

**An exploratory study into understanding behavioural
change in respect of HIV/AIDS. A pre-test and post-test
evaluation**

By

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DECLARATION

I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Date: March 2002

ABSTRACT

An exploratory study into understanding behavioural change in respect of HIV/AIDS. A pretest and posttest evaluation.

HIV/AIDS is regarded as a global disease that knows no colour, language or age barrier, for this reason, industry must regard the containment and management as a strategic priority in respect of its human resource development. The objectives of the study were to assess the obstacles on an implementation strategy as well as the impact thereof with regard to knowledge, intentions and behaviour. A pretest and posttest was conducted in order assess the changes in knowledge, intentions and behaviour.

The study constituted 75 subjects that were randomly selected from a Depot. Majority of staff were blue-collar workers. The researcher used two models (i.e. Theory of Reasoned Action and Modified AIDS Risk Reduction Model) as guidelines to understanding behavioural change in respect of HIV/AIDS. Information derived, supports the researcher's hypotheses, that implementation strategies increase knowledge of HIV, change sexual behaviour and attempt to reduce unsafe sexual practices. However, the researcher found no change in intentions

Despite the apparent positive spin-offs in the current study, the situation must be carefully monitored to aid the downward spiral in new HIV infection rates.

OPSOMMING

‘n Verduidelikende studie ten einde die verandering in optrede met betrekking tot MIV/Vigs te verstaan. ‘n Voor-toets en ‘n na-toets evaluasie.

MIV/Vigs word tans gesien as ‘n wêreld wye epidemie, wat geen kleur, taal of ouderdoms grense ken nie, daarom moet werkgewers die beperking en bestuur daarvan, as ‘n strategiese prioriteit sien met betrekking tot hul menslike hulpbron ontwikkeling. Die doelwitte van die studie was om die struikelblokke in ‘n implementering strategie te bepaal, sowel as om die impak daarvan op kennis, intensies en optrede na te vors.

Die studie het 75 deelnemers ingesluit wat lukraak gekies was by ‘n werkswinkel (depot) in die organisasie. Meerderheid van die werkers was bloukraag werknemers. Die navorser het van twee modelle gebruik gemaak (nl. Theory of Reasoned Action en Modified AIDS Risk Reduction Modelle) as riglyne om die verandering in optrede met betrekking tot MIV/VIGS te verstaan. Inligting wat bekom is uit die navorsing, ondersteun die navorser se hipotiese stelling dat implementerings strategië, kennis ten opsigte van MIV/VIGS verbeter, verandering in seksuele optrede teweegbring sowel as om onveilige seksuele aktiwiteit te verminder. Die navorser het egter geen verandering in intensies waargeneem nie.

Ten spyte van die positiewe aspekte wat uit die huidige studie waargeneem is, moet die situasie deeglik gemonitor word ten einde die afwaartse neiging in MIV/VIGS verwante infeksie vol te hou.

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CHAPTER 1

HIV/AIDS -INTRODUCTION

1.0 Introduction

The first cases of acquired Human immunodeficiency virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) in South Africa were diagnosed in 1982 (Wessels, 1987: 1). According to Wessels (1987) the number of AIDS sufferers in South Africa in the past were few in comparison to the rest of the world. However, it was predicted that it would affect not only the health of individuals but also the well being total system in which they operate. The earliest reported studies of the social and economic impact of HIV/AIDS epidemic date back to 1984, effectively three years after the disease was definitely recognised (Whiteside and Sunter, 2000). Extensive work on HIV/AIDS issues have been undertaken in USA and Europe, however, only limited studies have been done in developing countries.

HIV/AIDS is the most serious and devastating disease that faces the world today. HIV/AIDS is a global disease that knows no colour, language or age barrier, therefore industry must regard its containment and management as a strategic priority in respect of its human resource development. Industry at large has not assessed the extent potential seriousness of the HIV/AIDS epidemic for its workforce and for the country as a whole since the 1980's. The Joint United Nations Programme on HIV/AIDS estimates that 95%

of the lives claimed by AIDS since the beginning of the epidemic, live in developing countries (Department of Health, 2000: 1).

According to Laitz (2000) AIDS is killing the South African population at an alarming rate, in Durban alone, the number of people dying in the city has increased by 250% since 1994. Many organisations have underestimated the devastation of the disease.

Over the last few years the national and international response to the HIV/AIDS epidemic has increased dramatically. Businesses are now growing increasingly concerned with the HIV/AIDS pandemic, as such many organisations have forwarded HIV/AIDS policies, educational programmes, surveillance, counselling and protection against discrimination of employment of people living with AIDS. Research that has been conducted indicates that the epidemic can slow down with appropriate interventions, which seems to give hope to all in the challenge of the epidemic.

1.2 Objectives of the study

The Objectives of the study may be reflected as follows:

- a) to assess the obstacles in respect of behaviour change on an implementation strategy that might lead to behavioural change in respect to HIV/AIDS;
- b) to assess the impact of the implementation strategy with regard to knowledge, behaviour and intentions; and

- c) to investigate if there is a significant difference in behavioural change towards HIV/AIDS among the biographical variables (age, sex, race, marital status, number of children, level of education and job status).

1.3 Limitations of the study

Due the fact that HIV/AIDS is still a sensitive and confidential subject, the current study was unable to indicate exactly which individuals have changed specific modes of their behaviour. Instead there is an aggregate calculation of behaviour change.

The study was conducted in relatively small depot with a total staff complement of eighty employees. Although, the entire population was utilised in this study only seventy five employees handed on their completed questionnaires.

With reference to the biographical details of subjects, there seems to be an imbalance in race, education and age of the subjects. Once again, due to the employer's nature of business there is a large number of blue-collar workers whose educational levels are comparatively low in comparison to an administrative office. An analysis of subjects indicated that there was also a high percentage black males that are employed by the employer.

1.4 Conclusion

The researcher endeavors to elaborate on the clinical aspects of HIV/AIDS and two

behavioural theories that could influence a change in behaviour toward the risk associated with sexual activities. Chapter two gives an insight into the clinical aspects of the virus associated with HIV/AIDS. Chapter three deals specifically with HIV/AIDS in the work place and chapter four describes two behavioral theories, which focus on behavioural change in respect of HIV/AIDS. Chapter five delineates the research methodology and chapter six concentrates on the interpretation and discussion of results of the study. The content of chapter seven provides recommendations and concludes the study.

CHAPTER 2

HIV AND AIDS

2.0 Introduction

HIV/AIDS is becoming a large concern in society due to its rapid spread and fatal repercussions. The paths of HIV transmission is well known, but unfounded fear continues concerning the potential for transmission by other means such as casual contact in a household, school, workplace, or food-service setting.

The course of infection with these viruses is characterized by a long interval between initial infection and the onset of serious symptoms. Like HIV in humans and animals, viruses primarily infect immune system cells, often causing immunodeficiency and AIDS-like symptoms (GlaxoWellcome, 1999). Scientists use these and other viruses and their animal hosts as models of HIV disease.

Some people have fears about contracting AIDS based on misinformation or lack of knowledge about how AIDS is spread. Education providing accurate medical information can best alleviate fears of contracting an AIDS condition.

2.1 What is HIV and AIDS?

AIDS, refers specific group of diseases or conditions that result from suppression of the immune system related to infection with HIV (Department of Health, 1998).

The AIDS virus attacks the immune system, causing a breakdown in a person's normal protection against infection. This leaves the body vulnerable to life-threatening illnesses. In addition, the virus by itself can affect the nervous system.

Recent medical evidence suggests that an AIDS virus-related condition could have an incubation period of several weeks, months or years before symptoms appear. Medical findings indicate that a person who has a positive antibody test will not necessarily develop an AIDS virus-related condition.

A person infected with HIV gradually loses immune function along with certain immune cells, called CD4 T-lymphocytes or CD4 T-cells, causing the infected person to become vulnerable to pneumonia, fungus infections, and other common ailments (Carpenter et al, 1998). According to Carpenter (1998: 149) with the loss of immune function, a clinical syndrome (a group of various illnesses that together characterize a disease) develops over time and eventually results in death due to infections by organisms that do not normally cause disease except in persons whose immune system has been greatly weakened or become cancerous.

In 1983, French cancer specialist, Luc Montagnier, and scientists at the Pasteur Institute in Paris isolated what appeared to be a new human retrovirus a special type of virus that reproduces differently from other viruses (Stainer, Ingraham, Wheelis and Painter, 1989).

Infection with HIV does not necessarily mean that a person has AIDS, although people who are HIV-positive people are often mistakenly said to have AIDS. In fact, a person can remain HIV-positive for more than ten years without developing any of the clinical illnesses that define and constitute a diagnosis of AIDS (Pharmaceutical Benefit Management, 1999). Among patients enrolled in large epidemiological studies in western countries, the median time from infection with HIV to the development of AIDS-related symptoms has been approximately 10 years (Pharmaceutical Benefit Management, 1999). However, researchers have observed a wide variation in disease progression. Approximately 10 percent of HIV-infected people in these studies have progressed to AIDS within the first two to three years following infection, while 5 to 10 percent of individuals in the studies have stable CD4+ T cell counts and no symptoms even after 12 or more years (Pharmaceutical Benefit Management, 1999). Factors such as age or genetic differences among individuals, the level of virulence of an individual strain of virus, and co-infection with other microbes may influence the rate and severity of disease progression (Pharmaceutical Benefit Management, 1999).

In 1995 an estimated 18.4 million people worldwide were living with HIV or AIDS (Gerrard et al, 1996). The World Health Organisation estimates that between 1981, when the first AIDS cases were reported, and the end of 1995, over 6 million adults and children had developed AIDS. In this same time period there were 319,849 deaths from AIDS related diseases in the United States (Thomas and Butera, 1997).

2.2 Clinical Progression of AIDS

The progression from the point of HIV infection to the clinical diseases that define AIDS may take six to ten years or more. Carpenter et al (1998) studies indicate that the progression of HIV and AIDS can be monitored using Surrogate markers (laboratory data that correspond to the various stages of disease progression) or clinical endpoints (illnesses that are associated with more advanced disease) (Pharmaceutical Benefit Management, 1999). Surrogate markers for the various stages of HIV disease include the declining number of CD4 T-cells, the major type of white blood cell lost because of HIV infection. In general, the lower the infected person's CD4 T-cell count, the weaker the person's immune system and more advanced the disease state (Carpenter et al, 1998).

In 1996 it became evident that the actual amount of HIV in a person's blood, the so-called "viral burden," could be used to predict the progression to AIDS, regardless of a person's CD4 T-cell count (Thomas and Butera, 1997: 4). Thomas and Butera (1997) promote that with advancing technology, viral burden determinations are quickly becoming a standard means of patient testing. An infected person's immune response to the virus (i.e. the person's ability to produce antibodies against HIV) can also be used to determine the progression of AIDS, however, this surrogate marker is less precise during more advanced stages of AIDS because of the overall loss of immune function (Department of Health Manual, 1998).

Within one to three weeks after infection with HIV, most people experience nonspecific

flu-like symptoms such as fever, headache, skin rash, tender lymph nodes, and a vague feeling of discomfort (Pietermaritzburg AIDS Training, Information and Counseling Manual, 1997). These symptoms last about one to two weeks. According to the Pietermaritzburg AIDS Training, Information and Counseling Manual (1997) during this phase, known as the acute retroviral syndrome phase, HIV reproduces to very high concentrations in the blood, mutates (changes its genetic nature) frequently, circulates through the blood, and establishes infections throughout the body, especially in the lymphoid organs. The infected person's CD4 T-cell count falls briefly but then returns to near normal levels as the person's immune system responds to the infection. Individuals are thought to be highly infectious during this phase (Pietermaritzburg AIDS Training, Information and Counseling Manual, 1997, 12).

Following the acute retroviral syndrome phase, infected individuals enter a prolonged asymptomatic phase, a symptom-free phase that can last ten years or more (Carpenter et al, 1998). Nevertheless, HIV continues to replicate during the asymptomatic phase, causing progressive destruction of the immune system.

Eventually, the immune system weakens to the point that the person enters the early symptomatic phase. This phase can last from a few months to several years and is characterized by rapidly falling levels of CD4 T-cells and opportunistic infections that are not life threatening (Carpenter et al, 1998).

Following the early symptomatic phase, the infected person experiences the extensive immune destruction and serious illness that characterize the late symptomatic phase. A common observation is progressive weight loss and debilitating fatigue, which occurs in a large proportion of people in this stage (Meadows et al, 1998). The immune system is in a state of severe failure. A patient with HIV may die due to severe life-threatening infections and cancers occur within one to two years (Collier et al, 1999).

Additionally, HIV can recombine with itself to produce a wide range of variants or strains. During the course of HIV disease, viral strains emerge in an infected individual that differ widely in their ability to infect and kill different cell types, as well as in their rate of replication (Pharmaceutical Benefit Management, 1999). Scientists are investigating why strains of HIV from patients with advanced disease appear to be more virulent and infect more cell types than strains obtained earlier from the same individual (Collier et al, 1999).

2.3 Opportunistic Illnesses

Death from AIDS is generally due not to HIV infection itself, but rather to opportunistic infections that occur when the immune system can no longer protect the body against agents normally found in the environment (Collier et al, 1999).

Carpenter et al (1998) advocate that the most common opportunistic infection seen in AIDS is pneumonia, which is caused by a fungus that normally exists in the airways of

all people. Bacterial pneumonia and tuberculosis are also commonly associated with AIDS (Pietermaritzburg AIDS Training, Information and Counseling Manual, 1997). In the late symptomatic phase of AIDS, bacterial infection can cause fever, weight loss, anaemia, and diarrhea (Pharmaceutical Benefit Management, 1999). Additional bacterial infections of the gastrointestinal tract commonly cause diarrhea, weight loss, anorexia (loss of appetite), and fever (Department of Health Manual, 1998). Viral opportunistic infections in conjunction with other sexually transmitted diseases are common in people with AIDS.

Many people with AIDS develop cancers, the most common types being B-cell lymphoma and Kaposi's sarcoma (Carpenter et al, 1998). Kaposi's sarcoma, a cancer of blood vessels that results in purple bruises on the skin that can spread to internal organs and causes death mainly in homosexual and bisexual men (Pharmaceutical Benefit Management, 1999).

2.4 Human Immunodeficiency Virus (HIV)

Researchers have shown that the causative agent of AIDS is HIV, a human retrovirus (Pharmaceutical Benefit Management, 1999). HIV replication in CD4 T-cells can kill the cells directly, however, the cells also may be killed or rendered dysfunctional by indirect means without ever having been infected with HIV (Thomas and Butera, 1997, 6). CD4 T-cells are critical in the normal immune system because they help other types of immune cells respond to invading organisms. As CD4 T-cells are specifically killed

during HIV infection, no help is available for immune responses. General immune system failure results, permitting the opportunistic infections and cancers that characterise clinical AIDS.

Although it is generally agreed that HIV is the virus that causes AIDS and that HIV replication can directly kill CD4 T-cells, the large variation among individuals in the amount of time between infection with HIV and a diagnosis of AIDS. However, it is clear that HIV must be present for the development of AIDS.

2.5 Modes of Transmission

Individuals of all sexual preferences are at risk of contracting an AIDS virus-related condition. According to medical experts, the AIDS virus is transmitted in the following ways: sexual contact through transmission of semen or vaginal fluids, intravenous drug administration with contaminated needles, administration of contaminated blood or blood products, and passage of the virus from infected mothers to their foetus or newborn (Department of Health Manual, 1998). The following are common sources of HIV infection:

- It is most commonly spread by sexual contact with an infected person. The virus is present in the sexual secretions of infected men and women and gains access to the bloodstream of the uninfected person by way of small abrasions that may occur as a consequence of sexual intercourse (Collier et al, 1996). This includes sexual intercourse between men (homosexual), bisexual men

- and woman, and heterosexual men and women. Those males and females with multiple partners, either homosexual, bisexual or heterosexual pose a greater risk of contacting the disease. During sex, the virus can enter the body through the mucosal linings of the vagina, vulva, penis, rectum or, very rarely, via the mouth. According to Collier et al (1996) the likelihood of transmission is increased by factors that may damage these linings, especially other sexually transmitted diseases that cause ulcers or inflammation. Research by Carpenter et al (1998) suggests that immune system cells called dendritic cells, which reside in the mucosa, may begin the infection process after sexual exposure by binding to and carrying the virus from the site of infection to the lymph nodes where other immune system cells become infected. However, no cases of HIV transmission through the air, by casual contact, or even by kissing an infected individual have been documented (Collier et al, 1996).
- Contaminated blood given through transfusion to casualties of accidents and the sick are also means by which HIV is spread. When blood transfusion is administered the contamination interacts with a persons blood which starts to deplete the recipients immune system and thus causing further harm and complications to the recipients body (Pharmaceutical Benefit Management, 1999).

HIV is also spread by any sharing of needles or syringes that result in direct exposure to the blood of an infected individual. This method of exposure occurs most commonly among people abusing intravenous drugs (Department of Health Manual, 1998). Needles and syringes in which small amounts of contaminated blood can be transmitted or transferred by means of sharing the same needle or syringe. The use of unsterilised needles used by health workers, medical practitioners and traditional healers only increases the possibility of HIV infections.

Dalton (1990) studies indicated that intravenous drug abuse poses a high risk to HIV infection due to the method of drug intake as apposed to inhaling or oral indigestion of drugs. However, Dalton's (1990) studies advocated that drug intake (i.e. intravenous, inhalation or oral) not only breaks down a persons immune system but impairs their critical thinking which may result in carelessness regarding sexual and other activities. This type of carelessness could be potentially hazardous in leading the person to sexually transmitted diseases as well as HIV.

Tattooing ones body with unsterilised equipment can infect a person with HIV. An unsterilised piece of equipment could carry a specimen of a contaminated blood product, which could infect an individual with HIV.

Tribal customs and ritual scarification is common among the Black population in South Africa (Whiteside, 1995). According to Whiteside (1995) the deliberate scaring of the face and often a group of people being cut with the same instrument only increases the danger of HIV infection.

- HIV can be transmitted from an infected mother to her baby, either before or during childbirth, or through breast feeding (Department of Health Manual, 1998). According to studies at the Department of Health (1998) paediatric AIDS or AIDS in infants is growing increasingly common. Contaminated blood and blood products can transmit HIV, but it seems to pose a greater risk to infants which is probably due to their immature immune systems (Naidoo, 1994).

