = 0.28) and untreated group (Mean = 1.16, SD = 0.81).
- People with Aids should not be looked down upon by others - treated group (Mean = 1.25, SD = 1.43) and untreated group (Mean 2.08, SD = 1.15)
- No one deserves to have a disease like AIDS - treated group (Mean = 1.07, SD = 0.28) and untreated group (Mean 2.16, SD = 0.41)
- I would contribute money to an AIDS research project if I were making a charitable contribution - treated group (Mean = 1.07, SD = 0.28) and untreated group (Mean 1.33, SD = 0.48)

- People would not be so afraid of AIDS if they knew more about the disease - treated group (Mean = 1.07, SD = 0.28) and untreated group (Mean 1.16, SD = 0.81)

There is a significant mean difference in the attitude of the treated group with regards to attitudes reflecting social welfare and legal issues compared to the untreated group (( $p < 0.01$ ). With regards to the statement, 'A list of people who have AIDS should be available to anyone', the treated group reported more responses in disagreement (Mean = 4.79, SD = 0.58) in contrast to the untreated group who reported more responses in agreement (Mean = 2.16, SD = 0.25). With regards to the statement, 'People should not blame the homosexual community for the spread of AIDS', the treated group reported more responses in agreement (Mean = 1.70, SD = 0.60) in contrast to the untreated group who reported more responses in disagreement (Mean = 4.16, SD = 1.03). With regards to the statement, 'People get AIDS by performing 'strange' sex acts', the treated group reported more responses in disagreement (Mean = 4.40, SD = 0.77) in contrast to the untreated group who reported more responses in agreement (Mean = 1.15, SD = 0.03). With regards to the statement, 'Insurance companies should not be allowed to cancel insurance policies fro AIDS-related reasons', the treated group reported more responses in agreement (Mean = 1.88, SD = 1.17) in contrast to the untreated group who reported more responses in disagreement (Mean = 4.16, SD = 1.03). With regards to the statement, 'The spread of AIDS in South Africa is proof that homosexual behaviour should be illegale', the treated group reported more responses in disagreement (Mean = 4.92, SD = 0.36) in contrast to the untreated group who reported more responses in



agreement (Mean = 1.25, SD = 0.61). With regards to the statement, 'A list of people who have AIDS should be kept by the government', the treated group reported more responses in disagreement (Mean = 4.87, SD = 2.94) in contrast to the untreated group who reported more responses in agreement (Mean = 1.16, SD = 0.38). With regards to the statement, 'I can comfortably discuss AIDS with others', the treated group reported more responses in agreement (Mean = 1.68, SD = 1.10) in contrast to the untreated group who reported more responses in disagreement (Mean = 4.00, SD = 1.41).

It is, however, noteworthy that both groups agreed on the following statements:

- People who gives AIDS to others should face criminal charges - treated group (Mean = 2.12, SD = 0.54) and untreated group (Mean = 2.16, SD = 0.41).
- Churches should take a strong stand against drug abuse and homosexuality to prevent the spread of AIDS – treated group (Mean = 2.70, SD = 1.41) and untreated group (Mean = 1.58, SD = 1.12)
- A person who gives AIDS to someone else should be legally liable for any medical expenses – treated group (Mean = 1.79, SD = 1.19) and untreated group (Mean = 1.25, SD = 0.43)
- Parents who transmit AIDS to their children should be prosecuted as child abusers – treated group (Mean = 2.88, SD = 1.01)

In sum, the treated group showed a significant mean difference from pre-test to post-test as opposed to the untreated group. Table 4.4 summarizes the results.

**Table 4.4: Summary of mean scores of participants' attitude towards AIDS and people with aids (PWA)**

<b>FACTOR 1</b> Attitude towards proximity to PWA	57.70	0.29	67.60	2.60	-0.16
<b>FACTOR 2</b> Moral and judgmental attitudes towards AIDS and PWA	64.74	5.20	44.28	-0.38	0.04
<b>FACTOR 3</b> Social welfare and legal issues with regards to PWA	19.35	2.76	22.33	1.35	0.06

\*  $p < 0.01$

The results depicted in Table 4.4 clearly indicate that there is a significant statistical relationship between the Health-wise curriculum and the improvement in participants' attitude with regards to AIDS and PWA resulting in the null hypothesis being rejected.

In sum, the treated group showed a statistically significant mean difference from pre-test to post-test. If the level for rejection of the null hypothesis is set at the  $p < 0.01$  level it can thus be concluded that the null hypothesis is rejected.

