

AN INVESTIGATION INTO NURSES' ANXIETY WHEN DEALING WITH
HIV/AIDS PATIENTS

by

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SUMMARY

The aim of the study was to test the hypothesis developed by the author which states that most of the variation in nurses' anxiety when dealing with HIV/AIDS patients can be explained by the combination of the variables Knowledge on HIV, Judgement of Risk, Homophobia, Death Anxiety and Perceived Social Support. 72 nurses representing two state hospitals and one private hospital volunteered to participate in the study, and completed questionnaires. Contrary to the findings in the literature study, the nurses in the sample were not found to be reluctant or anxious when caring for HIV/AIDS patients. A multiple regression analysis revealed that the hypothesis is confirmed, that the independent variables explain some variation ($R = 0.649$) in the dependent variable to a significant degree. There are indications that uninvestigated variables are however also at play, and should be considered for future research.

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CHAPTER 1

INTRODUCTION

1) MOTIVATION FOR THE STUDY: A PERSONAL VIEW

My interest in the field HIV/AIDS and nurses was inspired by my personal experience. Totally unexpectedly in the early months of 1998, I learnt of three close friends who had recently been diagnosed as HIV positive. Initially my reaction was one of total disbelief. "Not them," I thought, "My friends, people I know and socialize with. It must be a mistake; this disease does not exist in my circle of friends". Well it did; for the first time in my life I had been introduced to HIV/AIDS. After coming to terms with the fact that they did in fact have this "disease", I found myself feeling unsure as to how to behave around them. I knew for a fact that I could not in any way contract the disease by physical contact, and yet I found myself feeling anxious and uncomfortable when I was with them. This is an experience that I am sure many people can relate to.

On reflection I am not sure why I reacted the way I did, but what this experience did make me think about more seriously, is those individuals who have to deal with HIV/AIDS patients more than anyone else – *nurses*. I began to wonder whether nurses tend to react in the same way I did. Do they feel uncomfortable or anxious, and, if so, why? I did a literature study in an attempt to clarify this issue. This research project is the eventual result.

2) AIM OF THE STUDY

The aim of this study is to test a hypothesis, derived from the literature, which states:

Nurses' (a) high knowledge base, (b) realistic judgement of risk, (c) positive attitudes towards homosexuality, (d) perceived social support, (e) low level of death anxiety, as components of their attitudes towards HIV/AIDS patients, decreases their level of anxiety when treating the HIV/AIDS patient.

A further aim will be to either establish which individual variables in the model contribute towards nurses' anxiety when treating HIV/AIDS patients, or alternatively, discover which individual variables in the model are in fact not significant in their contributions towards nurses' anxiety. Ultimately the aim is to get a deeper understanding of the underlying factors influencing nurses, which could possibly contribute towards their ambivalence and anxiety when treating HIV/AIDS patients. This will aid in the development of an appropriate model to guide future research.

It is also imperative to test this model (which was developed in accordance with international findings) on a local sample of nurses, as limited studies in the field have been conducted in South Africa. This will enable one to discover whether the results in South Africa are consistent with those of other countries, especially in view of the unique nature of South Africa as a third world country, and also as one of the countries with the fastest growing HIV epidemic.

3) OUTLINE OF CONTENT DISCUSSION

The outline of the literature study, methodology, findings and discussion of the study is as follows:

Chapter 2

Chapter two is a discussion on the disease HIV/AIDS, the history of the disease, transmission, effect, stages, and treatment. The estimated prevalence of the HIV infection in South Africa is discussed, in accordance with the latest data released

by the Health Department. Within the context of the HIV epidemic the imperative role of the nurse is explored with specific reference to international literature which reveals nurses' expressed unwillingness to treat HIV/AIDS patients. The discussion is then extended to theories on the attitude-behaviour link within the context of nurses' attitudes towards HIV/AIDS patients and their eventual behaviour or action towards HIV/AIDS patients when treating them.

Chapter 3

Chapter three is a discussion of the investigation of the available literature on the topic. Initially the studies which investigated the relationship between nurses' attitudes and nurses' intentions to care for HIV/AIDS patients are discussed. The discussion then moves towards studies which investigated specific component factors of nurses' attitudes towards HIV/AIDS patients.

Chapter 4

Chapter four is a discussion on the motivations and rationale of the author in developing a model to be tested in South Africa. The research design is then explained, followed by a discussion of the measuring instrument that was developed (i.e. the questionnaire). Each individual test used to measure the independent variables is indicted with an explanation of why it was chosen, followed by a discussion of the scale developed by the author to measure the dependent variable. The chapter ends with a discussion on the sample and procedure undertaken to complete the field work.

Chapter 5

Chapter five begins with a discussion on the demographics of the sample. Each section of the questionnaire is then discussed with specific reference to the final scores on the scales of the questionnaire, taking into account the inputting and

coding processes undertaken in order to reach the final scores. With regards to the dependent variable measurement, the results of the validity and reliability tests are discussed, as well as the finalization of the items to be included in the final measurement of the dependent variable. The results of an exploratory data analysis are then discussed, followed by the results of the hypothesis testing.

Chapter 6

This chapter embarks on a discussion of the results of the findings for each independent variable, and its relationship to the dependent variable along with possible explanations. This is then linked back to the literature study in order to understand whether the findings contradict or confirm the findings from previous international studies. Inherent limitations of the study are discussed, as well as suggestions made for further research as a result of the findings, and the usefulness of the model for the medical fraternity.

CHAPTER 2

THEORETICAL BACKGROUND

1. INTRODUCTION

“AIDS was to enter the worlds’ consciousness and become part of the vocabulary of the human soul, as a result of a dawning awareness of the advent of a strange new disease first reported in 1981,” Pratt (1995, p.1).

The AIDS and HIV disease is the most devastating personal and public health problem facing the human race. Nurses were one of the first professional groups to respond to the contemporary crisis of AIDS and HIV, employing all their professional skills in devising and delivering models of care and education. However, there were - and still are - many fears and prejudices to overcome both in society and within the caring professionals themselves, in order to provide the most effective and compassionate care for the HIV/AIDS patient. The challenge is to provide social support and educational programs for the health care professional to overcome his or her fears, prejudices and negative attitudes towards the HIV/AIDS patients. This will enable them to provide the best care for the victims who fall prey to this deadly disease.

2. AIDS IN CONTEXT

- **DEFINITION OF AIDS**

AIDS is the acronym for “acquired immunodeficiency syndrome”. Immunity refers to the body’s natural defense system which protects it against infection and disease. Deficiency indicates that the defense system is inadequate, that something is amiss. Syndrome is a group of specific signs and symptoms that occur together and are characteristic of a particular pathological condition. It is

generally accepted that the disease is caused by a virus which enters the body from outside (Lachman, 1990). Although the term “disease” is used when talking about AIDS, AIDS is not strictly speaking a specific illness. Rather it is a collection of more than 70 conditions that occur as a result of damage to the immune system and parts of the body caused by HIV. According to Lachman (1990, p.55), “ it is not one entity but a spectrum of diseases”.

Infection with the human immunodeficiency virus, therefore, produces a varied clinical picture ranging from opportunistic infections to acute seroconversion illness, tumors or full blown AIDS (Lachman, 1990). AIDS may, therefore, be defined as a syndrome of opportunistic diseases, infections, cancers, and encephalopathy in a patient with immunodeficiency that is not due to any other known causes and which eventually kills the patient.

- HISTORY OF THE DISEASE

The first recognized cases of the acquired immunodeficiency syndrome occurred in the United States of America. In the early months of 1981, five young men were admitted to various hospitals in the Los Angeles area, suffering from an unusual type of pneumonia caused by a commonly occurring protozoa known as *pneumocystis carinii*.

Previously pneumonia caused by *p.carinii* had only been seen in patients who were immunocompromised. Examples would be infants born with a primary immune deficiency, or adults whose immune system became deficient due to other causes (a secondary immune deficiency state) such as immunosuppressant chemotherapy following a kidney transplant (Pratt, 1995). However, these five patients had a number of characteristics in common: they were all young, homosexual men with depressed immune systems. Naturally the physicians in charge of the first case in Los Angeles were puzzled. Only in 1983 was it discovered that the disease is caused by a virus which at that stage was

known as LAV (lymphadenopathy- associated virus) and HTLV-3 (human T-cell lymphotropic virus type 3). In May 1986 the virus was renamed HIV (human immunodeficiency virus) (Van Dyk, 1993).

At present there are two viruses associated with AIDS, namely HIV1 and HIV2. HIV 1 was associated with infections in Central, East and Southern Africa, North and South America, Europe and the rest of the world.

HIV 2 was discovered in West Africa (Cape Verde Islands, Guinea-Bissau and Senegal) in 1986 (Van Dyk, 1993).

- **TRANSMISSION OF HIV**

HIV infection is transmitted primarily through sexual intercourse, when HIV infected blood is passed directly into the body of another person, or when a mother infects her baby during pregnancy, childbirth, or as a result of breastfeeding. HIV has been identified in various body fluids but is especially highly concentrated in blood, semen and vaginal fluids. Although HIV is present in saliva, tears, sweat and urine, the concentration of the virus in these fluids is very low (Van Dyk, 2001).