The virus is very fragile and has been found to be transmitted only through intimate exchange of bodily fluids (for example, blood or blood-contaminated tissue fluids such as semen or vaginal fluid). HIV is not spread through the environment, it is a very fragile blood-borne virus. HIV-infected persons do not pose a threat to co-workers or clients during casual, day-to-day activities and contacts.

Thus, an individual cannot be infected with HIV through:

- Handshakes;
- hugs or casual touching;

- close working conditions;
- use of telephones, office equipment, furniture, sinks, toilets, showers, dishes, utensils, or food;
- sneezing or coughing;
- air;
- water; or
- insects.

An AIDS virus-related condition is not transmitted by breathing the same air, using the same toilets, touching a common piece of paper, or using the same telephone. According to medical authorities transmission of the virus through oral secretions or tears is not a recognized risk (Collier et al, 1996). Studies have shown no evidence of HIV transmission through insects even in areas where there are many cases of AIDS and large populations of insects such as mosquitoes. HIV lives for only a short time inside an insect and does not reproduce in insects (Jimenez - Nacher et al, 1998). Thus, even if the virus enters a mosquito or another sucking or biting insect, the insect does not become infected and cannot transmit HIV to the next human it feeds on or bites.

The National Center for HIV/AIDS maintain that intravenous drug users, women, and young people must be targeted more aggressively for HIV education, and prevention

programmes must be tailored to the various regions. Newly diagnosed AIDS cases are also increasing among intravenous drug users, women and heterosexuals (GlaxoWellcome, 1999). The Center recommends that AIDS prevention programmes should also focus on teenagers and heterosexual women.

2.6 Detection and Diagnosis

Although AIDS has been tracked since 1981, the identification of HIV as the causative agent was not made until 1983. In 1985 the first blood test for HIV, developed by the research group lead by Robert Gallo, was approved for use in blood banks (Thomas and Butera, 1997). This test can detect whether a person's blood contains antibodies against HIV, an indication of exposure to the virus. However, for about four to eight weeks after exposure to HIV, an individual will continue to test negative for HIV infection because the immune system has not had enough time to make antibodies against HIV (Thomas and Butera, 1997). In 1996 an additional blood test was approved for use in blood banks. This test can detect HIV antigens proteins produced by the virus itself (Pharmaceutical Benefit Management, 1999). The test can thus identify HIV even before the donor's immune system has had a chance to make antibodies. In South Africa medical practitioners and clinical pathologists frequently use the ELISA test in order to ascertain whether a person is HIV positive.

2.7 Treatment

Antiviral drugs that attack HIV exploit vulnerable spots in the viral replication cycle

(Collier et al,1996). According to Carpenter et al (1998) one target is the process of reverse transcription that is, the conversion of the viral ribonucleic acid (RNA) into deoxyribonucleic acid (DNA) that HIV must undergo to be infectious. Carpenter et al (1998, 37) studies reveal that reverse transcription is a process unique to retroviruses and is performed by the viral enzyme reverse transcriptase (RT). Drugs work as DNA-chain terminators. Although drugs were never considered a cure for HIV infection, it was hoped that they would slow the progression of AIDS. However, the clinical benefit of drugs has been disappointing, they have extended the lives of people with AIDS by only about six months (Pharmaceutical Benefit Management, 1999). One exception is that AZT has been shown effective in reducing HIV transmission from pregnant women to their babies. To prevent infection, Azidothymidine (AZT) is also given to babies of infected women immediately after birth.

A second problem is the emergence of drug-resistant forms of HIV in people receiving these drugs. Studies on early treatment of HIV infection with AZT have presented contradictory results as to whether such early treatment prolongs life (Thomas and Butera, 1997). Carpenter et al (1998) promote that since HIV replicates rapidly and mutates frequently during the earliest period of infection, an HIV-infected person carries many different strains of HIV, some of which may be drug-resistant. The limited variety of HIV in the early stage is thought to make it more susceptible to AZT and related drugs. Seeger (1999) mentioned that medical schemes in South Africa are allowing pregnant women who are infected to claim for the drug AZT. According to Dr Evian (cited in

Seeger, 1999) the drug can prevent the disease from being passed on to the woman's child and thereby avoid the cost of treating an HIV-infected child as well.

Effective drug treatments are available to fight many AIDS-associated opportunistic infections, and these treatments have provided clinical benefit and prolonged survival for individuals with AIDS (Pharmaceutical Benefit Management, 1999).

Gene therapy, an approach that involves altering the genes of the infected person to help prevent the virus from spreading to uninfected cells, might someday be used to treat HIV infection (Jimenez-Nacher, 1998). Gene therapy has been used in clinical trials to inhibit HIV by introducing into cells, a new gene (Thomas and Butera, 1997). According to Thomas and Butera (1997) in other trials, gene therapy has been used to introduce a new gene that protects the cells from becoming infected by HIV.

Efforts are also under way to develop an effective immunization that could be either protective, preventing infection if an immunized person is exposed to HIV, or prolonging survival or decreasing immune destruction in people already infected with HIV. The World Health Organisation (WHO) is currently sponsoring large amounts of money in an attempt to find a protective-vaccine where the rate of HIV infection can be controlled or HIV virus killed (Catz and Kelly, 1998).

Recent years have brought dramatic changes in the medical treatment of HIV infection

including the advent and increasingly widespread use of a new class of medications, protease inhibitors (PIs). Used in combination with other antiviral medications, PIs have been shown to substantially reduce the number of viral particles within the bloodstream, thereby leading to improved immune functioning, reduced incidence of opportunistic infections, and lower rates of viral mutation, thus effectively slowing disease progression and enhancing survival for many patients (Collier et al., 1996, Deeks et al., 1997, McDonald and Kuritzkes, 1997). Research indicates that preferred therapeutic regimens include one protease inhibitor along with two or more traditional antiviral agents and should be initiated with all symptomatic HIV patients and asymptomatic patients with CD4 cell counts below 500 (Carpenter et al., 1998). While not a cure, combination therapies including PIs have offered physicians more effective treatment options and provided many HIV-infected individuals with extended survival and an enhanced quality of life.

Seeger (1999) advocated that medical aid premiums could soar in the next few years if health insurers do not prepare for the impact of AIDS. Seeger's (1999) study indicated that treatment for HIV positive patients could range between R600.00 and R4000.00 per month per patient.

2.8 Alternative medicine

Views about the validity of alternative or complementary therapies are deeply divided. Some researchers believe that conventional medicines are ineffective because it deals

with symptoms alone whereas alternative therapies aim to include the social aspects that can cause illness (e.g. effects of stress when dealing with HIV, relationship difficulties or inability to confront and deal with feelings, etc). However it is important that patients communicate with their doctors in an attempt to avoid a conflict in medication. As explained by Tavanyar (1992) some complementary treatments are discussed below:

- Acupuncture – This type of treatment works on the principle that energy flows through the body in lines or meridians, which are blocked by specific illnesses. Sharp needles are inserted in the body at particular points in order to unblock the energy. Research has indicated that acupuncture can be very relaxing and may play a significant role in relieving symptoms of illnesses.
- Aromatherapy – this type of treatment is based on idea that smells can have a positive effect on the psyche and thus on the body. Aromatherapist's usually massage a range of oils on the body with the aim of reducing tension, stress and induce a sense of well being.
- Homeopathy – this form of therapy involves a full medical examination by the practitioner whereafter natural remedies are prescribed in order to detoxify the body and then strengthen the body to fight off illnesses.
- Vitamins and mineral supplements – these additives are considered to help the

body's metabolism. However there is little evidence that unlimited amounts of vitamins and mineral supplements are helpful to the body.

2.9 Prevention Efforts

Since there is as yet no successful vaccination against HIV, prevention efforts have focused mainly on educating the public about routes of HIV transmission and about personal measures that reduces the risk of infection. The Department of Health and other AIDS Centres have established, a hotline to circulate educational literature and current statistics on AIDS. Safe-sex campaigns encourage sexual abstinence or sexual relations with only one partner and the use of latex condoms to provide a protective barrier during sexual intercourse.

Needle-exchange programmes have been implemented to reduce needle sharing and consequent HIV transmission among intravenous drug abusers.

During the first decade of AIDS, mental health researchers and practitioners sought to better understand and improve the psychological and social wellbeing of person living with HIV/AIDS. Many of these efforts targeted persons younger in age. This restricted focus was understandable, since younger individuals were initially and perhaps most severely affected by HIV disease. However, as HIV becomes more common among older adults and as improved clinical treatments extend the life expectancy of persons living with HIV/AIDS, mental health researchers and practitioners will need to conceptualize,

implement and evaluate mental health support programmes for this growing population. Interventions that enable HIV-infected older adults to cope more effectively with life stressors and obtain more social and emotional support are likely to be especially valuable.

2.10 Psychological impact of HIV/AIDS

HIV/AIDS has proved to be a complex medical disease, which has equivalent psychological complexities. HIV/AIDS evokes widespread fear amongst people. HIV/AIDS is still a silent killer and society has not acknowledged the reality of the disease therefore the stigma attached to the illness poses serious difficulties for an individual who is affected by and dealing with the disease. For some this fear may reach obsessional proportions beyond that expected in the normal course of events. Psychological complexities highly influence the way people live their lives and unfortunately coupled with HIV/AIDS dampens the chances of positive living.

The physiological problems of excessive sweating, reduced weight loss, looseness of bowels, reduced concentration, forgetfulness, anxiety induced breathlessness aggravate the symptoms of depression. HIV positive individuals often maintain depressive thoughts that include inevitability of decline in health, death, guilt over past behaviours and fear that they have contaminated others.

HIV positive individuals often seek constant reassurance from family and friends in order

to enjoy the most basic of daily pleasures. Tavanyar's research (1992) indicates that unless psychological factors are adequately dealt with, the stress and strain of the illness and psyche will accumulate and drain an individual's energy rather than increase it.

Depressed mood has a significant effect on quality of life, progression of disability and ability to receive good medical care (King, 1994). With the advent of protease inhibitors, which have the potential to control HIV infection and prolong life, treatment of a mood disorder is even more critical, since untreated depression could both compromise medication adherence and the disabling effects of the illness. This is often related to clusters of physical symptoms that are associated with HIV-related medical illness or psychological symptoms such as anxiety or loss of interest in activities when the person has been bedridden, housebound, or unable to participate in social and recreational activities.

It has been suggested that HIV itself causes depression, that HIV associated neurocognitive changes (Cognitive Motor Disorder and HIV Associated Dementia) may be a cause of depression, or that HIV associated medications (including AZT) may cause mood changes (Brandon et al, 1994).

2.10.1 Stress

The emotional and psychological effects of HIV/AIDS are devastating on a

person, family and friends. The reactions to receiving a positive HIV test result are as unique as each person who becomes infected. Emotions range from shock, fear, anger, grief, despair, and confusion to relief, hope, and a commitment to "take care of oneself," reactions depend on a variety of factors. These include a person's age, culture, connection to other people who are HIV-infected, sexual practices, level of emotional support, personality style, and perhaps, most importantly, the degree to which a person was expecting a positive test result.

Those who do not expect a positive result and believe they have participated in "safe" behaviors are surprised to learn that they had not been as "safe" as they might have believed and tend to have the most difficult time. These people may be shocked, angry and emotionally overwhelmed. They may become tearful and visibly upset as their usual psychological defenses crumble under the weight of the news (Catz and Kelly, 1998). Alternatively, people who do not expect a positive result may show little or no outward expression of his or her emotional response.

Other people, regardless of ethnicity, may actually be in such a state of shock that they cannot immediately appreciate the meaning of the news and may experience the result "as though it was being given to someone else" (Catz and Kelly, 1998). While these people may be as overwhelmed as people who express strong emotions, they feel numb and exhibit no outward reaction (Catz and Kelly, 1998).

They appear to be "fine," but are actually delaying their emotional response- "denying" the awful meaning of the news even though they may understand it intellectually. Over time, as the intensity of the shock lessens, these people are able to begin to express their feelings, perhaps in the safety of their homes or with trusted friends. Those people who expect to receive positive test results may respond with less overall emotional intensity. They may appear to be unaffected by the news or they may briefly breakdown. It is not uncommon for some to report a mixture of sadness and relief (King, 1994). The relief comes from "knowing for sure what I've always suspected." These people are typically knowledgeable about HIV disease and the latest research and aware of how their actions have put them at risk, and have adapted their lifestyles to incorporate aspects of healthier living (King, 1994). King (1994) also avers that often, these people have access to primary care facilities such as, medical practitioners, medical aid, and friends who are living with HIV. Receiving the test result is usually one last piece of a puzzle whose answer they already know, one last step to psychologically integrating the reality that they are HIV-infected (King, 1994). Counsellors need to be trained to understand these various responses and to help people manage their emotions.

It is clear that HIV provokes considerable anxiety. HIV tests or antibody testing is a particular stress that individuals face in order to know their HIV status. Although HIV is not a prerequisite for both work and social activities, the stress

of testing causes a large degree of discomfort. Often fears of being infected, previous relationships or even work related activities (paramedics, nurses, etc.) encounter a high degree of stress when they want to be tested. Consequently there has been a great need for pretest and posttest counselling. Practitioners attempt to reduce the anxiety before testing and provide an interpretation of results after testing. If an individual is tested positive then further counselling interventions will be required.

2.10.2 Suicide

McKegney and O'Dowd (1996) mentioned that suicidal impulses were common in people who were aware of their positive serostatus. Many HIV positive individuals fear facing their family, friends as well as physical and mental deterioration that the disease will bring. Despite the fact that an individual may have support, there remains considerable evidence that so called "rational suicide" may mask a depressed mood, inappropriate guilt about being a burden to others or perhaps an erroneous perception of development of the illness and methods available to alleviate suffering (King, 1994: 35). McKegney and O'Dowd (1996) also reported that suicide was less likely in those who had AIDS than those with earlier stages of HIV infection. Meadows et al (1998) found that HIV positive people with psychological disorders and high levels of stress are more likely to deliberately harm themselves or commit suicide.

2.11 Conclusion

Prevention efforts that promote sexual awareness through open discussion and condom distribution in public schools have been opposed by some sectors of the general public because of they fear that these efforts may encourage sexual activity. Similarly, needle-exchange programmes have been criticized as promoting drug abuse. Prevention programmes that identify HIV-infected individuals and notify their sexual partners, as well as programmes that promote HIV testing have been criticized for invading personal privacy.

The lack of effective vaccines and antiviral drugs for AIDS has spurred speculation that the funding for AIDS research is insufficient. Although the actual amount of government funding for AIDS research is large, most of these funds are used for expensive clinical studies to evaluate new drugs. “Most surveillance efforts to date have concentrated on tracking AIDS cases or the spread of the HIV virus itself. Concentrating on infection alone, however, is rather like shutting the stable door after the horse has bolted” (Family Health International, 2000: 1). Many scientists still believe that not enough is known about the basic biology of HIV and recommend shifting the emphasis of AIDS research to basic research in order to find more effective alternatives to the pandemic.

The next chapter will deal specifically with HIV/AIDS in the workplace.

CHAPTER 3

HIV/AIDS IN THE WORKPLACE

3.0 Introduction

AIDS has become an issue of great concern in the last decade and with large number of reported cases increasing daily, it has substantially affected the workplace worldwide. According to the Durban Chamber of Commerce (1996) the economic effects of AIDS on businesses will be mainly felt in a drop in productivity due to the untimely deaths of young, productive workers, an increase in absence from work for medical treatment and rise in the cost of medical aid, pensions and insurance.

According to Kingborn (2000: 22) South Africa's HIV/AIDS epidemic is amongst the worst in the world, and many businesses are recognising the need to manage its impact on productivity and competitiveness. Kingborn's (2000: 22) studies project that more than four million people in South Africa will be infected with the HIV virus and approximately six million people will be infected by the year 2005. Over the next ten years, many South African businesses will begin to lose in the region of four percent of their employees to AIDS each year (Kingborn, 2000: 22).

3.1 HIV/AIDS in the workplace

As discussed earlier, HIV is a complex disease and its consequences in the workplace

serve to provide just as many complications in industry as a whole. The ethics of health screening and the issues surrounding confidentiality and stigmatisation at work combine to make the issue of HIV/AIDS at work far more complicated than that of other serious illnesses (Welch: 1998, 14). Kingborn's (2000: 22) studies maintain that the risk of HIV infection in South Africa tends to be greatest among employees who are less skilled and from disadvantaged sectors of the communities.

The most dramatic impact of HIV/AIDS will be developmental, in that the virus will reverse three or more decades of developmental gain (Whiteside and Sunter, 2000). The seriousness of the HIV/AIDS epidemic in industries lies in a host of indirect costs. Kingborn's (2000, 22) studies illustrate examples of indirect costs, inter alia:

- ◆ absenteeism due to illness, caring for sick members of the family or attending funerals;
- ◆ higher recruitment and training costs - due to productive members of the workforce that are forced to leave on the account of incapacitation;
- ◆ loss of skilled people to HIV/AIDS, which could adversely effect production, lower performance and potentially increase market wages among employees with scarce skills or ability to perform certain job functions;
- ◆ reduced job performance due to illness, stress and low morale amongst those employees infected or affected by HIV/AIDS; and

- ◆ potential labour relations problems and possible litigation costs of managing HIV/AIDS related issues ineffectively.

The aforementioned costs are only a scratch on industries surface in respect of the severity of problems that companies are going to face unless they adequately prepare themselves for further adversities.

In study conducted at Eskom in 1996, an AIDS cost centre was created to monitor AIDS education, awareness and care costs. In 1998 the care cost was R117,00 per employee (R4,2m for Eskom's total staff compliment) and in 1999 it was R125,00 per employee (R4,722m for Eskom's total staff compliment) (Quattek, 1999). This amount included R520 000 to cover the cost of specific HIV/AIDS treatments; inter alia:

- Syndromic treatment of STDs
- CD4 monitoring
- Treatment according to Eskom protocols

A further R500 000 a year has been invested in salaries for contracted people living with AIDS who work as consultants to the Greater Involvement of People Living with AIDS organisation (Quattek, 1999)). The treatment costs prove that there is a dire need to fight AIDS by investing in programmes that will save the organisation from losing more than it bargained for, due to the negative impact of HIV/AIDS. Quattek (1999) further

advocates that tackling HIV/AIDS would cost companies large sums of money, but that ignoring it, would cost much more.