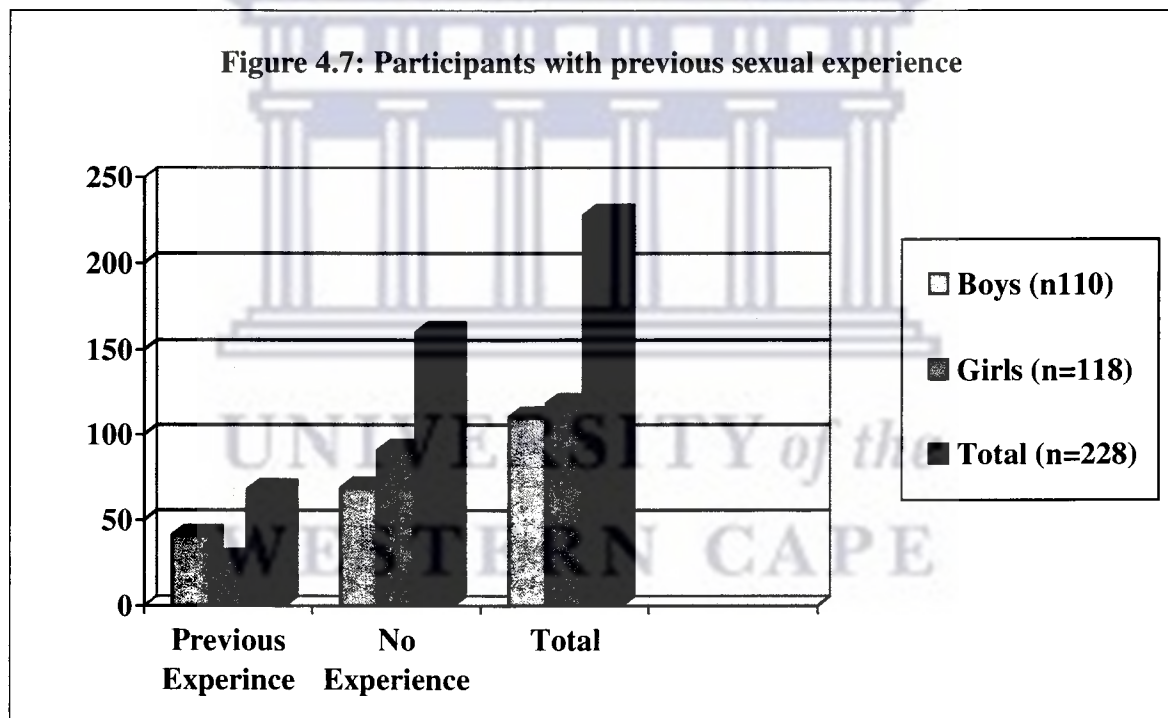
### **Hypothesis 3**

The life-skills curriculum will reduce risky behaviour and enhance risk-reduction behaviour among learners.

#### 4.2.2.3. Sexual behaviour and Condom usage

The specific aim of Section D was to determine the following:

- 1) the current level of sexual activity of participants
- 2) their number of sexual partners over a fixed period
- 3) their frequency of condom use
- 4) anticipated future condom use
- 5) if participants knew where to obtain condoms



As illustrated in Figure 4.7, the sample's previous sexual experience as follows: 29.8% of the respondents (n = 68) indicated that they had previous sexual experience. The 29.8% (n = 68) comprises of 17.98% (n = 41) male respondents and 11.84% (n = 27) female participants.

**Table 4.5: Sexual behaviour of sample**

<b>If you have had sex, how many sexual partners have you had in the last year?</b>				
None?	<b>69</b>	<b>41</b>	<b>91</b>	<b>27</b>
One?	<b>21</b>	<b>69</b>	<b>24</b>	<b>91</b>
Two/Three?	<b>14</b>	<b>69</b>	<b>02</b>	<b>91</b>
Four or more?	<b>06</b>	<b>69</b>	<b>01</b>	<b>91</b>
Do you and your partner use a condom every time you have sex?	<b>04</b>	<b>37</b>	<b>02</b>	<b>25</b>
Do you think that you will use condoms when having sex in the future?	<b>105</b>	<b>05</b>	<b>118</b>	<b>00</b>
Do you know where to go to get a condom?	<b>101</b>	<b>09</b>	<b>112</b>	<b>06</b>
Would you use a condom regularly if they were provided free of charge?	<b>105</b>	<b>05</b>	<b>118</b>	<b>00</b>

- ❖ **17.98% (n = 41) of the male participants indicated that they have had previous sexual experience as opposed to 11.84% (n = 27) of the female participants.**
- ❖ **66.17% (n= 45) of the sample who indicated that they had some previous sexual experience had at least one sexual partner over the previous year. The**

66.17% constituted 35.2% female respondents (n = 24) and 30.8% male respondents (n = 21).