1) Transmission by intimate sexual contact with an infected person

Sexual contact - in particular anal and vaginal intercourse with an infected person - presents a major risk for transmission of the virus. HIV is transmitted only if the virus enters a person's blood stream via the body fluids of an infected person, which can easily happen owing to the friction that takes place during sexual contact. The delicate membrane linings of body cavities are often torn as a result of friction and the virus is easily able to enter the other person's bloodstream through the tear, or mix with blood from the tear (Alvarado, 1990).

One of the most dangerous fallacies is to believe that AIDS is a homosexual disease. This common misconception arose because AIDS was first diagnosed

in gay groups in America. This fact does not mean that only gay people can act as hosts to AIDS, it merely means that AIDS was first diagnosed in a group of people who at that time were extremely promiscuous. AIDS is a disease for anyone who indulges in high-risk sexual behaviour. In Africa AIDS is mostly a heterosexual disease, that is, passed on from men to women and visa versa (Alvarado, 1990).

2) Transmission by exposure to contaminated blood and blood products

Although blood transfusion was a high risk factor, this risk has been reduced since all donated blood is tested for HIV antibodies, and infected blood is then destroyed. However the “window period” (period after infection, but before antibodies are formed) still creates problems. Infected blood cannot be identified during this period as HIV positive and is, therefore, not destroyed. There is thus no such thing as “no risk” blood. It is, therefore, the moral and ethical responsibility of people who engage in high risk sexual behaviour not to donate blood (Van Dyk, 1993). HIV can also be transmitted through contaminated needles and instruments in hospitals, through contaminated instruments used in tattooing and ear piercing, and through contact with infected blood at accident scenes. It is impossible to say exactly how much blood is required to transmit HIV. Much depends on the concentration of the HIV in the blood.

3) Transmission by intravenous drug use

People who share syringes and needles to inject drugs run a high risk of being infected. HIV is easily transmitted when needles are shared because many drug users inject drugs directly into the blood stream. In order to ensure that the needle has struck a vein, they first draw blood into the syringe before injecting the drug. A drop or two of blood often remains in the needle and is injected directly into the blood stream of the next user (Alvarado, 1990).

4) Transmission of HIV from an infected mother to her baby

HIV can be transmitted from an infected mother to her baby, before, during, or after birth. The virus may be transmitted through the placenta before birth, by blood contamination during birth and also through breast feeding after birth. It is estimated that there is approximately a 30% to 50% chance of an HIV positive mother infecting her baby (Alvarado, 1990).

- **EFFECT OF HIV ON THE IMMUNE SYSTEM**

Because of the unique way in which HIV attacks and disarms the immune system, all the body's defense mechanisms are disarmed. This means in effect that the body is no longer able to protect itself against other diseases. As a result, all kinds of bacteria, fungi, protozoa and viruses are able successfully to invade the body because they encounter no resistance. Even various kinds of cancers may take root and spread in the now - defenseless HIV - infected body, Van Dyk (2001, p.36).

- **THE FIVE STAGES OF HIV INFECTION**

Although HIV infection cannot in practice be precisely demarcated into separate and distinctive phases with easily identifiable boundaries, it can nevertheless be theoretically divided into the following five phases:

- 1. The primary HIV infection phase (or acute sero – conversion illness)**

The acute phase of HIV infection begins as soon as sero – conversion has taken place. Sero – conversion means the point at which a person's HIV status converts or changes from being HIV negative to HIV positive. This usually coincides with the time when an HIV antibody test will show that a person is HIV positive.

Sero – conversion usually occurs 4 – 8 weeks after an individual has been infected with the HIV virus. Approximately 30% - 60% of people infected with HIV will develop glandular fever – like illness at the time of sero – conversion, and the symptoms of this fever will usually last from between one and two weeks. This sero – conversion illness is often mistaken for a ‘ flu – like’ viral infection, and it is characterized by symptoms such as a sore throat, headache, mild fever, fatigue, muscle and joint pains, swelling of the lymph nodes, rash and (occasionally) oral ulcers (Schoub, 1997b) in Van Dyk (2001, p.37).

2. The asymptomatic latent stage

The second stage of HIV infection is the asymptomatic latent or silent stage. In this stage an infected person displays no symptoms. Even though the infected person may be ignorant of its presence, the virus nevertheless remains active in the body during this stage and it continues to damage and undermine the infected person’s immune system. A positive HIV antibody test is often the only indication of HIV infection during this latent stage.

HIV infected people can remain healthy for many years, show no symptoms and carry on with their work in a normal way, while others may deteriorate rapidly, develop AIDS and die within months. In some cases the only symptom during this phase is persistent generalized lymphadenopathy, or swollen glands, Van Dyk (2001, p.37).

3. The minor symptomatic phase of HIV disease

In the third phase of infection, minor and early symptoms of HIV disease usually begin to manifest. The minor symptomatic stage commences when people with HIV antibodies begin to present with one or more of the following symptoms:

- Mild to moderate swelling of lymph nodes in the neck, armpits and groin
- occasional fever

- herpes zoster or shingles
- skin rashes, dermatitis, chronic itchy skin, fungal nail infection
- recurrent oral ulcerations
- recurrent upper respiratory tract infections
- weight loss up to 10% of the person's usual body weight
- malaise, fatigue and lethargy

The individual in the minor symptomatic stage of HIV infection is usually able to carry on with his or her normal activities, despite being symptomatic, Van Dyk (2001, p.38).

4. The major symptomatic phase of HIV infection and opportunistic diseases

Major symptoms and opportunistic diseases begin to appear as the immune system continues to deteriorate. The following symptoms are usually an indication of advanced immune deficiency:

- persistent and recurrent oral and vaginal candida infections: candida or thrush in the mouth is also a common sign of immune deficiency
- recurrent herpes infection such as herpes simplex
- recurrent herpes zoster
- bacterial skin infection and skin rash
- intermitted or constant unexplained fever that last for more than a month
- night sweats
- persistent and intractable chronic diarrhoea that last for more than a month
- significant and unexplained weight loss (more than 10% of usual body weight)
- generalized lymphadenopathy
- abdominal discomfort, headaches
- oral hairy leucoplakia

- persistent cough and reactivation of tuberculosis
- opportunistic disease of various kinds

The person in the major symptomatic phase of HIV infection is usually bedridden for up to 50% of the day during the last month, Van Dyk (2001, p.38).

5. AIDS defining condition: the severe symptomatic phase

Only when patients enter the last phase of HIV infection can they be said to have full – blown AIDS. It usually takes about 18 months for the major symptomatic phase to develop into AIDS.

In the final stage of AIDS, symptoms of HIV disease become more acute, patients become infected by relatively rare and unusual organisms that do not respond to antibodies, the immune system deteriorates exponentially, and more persistent and untreatable opportunistic conditions and cancers begin to manifest. Any of the following symptoms, conditions or opportunistic infections can occur in the AIDS patient:

- Due to Diarrhoea, nausea, and vomiting, an AIDS patient is usually thin and emaciated
- Oral manifestations of HIV infection such as oral candidiasis, oral hairy leukoplakia, herpes simplex
- Persistent, recurrent vaginal candidiasis
- Persistent , generalized lymphadenopathy
- Severe and recurrent skin infections such as warts, ringworm and folliculitis
- Respiratory infections may cause the patient to present with a persistent cough, chest pain and fever
- Pneumonia, especially pneumocystis carinii pneumonia
- A wasting of body's tissues and marked weight loss
- Severe herpes zoster (shingles)
- Peripheral neuropathy (pins and needles' sensation in the hands and feet)

- Neurological abnormalities
- Cryptococcal meningitis
- Cytomegalovirus retinitis (inflammation of the retina of the eye)
- Kaposi's sarcoma (a form of skin cancer)
- Lymphoma or cancer of the lymph nodes
- Tuberculosis (serious opportunistic infection in AIDS patients)
- Other sexually transmitted diseases

The AIDS patient in this stage is usually bedridden for more than 50% of the day during the last month Van Dyk (2001, p.40 - 42).

- **TREATMENT**

There is at present no treatment available to cure AIDS or HIV infection. The two main strategies of medical treatment are:

a) Treatment of the HIV infection

Use of anti – retroviral therapy (ART)

The ultimate purpose of anti – retroviral therapy (ART) is to reduce the HIV viral loads as much as possible – preferably to undetectable levels – for as long as possible. Anti – retroviral drugs act by blocking the action of enzymes that are important for the replication and functioning of HIV (Van Dyk, 2001). Because this in turn means that less damage will be inflicted on the immune system, the patient will experience an improvement in his/her immune functioning and the onset of AIDS will be delayed. A combination of 2 or 3 different anti – retroviral drugs has been shown to produce the best effects and to reduce the possibility of viral resistance (Van Dyk, 2001).

There are currently three main categories of anti – retroviral drugs:

b) Prevention and treatment of opportunistic infection

Because of their depleted immune systems make HIV –infected people vulnerable to opportunistic infections, they can only maintain a reasonable quality of life if they can prevent themselves from being infected by such opportunistic infections. Prophylactic treatment usually works very well in preventing the most serious of infectious disease such as oral vaginal thrush, pneumocystis carinii pneumonia, tuberculosis, toxoplasmosis and herpes infections (Van Dyk, 2001).