3.3 Statistics

Surveys conducted throughout the world form the cornerstone of HIV/AIDS surveillance. The results of such studies serve to provide information pertaining to development and status of the epidemic, which assist to assess whether intervention strategies may be impacting on the profile of HIV/AIDS.

Table 3.1 - UNAIDS, 1998.

LIFE EXPECTANCY BY 2010			
COUNTRY	WITHOUT AIDS	WITH AIDS	YEARS LOST
ZIMBABWE	64.9	39.2	25.7
NAMIBIA	65.3	41.5	23.8
BOTSWANA	61.5	40.1	21.4
SWAZILAND	58.1	38.5	19.6
ZAMBIA	56.2	37.1	19.1
KENYA	65.6	47.6	18
MALAWI	51.1	36.6	14.5
SOUTH AFRICA	65.4	55.7	9.7

The above-mentioned survey (UNAIDS, 1998) was presented in 1998 and has undoubtedly increased since then. As illustrated above, the progression and magnitude of the HIV/AIDS epidemic varies across the different countries within Sub-Saharan Africa. The most important finding of this survey is that the prevalence is alarmingly high in all countries. Although the South African citizen's average life expectancy may be the highest in comparison to the rest of Sub-Saharan Africa, it still causes great concern. The

fact that 9.7 years (on average) may be lost due to HIV/AIDS presents astronomical concerns for the socio-economic environment of the country. The loss in years will create mass erosion of commercial welfare and economy of scales.

Table 3.2 - UNAIDS, 1998.

CATEGORY	1999	2005	2010
% OF SA LABOUR SICK WITH AIDS	11	18	21
% OF SA LABOUR SICK WITH HIV	0.6	1.8	2.9
NEW AIDS CASES PER ANNUM	175 000	461 000	580 000

It was estimated that 3.6 million South Africans were HIV positive at the end of 1998 (UNAIDS, 1998).

In April 2000 a Department of Health forecast indicated that six million people will be infected by the HIV virus by 2005. However, studies undertaken by ING Barings, an unnamed South African corporate and Investec Bank revealed that six million people will be HIV-positive by the end of 2001 (Quattek, 1999). The study found that 17% of South Africa's population will be HIV positive by 2006 and a quarter of a million would die of AIDS in 2000. The study, further indicated that the number of deaths would rise by 180% in the next the five years with 700 000 deaths expected by 2005 (Quattek, 1999). The study concluded that approximately 10 million South Africans would have died of the pandemic.

3.4 Migrant labour

Whiteside's (1990: 17) studies states that one of the unique features of South Africa is its migrant labour system, where for over a century workers have traveled across national boundaries in search of employment. According to Haldenwang (1993: 11) the migrant labour system breeds conditions of single-sex hostels, homelessness, massive unemployment and civil unrest. Recent police investigations revealed that there a large number of illegal immigrants within the South African region. Many of these people are unable to get legitimate jobs due to the fact that they do not possess legal documents to temporarily live in South Africa. A large number of these illegal immigrants live under unhygienic conditions. Unfortunately such conditions creates an unstable lifestyle that contributes to the spread of HIV.

3.5 Skilled and unskilled labour

South Africa faces a shortage of skilled and semi-skilled workers (Duckitt: 1998). Whiteside's (1990) study reveals that HIV/AIDS varies with level of skills of workers. Initial surveys conducted indicated that skilled workers had been hit the hardest, the reason for which was described as, skilled workers earn higher salaries as such they were mobile and able to easily afford to purchase beer and sex (Whiteside: 1990). The repercussions extend further for the employer, in that, firstly, the healthy workers would probably have to help the sick, both financially and emotionally. Secondly, it may also mean that workers would have to take time off to attend to the sick or in the case of death, attend funerals. Thirdly, as the skills base becomes weaker, employers would have

to pay premium rates to employ new labour.

Miller's (1992: 34) study reflected that many companies canvassed the prospect of pre-employment HIV tests, however her studies clearly highlighted that HIV tests contradict much literature written on the topic, in which it was argued that:

- ◆ pre-employment testing will not keep the South African workplace AIDS free;
- ◆ HIV tests not completely reliable for detecting HIV infection - there have been cases where the virus does not show up immediately;
- ◆ these procedures will create a pool of unemployable people; and
- ◆ HIV positive employees may have many productive years ahead of them.

The above-mentioned issues were reinforced by Parliament in 1994/5, which gave rise to provisions in the Labour Relations Act of South Africa of 1995. According to Evian (1991) a particular concern among employees who are not infected by HIV is the safety of working with people who are infected, whilst those who are HIV-positive or have AIDS have fears of discrimination, losing jobs and benefits.

3.6 The legal implications of dealing with an HIV-positive person in the workplace

The Labour Relations Act of South Africa of 1995 (LRA) regulates all employment

relationships appertaining to employers and employees. According to the Durban Chamber of Commerce (1996: 7) the mere fact that an employee has been diagnosed as HIV positive or even suffering from full-blown AIDS is not a justifiable reason for dismissal. An employee that is HIV infected does not necessarily tell one anything about that persons longevity in the workplace, those employees could be solid contributors for many years (Breuer, 1995). As such employers may not ask job applicants about the existence, nature or severity of their health or disability. The employer is prohibited from asking employees whether they have HIV infection or AIDS, nor can an employer require any applicant to undergo a medical examination since such examinations are not permissible under the Employment Equity Act, 1998. Thus, an employer cannot ask applicants if they have HIV infection, AIDS, or any opportunistic infection associated with AIDS. However, applicants may be asked about their ability to perform specific job functions.

If a conditional job offer is withdrawn because of the results of any medical examination, an employer must be able to show that:

- the reasons for the exclusion are job-related and consistent with business necessity, or the person is being excluded to avoid a "direct threat" to health or safety; and that
- no reasonable accommodation was available that would enable this person to perform the essential job functions without a significant risk to health or safety, or that such an accommodation would cause undue hardship.

Information that an individual has HIV infection will rarely justify withdrawal of the job offer. In many cases, HIV infection and AIDS will not interfere with the individual's ability to perform the essential job functions. Moreover, the individual is entitled to a reasonable accommodation to permit performance of essential job functions. Since the mere fact that an individual has HIV infection will almost never justify revoking a job offer, employers may want to consider whether it is advisable to make such inquiries. Similarly, employers may not want to conduct HIV testing because the results alone will not justify revocation of a job offer. However, the employer may feel that dismissal is justified if an infected employee creates a health risk to fellow colleagues or is incapacitated to such extent that they are unable to fulfill any form of reasonable accommodation within the organisation.

3.7 HIV/AIDS and Employment – Code of Good Practice

According to the Durban Chamber of Commerce (1998: 23) the code of good practice has been developed from the point of view of employment law and equity. The primary focus is to prohibit unfair labour practices due to the fact that it was found that people with HIV/AIDS were unfairly discriminated against, in terms of both the Constitution of South Africa and the Employment Equity Act, 1998. It serves to provide employers with information to properly manage HIV/AIDS programmes in order to save lives, money and to ensure the employers survival in industry. The Department of Health in conjunction with the Department of Labour have introduced the following guidelines

(Durban Chamber of Commerce Digest, 1998: 23-24 and 19-20):

3.7.1 HIV/AIDS and the employment contract

Every employee irrespective of their status of health shall not and must not be treated differently. Employees and prospective employees with HIV must be treated in a humane manner. Employers must acknowledge continued employment, which also means that those employees with HIV should not be precluded from appropriate promotions, training and development opportunities.

3.7.2 Recruitment, continued employment and termination of employment

Any medical examination either before or during employment must be conducted solely to determine the functional performance and not to ascertain the for fitness for work of that employee. In this respect the following conditions apply:

- ◆ Employers are not allowed to conduct any medical tests (i.e. any test that has been conducted to establish the HIV status of an employee) as a pre-condition of employment.
- ◆ If an employee HIV status surfaces by voluntary admission then such condition shall not be rationale for altering an HIV-positive employee's contract.
- ◆ Employees with HIV are bound by the same contractual obligations of all other employees.

- ◆ No employee shall be dismissed or retrenched on their HIV status. However, if the employee is unable to perform any work whatsoever, then an employer in such instance may terminate the employees services on the basis of incapacity.
- ◆ No employee shall unilaterally medically board an employee on the basis of his/her HIV status.

3.7.3 Ill-health, leave and performance

An HIV test may not be requested as a obligatory part of an medical examination. Furthermore, HIV- positive employees shall not be discriminated against, in respect of existing sick leave procedures. In the event of an HIV/AIDS diagnosis, all parties may jointly agree on a medical examination to assess the ability to continue performing that employees tasks. In such cases, the employer should, at the earliest stage try to find an alternate position or task that the employee will be able to perform. As discussed above, if the employee is unable to perform any work then that employee's contract may be terminated on the basis of incapacity.

3.7.4 Benefits

No employee may be precluded from any company benefit on the basis of their health (i.e. including HIV/AIDS). Employees with HIV/AIDS should have equal access to company benefits, inter alia; medical aid, group life assurance, pension/provident funds, housing benefits, bursaries, etc.

3.7.5 Grievance

An employee with HIV has the same rights as any other employee within that organisation. If an act of discrimination occurs then the HIV-positive employee should have the right to refer to matter for redress.

3.7.6 HIV/AIDS and Sexually Transmitted Disease Education and prevention: employer and employee responsibilities

Employers and employees should agree that HIV/AIDS education is vitally important therefore such programmes should be conducted in the workplace. Attention should be drawn to language preferences, levels of education/literacy and type of jobs. Educational strategies must be based on consultations between employers, employees and/or their representative organisations. There should also be regular evaluations and reviews on the educational programmes should be carried out and where necessary changes should be made.

Education is an important way of combating discrimination and irrational responses to HIV/AIDS in the workplace and therefore it should be compulsory for all employees to attend. These programmes should focus on safer sex, non-stigmatisation of HIV-positive employees, etc. Education programmes should also promote the code of good practice as set out by the South African Government.

3.7.7 The issue Confidentiality

As previously mentioned, the LRA does not permit the use of information obtained from medical inquiries and examinations, including information relating to a person's HIV infection/AIDS. If any member of the organisation is exposed to such information then those must be treated as a confidential medical record. This information should not be exposed to the rest of the organisation.

Once an employer obtains such information, it must be kept confidential and the employer could be held liable if there is any breach of confidentiality. The employee has a legal right to confidentiality regarding their HIV status.

3.7.8 Management of colleagues and addressing client fears

It is the responsibility of the employer in association with employee's organisations to ensure that all employees are educated and understand the facts relating to the transmission of HIV/AIDS, this exercise should aim at minimising discrimination and irrational fears.

There is also an obligation to ensure that the working condition within an organisation are safe, i.e. appropriate and adequate safety equipment is available and staff are adequately trained in first aid.

3.7.9 Dispute resolution

Employers and employees are encouraged to develop policies and abide by the code of good practice when dealing with cases of HIV/AIDS. Adherence to the code of good practice also means developing an HIV/AIDS policy.

Any dispute arising from any form of discrimination of an HIV-positive person may be referred to any statutory body registered under the Labour relations Act of 1995.

3.8 Development of an HIV/AIDS policy

As indicated in the code of good practice for HIV/AIDS, the employer should develop a policy and procedures for interacting with employees who have been medically diagnosed with or who are suspected of having the HIV/AIDS virus.

3.8.1 Purpose

The purpose of the AIDS policy is to reassure employees that AIDS is not spread through casual contact during normal work practices and to reduce unrealistic fears about contracting an AIDS virus-related condition (Davies, et al, 1998).

This policy also protects the legal right to work of employees who are diagnosed with an AIDS virus-related condition and should provide guidelines for situations where infection with the AIDS virus is suspected. A policy needs to be written in

order to encourage sensitivity to and understanding for employees infected and/or affected with a condition of the AIDS virus.

3.8.2 General policy

Organisations must be committed to maintaining a healthy work environment by protecting the physical and emotional health and well being of all employees in the workplace (Davies et al, 1998). It must provide guidelines for situations when a question as to an AIDS virus-related condition arises. According to the Guidelines for developing a workplace policy and HIV/AIDS and STDs (Davies et al, 1998), there are three major points:

- Employees who are diagnosed with an AIDS virus-related condition may continue to work if they are deemed medically able to work and can meet acceptable performance standards. Organisations must provide reasonable performance standards and reasonable accommodation if necessary to enable these employees to continue working.
- Organisations must provide AIDS education for all employees to help them understand how the AIDS virus is spread and to reduce unrealistic fears of contracting an AIDS virus-related condition.
- The term “AIDS virus-related conditions” refers to the following four medically diagnosed conditions:

1. Presence of the AIDS antibody without symptoms of AIDS

2. Presence of an AIDS-Related Complex (ARC)
3. AIDS
4. Central nervous system infection

3.8.3 Medical overview

Medical experts on AIDS virus-related conditions have revealed through research that there is no known risk of AIDS transmission between an infected employee and other employees through either casual or close contact that occurs during normal work activities.

As discussed earlier, it must be re-enforced that an AIDS virus-related condition is not transmitted by breathing the same air, using the same toilets, touching a common piece of paper, or using the same telephone. According to medical authorities, transmission of the virus through oral secretions or tears is not a recognised risk. It must be highlighted that the virus is transmitted only through intimate exchange of bodily fluids (for example, blood or blood-contaminated tissue fluids such as semen or vaginal fluid).

The AIDS virus attacks the immune system, causing a breakdown in a person's normal protection against infection. This leaves the body vulnerable to life-threatening illnesses for example, the virus can affect the nervous system. In addition, individuals of all sexual preferences are at risk of contracting an AIDS

virus-related condition.

Medical findings indicate that a person who has a positive antibody test will not necessarily develop an AIDS virus-related condition. The presence of the AIDS antibody is a sign of infection, not immunity (Department of Health, 1997).

As is true for any person with a life-threatening illness, a person diagnosed with an AIDS virus-related condition deserves and requires compassion and understanding. While that person is attempting to cope with his or her own vulnerability and fears, the support and understanding of friends and colleagues can be particularly valuable.

Some people have fears about contracting AIDS based on misinformation or lack of knowledge about how AIDS is spread. Education providing accurate medical information can best alleviate fears of contracting an AIDS condition.

3.8.4 Supervisor's responsibilities

In respect of South African legislation, the physical and well-being of all employees must be protected, and reasonable accommodation for the medically impaired employee with an AIDS virus-related condition must be provided, as long as the employee is able to meet acceptable performance standards (Department of Health, 1997). To ensure these goals are met, the Department of

Health (1998) encourages organisations to follow guidelines set below:

- Any employee diagnosed with an AIDS condition is entitled, as is any other employee, to confidentiality of their medical condition and medical records.
- If an employee voluntarily discloses his/her AIDS condition and requests job accommodation for his/her medical condition, then that employee must obtain a written medical opinion that he/she (a) is medically able to work and (b) needs a reasonable job accommodation in order to maintain employment.
- If it is deemed medically necessary, based upon current physical impairment, the company in conjunction with its management must work to bring about any reasonable job modification or job transfer of the employee with a diagnosed condition of AIDS.
- If a healthy employee refuses to work with an employee who is diagnosed with an AIDS condition and is medically approved as able to work, job transfer or other work accommodation for the healthy employee will only occur when medically indicated by written order of his/her physician. The medical order must be a signed medical statement requesting this job change. In the absence of a medical order, normal transfer procedures must be followed.

3.9 HIV/AIDS Education

As discussed earlier, there is currently no cure for the HIV/AIDS pandemic that exists in the world today. Feldman (1991) highlighted that in the absence of a vaccine, education is the only weapon corporations have in their fight against AIDS. In addition, various statutory bodies have called for development and implementation of HIV/AIDS workplace policies, employee and supervisory education and prevention programmes. The code of good practice serves as a guide on workplace HIV/AIDS issues to assist employers and employees in establishing effective programmes and policies. Education should effectively deal with the general duty of care of employers and employees, and elaborates on specific protective measures for employees who work in occupations with an identified increased risk of exposure to HIV AIDS. Workplace education, which emphasises that HIV and AIDS are not transmitted by casual contact, may allow such an employee to be accommodated within a supportive atmosphere. It will also serve to reassure co-workers that they are not at risk and thus help preserve workforce productivity. According to Horner-long and Ortlepp (1994) survival of organisation in respect of HIV/AIDS will depend on how employers and trade unions can effectively develop or adopt a comprehensive employee educational programme in conjunction with the development of an effective AIDS policy. Feldman (1991: 11) emphasised that the future fight against AIDS “will not depend on the survival of the fittest but rather the survival of the best informed.”

Business leaders and human resource managers who understand this reality and

implement comprehensive workplace programmes, can better address legal challenges, avoid discrimination, manage employees with HIV, compassionately and in the process educate their workforce.

According to the Red Cross Workplace HIV/AIDS Programme (Department of Health, 1998) the programme must be flexible to adapt to the needs of a variety of workplaces.

The programme should therefore include:

- Sharing with employees and employers reliable information about HIV and AIDS, including facts about transmission and prevention;
- Encouraging discussion about topics including employee and employer rights and responsibilities, thereto;
- Helping employees understand that they can work safely, without fear, alongside people living with HIV or AIDS;
- Promotion of a compassionate environment for workers living with HIV, or those whose family members, friends, or partners may be HIV-positive;
- Include a special interactive module for managers and supervisors that prepares them for the unique challenges presented by HIV/AIDS in the workplace; and
- Identification of local resources and services.

HIV/AIDS education should focus on topics pertaining to sex, sexuality and sensitive issues affiliated to it. According to Tonks (1996) HIV/AIDS education should encourage participation and experiential learning. Both employers and employees need to

understand the facts about HIV and AIDS and be able eradicate misunderstanding that may exist. Tonks (1996) advocates that the best approach to HIV/AIDS education should be that of facilitation as opposed to lecturing or teaching, as such educational programmes should encourage:

- Learners to enjoy the experience of learning;
- Participation;
- Discussions with learners;
- Experiential activities; and
- The principles of reflection, interpretation and application.

Learners should relate to what they have learnt to the real world and assist in developing strategies and plan to manage the pandemic. The silence of living in fear, isolation and discrimination need to be broken. The approach to HIV/AIDS training should ensure that there is an atmosphere of trust whereby individuals feel to discuss their fears and phobias (Horner-long and Ortlepp, 1994). Both employers and employees need to start taking on responsibility for future business sustainability. To this end, prevention and educational programmes have to be specifically inclined to the needs of businesses and their employees.