- ❖ More importantly, 33.83 % (n=23) of those sexually active indicated that they had more than one sexual partner over the previous year. The 33.83% comprised of 4.41% female respondents (n = 3) and 29.4% male respondents (n = 20).
- ❖ Males reported more multiple partners than their female counterparts.
- ❖ Only 8.8% (n = 6) of the respondents indicated that they use condoms every time they have sexual relations. Of concern, is the 91.1% (n = 62) of respondents who do not use condoms every time they have sexual relations.
- ❖ Most respondents 93.4% (n = 213) indicated that they knew where to obtain condoms.
- ❖ Most respondents 97.8% (n = 223) indicated that they would use condoms during future sexual encounters.
- ❖ Most respondents 97.8% (n = 223) indicated that they would use condoms if it was provided to them free of charge.

#### **4.3. Summary of the Chapter**

In this chapter, the results of the research were presented in tabular format. The researcher described the results. Statistically significant mean difference between the two sets of data (pretest and post-test) in terms of knowledge, attitudes and risky sexual

behaviour were identified and highlighted. It was identified that a significant relationship exists between the Life Skills Curriculum and the increase in knowledge of AIDS and HIV transmission as well as an improvement in the attitudes towards AIDS and People with AIDS.



## CHAPTER 5

### DISCUSSION AND RECOMMENDATIONS

#### 5.1. Introduction

In this section the prominent findings of the research will be discussed and where relevant research is available, reference will be made to it. The discussion includes significant statistical differences between the pre-intervention phase and the post-intervention phase. Conclusions are drawn from the results obtained and recommendations for future research are identified and suggested.

#### 5.2. Discussion

##### 5.2.1. Descriptive Results

The sample consisted of 228 learners. As observed in Figure 4.1 the majority of respondents were in the age group 14-15 years [(n=108)(51.9%)]. As viewed in Figure 4.2 the majority of respondents were female [(n=118)(54.2%)]. The majority of respondents as observed in Figure 4.3 were black [(n=167)(74%)]. The majority of respondents as observed in Figure 4.4 have Xhosa as their home language [(n=167)(74%)].

## **5.2.2. Inferential Results**

### **5.2.2.1. T – tests**

The results shown in Table 4.1 suggest that a significant change took place between the pre-test and post-test for the Treated group's knowledge about AIDS and HIV. This finding suggests that the life skills curriculum has significantly increased the level of knowledge of HIV/AIDS among learners. The null hypothesis is thus rejected.

### **5.2.2.2. Knowledge of AIDS and HIV transmission**

Results of the study indicated that the overall level of knowledge regarding AIDS and HIV transmission was not particularly good. This finding concurred with that of Matthews, Kuhn, Metcalf, Houbert and Cameron (1990) who found that Cape Town High School students had a very superficial knowledge of AIDS and HIV.

In addition, respondents appeared to lack certain basic knowledge regarding AIDS and HIV transmission. Findings revealed the following:

- 61% respondents were unaware that AIDS can be transmitted during heterosexual intercourse.
- 30% of respondents were unaware that AIDS can be transmitted during male/male sexual contact. This finding was also reported by Naidoo (1994).
- 65% of respondents were unaware of distinction between AIDS and HIV
- 60% were unaware that there are not always visible signs when a person is infected with HIV.



However, most respondents (95%) were aware that condom usage during sexual intercourse could lower the risk of contracting HIV. Matthews et al. (1990) also found that in their study of township youth that youth were confused regarding modes of HIV transmission. In addition, 99% were aware there is no cure for AIDS and 96% were aware that most people who get AIDS die.

### **5.2.2.3. Previous sources of knowledge for AIDS information**

The media was cited as an important source for AIDS information. Magazines were chosen by [(n=91) (42%)] of respondents as their source of information and television was chosen by [(n=80) (34%)] of respondents as their source. The media thus accounted for [(n=171) (76%)] of the respondents source of information. This finding clearly reflects the powerful influence of media in both printed and visual forms. These findings were consistent with those found by Elkonin (1992) in her study with University of Port Elizabeth students and the study of Naidoo (1994). These findings are also supported by Opt and Loffredo (2004) in their study conducted on college students. The respondents reported getting less information from the college health centre (20, 9%) and most of their information from magazines (64.1%), TV news shows (64.8%), TV drama shows (36.5%) and books (42.2%).

#### **5.2.2.4. Future sources of knowledge for AIDS information**

It is noteworthy, that [(n=132) (58%)] respondents had noted that it was best to receive information from trained individuals who can provide correct, up-to-date information. This has positive implications for the present training of AIDS counsellors as it shows that participants have confidence to receive information from trained individuals.