3. ESTIMATED PREVALENCE OF THE HIV INFECTION IN SOUTH AFRICA

Every year since 1990 the South African Department of Health screens all specimens (blood samples) received from women attending antenatal clinics of the public health services for HIV infection. The choice of pregnant women is based on international scientific practice. Pregnant women are normally preferred as a sample base as they are sexually active, constitute an easily identifiable, accessible and stable population, and are more likely than other groups to be representative of the general population. In addition, this group obtains health care at facilities where blood is drawn as part of routine medical service offered for women's health. In South Africa 89.4% of all pregnant women and 90.2% of African women attend public antenatal clinics (Department of Health, 1998). The results are then further used to estimate the number of South Africans infected with the virus at the end of each year.

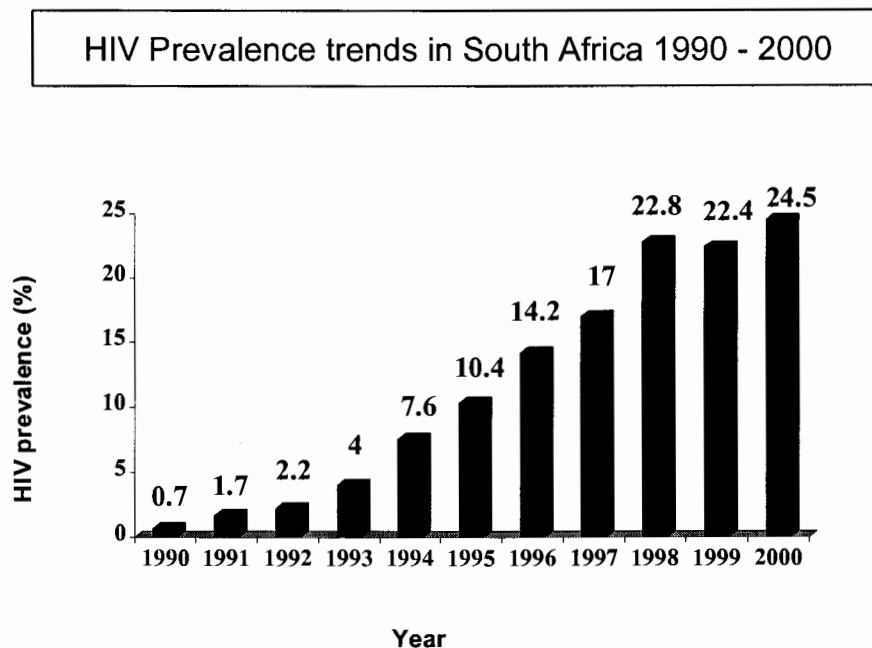
The following discussion refers to the report (*National HIV and Syphilis Sero – prevalence survey of women attending public antenatal clinics in South Africa*) released by the Minister of Health in 2000.

- NATIONAL HIV SURVEY OF WOMEN ATTENDING PUBLIC ANTENATAL CLINICS IN SOUTH AFRICA IN THE YEAR 2000.

Based on the 16 548 blood samples tested in October 2000, it is estimated that nationally, 24.5% of the women who presented at the public health facilities (for the first time during that current pregnancy) were infected with HIV by the end of the year.

This is compared to 22.4% in 1999 and 22.8% in 1998. No exponential increase in HIV prevalence has been noted in South Africa since 1998 (refer to Figure 2.1).

Figure 2.1



- HIV PREVALENCE BY AGE

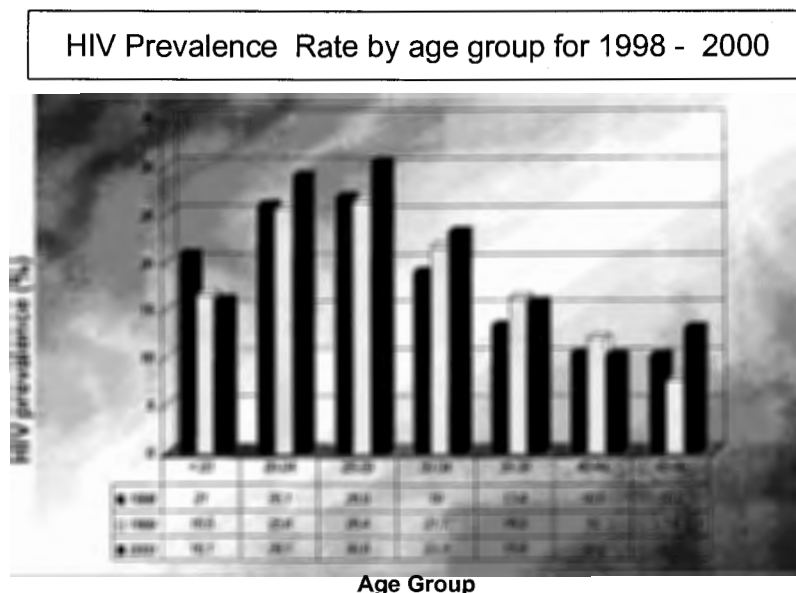
Between 1999 and 2000, HIV point prevalence increased significantly among women in their twenties only (refer to Figure 2.2). Pregnant women in their late twenties show the highest infection rate at 30.6%, whereas survey participants aged 20 – 24 yielded a point prevalence of 29.1%. It is important to note that over the years, women in their twenties have consistently shown the highest level

of HIV infection, making up, on average, not less than half of the adult HIV positive population. It goes without saying that the implications of such a distribution in terms of social and economic factors are matters for concern. What is more, this also significantly impacts on maternal care and child survival.

As observed previously, HIV infection is clearly present in older women with rates of 10.2% and 13.1% found in the 40 – 44 and 45 – 49 age groups respectively. However, due to small sample sizes in these age categories the data should be interpreted with caution.

It is encouraging to see HIV prevalence among teenagers has not increased for the third consecutive year. This is consistent with the findings from the Demographic and Health Survey that showed condom use to be higher among female teenagers than in all other age groups (Department of Health 1998). However, the increase in HIV prevalence in older women (particularly those in their twenties) might be an indication that infection is simply delayed and not avoided. The Department of Health also noted that although the use of condoms was highest among adolescents (almost 20 percent), this figure needed to be increased.

Figure 2.2

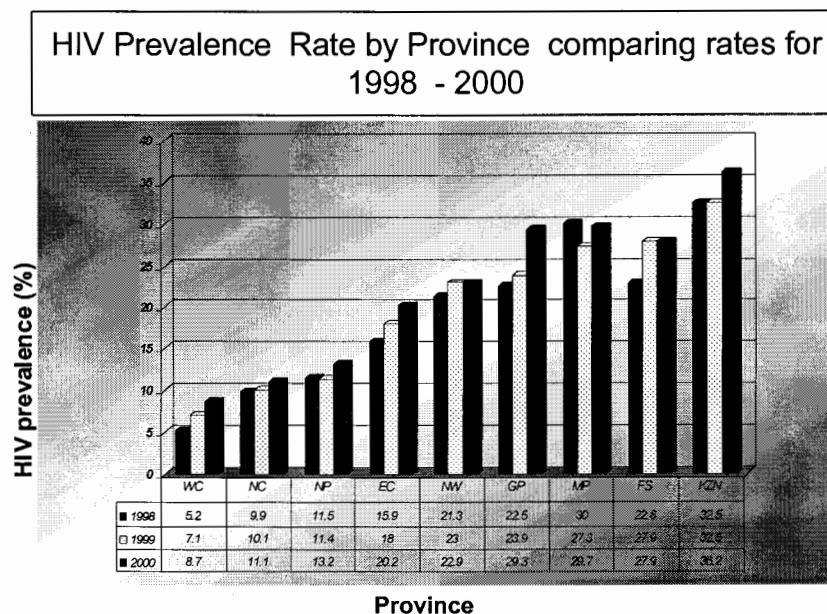


- HIV PREVALENCE BY PROVINCE

The level of HIV prevalence in South Africa continues to reflect large geographical variations between the provinces with KwaZulu – Natal consistently reflecting the highest HIV prevalence rate (refer to Figure 2.3).

Point prevalence rates for HIV infection in the nine provinces for the year 2000 were estimated as follows: KwaZulu – Natal 36.2%, Mpumalanga 29.7%, Gauteng 29.4%, Free State 27.9%, North West 22.9%, Eastern Cape 20.2%, Northern Province 13.2%, Northern Cape 11.2% and Western Cape 8.7%. None of the provinces showed a significant increase except KwaZulu - Natal and Gauteng which did show significant increases in 2000. Interestingly, last year it seemed that since the growth rate in KZN remain stable from 1998-1999 the epidemic may have reached its plateau level for this specific region and would enter the stabilization phase of the epidemic (National HIV Sero – Prevalence survey of women attending Public Antenatal Clinics in South Africa, 1999). However, the results of the 2000 study has proven the assumption to be premature at the least. The same could be said for the growth rate in Gauteng for the past three years.

Figure 2.3



- EXTRAPOLATION TO THE GENERAL POPULATION

As the antenatal survey results are only able to give direct estimates of HIV infection levels amongst pregnant women, no information is available on women who are not pregnant, nor on men. In order to obtain an estimate on the approximate numbers of men, women and infants who might have been infected with HIV at the end of 2000, projections are therefore made to extrapolate the total number of persons who would have been infected by the end of 2000.

The estimates of infection among the general population need to be interpreted with caution, as there are inherent limitations in the methodology applied.

The projection of the estimated number of individuals infected with HIV in South Africa by the end of 2000 are as follows:

Women (15 – 49)	2.5 million
Men (15-49)	2.2 million
Babies	106109

In total this results in an estimated number of 4.7 million South Africans. These estimates suggest that approximately one in every 9 South Africans is infected with HIV.