In essence factual presentation of the impact of the virus would probably be the best way to educate the workforce. Horner-long and Ortlepp (1994: 16) promote that additional training components should also include first aid in which basic safety rules are learned

and how to prevent possible infect when attending to any workplace accident. Horner-long and Ortlepp (1994) indicate that this also prevents discrimination and highlights awareness and protection in all circumstances.

3.10 Education and training programmes

There are various education and strategies that are currently being utilised in industry today. Private and governmental organisations have and still are encouraging such programmes. In general most educational programmes consist of the following components:

3.10.1 Sex education and sexually transmitted diseases

Presentations are conducted on sex education and sexuality. Issues pertaining to culture are dealt with in conjunction with gender stereotypes. Programmes are designed to explain and describe how sexually transmitted diseases arise. The importance of understanding the accessibility of health services and the affordability of such medical treatment.

3.10.2 What is HIV/AIDS and how it is transmitted?

Educational programmes focus on the history of HIV and its progression in the human body. Facilitators also explain the modes transmission and thereby highlighting some of the risks involved when engaging in sexual activities, intake of drugs, tribal rituals, etc. But importantly how to prevent HIV.

3.10.3 How HIV infection develops

Programmes expose the clinical progression of the disease. Programmes also define symptomatic illnesses and explain how these illnesses contribute to developing further complications to the body.

3.10.4 Risk reduction, testing, and workplace issues

This programme is developed primarily for managerial levels in organisations. They focus on addressing some of the fears and in the same breath they also try to discourage the beliefs in myths. Such programmes also deal with the fact that an HIV-positive person does not pose a threat to the health of others in the workplace.

Issues regarding HIV testing and legalities tied with such practices are discussed in an attempt to educate management to deal with workplace practices. These programmes also highlight that a person with HIV disease may continue to work as long as he/she can fulfill the essential functions of the job.

3.10.5 First Aid

These programmes focus first aid and safety issues linked with the responsibilities of administering such assistance. Effectively, how to perform first aid safely to prevent infection from the range of bloodborne pathogens.

3.10.6 Management issues of HIV/AIDS

This type of educational programme highlights the consequences of failure to educate staff about HIV/AIDS. In addition it emphasises line managers and supervisors' responsibilities when an employee discloses HIV infection. Some of training programmes focus on the significance of providing, inter alia:

- ✓ Counselling;
- ✓ Peer Education; and
- ✓ Implement a wellness programme for all employees.

3.11 Conclusion

In essence HIV/AIDS will place tremendous strain on the workforce in general. The productivity of businesses will surely suffer without adequate knowledge of the implication of the disease on their businesses. Educational interventions are means by which organisations can understand and take the necessary steps to minimise the potential problems associated with the pandemic. According to Feldman (1991) knowledge in respect of HIV/AIDS is vital, therefore a knowledgeable workforce will be a healthy workforce. The next chapter will describe behavioural theories that focus on change.

CHAPTER 4

BEHAVIOURAL MODELS

4.0 Introduction

“All over the world HIV/AIDS workers have tried to change the behaviour of people so as to prune the apparently uncontrollable rise in the incidence of HIV/AIDS” (Dev Griesel and Van Rooyen, 2000). Furthermore, Dev Griesel and Van Rooyen (2000) advocate that many studies emphasise the need for an underlying theory upon which an intervention is built. Family Health International (2000) states that successful HIV prevention depends on changing risk behaviours. The ultimate goal of any HIV/AIDS initiative is to reduce the number of infections occurring in society and to effectively deal with prevalence of HIV/AIDS the currently exists.

HIV/AIDS prevalence is rising which gives a good indication that the majority of prevention programmes are failing, there has been however, no indication why (Family Health International, 2000). The reality of HIV/AIDS has scared many countries as it continues to spread all over the world, prevention techniques and efforts so too are increasing to promote changes in behaviour. While the majority of attempts to curtail HIV/AIDS rely in one way or the other on an intervention which involves the behaviour of people, the more successful programmes are those which are aimed specifically and directly at clearly identifying aspects of behaviour (Dev Griesel and Van Rooyen, 2000). However, research conducted by Dev Griesel and Van Rooyen (2000) indicate that a

large part of the problem to curb HIV/AIDS prevalence is that although people may have the knowledge, they may not have the incentive or the power to change behaviour.

According to Vadisetti (1989), behavioural theory is one of many important tools that can have a vital influence on HIV programmes. Developing new interventions is expensive and time consuming, and it makes good sense to adapt programmes that have been demonstrated to be effective. Using existing tools and theories of successful programmes can save time and money. In an age when money for preventative programmes is limited, adapting interventions is a means by which a programme can be cost-effective. Adapting interventions allows one to use principles that are known to be effective to address the needs of risk behaviour. There are many theories and models of health behaviour change, inter alia; theory of reasoned action, social learning theory, cognitive theory, Modified Aids risk-reduction behavior sequence and hierarchy of effects. The models of behaviour change are often used in HIV/AIDS programmes and form the foundation of health promotion initiatives. The researcher wishes to use two behavioural models [viz. The theory of reasoned action (Fishbein, Middlestadt and Hitchcock, 1991) and Modified AIDS risk-reduction model (Ehrhardt et al, 1992)] in an attempt to understand behavioural change in respect of HIV/AIDS in industry.

4.1 The Theory of Reasoned Action

The theory of reasoned action was developed in 1967. During the 1970's, the theory was revised and expanded by Azjen and Fishbein. During the course of the 80's the theory was used to study human behaviour and develop appropriate interventions (Kashima et al

1993). The theory of reasoned action is primarily a behavioural theory and was developed to explain how people make decisions.

The purpose of the theory is (Kashima et al, 1993):

- ✓ To predict and understand motivational influences on behaviour that is not under the individual's volitional control;
- ✓ To identify how and where to target strategies for changing behaviour; and
- ✓ To explain virtually any human behaviour.

The underlying premise of the theory is that humans are rational thinkers and systematically process and weigh the results of their volitional health actions before they make a decision (Fishbein and Middlestadt, 1991). People consider the implication of their actions before they decide to engage or not to engage in a given behaviour. The determinants of such theory creates the following sequence:

Attitudes + Intention = Behaviour

According to Fishbein, Middlestadt and Hitchcock (1991: 4) the theory of reasoned action has been constructed as follows:

“There is one primary determinant of behaviour, namely the person's intention to perform it. This intention is itself viewed as a function of two determinants:

- the person's attitude toward performing the behaviour (based on his/her beliefs

about the consequences of performing the behaviour, i.e. his or her beliefs about the costs and benefits of performing the behaviour); and

- the person's perception of the social (normative) pressure exerted upon him or her to perform the behaviour."

An elaboration of the above-mentioned formula is that an individual's behaviour is seen as function of intention to perform behaviour, which in turn is determined by personal attitudes, subjective norms and social norms about the behaviour and the consequences of such. A person's attitude toward behaviour is indicative of past experience, sufficient or insufficient information and social influences (Ajzen and Fishbein, 1980). Subjective norms relate to person's belief about whether significant other or referent groups (i.e. parents, spouses, teachers, peers, etc) approve or disapprove of the behaviour. The theory of reasoned action focuses on behavioural intentions rather than attitudes as the main predictors of behaviour. The resultant of a specific behaviour or behaviour pattern is the consequence of a person's attitude and their intention to act in a certain way (which may also be persuaded by social influences/norms).

Ajzen and Fishbein (1980: 5) further advocate that in order for a person to perform a given behaviour one or more of the following must be true:

- ✓ the person must have formed a strong positive intention (or made a commitment) to perform the behaviour;
- ✓ there are no environmental constraints that make it impossible to perform the behaviour;

- ✓ the person has the skills necessary to perform the behaviour;
- ✓ the person believes that the advantages (benefits, anticipated positive outcomes) of performing the behaviour outweighs the disadvantages (costs, anticipated negative outcomes);
- ✓ the person perceives more social pressure to perform the behaviour than not to perform the behaviour;
- ✓ the person perceives that the performance of the behaviour is more consistent than inconsistent with his or her self image, or that it's performance does not violate personal standards that activate negative self actions;
- ✓ the persons emotional reaction to performing the behaviour is more positive than negative; and
- ✓ the person perceives that he or she has the capabilities to perform the behaviour under a number of different circumstances.

For this reason, it is recommended that:

- A) that interventions incorporate elements designed to develop positive intentions in a given target group to participate in a clearly specified set of activities or behaviours and which in turn are articulated within the perceived social norms of that target group;
- B) that interventions which focus on maximising individuals' intentions to adopt or participate in a given behaviour or activity may be most relevant for those persons in the contemplation and preparation stages of behaviour

change (i.e. to facilitate movement into the action stage) rather than those who have already adopted the behaviour.

The theory of reason action is most successful when applied to behaviours that are under a person's volitional control (Kashima et al, 1993). Jemmot and Jemmot (1991) maintain that if behaviours are not fully under volitional control, even though a person may be highly motivated by his/her own attitudes and subject norms, he/she may not actually perform the behaviour due to intervening environmental factors or conditions. Kashima et al (1993) further advocate that the greatest limitation of the theory is with people who have little or feel they have little power over their behaviours and attitudes. Internal factors that may limit behavioural change are elements such as skills, abilities, information, etc and external factors may include a host of situational and environmental factors.

4.1.1 Figure 4.1 – Theory of Reason Action and its Application to AIDS

According to Jemmot and Jemmot (1991) AIDS researchers have applied the theory of reasoned action to enhance the understanding of risk reduction behaviour. Jemmot and Jemmot (1991) aver that several studies have underscored the influence of social norms in HIV prevention and risk reduction behaviours.

Kashima et al (1993) research indicates that intentions are defined by four elements:

- 1 what action is taken;

- 2 the target or who acts;
- 3 the situation in which the action takes places; and
- 4 the time in which the action takes place.

According to the theory, the most important determinant of a person's behaviour is behaviour intent. The individual's intention to perform behaviour is the combination of attitude towards performing the behaviour and subjective norms (Kashima et al, 1993). Consistent with Kashima et al (1993) the individual's attitude toward the behaviour includes, inter alia; behaviour belief, evaluations of behavioural outcome, subjective norms, normative beliefs and the motivation to comply. If a person perceives that the outcome from performing behaviour is positive then he/she will have a positive attitude toward performing that behaviour. If significant others (family, friends, peers, etc.) performing the behaviour as positive and the individual is motivated to meet the expectations of significant others, then a positive subjective norm is expected (Jemmot and Jemmot, 1991).

Several elements of health behaviour models (e.g. perceived vulnerability, perceived costs and benefits) effect motivation and intentions to change behaviour. Not only knowledge but also social norms affect behaviour to engage in prevention activities. Intentions are also based on social pressure to perform a behaviour and subjective norms such as expectations of what the referent group (i.e. the group with which one most likely identifies, e.g. parents, partners, friends, etc.) thinks he or she should do. For example, a woman's intention to use condoms is a function of her attitude (i.e. positive or negative)

toward using condoms and her perception of what her referent group thinks she should do about using condoms.

Studies of Jemmot and Jemmot (1991) promoted the use of condoms through education and ease of accessibility amongst African American woman. Knowledge imparted on the subjects indicated that proper use of condoms would decrease the risk of contracting sexually transmitted diseases such as HIV/AIDS. The study reflected that female African American women, who had more favourable attitudes towards condoms, perceived subjective norms to be more supportive of condom use. Reports by Jemmot and Jemmot (1991) indicated that African American women reported more consistent use of condoms as compared to other adolescent women.

Ross and McLaws' (1992) study was conducted in Australia among male homosexuals. Their study advocated the use of condoms in an attempt to reduce the risk of contracting sexually transmitted viruses during sexual activities. Condom use was promoted as means to reduce sexually transmitted and other forms of risky sexual behaviour. Their research confirmed that gay men in South Australia intentions to use condoms were congruent with predicted actual use. Attitudes had little impact on intentions, but subjective social norms particularly those of sexual partners and the gay community were important predictors of intentions to use condoms and actual use. See figure 4.1

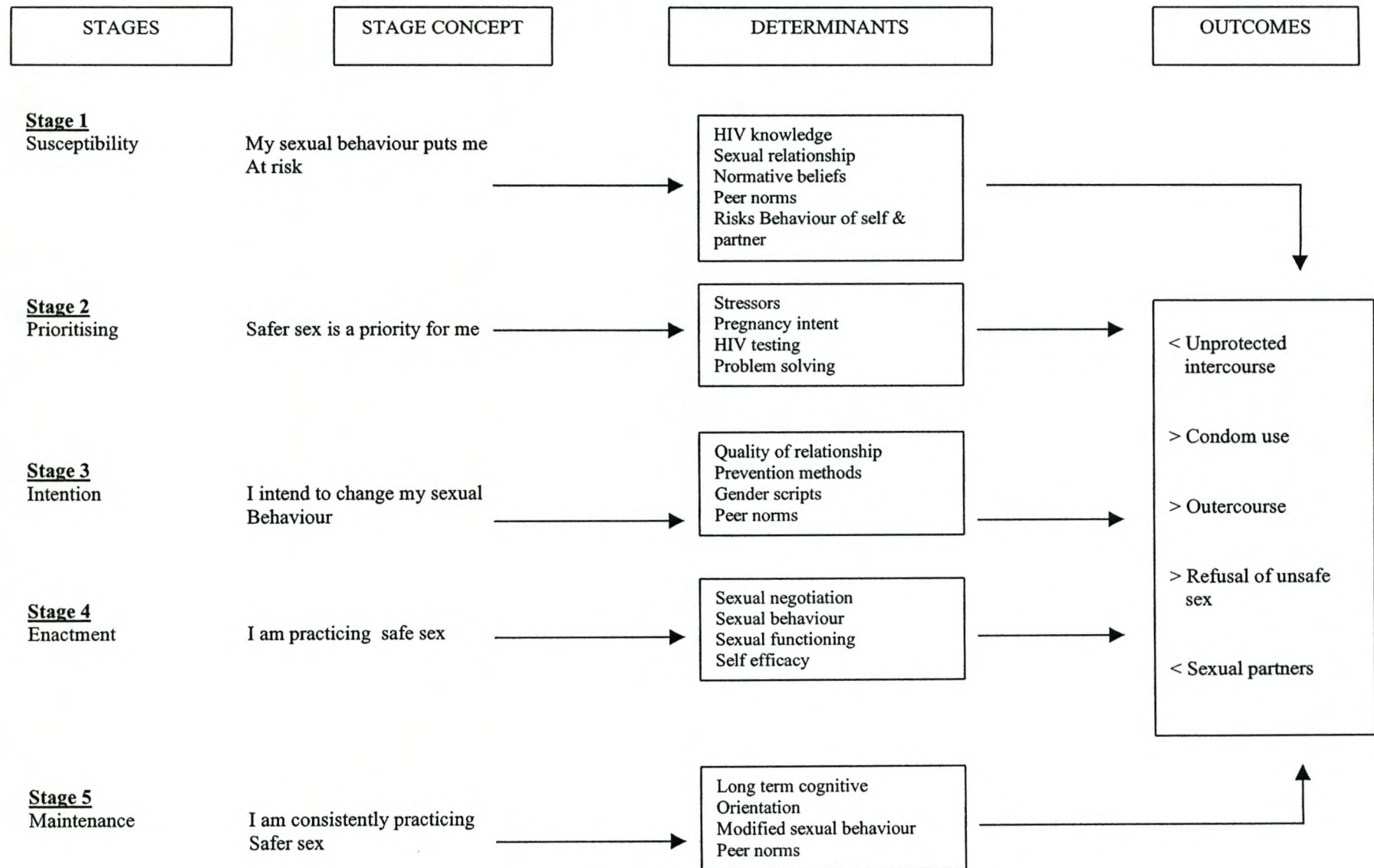


Figure 4.2 - AIDS Risk Reduction Model

4.2 The AIDS Risk Reduction Model and Modified Aids-Risk Reduction Model

The AIDS Risk Reduction Model (ARRM) (Catania et al, 1990) integrates elements of the health belief model (Rosenstock, Strecher and Becker, 1994), Social Learning theory (Bandura, 1986), The Theory of reasoned action (Fishbein and Ajzen, 1975) and the theory of Motivation (Prochaska and DiClemente, 1986) to explain AIDS prevention efforts. It acknowledges behaviour change as a multi-step process with different psychological determinants for each stage. The ARRM was modified by Ehrhardt et al (1992).

According to Dev Griesel and Van Rooyen (2000) the AIDS Risk Reduction Model (ARRM) is the most comprehensive model and has specifically designed around the HIV/AIDS phenomenon. The AIDS risk reduction behaviour sequence describes behavioural change as having to take to place in a particular order. There are three fundamental determinants of HIV/AIDS risk reduction behaviour that are established in the following sequence:

- Information (regarding transmission and methods of preventing infection)
- Motivation to change HIV/AIDS risk behaviour; and
- Behavioural skills for performing several HIV/AIDS preventative acts.

When information is followed by motivation to change behaviour, this circumstance activates a need for a set of behavioural skills, which, once acquired can lead to behavioural change (Dev Griesel and Van Rooyen, 2000: 5).

Kalichman et al (1996) avers that although theories are based on different assumptions, they all state that behavioural changes occur by changing potential risk-producing situations, social relationships, risk perceptions, attitudes, self efficacy beliefs, intentions and outcome expectations.

Dev Griesel and Van Rooyen (2000) promote that there is currently a more urgent, if not a desperate campaign to assist behaviour in more direct and positive ways. An attempt to understand the reasons for little behavioural change will serve to identify the role of information regarding HIV/AIDS and the possibility of tracing behaviours that lead to the spread of HIV.

4.2.1 Discussion of the Modified AIDS Risk Reduction Model (M-ARRM)

Although Dev Griesel and Van Rooyen (2000) promote that ARRM is the most comprehensive model, the M –ARRM appears to take more environmental considerations into account. In the M-ARRM the labeling of stage one is renamed susceptibility, stage two has been renamed intention and whilst the enactment stage has been maintained, the M-ARRM considers sexual negotiation (e.g. concern with partner's reaction to safer sex, gender role beliefs and norms), sexual behavior, sexual function and self efficacy. Two new stages were included in the model, namely, prioritising and maintenance. The prioritisation stage acknowledges the need to see prevention as important issue of everyday life. In light of the above discussion, the revised aids risk reduction model consists of five stages, i.e. susceptibility, prioritising, intention, enactment and maintenance. See figure 4.2.