Post intervention results revealed that respondents' overall knowledge of AIDS and HIV transmission had significantly increased. However, despite a generally high level of AIDS knowledge, respondents were still confused about certain fundamental issues such as the distinction between HIV and AIDS. The untreated comparison group showed an insignificant change in knowledge from pre-test to post-test. They reported less certainty on statements regarding the transmission of AIDS especially via oral sex, kissing and mosquitoes. The treated group, on the other hand, displayed a good knowledge regarding transmission of HIV and any previous misconceptions regarding casual contagion appeared to be cleared up. According to Quek and Li (2002) in a review done on previous studies, thirty out of thirty-four studies reported improvements in HIV/AIDS knowledge. This finding is supported by this study as the post-test results for the knowledge section showed a significant increase from 39.3% correct responses to 76.1% correct responses

#### **5.2.2.5. Attitudes towards AIDS and People with AIDS**

Overall the sample showed positive attitudes as regards "moral and judgmental attitudes towards people with AIDS". Attitudes regarding 'proximity to people with AIDS, were

however, less tolerant. Most of the items that elicited negative responses tended to relate to socialisation and personal contact with people with AIDS. In sum, respondents appeared to be afraid of closer contact with infected persons thus reflecting their lack of knowledge regarding how HIV is transmitted. Similar findings of intolerance, rejection and fear of HIV were reported by Mathews et al. (1990) among Cape Town high school pupils. The item from the attitudinal section that warrants the most concern is that almost half the sample endorsed the view that they could not comfortably discuss AIDS with others. This finding concurred with results in the study by Naidoo (1994) where youth also expressed the view that they found it difficult to talk about AIDS to others.

In terms of overall perceptions, about 89% of the participants showed positive attitudes on all three factors of the attitudinal section. According to Quek and Li (2002) in a review done on previous studies, thirty out of thirty-four studies reported improvement in attitudes towards AIDS and PWA. This study supports this finding.

However, statements that still elicited negative responses were mainly from Factor 1, concerning proximity to people with AIDS. It can therefore be concluded that although respondents' attitudes had become more positive in general, there still appeared to be a degree of fear with associating with HIV positive individuals.

#### **5.2.2.6. Sexual behaviour**

Less than a third (29.9%) of the sample indicated that they had some previous sexual experience with at least one sexual partner over the previous year. More importantly, the

boys (16.6%) showed a higher level of sexual experience compared to the girls (13.3%). This finding is supported by Naidoo (1994) in her study of the knowledge, attitudes and sexual practices among Black adolescents. Eleven percent (11%) who indicated that they are sexually active had more than one sexual partner over the previous year. When one compares the sexually active lifestyles of youth in relation to their low level of AIDS knowledge, the implications are that youth are engaging in risky sexual practices. This supports Mathews et al. (1990) findings showing that the majority of youth were regularly engaging in unsafe sexual activities. Similarly, the study by Siegal, Lazarus, Krasnovsky, Durbin and Chesney (1991) with youth in San Francisco found that a high proportion of the youth had engaged in high risk sexual behaviour.

Gender also significantly influenced the number of sexual partners that respondents had, with males reporting more multiple sexual partners than their female counterparts. This is supported by Szwarcwald, Barbosa-Junior, Pascom and de Souza-Junior (2005) in their study on the Brazilian population's 15 -54 years age groups. They reported the highest percentage of multiplicity of sexual partners over the past 12 months was found in the youngest age group, 15-24 years old. 7% reported five or more casual partners in the previous year.

According to Szwarcwald et al. (2005) the study also reflected that the multiplicity of sex partners (over a lifetime or past year) as a typical male practice.

### 5.2.2.7. Condom usage

Most respondents (89%) reported that they used a condom during sexual intercourse. This is supported by Szwarcwald et al (2005) who reported that individuals aged 15-24 years used condoms more frequently than the other age groups, especially with casual partners. More specifically, 74% reported condom use in the last sexual encounter and 59% reported consistent condom use over the past year.

Males reported to be using condoms more frequently as opposed to females. According to Szwarcwald et al (2005) this is consistent with the results derived from their study as consistent condom use varied from 57% among men to 41% among women. Alhassan (2003) supports these findings as recent studies in several African countries indicate that girls aged 15 – 19 years are five to six times more likely to be HIV – positive than boys of the same age bracket. In one area of Kenya, 22 per cent of young women aged 15 – 19 years in the general population were HIV – infected, compared with four per cent of boys of the same age. These girls indicated they are less likely to negotiate the use of a condom as they are in relationships with older men. Similar findings were reported by Ebersohn and Rogan (2006) in their study conducted on grade eleven biology learners. as learners related that females played a subservient role and are unable to negotiate either sex or condom use.