- DISCUSSION AND CONCLUSIONS

The findings highlight the fact that although the epidemic has ceased to grow in an exponential manner, approximately 4.7 million South Africans are infected with HIV, most of them being at the prime of their lives.

The noted trend towards a more mature epidemic does not take away the need for a concerted effort to preserve the gains made. Prevention efforts need, therefore, to be sustained over time. All provinces should work to reach the stabilization phase at the lowest possible level, in order to minimize impact on mortality, morbidity as well as at the social and economic level.

With the change in trends of HIV in the past three years, a change in the trend among teenagers has also been noted. This latter finding is also supported by other studies suggestive of more positive behaviour among adolescents, than among any other age group. The awareness campaign efforts in this particular category seem to be bearing fruit.

Of concern, however, is the fact that such behaviour does not seem to be maintained through adulthood, suggesting that HIV infection might simply be delayed and not prevented, as should ultimately be the aim. Recent international literature has drawn attention to the fact that people perceived to be at lesser risk of infection with HIV (mature adults, people in stable relationships) are in fact more susceptible to infection than was previously thought (National HIV Sero – Prevalence survey of women attending Public Antenatal Clinics in South Africa, 2000). This calls for group-specific targeted interventions, among and beyond the teenagers in order to reduce transmission rates. Therefore, targeted campaigns and adapted material for adults assumed or perceived to be at a lesser risk should be conceived as a matter of urgency, as women in their twenties comprise nearly 60% of those infected with HIV.

4. THE ROLE OF THE NURSE

Central to the AIDS epidemic is the nursing profession, which is being called upon increasingly to provide direct patient care, family and community counseling, AIDS education and educational strategies for intervention (Preston, Koch & Young, 1991). Health care workers have had to respond rapidly and imaginatively to a new infectious disease of epidemic proportions, which, moreover, can be transmitted sexually. This inevitably involves workers in addressing many powerful taboos and specifically sensitive issues (Barbour, 1995).

Nurses are often considered to be the most important people in the life of an HIV/AIDS patient, because it is ultimately the nurse who will spend a considerable amount of time treating and caring for the patient. However, the nurse is also in the unique position of being in contact not only with the patient, but also with the patient's family, friends and the community at large (Van Dyk, 1993).

The role of the nurse caring for the HIV/AIDS patient thus includes:

- 1) medical treatment;
- 2) education of the patient and the general public about AIDS and its health and social related problems;
- 3) counseling where needed;
- 4) combating fear, ignorance and prejudices and replacing these with understanding and preparedness;
- 5) offering care and compassion to those living with and dying from the HIV infection;
- 6) creating a safe working environment for themselves and their colleagues.

The HIV/AIDS patients present nursing staff with numerous challenges at all stages of the disease. Furthermore, because AIDS is a highly publicized disease for which there is no cure, a diagnosis of HIV infection often has a devastating impact upon the individual, the family and friends, often placing great emotional stress on the nurses themselves. Nurses are in a position to provide care that respects the dignity of the individual and to set an example of an appropriate non-judgmental attitude, to other health care workers and members of the community.

Clearly these demands and expectations of the nurse, in conjunction with the high prevalence rate of HIV/AIDS, places the nurse under a great amount of pressure, as stated by Visintini, Campanini, Fossati, Bagnato, Novella & Maffei

(1996, p.12), "to be aware that a very real health problem exists which requires the mobilization of exceptional nursing skills in order to meet the demands which the onslaught of this condition present us with".

The role of the nurse is thus of absolute and central importance in the treatment of and education about the HIV/AIDS epidemic. Despite nurses' awareness of this fact, much research suggests that this crucial role of the nurse may be complicated by nurses' reluctance and unwillingness to care for HIV/AIDS patients.

Blumenfield, Smith, Milazzo, Seropians & Wormser (1987) conducted studies in 1983, 1984 and 1987. Consistent in all three studies was the finding that 40% of responding nurses stated that they would ask for a transfer to another unit if they had to care for HIV/AIDS patients on a regular basis. Even amongst the nurses' willing to care for AIDS patients, only 16% indicated that they would consider working on a unit that had mainly patients with AIDS.

In a survey conducted by Cooke (1988) at the San Francisco general hospital, it was found that 55% of house nurses disliked taking care of patients with HIV/AIDS, 35% of medical residents were concerned for their family members, 20% had recurring nightmares related to their risk of contracting HIV and 18% believed that they already had symptoms of HIV. In one study up to 85% of nurses were found to be unwilling to provide care for AIDS patients (Harrison, Fusilier & Worley, 1994). Gershon, Curbow, Kelen, Celantano, Lears & Vlahou (1994) found that clinical care providers have intolerant attitudes and are reluctant to care for patients with HIV/AIDS.

Examples of unwillingness to provide AIDS care were also evidenced in a self-report study of health care providers conducted by Douglas, Kalman & Kalman (1985). In this study it was found that 32% of the respondents agreed that persons with AIDS receive lower quality of care in the hospital than patients

with other illnesses. Gordin, Willoughby & Levine (1987) (also a self report study), found that 32% of their sample of 1194 hospital employees reported spending less time with AIDS patients than any other patients. However, as a result of hospitals beginning to mainstream AIDS patients, as part of an integrated care approach, nurses today (regardless of their speciality) are not permitted to refuse or avoid care to AIDS patients (Jemmot, Jemmot & Cruz, 1992). Furthermore, there is the issue of potential litigation. There have been over 500 lawsuits in the United States brought against health care providers for alleged discrimination and refusal to treat AIDS patients (Jemmot *et al.*, 1992). More recent studies however seem to imply a gradual shift towards a more positive orientation. In a study conducted by Steward (1999) it was found that student nurses held positive attitudes towards HIV patients although they reported a significantly greater prejudice towards AIDS patients than any other patient. A similar survey conducted by Chang, Yzou, Reh (1999) also revealed that nurses' overall attitudes and behavioural intentions tended to be more positive towards AIDS patients. However a study conducted by Ngan, Kiat, Kheng, Lin, Suan, Nagammal, Khim, Kei (2000) revealed that a significant number of students (40.3%) associated a risk with caring for these patients and felt uneasy about treating them. Therefore although the more recent studies suggest a shift in nurses towards a more positive orientation, the findings are far from conclusive. One should bear in mind however that this possible shift could be as a result of the fact that as opposed to the 1980s a lot more is known about the disease which could be influencing the willingness and attitudes of nurses more positively.

As a result of the implementation of the integrated care approach and lawsuits brought against nurses in the United States, little research has been conducted overseas beyond 1994 to investigate the willingness of nurses to care for HIV/AIDS patients, because nurses no longer have the choice to refuse or avoid AIDS care. Instead the underlying phenomena which causes unwillingness such as "attitudes" was investigated. In South Africa, however, nurses were never in a

position to refuse caring for HIV/AIDS patients. Since the start of the epidemic the law stated that nurses working in hospitals cannot refuse to care for HIV/AIDS patients. The fact that nurses cannot refuse to treat HIV/AIDS patients does not imply that there is no reluctance, but merely that they are not allowed to act on any unwillingness they may feel. The focus, therefore, is to try and understand the underlying aspect which causes the unwillingness behaviour.

It is necessary to take a closer look at the causes of behaviour, with specific reference to attitudes as shaping behaviour.

- DEFINITION OF AN ATTITUDE

A common view of attitude, the tripartite conceptualization, is that an attitude is made up of three components - cognitive, affective and behavioural. These components are merely three types of evaluative responses that may underlie the formation of an attitude.

Eagly & Chaiken (1993) stated that attitude is a psychological tendency, that is expressed by evaluating a particular entity with some degree of favour or disfavour. It is a psychological tendency because it refers to the internal aspect of a person. One can discover an attitude by means of evaluating cognitive (thought, ideas), affective (feelings, moods, emotions) or behavioural (actions in relation to the attitude object) aspects of a person, in either an overt or covert form.

Attitudes develop after a response. In other words an individual does not have an attitude until he or she responds evaluatively to an entity, either affectively, cognitively or behaviourally. Evaluative responding, whether it is covert or overt, can produce a psychological tendency to respond with a particular mode of evaluation, when subsequently encountering the attitude object. Once this tendency to respond is established the person has formed an attitude (Eagly &

Chaiken, 1993). Attitudes are referred to as tendencies because, like tendencies, attitudes are internal states that last for at least a short time, although they are always changeable.

Furthermore, an attitude is an evaluation, because evaluation refers to imputation of some degree of goodness or badness to an entity. An evaluating response therefore is either approval or disapproval, favour or disfavour (Eagly & Chaiken, 1993).

- DO ATTITUDES INFLUENCE BEHAVIOUR? A THEORETICAL INVESTIGATION

The most obvious conclusion most people would reach concerning attitudes is that they do, in fact, influence behaviour. However, research has proven that this may not always be the case.

LaPiere (1934) wondered whether persons holding various prejudices or negative attitudes towards the members of various social groups, would demonstrate these actions in their overt behaviour. To investigate this phenomenon, LaPiere traveled around the United States with a young Chinese couple, and they stopped at 184 restaurants and 66 hotels and tourist camps for service. In the majority of cases they were treated with courtesy and consideration and were only refused services once. After all the travelling was complete, LaPiere wrote to all the businesses where he and the Chinese couple had stayed or dined, and asked whether they would offer services to Chinese visitors. Out of 128 establishments that responded, 92% of restaurants and 91% of hotels said no.