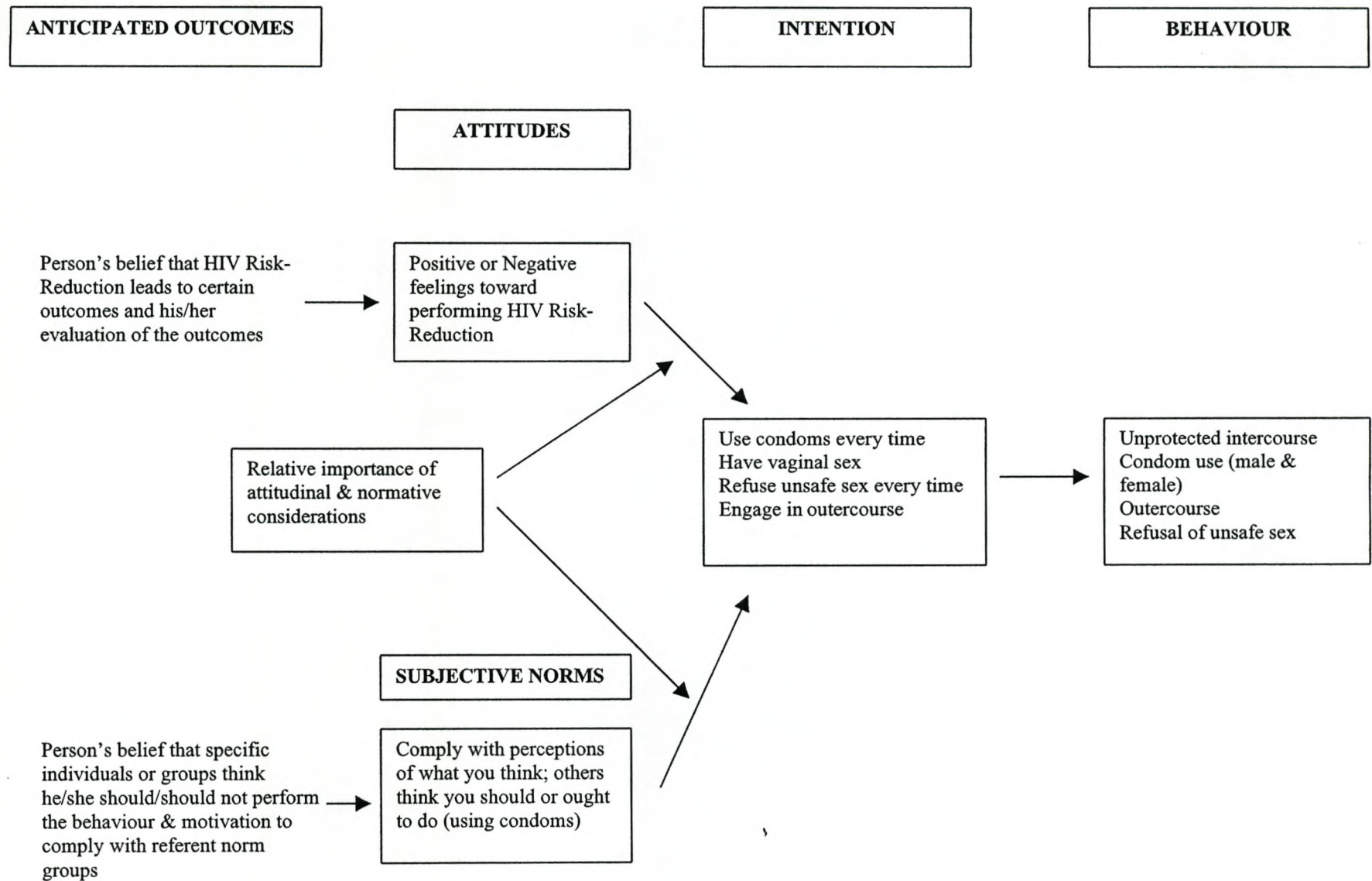


Figure 4.1 - Theory of Reasoned Action

The five stages will briefly be discussed hereunder:

Stage one – Susceptibility. This stage involves acquiring knowledge about the virus, for example; how is virus transmitted and the risks of getting virus. HIV prevention may involve activities which may include, providing educational interventions, distributing condoms, sponsoring community outreach activities such as religious campaigns, public awareness campaigns, co-ordinating with other community organisations in service-delivery or fund-raising activities.

Stage two – Prioritising. This stage empowers an individual to remain healthy. Understanding the importance of being tested for HIV. The issues of falling pregnant and the dangers thereof are the priorities of this stage.

Stage three – Intention. This stage focuses on the reconsideration and analysis of relationships. An individual's intention to change might involve prevention methods against getting the virus and acting proactively to live a healthier life. An individual may also assess his/her intentions with regards to HIV/AIDS and those of peers.

Stage four – Enactment. Armed with information of HIV/AIDS an individual will be able negotiate better relationships as opposed to careless or inappropriate sexual relationships. Healthier relationships will enhance a person's quality of life. For those that have been diagnosed with HIV, safer ways will follow in an attempt to curtail the spread of the virus.

Stage Five – Maintenance. Following the preceding steps will create a long-term cognitive orientation where consistent steps will be taken to control the spread of HIV/AIDS. Modified sexual behaviour will reduce the spread of the disease

through casual sexual relationships. Positive trends will also influence peer norms.

If more people follow the above-mentioned steps, the model is said to exhibit positive results such as :

- ✓ Decrease unprotected intercourse;
- ✓ increase condom use;
- ✓ increase outercourse (outercourse refers to exploration of ones own body by way of sensuous feeling, touching and masturbation);
- ✓ Increase in the refusal of unsafe sexual practices; and decrease sexual partners.

Prevention programmes need to take into account the life context in which a person applies safer sex, and the relationship to the HIV epidemic of that person. Prevention programmes need to be tailored to these different situations, not reinvented entirely. Programme planners can choose from a variety of elements of prevention programmes that can address their own local population and setting of intervention needs. Before adapting an intervention, it is essential to understand the characteristics of the original programme and its audience, and how they are different or similar to the new environment. A well informed and behaviourally skilled person must still be highly motivated to initiate and maintain HIV/AIDS preventative behaviour.

Theory gives a background for behavior change, and may also be useful in assessing whether an intervention is appropriate for a different target group. For example, the

Social Cognitive theory of behavior calls for learning through interactions with other people and using physical and social environments to produce change. An effective collaboration of information and assessment of behaviour may enable all stakeholders of the community (i.e. people, businesses, schools, etc) to adopt safer behaviours and/or protect themselves from risk behaviour. Family Health International (2000: 3) promotes that behavioural data can pinpoint specific behaviours, which need to change and also highlight those behaviours that are not changing over time. Organisations need to commit time and resources to training staff in effective use of prevention programmes, including using theory, conducting needs assessments and reaching out to researchers and other organisations to find out what interventions have proven to be effective.

4.3 Conclusion

New theories arise from a variety of sources, often from the needs of the local environment. Collaborations of organisations and researchers need to be encouraged, in order that programmes may move beyond learning through word of mouth.

It is the researcher's opinion that the theory of reasoned action and the M-ARRM share a similar conceptual framework. Both models use ways of trying to express factors underlying behaviour with a similar conceptual framework in order to predict and understand a given behaviour. A comprehensive HIV prevention strategy uses multiple elements to protect, as many of those at risk of HIV infection, as possible. With the use of theory as a framework, researchers can take a closer look at what works in prevention and design more effective programmes which will outlay the groundwork for programme

evaluation. This synthesis can result in more effective programmes, by which to better reach people at risk, and can help save time, money and lives.

The next chapter will highlight the research methodology used in the current study.

CHAPTER 5

RESEARCH METHODOLOGY

5.0 Introduction

The methodology and research design used in the current study form the content of this chapter. It focuses on the objectives of the study, the sampling design, research instrument, data collection method and data analysis techniques.

5.1 Objectives of the study

The Objectives of the study may be reflected as follows:

- a) to assess the obstacles in respect of behaviour change on an implementation strategy that might lead to behavioural change in respect to HIV/AIDS;
- b) to assess the impact of the implementation strategy with regard to knowledge, behaviour and intentions; and
- c) to investigate if there is a significant difference in behavioural change towards HIV/AIDS among the biographical variables (age, sex, race, marital status, number of children, level of education and job status).

5.2 Sampling Design

The sampling design refers to the manner in which the sample in the current study has been drawn from the population.

5.2.1 Population:

According to Huysamen (1990) a population refers to a total complement of individuals who are potentially accessible for research in a specific area of study. The population in this study comprises 80 employees within a depot.

5.2.2 Sample:

Huysamen (1990) defines a sample as a comparatively small group of individuals from the population.

5.2.3 Sample size

The size of the population was eighty employees and the researcher selected entire population as the sample. However, only seventy subjects responded to the questionnaire. The researcher used the entire population in order to obtain a comprehensive outlook of knowledge, intentions and behaviour towards HIV/AIDS.

5.3 Data Collection

Data collection explains the data techniques and research instrument used in this study.

5.3.1 Research instrument

The research instrument used in this study is a questionnaire. A pretest and posttest application of the questionnaire was utilised.

5.3.1.1 Description of the instrument

The questionnaire used in the study consisted of twenty four statements. The questionnaire consisted of two parts, namely, biographical section and a section relating to HIV/AIDS. The biographical section in the questionnaire refers to age, sex, race, marital status, number of children, level of education and job status. Section B related to the knowledge, intentions and behaviour toward HIV/AIDS.

All statements illustrated in the questionnaire were closed ended, that is to say, the respondent could have only chosen his or her answers from the five alternatives that were given (See Annexure 1, page 112).

The alternatives ranged from negative to positive, in other words the first block had a negative response and the last block had a positive response. The alternatives extended from strongly disagree, inclined to disagree, uncertain, inclined to agree, to strongly agree.

Strongly Disagree	Inclined to Disagree	Uncertain	Inclined to Agree	Strongly Agree
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5.4 Statistical reflection of the population

The sample consisted of 80 employees.

5.5 Research Procedure

The researcher handed pretest questionnaires to the entire population. HIV/AIDS awareness seminars were used as an implementation strategy by the organisation. The education seminars covered the following areas:

- ✓ background and statistics;
- ✓ modes of transmission;
- ✓ progression of the virus HIV/AIDS;
- ✓ signs and symptoms;
- ✓ factors that delay progression;
- ✓ prevention and safer sex;
- ✓ attitude and behaviour change; legal issues on HIV/AIDS in the workplace; and
- ✓ HIV/AIDS testing.

Thereafter, a posttest application of the questionnaire was applied to the subjects.

5.6 Data Analysis Techniques

Data analysis techniques refer to the statistical tools used to analyse the data attained from the research instrument. The researcher used the SIMSTAT Programme Version 5, to analyse the data.

5.6.1 Descriptive Statistics

Descriptive statistics is a collection of methods for classifying and

summarising numerical data.

5.6.1.1 Measure of central tendency and dispersion

a) Mean:

The mean is the arithmetic average of the scores in a distribution. It is determined by adding the scores and dividing by the total number of scores (Huysamen, 1990). The mean will be used in objectives A and B.

b) Standard Deviation:

Variance is the average of the sum of squared deviations around the mean. According to Huysamen (1990). It is expressed in squared units of measurement because the deviation scores are squared in order to eliminate negative scores. The standard deviation is the square root of the variance, hence satisfying the above-mentioned criterion (Huysamen, 1990). Standard deviation is expressed in the same units as the original measurement of the variable.

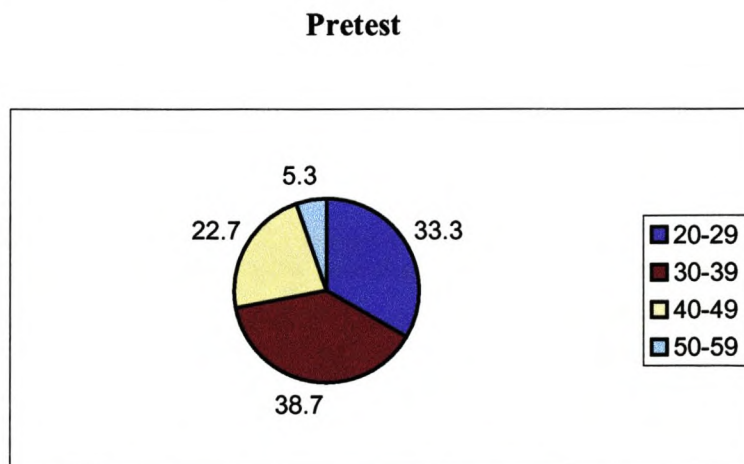
c) Frequency:

The frequency indicates the number of times a given score or

a group of scores occurs. Frequency will be used to enumerate the biographical data.

Biographical data pertaining to the sample were broken down into seven areas, i.e.; age, sex, race, marital status, number of children, level of education and job status. Due to the confidentiality of information, the research was unable to get the exact same sample to answer posttest as such a pretest and posttest statistical break of biographical details are as follows:

i) Age



**Figure 5.1 Biographical Data – Description of Age
(Pretest)**

Figure 5.1 illustrates the description of age of subjects in the pretest evaluation of the questionnaire. The pretest evaluation

indicated that the sample was made up of 33.3% of subjects who fell in the age category of 20 –29 years. 38.7% of subjects fell into the 30 –39 age category. 22.7% of subjects fell into the 40 – 49 age group and 5.3% of subjects indicated that they were between 50 to 59 years of age.

Posttest

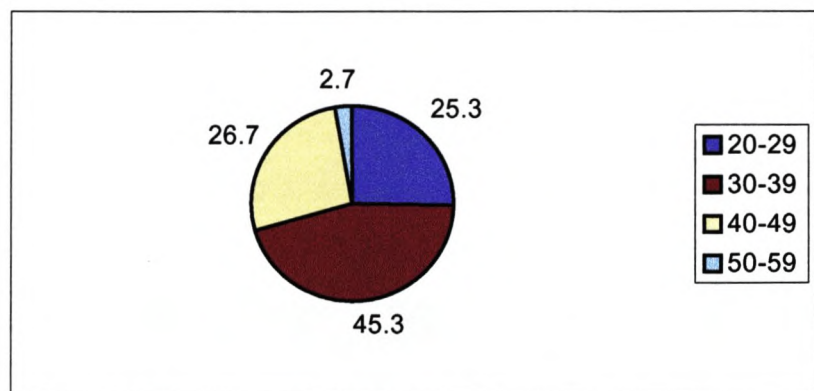


Figure 5.2 Biographical Data – Description of Age (Posttest)

The posttest evaluation indicated that the sample was made up of 25.3% of subjects who fell in the age category of 20 – 29 years (see figure 5.2). 45.3% of subjects fell into the 30 – 39 age category. 26.7% of subjects fell into the 40 – 49 age group and 2.7% of subjects indicated that they were between 50 to 59 years of age.

ii) Sex**Pretest**

The pretest evaluation indicated that the sample reflected that 88.2% of the subjects were males and 17.3% of the subjects were females (see figure 5.3).

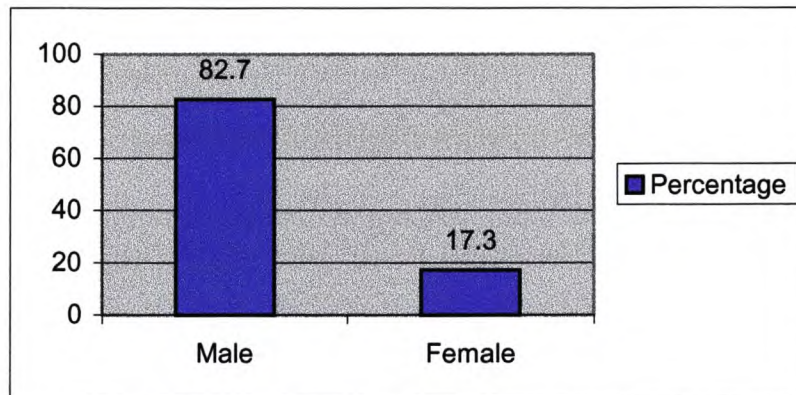


Figure 5.3 Biographical Data – Description of Sex (Pretest)

Posttest

The posttest evaluation indicated that the sample reflected that 88.2% of the subjects were males and 17.3% of the subjects were females. (See figure 5.4).

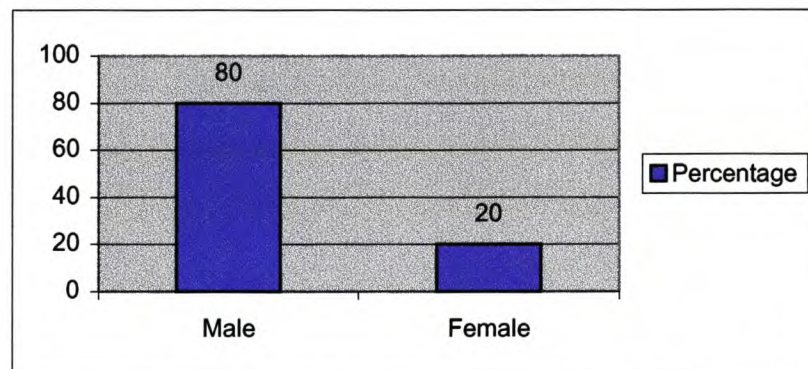


Figure 5.4 Biographical Data –Description of Sex (Posttest)

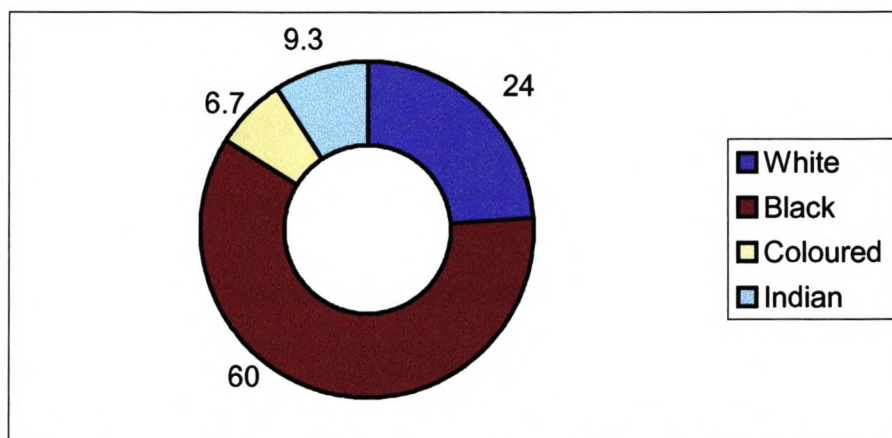
iii) Race**Pretest**

Figure 5.5 Biographical Data – Description of Race (Pretest)

The pretest evaluation as reflected in figure 5.5, indicates that the sample was made up of 24% of subjects that were whites. 60% of subjects fell into black race group. 6.7% of subjects were coloured and 9.3% of subjects indicated that they were Indian.