Moreover, most subjects knew where to obtain condoms. Noteworthy was the fact that most respondents indicated that they would use condoms during future sexual encounters.

According to Quek and Li (2002), in a review done on adolescent HIV/AIDS intervention literature, six out ten studies demonstrated improvements in intention to use condoms post-intervention. In addition, two out of six studies cited greater abstinence; seven out of eleven studies showed a reduction in the number of sexual partners and eleven out of fifteen studies reported increases in condom use after exposure to an AIDS risk-reduction intervention (Kingman, 1994; Kirby, 1997; Main et al., 1994; Quek & Li, 2002). These findings are supported by this study.

In addition, a recent pilot study launched in 10 high schools in Athens reported the following results. A cohort of 702 students was surveyed of which  $n = 209$  formed the control group and  $n = 493$  the intervention group. The intervention group compared to the control group were slightly more empowered with regards personal responsibility and adoption of safer behaviour in sexual practice (Merakou & Kourea-Kremastinou, 2006).

However, research has shown that although students are knowledgeable about HIV transmission routes and protection methods, such knowledge rarely deters them from engaging in risky sexual practices or encourages them to increase condom use (Opt & Loffredo, 2004)

### **5.3. Recommendations**

Several recommendations for future research include:

- Large scale studies involving more than one school.

- Learner exposure to Health Wise Curriculum from Grade 7 level.
- Exposure to the Curriculum at a younger age prior to first sexual encounter.
- Emphasis on establishing risk –reduction behaviour rather than modifying pre-existing practices.
- 6 month follow-up to assess long term retention.
- Curriculum should be part of a multi-component programme eg. a school health promotion council, curriculum and staff development activities, school environment activities implemented by peer educators, parent education activities and school community linkage activities.
- The curriculum should become a compulsory module in the Life Orientation learning area.
- Consolidation of knowledge and skills acquired through learners own research.

According to Visser (2005) there is growing evidence that preventive life skills programmes have a positive impact on the lives of adolescents as it increased levels of knowledge regarding HIV/AIDS. Moreover, it induced more assertiveness needed to negotiate safe sex. This is in particular applicable to girls as they seem to lack the skill to negotiate safe sex. This was reported by both Alhassan (2003) and Eberhsohn and Rogan (2006). In addition, preventive life skills programmes encourages more positive attitudes towards PWA and indicated delayed onset of sexual activity.

According to Visser (2005) the following components should be taken into consideration for future implementation of an AIDS/HIV curriculum/programme in practice:

- The content of the programme should focus on the development of life skills and assist learners to develop healthy life styles. This is supported by Hanson (2002) in the development of the Health Wise Curriculum.
- Teachers should be utilized as presenters as they have the advantage of ongoing contact with learners which would contribute to the sustainability of the programme.
- Community involvement is crucial as the capacity to change is dependent on community awareness and effective leadership.

“To avoid duplication, the Ministry of Education should liaise with the Ministry of Health in planning AIDS Preventive Education Programmes. A clearinghouse should be set up to co-ordinate activities. The Ministries of Education and Health should improve HIV / AIDS information through targeting the school programme, community health education, church, mosque and youth organizations“. (Dickenson, 2003).

In addition, it has been recommended that further research be carried out among junior and senior secondary schools students in other local government areas in the country on behaviours that place them at risk for HIV / AIDS infection. Such research will support the need for a comprehensive HIV / AIDS preventive educational programme. The effectiveness of the various educational programmes and thrusts should be monitored and evaluated carefully so that resources are used as efficiently as possible (Alhassan, 2003).



#### **5.4. Implications of the study**

The findings of this study imply that learners are capable of benefiting from a life skills curriculum. It is clear that the learners' level of AIDS knowledge as well as their attitude can be significantly improved. This has positive implications for those involved with AIDS educational efforts in general. This view is supported by Opt and Loffredo (2004) who discovered that 42% of their college students indicated that being taught about HIV/AIDS in the classroom was their primary source of HIV/AIDS information. In terms of the AIDS information encompassed in such programmes, the following implications were apparent from results of this study:

- Aids-Health Educational Interventions need to focus on providing basic information to youth.
- Information should include the modes of transmission of HIV and clarify that AIDS and HIV are not the same condition
- Information needs to be clear, accurate and easy to understand

#### **5.5. Limitations**

There were time constraints as the duration of the periods were only 45 minutes long and the curriculum had to be completed by the end of the second term. Thus less time was spent on the consolidation of what was taught in the previous lessons. Furthermore, the study could not effectively evaluate the effect on risk-reduction sexual activity as the time-span was too short between the pre-test and post-test.