LaPiere concluded as a result of these findings that a gap between attitudes expressed and actions existed. But it is equally clear that attitudes often do exert

important effects on behaviour. The key question thus becomes: under what circumstances and in what way do attitudes influence behaviour?

Two models attempt to answer this question: the moderating factors model and the theory of reasoned action model.

- **MODERATING FACTORS MODEL**

In response to the question of the influence of attitudes on behaviour, social psychologists have discovered certain moderators that influence the extent to which attitudes influence behaviour (Baron & Byrne, 1994).

Most of these factors or moderators involve either,

- 1) the situation,
- 2) aspects of the attitudes themselves, or
- 3) aspects of the individual.

- 1) Aspects of the situations**

- Situational constraints can sometimes hinder people from expressing their attitudes because doing so would be contrary to the norms in a given social situation, e.g. a biker wearing leathers in a catholic church.
- It has been found that when individuals are under time pressure and have to decide to act very quickly, they tend to fall back on their attitudes as quick and easy guides. Thus, when under time pressure the attitude-behaviour link is stronger than in situations in which such pressure is lacking (Baron & Byrne, 1994).
- People tend to place themselves in situations which allow them to maintain a close match between attitudes and behaviour. This allows them to express their attitudes freely. In other words, attitudes determine which situations individuals want to enter. Once the situation is entered and, given that the

attitudes are allowed free expression, these attitudes are strengthened, increasing the attitude-behaviour link (Baron & Byrne, 1994).

2) Aspects of attitudes themselves

- Attitude origin. Attitudes which are formed on the basis of direct experience often exert a stronger effect on behaviour than ones formed indirectly, e.g. attitudes passed on by parents. The reason for this, it appears, is that direct experience increases accessibility from memory of attitudes and, the more accessible the attitude, the more powerful the attitude-behaviour link.
- Attitude strength. The stronger attitudes are, the greater the influence they will have on behaviour and the more resistant they will be to change. Attitude strength includes aspects such as 1) intensity (emotional reaction), 2) importance (extent to which individuals care about attitude), 3) knowledge, 4) accessibility (how easily an attitude comes to mind) (Baron & Byrne, 1994).
- Attitude specificity. The more specific an attitude (in other words, the more focused it is on a specific object or situation) the more likely it will influence one's behaviour (Baron & Byrne, 1994).

3) Aspects of the individual

- Studies have found that the dimension of self-monitoring in individuals influences the strength of the attitude - behaviour link. It has been found that attitudes are indeed better predictors of behaviour for high self-monitoring people, i.e., people who use their attitudes as important guides to behaviour (looking inwards when trying to decide how to behave). In contrast, low-self monitoring people look outwards to what others are doing or saying in order to decide on a behaviour (Baron & Byrne, 1994).

- **THEORY OF REASONED ACTION MODEL**

Alongside the moderating factors approach, another model was developed to explain the attitude-behaviour link, namely the theory of reasoned action (refer to Figure 2.4: Ajzen & Fishbein, 1980). According to this approach, the proximal cause of behaviour is not attitude, but an intention to engage in a behaviour, which itself directly influences behaviour (Eagly & Bedford, 1992).

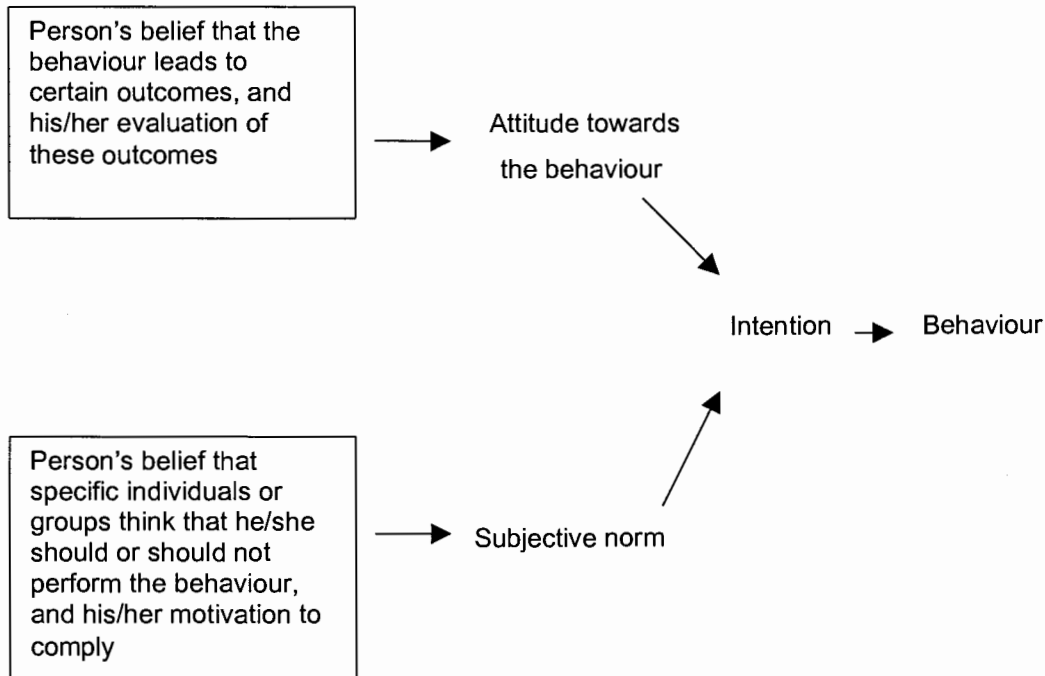
INTENTION-----→ BEHAVIOUR

Attitudes come into play in their influence on one's intention to engage in a behaviour. Only attitudes towards behavioural acts are important in this theory, and they are believed to influence behaviour through their impact on intention. What is referred to here as attitudes towards behavioural acts (and the cause of one's intention), are a result of:

- 1) one's attitude towards personally engaging in the behaviour, and
- 2) subjective norms, which is one's perception of the extent to which significant others think that one should engage in the behaviour (Eagly & Bedford, 1992).

Attitude towards the behavioural act is the person's individual belief that the behaviour leads to certain outcomes and his/her evaluation of these outcomes as either positive or negative. A subjective norm is a belief that specific individuals or groups of people think the individual should or should not perform the behaviour, and his/her motivation to comply with these specific individuals or groups.

Figure 2.4: Model of the theory of reasoned action (Ajzen & Fishbein, 1980)



The model is based on the assumption that human beings are usually quite rational and make systematic use of the information available to them. This model would, therefore, not subscribe to the view that human social behaviour is controlled by unconscious motives or overpowering desires. Rather, it states that people consider the implication of their actions before they decide to engage, or not engage, in a given behaviour (Ajzen & Fishbein, 1980).

Thus, this model focuses on attitudes towards behavioural acts as influencing behaviour indirectly, as opposed to the mediating factors approach which focuses on how the general attitude towards a certain attitude object will directly influence behaviour (Eagly & Bedford, 1992).

Both models, therefore, contend that an attitude-behaviour link does exist under certain circumstances. The Theory of Reasoned Action Model, however, takes it a step further by suggesting that cognition is the most important evaluative

response revealing attitudes and, consequently, has being criticized for placing too much stress on cognition (Eagly & Chaiken, 1993).

According to Eagly & Chaiken (1993, p, 175 – 177), many studies have attempted to investigate the importance and relevance of the three-dimensional model of attitudes. Eagly & Chaiken concluded that all the findings of these studies are contradictory. Some suggest that the three-dimensional model is valid, whereas others fail to support it. Eagly & Chaiken (1993), therefore, claim that a definite empirical determination of the dimensionality of attitudes is unlikely in the near future, and remains an important issue for theoretical development. As a result of these studies, Ajzen & Fishbein, (1980) argued that only a uni-dimensional model of attitude is acceptable, because all measures of attitude, whether based on cognition, affective, or behavioural responding, order individuals along an evaluative continuum.

From a theoretical analysis the implication is that nurses' unwillingness behaviour can be substantially influenced by nurses' attitudes towards HIV/AIDS patients. Which dimensional evaluative response/s reveal nurses' attitudes, however, is difficult to identify, especially in view of the contradictory findings concerning the three-dimensional model of attitudes.

The chapter to follow is a discussion on all relevant studies conducted which did in fact investigate the attitude - behaviour link between nurses' attitudes towards HIV/AIDS patients and nurses' eventual willingness to care for HIV/AIDS patients.

CHAPTER 3

LITERATURE STUDY

1) INTRODUCTION

From the analysis of various theories in the previous chapter it was contended that an attitude-behaviour link could exist between nurses' attitudes towards HIV/AIDS patients and nurses' unwillingness to care for HIV/AIDS patients. In this chapter relevant studies of the relationship between nurses' attitudes and nurses' unwillingness will be evaluated, in order to ascertain whether the findings support the theories.

2) STUDIES OF THE RELATIONSHIP BETWEEN NURSES' ATTITUDES AND NURSES' INTENTIONS TO CARE FOR HIV/AIDS PATIENT

Laschinger , Spence, Goldenberg & Bello (1995) examined community health nurses' attitudes, subjective norms and intentions to care for patients who are HIV positive, using the theory of reasoned action. Questionnaires were completed according to the guidelines provided by Ajzen & Fishbein (1980). Consistent with the theory, attitudes were found to be significant predictors of intentions to care for persons who are HIV positive.