Posttest

The posttest evaluation as reflected in figure 5.6, indicates that the sample was made up of 24% of subjects that were whites. 64% of subjects fell into black race group. 8% of subjects were coloured and 4% of subjects indicated that they were Indian.

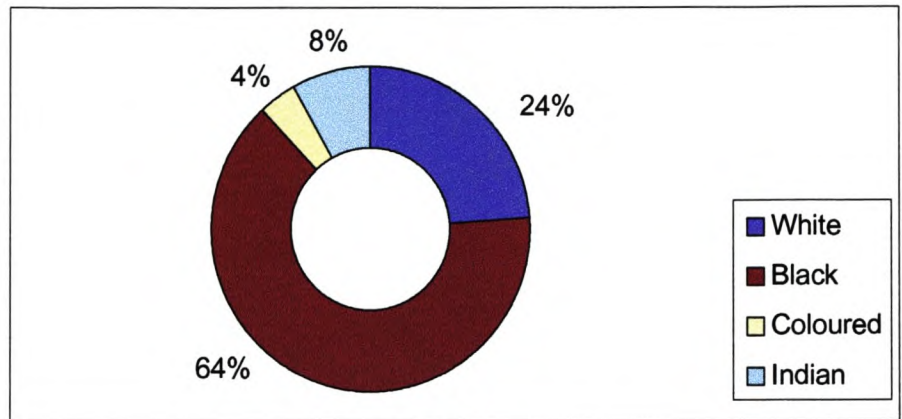


Figure 5.6 Biographical Data – Description of Race (Posttest)

vi) Marital Status

Pretest

The pretest evaluation as shown in figure 5.7, indicates that the sample was made up of 33.3% of subjects who were single. 56% of subjects fell into married category. 4% of subjects were separated and 6.7% of subjects indicated that they were divorced.

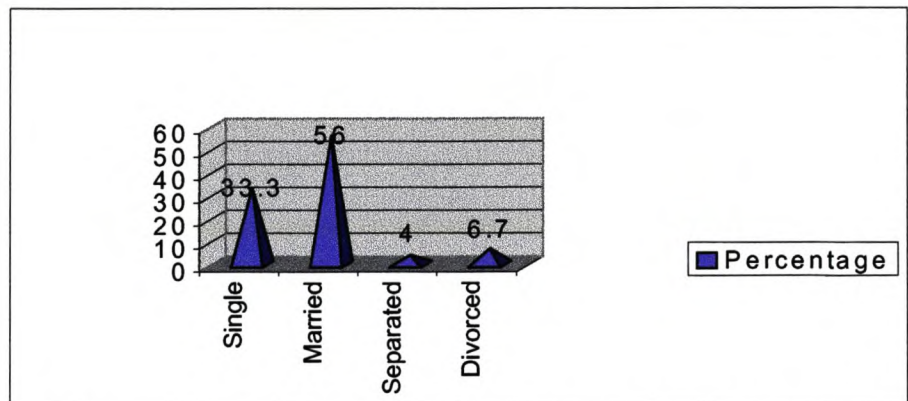


Figure 5.7 Biographical Data – Description of Marital Status (Pretest)

Posttest

The posttest evaluation as shown in figure 5.8, indicates that the sample was made up of 25.3% of subjects who were single. 65.3% of subjects fell into married category. 5.3% of subjects were separated and 4% of subjects indicated that they were divorced.

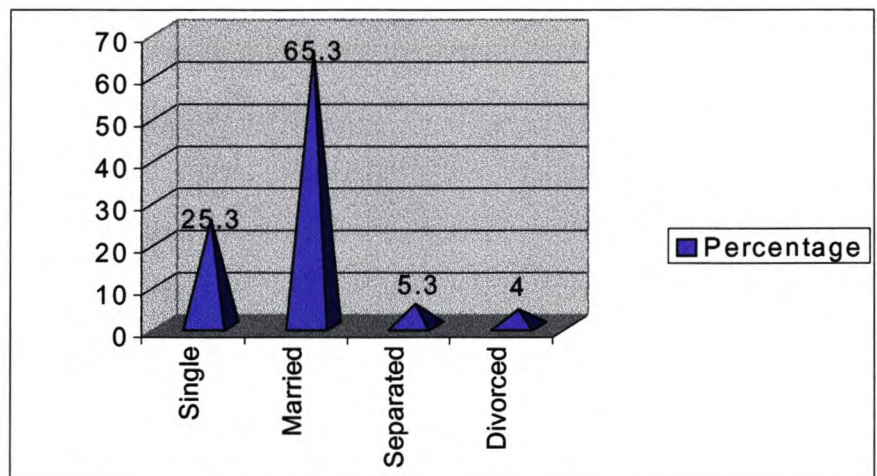


Figure 5.8 Biographical Data – Description of Marital Status (Posttest)

iv) Number of children

Pretest

The pretest evaluation as indicated in figure 5.9, reflects that the sample was made up of 28% of subjects who had no children. 36% of subjects parented 1 to 2 children. 28% of subjects had 2 to 3 children and 8% of subjects indicated that they parented more than 5 children.

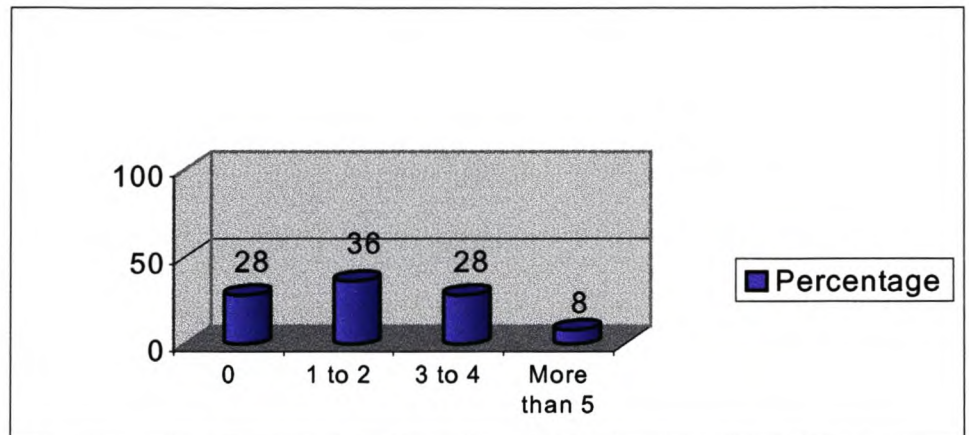


Figure 5.9 Biographical Data – Description of number of Children (Pretest)

Posttest

The posttest evaluation as indicated in figure 5.10, reflects that the sample was made up of 20% of subjects who had no children. 44% of subjects parented 1 to 2 children. 29.3% of subjects had 2 to 3 children and 6.7% of subjects indicated that they parented more than 5 children.

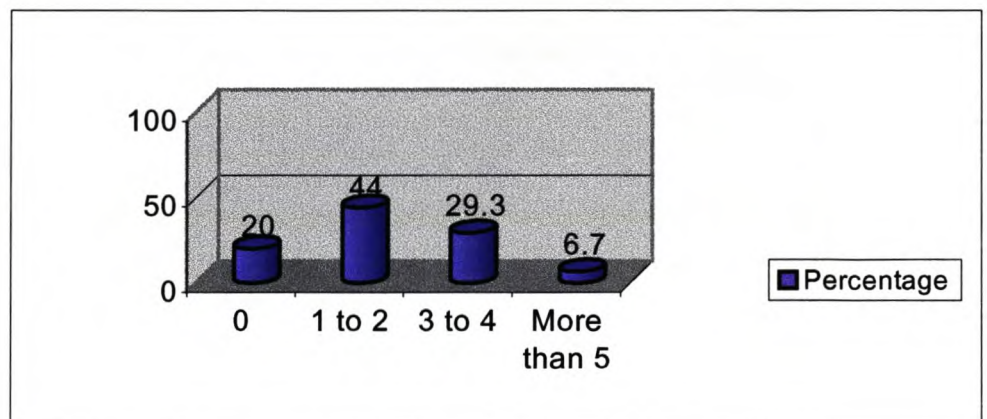


Figure 5.10 Biographical Data – Description of number of Children (Posttest)

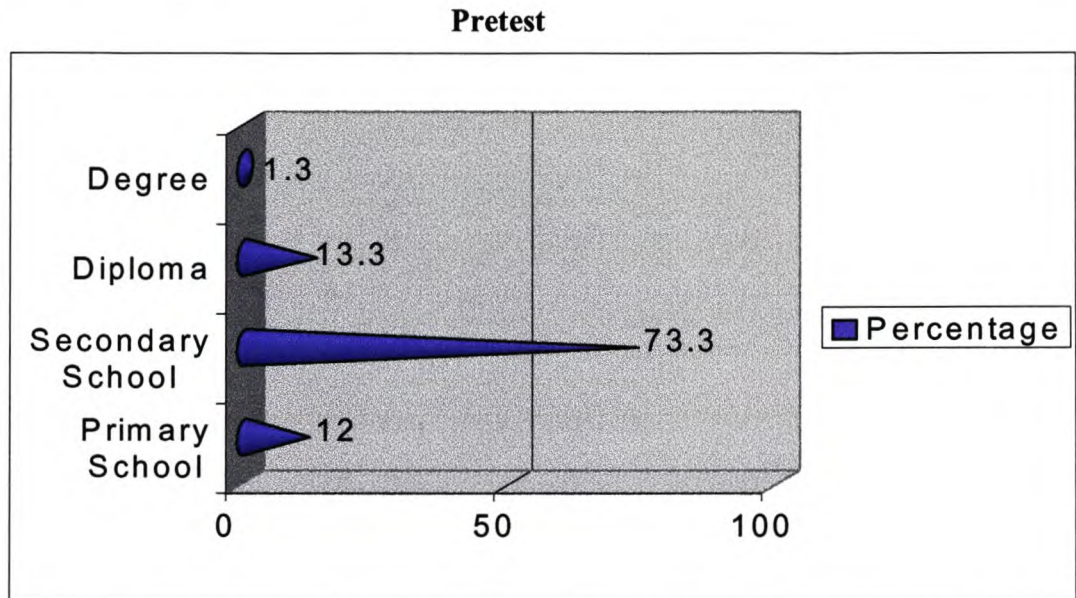
iv) Level of education

Figure 5.11 Biographical Data – Description of levels of Education (Pretest)

The pretest evaluation as illustrated in figure 5.11, indicates that the sample was made up of 12% of subjects who only attended primary school. 73.3% of subjects had secondary school education. 13.3% of subjects received diplomas and 1.3% of subjects indicated that they were graduates.

Posttest

The pretest evaluation as illustrated in figure 5.12, indicates that the sample was made up of 6.7% of subjects who only attended primary school. 81.7% of subjects had secondary school education. 10.7% of

subjects received diplomas and 1% of subjects indicated that they were graduates.

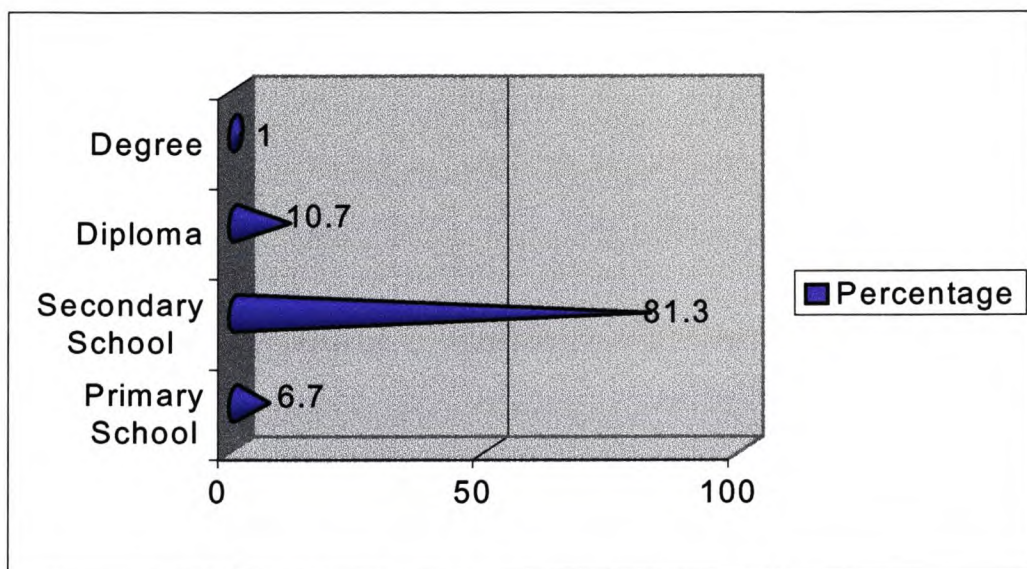


Figure 5.12 Biographical Data – Description of levels of Education (Posttest)

v) Job Status

Pretest

The pretest evaluation as exhibited in figure 5.13, indicates that the sample was made up of 17.3% of subjects who were part of management. 32% of subjects fell into administrative work category. 20% of subjects were Artisans and 30.7% of subjects indicated that they were labourers.

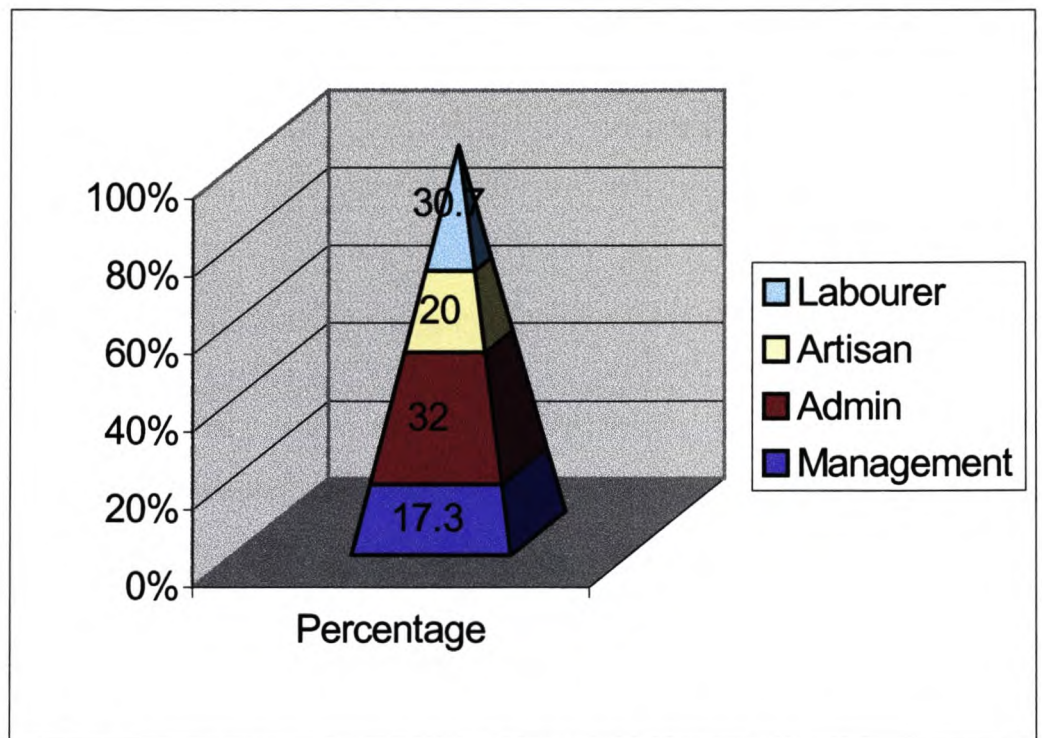
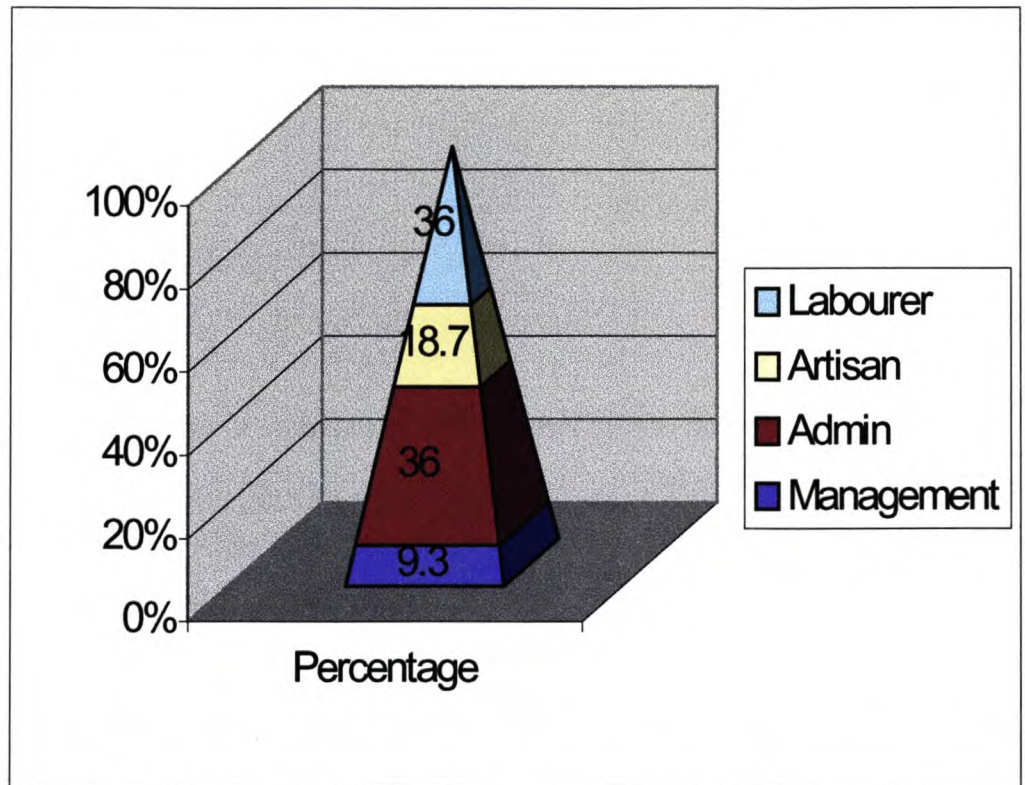


Figure 5.13 Biographical Data – Description of Job Status (Pretest)

Posttest

The posttest evaluation as exhibited in figure 5.14, indicates that the sample was made up of 9.3% of subjects who were part of management. 36% of subjects fell into administrative work category. 18.7% of subjects were Artisans and 36% of subjects indicated that they were labourers.