In addition, maturation was another factor as learners may have acquired more skills or have matured due to experiences beyond the researcher's control.

Moreover, the sensitivity of the subject might also have influenced the participants' responses especially in terms of sexual behaviour. This is supported by Ebersohn and Rogan (2006) who state that learners may be not be honest in reporting their attitudes or writing about their behaviours. This could be a result of HIV being stigmatized and thus not being openly discussed in many cultures. According to Eberhsohn and Rogan (2006) it thus becomes difficult to demonstrate that an HIV education programme has produced genuine and long-term changes in the life of a learner, unless one monitors the HIV infection rate amongst the learners to whom the programme has been taught.

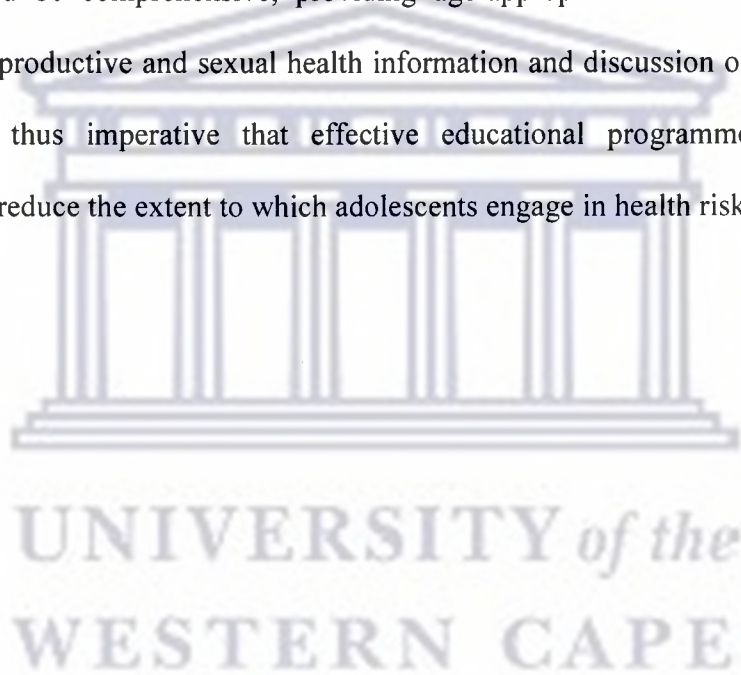
The use of a non-probability sampling procedure reduced the ability to generalize the results of this study

## **5.6. Conclusion**

The results in the study should be interpreted with caution due to the limitations of the research. The sample size and the amount of time allocated in which to complete questionnaires could have introduced elements of bias in the research findings.

However, the post intervention results indicated that exposure to the Health Wise Curriculum was associated with a significant increase in AIDS knowledge, a positive

attitude towards PWAs and an intention to engage in risk-reduction sexual behaviour. Thus in this respect the Curriculum could be regarded as being successful as the comparison group showed only a gradual increase in AIDS knowledge from pre-test to post-test. This showed the efficacy of the Health Wise Curriculum. It can thus be concluded that preventive programmes, such as this Health Wise Curriculum, should be an essential component of any national HIV prevention effort. Preventive health education should be comprehensive, providing age-appropriate balance of life-skills development, reproductive and sexual health information and discussion of attitudes and values. It is thus imperative that effective educational programmes should be administered to reduce the extent to which adolescents engage in health risk behaviours.



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**APPENDIX A**  
**QUESTIONNAIRE**

The attached questionnaire is part of the ongoing research into the psychosocial aspects of AIDS. The findings will be used to further improve the quality of our knowledge and to increase our effectiveness in the fight against this devastating disease.

Your confidentiality is protected as you are not required to give your name. For this reason we ask you to be entirely honest in answering.

PLEASE ANSWER ALL THE QUESTIONS

WE SINCERELY APPRECIATE THE TIME YOU WILL SPEND ON THIS QUESTIONNAIRE AND THANK YOU FOR YOUR PARTICIPATION AND CONTRIBUTION TO THIS RESEARCH PROJECT.

## SECTION A

Instructions: Please answer the following questions by marking a cross in the appropriate square or by writing your comments in the appropriate space.