In a study by Azaiza & Ben Ari (1997) it was found that while the majority of participants showed willingness to care for the HIV/AIDS patient, their comfort in doing so was related to their attitudes to people with HIV/AIDS. That is, attitudes towards AIDS patients was an important factors in determining nurses' social work practices with AIDS patients.

Harrison *et al.* (1994) found that up to 85% of nurses had negative attitudes towards AIDS patients, and simultaneously were unwilling to provide care to these patients. A study by Bliwise, Grade, Irish & Ficarrotto (1991), found that attitudes towards AIDS patients are expressed in willingness of the nurse to provide care. Preston *et al.* (1991) found that nurses' negative attitudes towards AIDS patients were correlated with nurses' unwillingness to care for patients with AIDS, as well as an unwillingness to provide specific nursing care procedures to persons with AIDS.

These are just a few of many studies and research projects in which it has been found that nurses' attitudes towards HIV/AIDS patients influences nurses' willingness to care for HIV/AIDS patients. Having established this attitude-behaviour link, the question becomes: "What factors contribute to, or have a direct influence on, nurses' negative attitudes towards HIV/AIDS patients, which in turn influences the nurses' intention to care for HIV/AIDS patients?"

Bliwise *et al.* (1991) posed the same question and attempted to determine the reason why health care professionals are reluctant to work with an HIV/AIDS patient. They investigated the factors which contribute to nurses' negative attitudes towards AIDS patients, and consequently towards unwillingness to care for HIV/AIDS patients. The results of the research suggested that there are indeed multiple overlapping pathways (variables or factors), to negative attitudes towards AIDS patients.

3) INVESTIGATION OF COMPONENT FACTORS OF NURSES' ATTITUDES TOWARDS HIV/AIDS PATIENTS

- **NURSES' KNOWLEDGE OF HIV/AIDS AS A COMPONENT FACTOR OF NURSES' ATTITUDES TOWARDS HIV/AIDS PATIENTS**

A significant influencing factor in nurses' negative attitudes was found to be nurses' knowledge of HIV/AIDS.

This is referred to as the knowledge-attitude-behaviour scheme. According to this scheme, correct information about AIDS shapes the formation of positive attitudes towards HIV/AIDS patients, which in turn influences their willingness to care for them. (Ben Ari, 1996).

Bowman, Brown, & Eason (1994) conducted a study to gather information about the attitudes of nursing students towards HIV/AIDS patients. It was found that the more knowledgeable the individual was about HIV/AIDS, the more positive was their attitude towards HIV/AIDS patients. This, concluded Bowman, should alert nurse educators to provide a curriculum which address knowledge and skills concerning the care of the HIV patient.

Gershon *et al.* (1994) conducted a study of the attitudes of nurses and found that more positive or more tolerant attitudes amongst clinical workers were correlated with many variables - one of which included nurses' general knowledge of HIV/AIDS and knowledge of transmission.

In a South African study by Eagly & Bedford (1992), which was based on a similar British study by McManus & Mortan (1986), it was found that a positive correlation between knowledge about HIV/AIDS and positive attitudes towards the HIV/AIDS patient does exist amongst nurses.

Bond, Rhodes, Philips, Setter, Foy & Bond, (1990) examined knowledge and its effects on student attitudes. It was discovered that AIDS education has a positive influence on attitudes of nursing students, and that professional nurses with graduate degrees have the highest knowledge base and the most positive attitudes towards HIV/AIDS patients. Bond *et al.* (1990) stated that as a result, attitudes about HIV/AIDS can be changed by increasing the knowledge base.

Contradicting the above findings is the study conducted by Kohi & Horrocks (1994), which investigated attitudes amongst nurses in Tanzania. The results

revealed that 96% of Tanzanian nurses appear to have a satisfactory or adequate level of knowledge about AIDS. However, they have negative attitudes towards HIV/AIDS patients and are overly cautious and reluctant to care for them, discrediting the knowledge-attitude-behaviour model.

In order to test the attitude-behaviour link Gallop, Taerk, Lancee, Coates & Fanning (1992) developed an educational package for health care providers, whereby all subjects received a one-hour educational training package. It was found that the knowledge package did increase knowledge about HIV/AIDS. However, knowledge alone was not sufficient to change negative attitudes. Gallop, therefore, recommends that training programmes for health professionals address not only the acquisition of knowledge.

In conclusion, it appears that knowledge is an important factor which influences the nurses' attitude and, in turn, their behaviour. However, it is not the only factor and despite having a good general knowledge base with regards to the disease, nurses can still express negative attitudes towards these patients.

- **NURSES' JUDGEMENT OF RISK AS A COMPONENT FACTOR OF NURSES' ATTITUDES TOWARDS HIV/AIDS PATIENTS**

Wang, Simoni & Paterson (1993) found that the phenomenon "nurses' judgement of risk" was a factor which influences nurses' attitudes and, therefore, behaviour towards HIV/AIDS patients. It was also found that knowledge correlated highly with judgement. In other words, the more knowledgeable the nurse, the less fear and more realistic judgement she displayed and, therefore, the more positive the nurses' attitude. This can be demonstrated by the findings that nurses with doctoral degrees (higher knowledge base) displayed less fear, and more positive attitudes towards AIDS patients. The lower threat of AIDS perceived by them may be related to the deeper sense of security afforded them by their knowledge about the disease and its transmission.

Gershon *et al.* (1994) found that tolerant attitudes amongst clinical workers were correlated with a range of variables such as personally knowing someone with AIDS, high scores on general knowledge, high knowledge scores about modes of transmission and low levels of fear. Judgement of risk in this study was, therefore, also found to be a significant factor which influences nurses' attitudes.

Beaufoy, Goldstone & Ridell (1988) suggested that greater knowledge is necessary to moderate judgement of risk associated with caring for the person with HIV/AIDS. Meisenhelder (1994) found that nurses with more accurate knowledge of HIV displayed a realistic judgement of risk and positive attitudes towards HIV patients.

Clearly, judgement of risk is a significant factor, which influences the nurses' attitude towards the HIV/AIDS patient. However, research findings have also suggested that nurses' realistic judgement of risk, which increases their positive attitudes towards the HIV/AIDS patients, is in fact directly influenced by nurses' knowledge base. Therefore, knowledge as an influencing factor towards attitudes, also influences judgement of risk, which in turn is another influencing factor towards attitudes.

Once again judgement of risk is only one amongst other influencing factors in nurses' attitudes towards HIV/AIDS patients.

- **NURSES' ATTITUDES TOWARDS HOMOSEXUALITY AS A COMPONENT FACTOR OF NURSES' ATTITUDES TOWARDS HIV/AIDS PATIENTS**

Research findings suggest that attitudes towards lesbian women and gay men do influence the type and quality of health care provided (Douglas *et al.*, 1985). In Schwanberg (1996) nurses' negative attitudes towards homosexuality were

linked with nurses' negative attitudes towards HIV/AIDS patients and, therefore, influenced nurses' willingness to care for HIV/AIDS patients.

Barrick (1988) investigated the degree of association between nurses' attitudes towards and willingness to care for patients with HIV/AIDS, and nurses' attitudes towards homosexuality. Results indicated a direct correlation between negative attitudes towards gay men and women and a negative and unwilling attitude to care for AIDS patients. Similar findings were reported by Marram van Servellen, Lewis & Leake, (1988) in a study of 1019 registered nurses. More than one third of the participants, that is 38,4%, indicated they had either a great or moderate level of discomfort in caring for male homosexuals.

Data from a survey conducted by Scherer, Wu & Haughey (1991) suggested that issues surrounding the negative attitudes towards and care of patients with AIDS may be complicated by the fact that these individuals could be homosexuals. For example, only 55% reported that they would feel comfortable establishing a therapeutic relationship with a homosexual patient. In addition it was found that some nurses, that is 25%, had become more negative about homosexuality since the AIDS crisis began.

Young, Henderson & Marx (1990) state that since nearly three quarters of AIDS patients are homosexual or bisexual males (as was the case in the United States of America at the time of the study), negative attitudes towards HIV/AIDS patients may primarily be a reflection of homophobia. This was confirmed in Young's study where it was found that homophobia accounted for a significant amount of difference in attitudes and that, therefore, negative attitudes towards AIDS patients is more than simply a fear of the disease, but it may in fact be related to discomfort in dealing with homosexuality. Dupra, Levy, Samson & Tessier (1989) found that amongst a random sample of French Canadians, negative attitudes towards AIDS patients were better predicted by homophobia than by other measures.

A study by Gallop *et al.* (1992) investigated whether knowledge alone influenced attitudes and care behaviour in nurses. All subjects, therefore, underwent one hour of educational training. Since the investigator was not certain that knowledge would modify attitudes, 75% of the subjects received an additional one hour group discussion intervention. The results suggested that knowledge alone was not sufficient to change attitudes and that the extra focused group discussions were necessary for the subjects' attitudes about AIDS patients to change. The focus group discussions involved issues around fear of contagion and homophobia and it was, therefore, concluded that both these factors influence attitudes towards HIV/AIDS patients.

Bliwise *et al.* (1991) found that negative attitudes amongst nurses about caring for HIV/AIDS patients reflects a variety of concerns, one of which was identified as homonegativism. Jemmot *et al.* (1992) examined nursing students' intentions, attitudes and AIDS knowledge and found that those with negative attitudes towards HIV/AIDS patients and greater tendency to avoid caring for these patients displayed (amongst other factors) negative attitudes towards homosexuals.