**Figure 5.13 Biographical Data – Description of Job Status
(Posttest)**

5.6.2 Inferential Statistics

Inferential statistics is a collection of methods for making inferences about the characteristics of the population from knowledge of the corresponding characteristics of the sample (Sekaran, 1992). Inferential statistical techniques used in the current study will be interpreted and discussed in chapter six.

a) T Tests:

The t-test is used to test pretest and posttest data pertaining to gender. It is a statistical test that establishes a significant mean difference in a variable between two groups (Sekaran, 1992: 372). The t-test will be utilised to determine whether there is significant difference between gender and variables of knowledge, intentions and behaviour towards HIV/AIDS.

b) Analysis of Variance (ANOVA)

ANOVA is used to test two or more hypotheses. This statistical test establishes significant mean differences in variables among multiple groups (Sekaran, 1992: 372). Anova will be used to investigate knowledge, intentions and behaviour has changed after the implementation strategy. ANOVA will also utilised to determine whether there is a significant difference between knowledge, intentions and behaviour among biographical details.

c) Pearson's Product Moment Correlation

Correlation seeks to test if two variables are directly related to one another (Huysamen, 1990). Pearson's Product Moment Correlation will be utilised to establish the inter-correlation between knowledge, intentions and behaviour towards HIV/AIDS.

5.7 Conclusion

This chapter illustrated how the sample in the present study was delineated. It defines concepts that were used in the research. The next chapter deals with the manner in which, those concepts explained in this chapter were used in analysing the data extracted from the research instrument.

CHAPTER 6

ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS

6.0 Introduction

This chapter consists of three significant areas, which reflect the analyses, presentation and discussion of results. In order to test the hypotheses of the study, various statistical analyses have been conducted and the results of these analyses are presented and discussed in this chapter.

6.1 Objectives of the study

Objectives of the current study are reflected as follows:

- a) to assess the obstacles in respect of behaviour change on implementation of a strategy that might lead to behavioural change in respect to HIV/AIDS;
- b) to assess the impact of the implementation strategy with regard to knowledge, behaviour and intentions; and
- c) to investigate if there is a significant difference in behavioural change towards HIV/AIDS among the biographical variables (age, sex, race, marital status, number of children, level of education and job status).

6.3 Measures of central tendencies and dispersion

Statistics such as means, standard deviations, minimum and maximum scores were obtained in respect of knowledge, intentions and behaviour towards HIV/AIDS for both pre and post test applications of the research instrument.

TABLE 6.1

PRETEST				
Criteria of measurement	Mean	Standard deviation	Minimum	Maximum
Knowledge	33.83	6.39	20	49

The pretest evaluation of the research instrument indicated a mean of 33.83. The standard deviation of 6.39 was high which, indicates a difference in knowledge amongst the subjects used in the study. The minimum and maximum scores showed a large differential, which indicates a gap in knowledge in respect of HIV/AIDS.

TABLE 6.2

POSTTEST				
Criteria of measurement	Mean	Standard deviation	Minimum	Maximum
Knowledge	44.04	4.81	31	50

The mean score of 44.04 increased in the posttest evaluation of the questionnaire, which reflects that learning did occur during the implementation of the strategy used by the organisation. The standard deviation of 4.81 decreased from the pretest application of the questionnaire and it indicates that the difference in knowledge in respect of HIV/AIDS decreased amongst subjects of the study.

TABLE 6.3

PRETEST				
Criteria of measurement	Mean	Standard deviation	Minimum	Maximum
Intentions	21.71	3.64	6	28

The pretest evaluation of the research instrument reflected a mean of 21.67. The standard deviation was low which indicates that subjects shared similar intentions in respect of their behaviour towards HIV/AIDS.

TABLE 6.4

POSTTEST				
Criteria of measurement	Mean	Standard deviation	Minimum	Maximum
Intentions	21.67	3.18	12	26

The posttest application of the questionnaire reflected a mean 21.67. The mean score in the posttest decreased from that of the pretest. This indicates that was a very small decrease in respect of positive behaviour towards HIV/AIDS. The gap between the minimum and maximum scores decreased from the pretest.

TABLE 6.5

PRETEST				
Criteria of measurement	Mean	Standard deviation	Minimum	Maximum
Behaviour	18.84	5.18	6	25

The behavioural component measured during the pretest application of the questionnaire

exhibited a score of 18.84. The standard deviation yielded a score of 5.18, which is relatively high and indicates a large difference in respect of behaviour towards HIV/AIDS. The difference between in minimum and maximum scores also reflects divergent modes of behaviour towards HIV/AIDS.

TABLE 6.6

POSTTEST				
Criteria of measurement	Mean	Standard deviation	Minimum	Maximum
Behaviour	19.43	4.73	9	25

The behavioural component of the questionnaire indicated a mean of 19.43. The mean score in posttest application of the questionnaire displayed that behaviour towards HIV/AIDS did make a positive change. The standard deviation score of 4.73 reflected a decrease, which also indicates that subjects did indicate a behavioural change after the implementation strategy was completed. The gap between the minimum and maximum scores decreased in range, which consequently means less divergent modes of behavioural toward HIV/AIDS.

6.3 Inter-correlation of knowledge, intentions and behaviour towards HIV/AIDS

Inter-correlation matrix of the above-mentioned components was obtained by using the Pearson's Product Moment Correlation technique.

The results are indicated as follows:

TABLE 6.7

PEARSON PRODUCT MOMENT CORRELATION (PRETEST)			
VARIABLES	PRETEST KNOWLEDGE	PRETEST INTENTIONS	PRETEST BEHAVIOUR
KNOWLEDGE Pearson Correlation Sig (2 tailed)	1.00 0	0.088 0.451	0.310 0.007 *
INTENTIONS Pearson Correlation Sig (2 tailed)	0.88 0.451	1.00 0	0.200 0.086
BEHAVIOUR Pearson Correlation Sig (2 tailed)	0.310 0.007 *	0.200 0.086	1.00 0
* = P < 0.05			

The results of Pearson's Moment Correlation used in pretest application of the questionnaire shows a significant relationship between knowledge and behaviour.

TABLE 6.8

PEARSON PRODUCT MOMENT CORRELATION (POSTTEST)			
VARIABLES	POSTTEST KNOWLEDGE	POSTTEST INTENTIONS	POSTTEST BEHAVIOUR
KNOWLEDGE Pearson Correlation Sig (2 tailed)	1.00 0	-0.103 0.377	0.302 0.009 *
INTENTIONS Pearson Correlation Sig (2 tailed)	-0.103 0.377	1.00 0	0.169 0.146
BEHAVIOUR Pearson Correlation Sig (2 tailed)	0.302 0.009 *	0.169 0.146	1.00 0
* = P < 0.05			

The results of Pearson's Moment Correlation of the posttest application of the questionnaire also indicated a significant relationship between knowledge and behaviour.

6.4 ANOVA

TABLE 6.9

ANOVA (PRETEST)						
VARIABLES	SUM OF SQ	df	MEAN SQ	f	Sig	
Age - Knowledge						
Between groups	34.327	3	11.442	0.272	0.845	
Within groups	2986.420	71	42.062			
Total	3020.747	74				
Age - Intentions						
Between groups	78.114	3	25.039	1.961	0.128	
Within groups	906.431	71	12.767			
Total	981.547	74				
Age - Behaviour						
Between groups	78.114	3	26.039	0.970	0.412	
Within groups	1905.966	71	26.845			
Total	1984.080	74				
Race - Knowledge						
Between groups	71.229	3	23.743	0.572	0.636	
Within groups	2949.517	71	41.542			
Total	3020.747	74				
Race - Intentions						
Between groups	24.321	3	8.107	0.601	0.616	
Within groups	957.225	71	13.482			
Total	981.547	74				
Race - Behaviour						
Between groups	514.677	3	171.559	8.290	0.00*	
Within groups	1469.403	71	20.696			
Total	1984.080	74				
Marital Status - Knowledge						
Between groups	121.630	3	40.543	0.993	0.401	
Within groups	2899.116	71	40.833			
Total	3020.747	74				
Marital Status - Intentions						
Between groups	9.870	3	3.290	0.240	0.868	
Within groups	971.676	71	13.686			
Total	981.547	74				
Marital Status - Behaviour						
Between groups	49.610	3	16.537	0.607	0.613	
Within groups	1934.470	71	27.246			
Total	1984.080	74				
No. of Children - Knowledge						
Between groups	89.308	3	29.769	0.721	0.543	
Within groups	2931.439	71	41.288			
Total	3020.747	74				
No. of Children - Intentions						
Between groups	52.499	3	17.500	1.337	0.269	
Within groups	929.048	71	13.085			
Total	981.547	74				
No. of Children - Behaviour						
Between groups	29.054	3	9.685	0.352	0.788	
Within groups	1955.026	71	27.536			
Total	1984.080	74				

Education - Knowledge					
Between groups	97.119	3	32.373	0.786	0.506
Within groups	2923.627	71	41.178		
Total	3020.747	74			
Education - Intentions					
Between groups	38.065	3	12.688	0.955	0.419
Within groups	943.482	71	13.288		
Total	981.547	74			
Education - Behaviour					
Between groups	78.415	3	26.138	0.974	0.410
Within groups	1905.665	71	26.840		
Total	1984.080	74			
Job Status - Knowledge					
Between groups	79.288	3	26.429	0.638	0.593
Within groups	2941.459	71	41.429		
Total	3020.747	74			
Job Status - Intentions					
Between groups	16.288	3	5.429	0.399	0.754
Within groups	965.258	71	13.595		
Total	981.547	74			
Job Status - Behaviour					
Between groups	165.084	3	55.028	2.148	0.102
Within groups	1818.996	71	25.620		
Total	1984.080	74			

The results of Anova (pretest) for biographical variables indicated that there is no significant difference in knowledge, intentions and behaviour of employees in the various biographical categories (i.e. age, marital status, number of children, education and job status) regarding HIV/AIDS.

Similarly there is no significant difference in knowledge and intentions of employees among the different race groups (i.e. White, Black, Coloured and Indian). However, employees in various race groups did display varying behaviour with regard to HIV/AIDS.

TABLE 6.10

ANOVA (POSTTEST)					
VARIABLES	SUM OF SQ	df	MEAN SQ	f	Sig
Age - Knowledge					
Between groups	71.564	3	23.855	1.033	0.383
Within groups	1639.316	71	23.089		
Total	1710.880	74			
Age - Intentions					
Between groups	17.300	3	5.767	0.560	0.643
Within groups	731.367	71	10.301		
Total	748.667	74			
Age - Behaviour					
Between groups	34.424	3	11.475	0.502	0.682
Within groups	1621.923	71	22844		
Total	1656.347	74			
Race - Knowledge					
Between groups	288.986	3	96.329	4.810	0.004*
Within groups	1421.894	71	20.027		
Total	1710.880	74			
Race - Intentions					
Between groups	27.889	3	9.296	0.916	0.438
Within groups	720.778	71	10.152		
Total	748.667	74			
Race - Behaviour					
Between groups	174.423	3	58.141	2.786	0.047*
Within groups	1481.924	71	20.872		
Total	1656.347	74			
Marital Status - Knowledge					
Between groups	288.986	3	96.329	4.810	0.004*
Within groups	142.894	71	20.027		
Total	1710.880	74			
Marital Status - Intentions					
Between groups	7.005	3	2.335	0.224	0.880
Within groups	741.662	71	10.446		
Total	748.667	74			
Marital Status - Behaviour					
Between groups	30.559	3	10.186	0.445	0.722
Within groups	1625.788	71	22.898		
Total	1656.347	74			
No. of Children - Knowledge					
Between groups	157.074	3	52.358	2.392	0.076
Within groups	1553.806	71	21.885		
Total	1710.880	74			
No. of Children - Intentions					
Between groups	35.882	3	11.961	1.191	0.319
Within groups	712.785	71	10.039		
Total	748.667	74			
No. of Children - Behaviour					
Between groups	38.432	3	12.811	0.562	0.642
Within groups	1617.915	71	22.788		
Total	1656.347	74			

Education - Knowledge					
Between groups	111.959	3	37.320	1.657	0.184
Within groups	15921	71	22.520		
Total	1710.880	74			
Education - Intentions					
Between groups	9.742	3	3.247	0.312	0.817
Within groups	738.924	71	10.407		
Total	748.667	74			
Education - Behaviour					
Between groups	42.032	3	14.011	0.616	0.607
Within groups	1614.314	71	22.737		
Total	1656.347	74			
Job Status - Knowledge					
Between groups	101.274	3	33.758	1.489	0.225
Within groups	1609.606	71	22.671		
Total	1710.880	74			
Job Status - Intentions					
Between groups	14.288	3	4.763	0.460	0.711
Within groups	734.378	71	10.343		
Total	748.667	74			
Job Status - Behaviour					
Between groups	260.548	3	86.849	4.418	0.007*
Within groups	1395.799	71	19.659		
Total	1656.347	74			

The results of Anova (posttest) for biographical variables indicated that there is no significant difference in knowledge, intentions and behaviour of employees in the various biographical categories (i.e. age, number of children and education) regarding HIV/AIDS.

There is no significant difference in intentions of employees among the different race groups (i.e. White, Black, Coloured and Indian). However employees in various race groups did reflect a significant difference in knowledge and displayed varying behaviour with regard to HIV/AIDS.

There is also no significant difference in intentions and behaviour of employees from the different marital status (i.e. single, married, separated and divorced). Employees, however, from the various marital statuses did display varying knowledge with regard to HIV/AIDS.

Similarly there is no significant difference in knowledge and intentions of employees from different job statuses (i.e. management, administration, artisans and labourers). However, employees within different job statuses did display varying behaviour with regard to HIV/AIDS.

6.5 T-TEST

TABLE 6.11

T-TEST (PRETEST)			
VARIABLES	T	df	Sig
Knowledge			
Equal variance assumed	0.415	73	0.679
Equal variance not assumed	0.354	15.249	0.728
Intentions			
Equal variance assumed	0.516	73	0.608
Equal variance not assumed	0.547	18.534	0.591
Behaviour			
Equal variance assumed	1.297	73	0.199
Equal variance not assumed	1.140	15.575	0.272

The results of the t-test (pretest) amongst males and females reflected no significant difference in knowledge, intentions and behaviour towards HIV/AIDS.

TABLE 6.12

T-TEST (POSTTEST)			
VARIABLES	T	df	Sig
Knowledge			
Equal variance assumed	-0.442	73	0.660
Equal variance not assumed	-0.519	27.358	0.608
Intentions			
Equal variance assumed	-0.361	73	0.719
Equal variance not assumed	-0.415	26.372	0.682
Behaviour			
Equal variance assumed	0.877	73	0.383
Equal variance not assumed	0.768	18.749	0.452

The results of the t-test (posttest) also indicated that there is no significant difference in knowledge, intentions and behaviour amongst males and females.

6.6 Subjects perception of the gender mostly responsible for the spread HIV/AIDS?

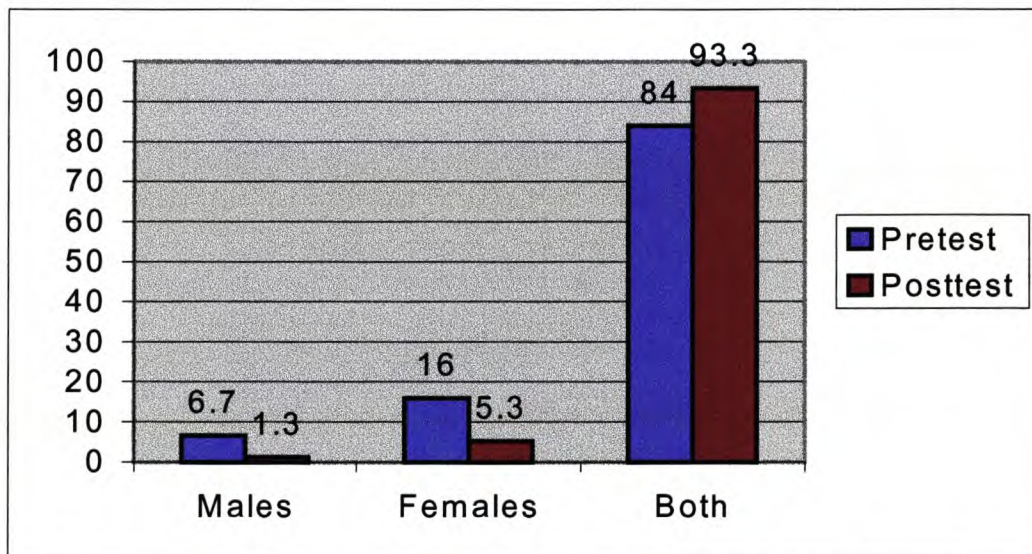


Figure 6.1 Response to who is HIV/AIDS mostly spread by?

Pretest

During the pretest application of the questionnaire 6.7% of subjects believed that HIV/AIDS was spread mostly by males and 16% of subjects believed that females were mostly responsible for the spread of HIV/AIDS. 84% of subjects believed that HIV/AIDS is spread by both, males and females.

Posttest

The posttest reflected that learning did occur, whereby only 1.3% of subjects believed that males were mostly responsible for the spread of HIV/AIDS and 5.3% of subjects felt that females were mostly responsible for the spread of HIV/AIDS. 93.3% of the subjects believed that HIV/AIDS is spread both males and females.