1. How old are you?

---

2. What is your sex?

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

3. What grade are you in at present?

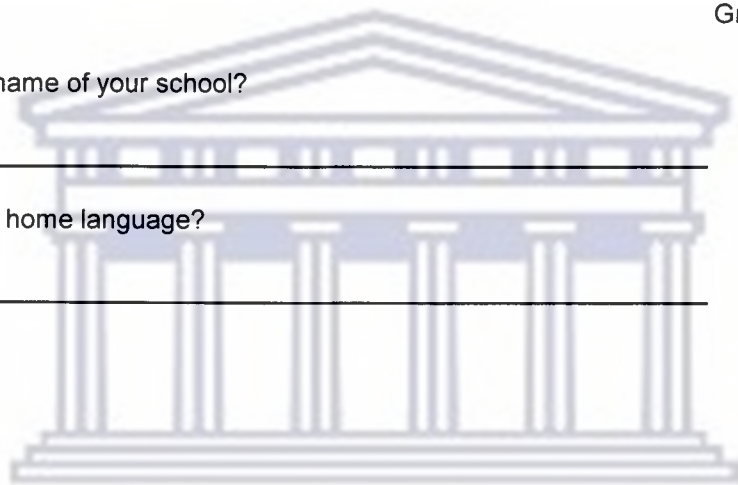
Grade 8	<input type="checkbox"/>
Grade 9	<input type="checkbox"/>
Grade 10	<input type="checkbox"/>
Grade 11	<input type="checkbox"/>
Grade 12	<input type="checkbox"/>

4. What is the name of your school?

---

5. What is your home language?

---



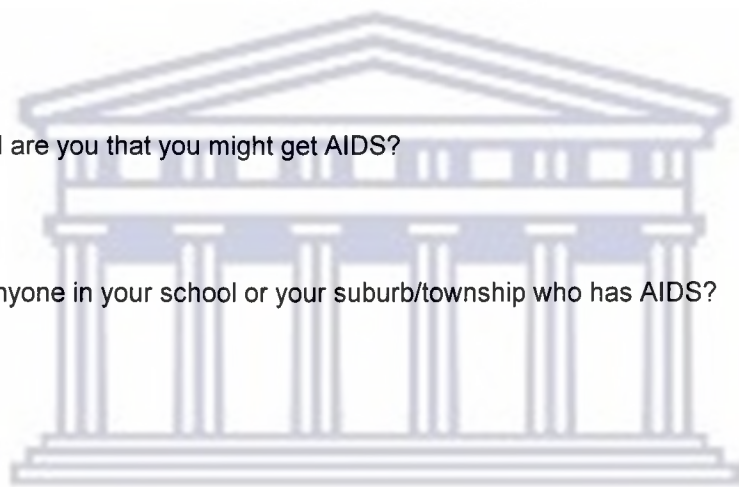
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## SECTION B

Instructions: Please indicate your response by making a cross in the appropriate square or by writing your comments in the appropriate space.

- |   |  |           |   |
|---|--|-----------|---|
| 6.  | AIDS and HIV infection are the same thing.                   | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 7.  | Is there a cure for AIDS?                                    | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| <b>AIDS/HIV can be transmitted in the following ways:</b> |  |           |   |
| 8.  | male/male sexual intercourse with an AIDS infected person    | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 9.  | male/female sexual intercourse with an AIDS infected person  | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 10.   | from sharing cups and plates with an AIDS infected person    | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 11.   | from being bitten by mosquitos or bedbugs                    | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 12.   | through physical contact sport like soccer or rugby          | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 13.   | an HIV mother can pass on AIDS through breastmilk            | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 14.   | through oral sex with an infected person                     | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 15.   | from a toilet seat   | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 16.   | through hugging or being close to an infected person         | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 17.   | by swimming in the same pool as an infected person           | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 18.   | by kissing   | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 19.   | from being in the same room as an AIDS patient               | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 20.   | from infected blood transfusions                             | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 21.   | using a condom during sex can lower the risk of getting AIDS | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 22.   | most people who get AIDS die from the disease                | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |
| 23.   | there are always visible signs when someone is infected      | yes<br>no | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">1</table> <table border="1" style="border-collapse: collapse; width: 40px; height: 20px; margin: 2px;">2</table> |

24. with whom have you discussed AIDS?
- |              |   |
|--------------|---|
| friends      | 1 |
| parents      | 2 |
| school nurse | 3 |
| teachers     | 4 |
| nobody       | 5 |
25. from whom have you received most of your knowledge of AIDS in the past?
- |               |   |
|---------------|---|
| printed media | 1 |
| parents       | 2 |
| friends       | 3 |
| television    | 4 |
| nobody        | 5 |
26. from whom would you like to receive information about AIDS in the future?
- |                  |   |
|------------------|---|
| printed media    | 1 |
| AIDS counsellors | 2 |
| teachers         | 3 |
| own doctor       | 4 |
| fellow scholars  | 5 |
| infected person  | 6 |
| friend           | 7 |
27. how concerned are you that you might get AIDS?
- |            |   |
|------------|---|
| not at all | 1 |
| a little   | 2 |
| very       | 3 |
| don't know | 4 |
28. do you know anyone in your school or your suburb/township who has AIDS?
- |     |   |
|-----|---|
| yes | 1 |
| no  | 2 |



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## SECTION C

Instructions: For each of the following statements, please note whether you agree or disagree with the statement. Please respond to all items on the questionnaire. There are no right or wrong answers.