Eagly & Bedford (1992) conducted an attitude - knowledge study of South African health care professionals. One of the significant findings was that attitudes towards AIDS patients are most highly correlated with attitudes to homosexuality ($r = 0,60$). While there is some factual basis to the association between AIDS and homosexuality in terms of their identification as a high risk group, attitudes seem to be determined by negative associations rather than primarily on the basis of factual information, and may in some instances result in prejudices and ill-informed responses to AIDS sufferers and homosexuals.

All these findings, according to Scherer *et al.* (1991), suggest the importance of designing intervention strategies for nurses that include the opportunity to explore attitudes towards homosexuality. Through the process of discussing and

exploring attitudes, latent prejudices against homosexuality may be brought to the conscious level where they are amendable. Scherer further claims that it is crucial to uncover and help nurses deal with homosexual prejudices because of the impact that negative attitudes can have on providing quality care to patients with HIV/AIDS.

- **STRENGTH AND NATURE OF SUPPORT SYSTEM AS PERCEIVED BY NURSES**

Perceived social support is recognized as a measure of interpersonal relationships that provides environmental resources integral to a person's health and social functioning, especially in major life roles (Cohen & Syme, 1985).

Weiss (1974) proposed in his theory of social support that interpersonal relationships offer attachment in which an individual experiences various conditions: a personal commitment, social integration involving the sharing of ideas, opportunity for nurturance and nurturant behaviour, reassurance of worth and, finally, a sense of reasonable alliance that overcomes a sense of vulnerability. Within the context of AIDS care, the nurse's perception of social support may strengthen the nurse's positive attitude towards AIDS patients and motivation in caring for the AIDS patient (Gottlieb, 1983).

Support for the importance of perceived social support in influencing nurses' attitudes and behaviour comes from the theory of reasoned action (Ajzen & Fishbein, 1980). This theory emphasizes that attitudes towards a certain phenomenon (in this case nurses' attitudes towards HIV/AIDS patients) are developed out of 1) personal beliefs, and 2) subjective norms, i.e. perceptions of the expectations, support and concerns of important others with regards to the attitude topic. Therefore, both phenomena should be considered as influencing factors of nurses' attitudes towards HIV/AIDS patients.

Research appears to support this view. In Tessaro & Highriter (1994), 311 health nurses completed anonymous questionnaires which attempted to investigate the relationship between nurses' perceived support from their families, and nurses' attitudes and willingness to care for HIV/AIDS patients. It was found that nurses who perceived high levels of support from their families and friends (subjective norms), displayed more favorable attitudes and intentions to care for HIV/AIDS patients. However, subjective norms alone could not explain all attitude variations, implying that other factors are involved (Tessaro & Highriter, 1994). Sherman (1995) found that the results of her study offer empirical support for the relationship between nurses' perceived social support, and nurses' attitudes and willingness to care for HIV/AIDS patients.

Other studies found that even when support is present, the nature of the support can enhance unwillingness to provide nursing care to HIV/AIDS patients due to negative attitudes towards HIV/AIDS patients from significant others. Preston *et al.* (1991) attempted to investigate experiences and attitudes of nurses from rural communities in Pennsylvania and New York and found that of the nurses who expressed an unwillingness to provide specific nursing care procedures to persons with AIDS (20%), many reported that their families would be upset if they were to care for AIDS patients. Laschinger *et al.* (1995) examined health nurses' attitudes, subjective norms and intentions to care for patients who are HIV positive using the theory of reasoned action. It was discovered that, in part, subjective norms (perceived negative attitudes towards HIV/AIDS patients of significant others) do influence nurses' attitudes towards HIV/AIDS patients and, therefore, willingness to care for HIV/AIDS patients.

Research evidence, therefore, suggests that social support and the nature of the social support are important factors in predicting nurses' attitudes and behaviours towards HIV/AIDS patients.

- OTHER FACTORS INVESTIGATED AS COMPONENT FACTORS OF NURSES' ATTITUDES TOWARDS HIV/AIDS PATIENTS

In a study measuring medical and nursing students' attitudes towards AIDS, results revealed the importance of recognizing the role that fear of death (death anxiety) can play in health care professionals' attitudes towards HIV/AIDS patients (Bliwise *et al.*, 1991). A similar study confirmed the relationship between nurses' fear of death and negative attitudes and antipathy to the care of AIDS patients (Sherman, 1995).

Conners & Heaven (1995) studied the relationship between nurses' health beliefs (health internal and external locus of control) and their attitudes towards HIV/AIDS patients. No significant relationship was found.

Harrison *et al.* (1994) claimed but never researched the idea that nurses' general conservative views may be correlated with nurses' negative attitudes towards HIV/AIDS patients when considering the nature of transmission (mainly sexual contact and drug users). This factor could, therefore, be an additional avenue for further research.

CHAPTER 4

PROPOSED MODEL AND RESEARCH DESIGN

1) PROPOSED MODEL

As discussed in the previous chapter, many component factors have been identified and studied as elements which constitute nurses' attitudes towards the HIV/AIDS patient. However, most of the relevant studies did not investigate the effect of the combination of influencing factors on nurses' attitudes or unwillingness to care for HIV/AIDS patients. For example, some focused on knowledge alone and others on homophobia alone, but few attempted to combine more than two factors in their investigation. Other studies which identified the attitude-behaviour link failed to investigate the component factors which influence nurses' attitudes.

It thus appears that there is a need for a study which investigates all relevant component factors which influences nurses' attitudes towards HIV/AIDS patients (based on the cumulative combination of all previous studies and their consequent findings).

Within most previous studies the focus of the research was either to investigate the attitude-behaviour link, or to investigate the component factors which shape attitudes. In essence, therefore, some of these studies investigated the evaluative response - behaviour - as a measurement to reveal attitude, or more simply wanted to prove that attitudes shape behaviour. Either way the focus was on measuring behaviour, either as an evaluative response revealing an attitude, or as an action shaped by an attitude. Based on the three-dimensional model of attitudes one can assume that, although behaviour can be an evaluative response which reveals underlying attitudes, so can cognition and affect be

considered evaluative responses which reveal underlying attitudes. As discussed in Eagly & Chaiken (1993, p, 175 – 177), the tripartite model, which claims that all three dimensional elements should be evaluated, has resulted in contradictory findings which either support or reject the model and thus leave the issue unresolved. Therefore, there is no concrete theory which states that all three evaluative responses should be measured, or which would be the best form of measurement. The measurement of behaviour in previous studies as an evaluative dimension which reveals the underlying attitude was not accurate nor inaccurate, it was merely a choice.

It is, therefore, assumed that perhaps the affective evaluative dimension could be an equal or more effective form of attitudinal measurement. This would seem to be true, especially when one considers the nature of the attitude object, i.e. HIV/AIDS patients, and also taking into account that nurses are no longer allowed to act on their possible unwillingness to care for HIV/AIDS patients, therefore making the measurement of behaviour ineffective. For this reason it is proposed that the evaluative response affect should be used as a reflection of the underlying attitude of nurses. The specific evaluative response to be measured will be anxiety.

The focus, therefore, of the proposed study will shift slightly from previous studies. The various component factors which influence attitudes will still be investigated; however, the measurement of the underlying attitude will not be behaviour of nurses (which they are no longer free to express), but rather anxiety as the affective component which reveals the underlying attitude. So while the measurement of the underlying attitude will change, the aim of the investigation – to identify the component variables which influence nurses' attitudes – remains essentially the same.

Previous studies, were mostly conducted in European countries and in America, all of which are developed countries. Few studies addressed the South African

situation, which is not only that of a developing country but also of a country in the process of change and transformation.

It follows that there is a need to pursue a research project in South Africa, in order to investigate whether research findings in other countries are consistent with research findings in South Africa.

It should also be taken into account that in most other countries, HIV/AIDS appears to be perceived by the general public as more directly associated with homosexuals than with heterosexuals. In South Africa HIV/AIDS is mostly a heterosexual disease, that is passed on from men to women or women to men (Van Dyk, 1993). This difference in public perception could influence the nurses' attitude towards the HIV/AIDS patient more positively, and possibly reduce unwillingness to care for HIV/AIDS patients (based on the rationale that not all HIV/AIDS patients are gay and, therefore, outcasts). On the other hand, it could also influence nurses' attitudes towards HIV/AIDS patients more negatively and increase negative care behaviour (based on the rationale that all patients and not only gay patients could be HIV/AIDS positive).