6.7 Susceptibility of HIV/AIDS

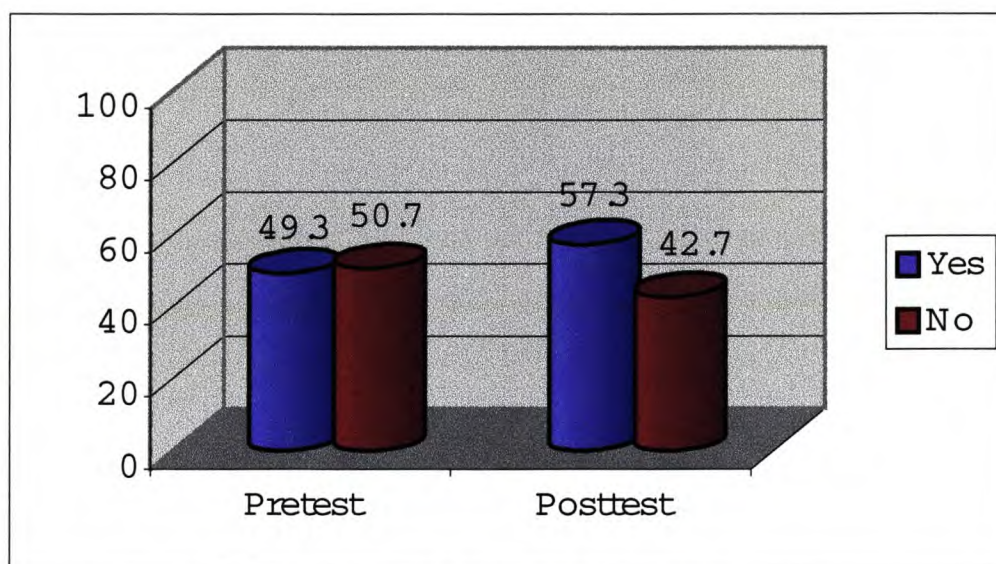


Figure 6.2 Response to can you get HIV/AIDS?

Pretest

The pretest results reflected that 49.3% of the subjects believed that they could get HIV/AIDS and 50.7% felt that they were not at risk in terms contracting HIV/AIDS.

Posttest

The posttest results indicated that there was an increase in view of susceptibility of HIV/AIDS, where 57.3% of subjects believed that that they were at risk of becoming infected and 42.7% felt that they were not at risk of becoming infected by HIV/AIDS.

6.8 Sexual Partners

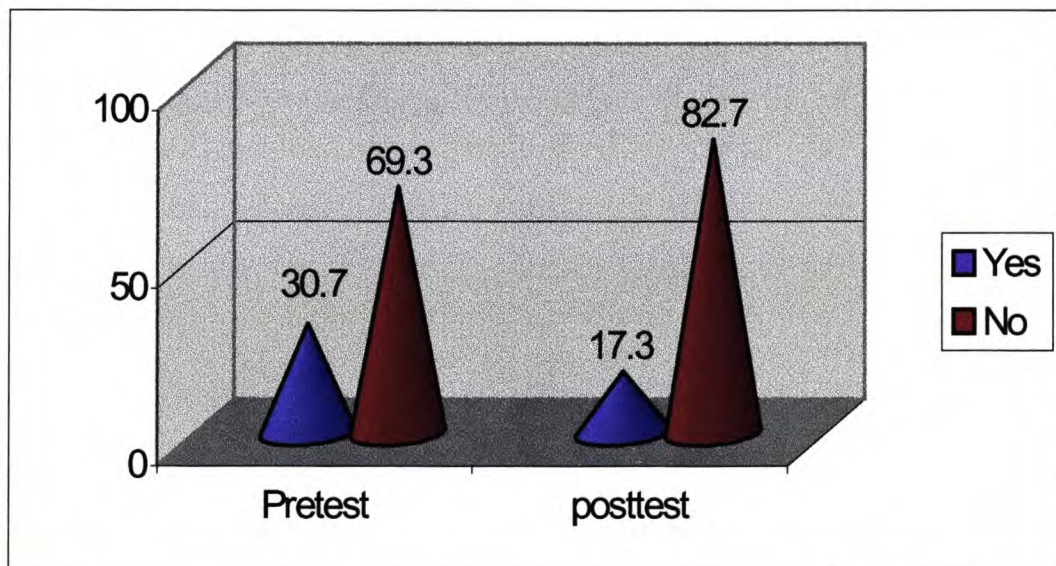


Figure 6.3 Have you had more than 2 sexual partners over the last 3 months?

Pretest

The pretest results of the question pertaining whether subjects had more than 2 sexual

partners over the last 3 months yielded the following response:

- 30.7% of subjects indicated that they had more than 2 sexual partners over the last 3 months; and
- 69.3% of subjects indicated that they had less than 2 sexual partners over the last 3 months.

Posttest

The posttest results revealed the following response as to whether subjects had more than 2 sexual partners over the last three months:

- 17.3% of subjects indicated that they had more than 2 sexual partners over the last 3 months; and
- 82.7% of subjects stated that they had less than 2 sexual partners over the last 3 months.

The posttest results showed a positive response, which was indicative of a larger percentage of subjects that had fewer sexual partners.

6.9 Discussion of results

The organisation in which the current study was conducted, involved education awareness of HIV/AIDS. The education seminars covered the following areas:

- ✓ background and statistics;
- ✓ modes of transmission;
- ✓ progression of the virus HIV/AIDS;
- ✓ signs and symptoms;

- ✓ factors that delay progression;
- ✓ prevention and safer sex;
- ✓ attitude and behaviour change; legal issues on HIV/AIDS in the workplace;
- and
- ✓ HIV/AIDS testing.

The results of the pretest indicate there was a divergence in the levels of knowledge. The results also indicated that there was a lack of knowledge among different groups. The lack of knowledge is often the cause of unrealistic fears and breathes an air of discrimination amongst the workforce. Firstly, a positive spin-off of the strategy implemented by the organisation revealed that learning did take place, which was highlighted by the high mean score for knowledge on the posttest. Secondly, there was also an indication by way of a higher mean score in the posttest evaluation, of a positive change in behaviour toward HIV/AIDS.

A similar intervention was conducted Nambed Diamond Corporation to deal proactively with the impending HIV/AIDS pandemic. The objective was to encourage employees to take responsibility for their own health empowerment. Bedhest and Webster's (1996: 17) study revealed that the management of Nambed Diamond Corporation observed inter alia:

- ✓ Increase in condom usage;
- ✓ People are presenting with early problems, for example, STD's;
- ✓ Increase in personally requested tests;

- ✓ A decrease in STD infection; and
- ✓ Decrease in new infections amongst employees.

Both the pretest and posttest inter-correlation of knowledge, intentions and behaviour indicated a significant relationship between knowledge and behaviour. Intention, however, did not seem to prompt behaviour.

The results of ANOVA (pretest) for the biographical details revealed that employees in the various race groups did display varying modes of behaviour with regard to HIV/AIDS. Subjects from the various race groups also reflected a significant difference in knowledge and displayed varying behaviour in the posttest evaluation of the questionnaire.

It was also established that subjects from the various marital status categories (i.e. single, married, separated and divorced) revealed varying knowledge in respect of HIV/AIDS.

The current study reflected also reflected an increase in condom usage. The pretest indicated that 64% of employees used condoms and posttest showed that 75% of subjects used condoms. The increase in condom usage could be attributed to knowledge attained from the educational seminars regarding modes of transmission of HIV/AIDS, prevention of the disease, safer sex, attitudes and behaviour change.

The researcher was able to establish that there was an increase of 19.9% employees who now understand that that HIV/AIDS is an incurable disease. The educational seminars addressed the fact that HIV/AIDS is a problem that affects every community in different ways. The study indicated that there was an increase in awareness of the existence of HIV/AIDS in all communities. Background information and statistics provided during the implementation strategy served as a source of information regarding demographics of the pandemic.

A study conducted by Ogunbanjo and Henbest (1998) focused on AIDS education and change in sexual behaviour amongst high school students. The study was a randomised controlled trial of an AIDS education package, developed by the Medical Research Council, on high school students in KwaNdebele, South Africa. In the pre-study, students displayed varying knowledge and behaviour towards HIV/AIDS. Subjects held promiscuous relationships and only some students used condoms. The post-study reflected that knowledge did influence behaviour. This was highlighted by a significant decrease in the percentage of students who had more than one sexual partner (Ogunbanjo and Henbest, 1998: 72). The study also revealed a decrease in the number of reported casual sex incidents. According to Ogunbanjo and Henbest (1998) condom usage amongst students also increased from 25% to 83%.

The ANOVA (posttest) also highlighted that subjects within different job status categories (i.e. management, administration, artisan and labourer) displayed varying behaviour towards HIV/AIDS. The question pertaining to risk of contracting HIV/AIDS

in the current study indicated that the pretest analysis of statistics showed that 49.3% of subjects believed that they were at risk of getting HIV/AIDS and 50.7% believed they were at no risk of contracting the pandemic. The posttest, however, disclosed that 57.3% of subjects believed that they were at risk of becoming infected and 42.7% believed that they were not at risk of contracting the disease. The increase in subjects' beliefs regarding susceptibility could have been through the knowledge attained during the educational seminars regarding the modes of transmission, progression of the virus, signs and symptoms of the disease.

With reference to sexual interactions with different partners, 30.7% of subjects indicated that they had more than 2 sexual partners over the previous three months and 69.3% of subjects stated that they had less than 2 sexual partners over the previous three months. In conjunction with the findings of Ogunbanjo and Henbest (1998), the researcher also found that after the implementation strategy the number of subjects decreased in view of have more than 3 sexual partners over a period of 3 months. The posttest results reflected a major decrease to 17.3% of subjects who had more than 2 sexual partners over a 3 month period and enormous increase to 82.7% of subjects that had less than 2 sexual partners over the previous 3 months. The decrease in sexual partners indicates that subjects are taking cognisance of the risk of being infected and being ill with HIV/AIDS.

In view of the current posttest results and the theory of reasoned action, the triad between knowledge, intentions and behaviour is not complete. There seems to be a relationship between knowledge and behaviour, however, results indicated no significant

difference with intentions. The researcher is of the opinion that perhaps cultural considerations and community norms could have been further advocated to bring about a significant change in intentions.

6.10 Conclusion

It is evident from the results of the study that the implementation strategy was successful and learning did take place. It has also been established that knowledge has influenced behaviour, however, intentions were not significantly influenced by knowledge. Positive spin-offs of positive behaviour in respect of HIV/AIDS is perhaps the only hope organisation and society in general in their fight against the pandemic. There appears to be a better understanding of HIV/AIDS and its devastating effects on both family and work.

The next chapter focuses on recommendations and conclusion of the study.

CHAPTER 7

RECOMMENDATIONS AND CONCLUSION

7.1 Recommendations

Some HIV/AIDS interventions are generalised in so far their contents and modus operandi is recognised. The South African population is made up of diverse cultures. Cultural factors are often underestimated but in reality cultural factors regulate ones attitudes, values and perceptions in life. Each culture may have separate cultural beliefs, values and community norms therefore researchers, programme planners and developers must take these factors into consideration before a strategy can be implemented in an organisation. Incongruency with regard to implementation strategies and cultural norms could affect the intention to maintain healthier sexual relationships.

It is also acknowledged that English is not a first language for many employees. Educational seminars held in English may not be fully understood by all employees. It is recommended that implementation strategies are conducted a language that the workforce is comfortable with. This allows participants of the strategy to understand information, alleviate ambiguity and where necessary, seek clarification.

Implementation strategies must also be pitched at an appropriate level in order for its audience to understand its purpose and content. It would fruitless to present a managerial

perspective of HIV/AIDS to labourers or only a basic understanding of the disease to management. Levels in the organisation must be considered when planning the strategy in order to pitch the strategy at an appropriate level.

Demographic factors should also take into account in attempt to paint a realistic picture of the pandemic. Along with generic information, specific information relating to that demographic group should be utilised in order to strengthen the intervention.

Developing a HIV/AIDS policy helps organisations and employees to identify with the disease. A policy may serve as tool to break the silence and create openness to discuss critical aspects affecting both organisations and it's workforce. A HIV/AIDS policy may also assist in alleviating the stigma and discrimination associated with the pandemic.

Monogamous relationships form the central theme of most interventions as a means to practice safer sex. Although monogamy is critical to curtail the spread of virus, many individuals may have contracted the disease through past relationships. It is therefore imperative that obtaining information about sexual partners, HIV testing and condom use be promoted as a means to strengthen the ammunition against the fight of HIV/AIDS.

It must be highlighted that HIV/AIDS education should not be seen as a mere transmittal of knowledge, but also having persuasive and motivational properties to effect change in

sexual behaviour, especially when properly designed with input from the intended focus or target groups.

7.2 Conclusion

An HIV/AIDS intervention such as the one used in the current study can significantly increase awareness and knowledge of the disease. It has and contains further potential in decreasing high risk sexual behaviour through the increased use of condoms and a decrease in the number of sexual partners. Although the triad of the theory of reasoned action remains incomplete in the current study, evidence has shown that there was an increase in knowledge and a change in behaviour. Intentions, however did not reveal a significant difference but this could be attributed to the lack of insight into cultural beliefs, values and community norms in the implementation strategy. It has also been concluded that the M-ARRM has to be assessed over a long period of time to establish whether the theory is congruent with behaviour of subjects in the current study. Training and policy formulation can deter irrational and impetuous decisions whilst protecting the rights of both the organisation and employees.

The apathy expressed by South African organisations in addressing the implications of HIV/AIDS suggests a lack of the long-term social and economic costs of the disease (Horner-Long and Ortlepp, 1995). Discrimination inhibits a person's openness in disclosing their HIV status, which is ultimately detrimental to the organisation as it lacks

the opportunity to prepare for inevitable illness and eventual departure of HIV positive employees.

As we near the end of the second decade of AIDS, this global epidemic is characterised by a widening gap between wealthier nations in North America and Europe and the poorer nations of the world. In developed countries the epidemic has stabilized and there are dramatic decreases in mortality resulting from the use of intensive but expensive therapies (Meadows et al, 1998). This contrasts with the experience of poorer nations, where the epidemic's spread is often unabated and has devastating effects on businesses, communities, families, and individuals. It must be highlighted that an effective vaccine is unlikely to be a reality for many years and that adolescents and young adults are most at risk for contracting the infection. There is great need for culturally appropriate and innovative initiatives for affecting behaviour and to decrease the risk of transmission of the virus. The epidemic is a global problem, and addressing the disease and its consequences on children, youth and young adults worldwide, requires an international response. The potential for complacency in developed countries needs to be replaced by a determination to bridge existing gaps.

Feldman's (1991) statement does hold true in that in the absence of a vaccine, education is the only weapon corporations have in their fight against HIV/AIDS. There are massive drives to increase knowledge of HIV, changing attitudes, changing intentions of sexual behaviour and attempting to reduce unsafe sexual practices. Knowledge and accurate

information is crucial to place into perspective what type of interventions will be needed to deal with HIV/AIDS. Employers need be well aware of current developments in AIDS so as to be effective in dealing with their workforce. Despite the apparent positive spin-offs in the current study, the situation must be carefully monitored to aid the downward spiral in new HIV infection rates.

ANNEXURE 1**QUESTIONNAIRE ON HIV/AIDS****SECTION A – BIOGRAPHICAL DETAILS**

For each of the following, mark with a cross [X] against the appropriate responses.

1. AGE

20 - 29 YEARS	1	30 - 39 YEARS	2	40 - 49 YEARS	3	50 - 59 YEARS	4	60 YEARS & ABOVE	5
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2. SEX

MALE	1	FEMALE	2
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3. RACE

WHITE	1	BLACK	2
COLOURED	3	INDIAN	4

4. MARITAL STATUS

SINGLE	1	MARRIED	2	SEPERATED	3	DIVORCED	4
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5. NUMBER OF CHILDREN

0	1	1 TO 2	2	3 TO 4	3	MORE THAN 5	4
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6. LEVEL OF EDUCATION

PRIMARY SCHOOL	1	SECONDARY SCHOOL	2
DIPLOMA	3	UNIVERSITY DEGREE	4

7. JOB STATUS

MANAGEMENT	1	ADMIN	2
ARTISAN	3	LABOURER	4

SECTION B:**INSTRUCTIONS:**

Please indicate your response to each statement by making a cross[X] over the response, which most accurately reflects your view.

Your response to each statement should be an honest reflection of your personal feelings or opinion.

There is no time limit but you are requested to complete the questionnaire in oneun-interrupted period.

FOR EXAMPLE:**STATEMENT ONE -**

I think that HIV/AIDS is mostly spread by women.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	<input checked="" type="checkbox"/> DEFINITELY AGREE	5
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In this case, the respondent felt inclined to agree with the statement. If he/she definitely disagreed, for example, he/she would have placed the cross in the last box, and so forth.

1. I believe that the HIV/AIDS disease is really affecting South Africans.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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2. People can get HIV/AIDS through social contact, for example, touching and kissing.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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3. I would be comfortable sharing working equipment (eg. pens, rulers, machinery, etc) with someone who is HIV positive.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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4. I think it is mostly homosexuals that get infected with HIV/AIDS.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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5. I think it is mostly drug addicts that get infected with HIV/AIDS.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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6. I believe that the more sexual partners you have means that you are a real man or sociable female.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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7. I would be comfortable sharing eating utensils (eg. knives, spoons, forks, etc) with someone who is HIV positive.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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8. I think that unprotected sex could result in me getting a disease like HIV/AIDS.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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9. Before sex, I consider the risk of getting a disease like HIV/AIDS.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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10. I always use a condom.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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11. I would be comfortable sharing toilet facilities with someone who is HIV positive.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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12. A person can be cured if he or she has HIV/AIDS.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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13. HIV/AIDS causes the body to lose its ability to fight off infections.

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 14. People who have HIV/AIDS should be quarantined (put in a separate place from other people) to control the spread of the disease.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 15. I would be comfortable administering first aid to someone who is HIV positive.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 16. HIV/AIDS issues are really only important to people who work in AIDS agencies, hospitals or clinics.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 17. Most of the people with HIV/AIDS have the disease through their own fault.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 18. I think knowing about HIV/AIDS is important.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 19. Someone who is HIV positive should be dismissed from our organisation.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 20. I think that people with HIV/AIDS should tell other people in order to prevent spreading the disease.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 21. If I was HIV positive I would tell people about my HIV status.**

DEFINITELY DISAGREE	1	INCLINED DISAGREE	TO	2	UNCERTAIN	3	INCLINED TO AGREE	4	DEFINITELY AGREE	5
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- 24. Who do you think the HIV/AIDS is mostly spread by?**

MALES	1	FEMALES	2	BOTH MALES AND FEMALES EQUALLY	3
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25. Do you think that YOU can get HIV/AIDS?

YES	1	NO	2
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26. Have you had more than 2 sexual partners over the last 3 months?

YES	1	NO	2
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**27. Is there anything that you would like to comment on that this questionnaire does not include?
(Optional)**

THANK YOU

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