Use the following scale:

SA: Strongly agree with the statement

A: Agree with the statement

N: Neither agree nor disagree with statement

D: Disagree with the statement

SD: Strongly disagree with the statement

		1	2	3	4	5
		SA	A	N	D	SD
29.	Limiting the spread of AIDS is more important than trying to protect the rights of people with AIDS					
30.	Support groups for people with AIDS would be very helpful to them.					
31.	I would consider marrying someone with AIDS.					
32.	I would rather change schools than be in the same class with someone who has AIDS.					
33.	People should not be afraid of catching AIDS from casual contact, like hugging or shaking hands.					
34.	I would like to feel at ease around people with AIDS.					
35.	People who receive positive results from the AIDS blood test should not be allowed to get married.					
36.	I would prefer not to be around homosexuals for fear of catching AIDS.					
37.	Being around someone with AIDS would not put my health in danger.					
38.	Only disgusting people get AIDS.					
39.	I think that people with AIDS get what they deserve.					
40.	People with AIDS should not avoid being around other people.					
41.	People should avoid going to the dentist because they might catch AIDS from dental instruments.					
42.	The thought of being around someone with AIDS does not bother me.					

		1	2	3	4	5
		SA	A	N	D	SD
43.	People with AIDS should not be prohibited from working in public places.					
44.	I would not want to be in the same room with someone who I knew had AIDS.					
45.	AIDS is a homosexual disease.					
46.	People who give AIDS to others should face criminal charges.					
47.	People should not be afraid to donate blood because of AIDS.					
48.	A list of people who have AIDS should be available to anyone.					
49.	I would go out with a person who has AIDS.					
50.	People should not blame the homosexuals community for the spread of AIDS in South Africa.					
51.	No one deserves to have a disease like AIDS.					
52.	It would not bother me to attend class with someone with AIDS.					
53.	An employer should have the right to fire an employee with AIDS regardless of the type of work he/she does.					
54.	I would allow my children to play with the children of someone known to have AIDS.					
55.	People get AIDS by performing "strange" sex acts.					
56.	People with AIDS should should not be looked down upon by others.					
57.	I could tell by looking at someone if he/she has AIDS.					
58.	AIDS is a disease which only affects the black population of South Africa.					
59.	Health care workers should not refuse to care for people with AIDS regardless of their personal feelings about AIDS.					
60.	Children who have AIDS should not be prohibited from going to schools or day care centers.					

		1	2	3	4	5
		SA	A	N	D	SD
61.	Children who have AIDS probably have a homosexual parent.					
62.	AIDS blood test results should be confidential to avoid discrimination against people with positive results.					
63.	AIDS is a punishment for immoral behaviour.					
64.	I would not be afraid to take care of a family member with AIDS.					
65.	If I discovered that my roommate at boarding school had AIDS I would move out.					
66.	I would contribute money to an AIDS research project if I were making a charitable contribution.					
67.	The best way to rid of AIDS is to get rid of homosexuality.					
68.	Churches should take a strong stand against drug abuse and homosexuality to prevent the spread of AIDS.					
69.	Insurance companies should not be allowed to cancel insurance policies for AIDS related reasons.					
70.	Money being spent on AIDS research should instead be spent on disease that affect innocent people.					
71.	A person who gives AIDS to someone else should be legally liable for any medical expenses.					
72.	The spread of AIDS in South Africa is proof that homosexual behaviour should be illegal.					
73.	A list of people who have AIDS should be kept by the government.					
74.	I could comfortably discuss AIDS with others.					
75.	People with AIDS are not worth getting to know.					
76.	I have no sympathy for homosexuals who get AIDS.					
77.	Parents who transmit AIDS to their children should be prosecuted as child abusers.					
78.	People with AIDS should be sent to special hospitals to protect others.					



		1	2	3	4	5
		SA	A	N	D	SD
79.	People would not be so afraid of AIDS if they knew more about the disease.					
80.	Hospitals and nursing homes should not refuse to admit patients with AIDS.					
81.	I would not avoid a friend if he/she/had AIDS.					
82.	The spread of AIDS in our society illustrates how immoral the South Africans has become.					



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