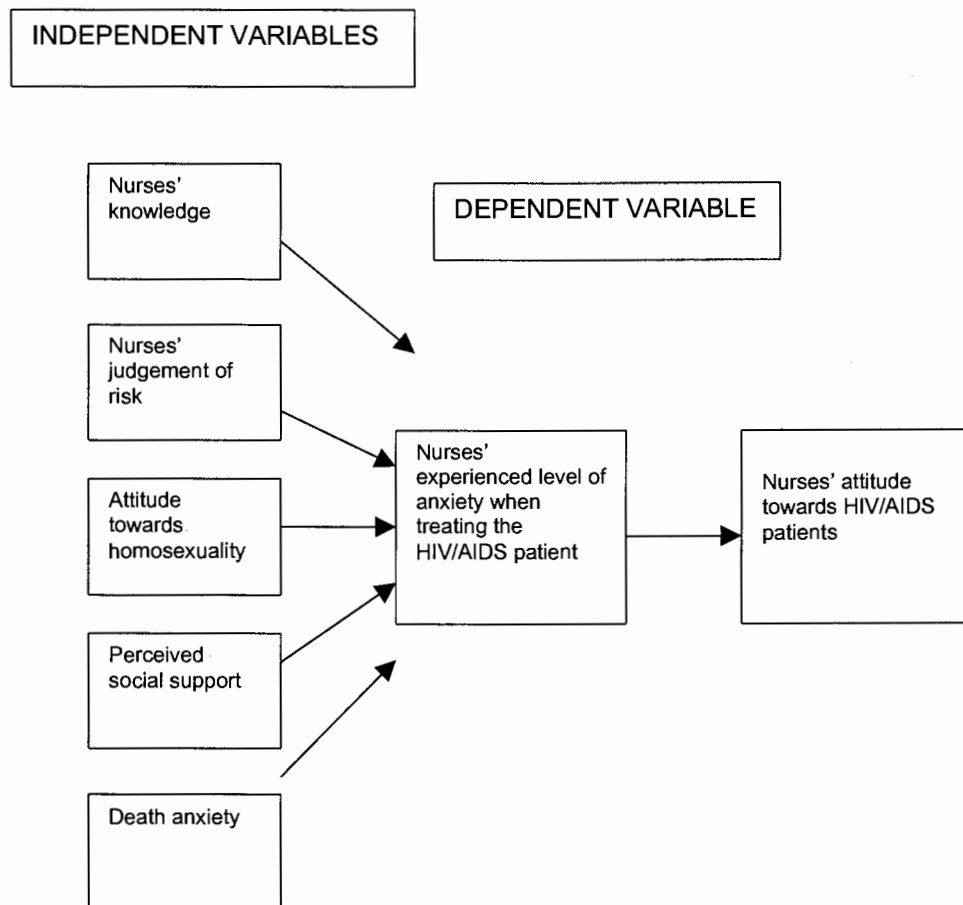
The need for such research in South Africa is further strengthened by the fact that South Africa has been amongst those countries with a rapid spread of HIV/AIDS, thus increasing the need to initiate and continue with research, and to plan both care management and prevention of the syndrome.

Based on the theoretical analysis, research findings, and the need for such a research in South Africa, the following hypothesis/model is proposed for research:

Nurses' (a) high knowledge base, (b) realistic judgement of risk, (c) positive attitudes towards homosexuality, (d) perceived social support, (e) low levels of death anxiety, as components of their attitudes towards HIV/AIDS patients, decrease nurses' levels of anxiety when treating the HIV/AIDS patient.

This model is presented schematically in Figure 4.1.

Figure 4.1: Model of proposed hypothesis



The five components of nurses' attitudes which were chosen to be included in the model are those components which in various studies, as discussed in the literature survey (refer to Chapter 3), have been shown to influence the dependent variable, i.e., nurses' attitudes towards HIV/AIDS patient. Other possible factors which were explored in the literature provided contradictory findings, or very weak to no relationships between the relevant component and nurses' attitudes towards HIV/AIDS patients. The proposed model attempts to combine all previous studies and their consequent findings, in order to include all

the most relevant component factors of nurses' attitudes towards HIV/AIDS patients.

It is hoped that the model can explain most of the variation in nurses' anxiety levels when treating HIV/AIDS patients.

2) RESEARCH DESIGN

Due to the nature of the study, i.e. the investigation into nurses' beliefs, attitudes, and thoughts, it is proposed that the research should be conducted by way of a survey.

Survey research studies large and small populations by selecting and studying a sample chosen from the population to discover the relative incidence, distribution, and interrelations of sociological and psychological variables, and in so doing, usually focuses on people, and their beliefs, opinions, attitudes, motivations, and behavior (Kerlinger, 1986). It is necessary to use a sample to draw inferences about populations since studying a whole population is difficult or impossible. From an appropriate representative sample one can then infer the characteristics of the defined population or universe.

While questionnaire and structured interview surveys are the most common forms of collecting data in a survey, it is perfectly possible to collect qualitative data within a survey. Even experimental investigations can be done using survey techniques, though these are still quite rare. Within this study, a questionnaire was used to collect both qualitative and quantitative data.

3) MEASURING INSTRUMENT

A measuring instrument (i.e. questionnaire) was developed to collect the data (full questionnaire is included as Addendum A).

The questionnaire was divided into various sections, with each section measuring a specific variable / factor which was proposed in the model (refer to Figure 4. 1).

The sections are as follows:

- SECTION 1: DEMOGRAPHICS

Section 1 was designed to gather information on demographic characteristics such as age, gender, ethnic group, nursing education, position, unit, percentage of HIV patient care etc. This first section of the questionnaire was designed by the author of the study and consisted of 17 questions, which required either a multiple-choice selection or one-word answers.

Sections 2 – 6 measure each individual factor identified in the model as components of nurses' attitudes towards HIV/AIDS patients (the dependent variables).

- SECTION 2: KNOWLEDGE OF HIV/AIDS

Section 2 of the questionnaire was designed to investigate nurses' Knowledge of HIV/AIDS as one of the independent variables within the proposed model (refer to Figure 4.1). Within the literature study, it was found that a significant influencing factor in nurses' negative attitudes was nurses' Knowledge of HIV/AIDS (refer to Chapter 3). This is referred to as the knowledge-attitude-behaviour scheme. Various studies support this scheme. Within all the relevant studies various knowledge questionnaires were developed and validated. However, the measuring instrument which was selected for this study was a scale developed by McManus & Mortan (1986) and later revised by Eagly & Bedford (1992). Since the scale was revised to accommodate to the South African context, it was felt that this scale would measure South African nurses' knowledge base more effectively than other available scales for measuring

knowledge. The scale consists of eighteen questions to which the subject answers true or false. No validity and reliability test are available for this scale.

- SECTION 3: JUDGEMENT OF RISK

Section 3 of the questionnaire was designed to measure nurses' Judgement of Risk as one of the independent variables in the proposed model (refer to Figure 4.1). With reference to Chapter 3, various studies suggested that nurses' Judgement of Risk was found to be a factor which influenced nurses' attitudes towards HIV/AIDS patients. In one study by Wang *et al* (1993) it was also found that Knowledge correlated highly with Judgement. It has been suggested by Beaufoy *et al* (1988) that greater Knowledge is necessary to moderate Judgement of Risk. The component of Judgement of Risk, therefore, is identified as a factor which influences nurses' attitudes and correlates highly with the component of Knowledge. It is for these reasons that the component was included in the model.

The scale instrument chosen to measure this component is an instrument developed by Tabet *et al* (1992) which consists of a five item, six point Likert scale. The items involve questions regarding the risk of contracting HIV from an infected patient in several different situations. Internal consistency of the scale was assessed by comparing each question with the direct question: "I am afraid of getting infected by AIDS patients." The internal consistency data of the study, however, was not provided.

- SECTION 4: ATTITUDES TOWARDS HOMOSEXUALITY

Section 4 of the questionnaire was developed to measure nurses' attitudes towards Homosexuality as a independent variable of the proposed model (refer to Figure 4.1). In more than half of the relevant studies which were evaluated, Homophobia was found to be a strong factor which influenced nurses' attitudes towards HIV/AIDS patients. It became evident, therefore, that Homophobia is an

important component to be included in the proposed model. The Index of Homophobia Scale (IHP) developed by Hudson & Ricketts (1980) was chosen as the scale to measure this component. This scale was selected because, firstly, it was the mostly widely used scale in previous studies and, secondly, it is the most well validated scale to date. The IHP is a 25 item, 5 point Likert scale instrument with a score range of 1 to 100 (a low score indicating low Homophobia and a high score indicating high Homophobia).

In the study by Hudson & Ricketts (1980), the IHP was examined for its reliability and construct validity. The reliability of the scale was examined by computing the coefficient alpha, which was found to be .90 (Hudson & Ricketts, 1980). Due to the possibility of marked differences in sample or population variances the standard error of measurement was also computed, and was found to be 4.75. This indicates that on average an individual IHP score will fall within a range of plus or minus 9.5 points of their true score about 95% of their time.

The construct validity of the IHP was examined by Hudson & Ricketts using several criterion variables. Since Hudson & Ricketts believed that persons who are conservative in their attitudes towards the expression of human sexuality will tend to be homophobic, they decided to use scores obtained from the Sexual Attitude Scale (SAS) to examine the validity of the IHP. The correlation between the IHP and SAS scores was .53, significant at $p < .001$. Other criterion variables, such as the "Personal Distress" (PD) which was combined with the "Interpersonal Relationship Disorder" (IRD) to obtain an overall IRD score, were used to measure construct validity of the IHP. A correlation of $r = 0.14$ was found, which is significant at $p < 0.025$.

- SECTION 5: DEATH ANXIETY

Section 5 of the questionnaire was developed to measure Death Anxiety as a independent variable in the proposed model (refer to Figure 4.1). There are many studies which imply that Death Anxiety plays a significant role in health

care professionals' attitudes towards HIV/AIDS patients. Studies by Bliwise *et al* (1991) and Sherman, (1995) investigated the relationship between nurses' level of Death Anxiety and their attitudes/care towards HIV/AIDS patients. In both studies a significant relationship was found.

The scale chosen to measure the component Death Anxiety was the Templer Death Anxiety Scale (Templer, 1970), one of the most widely used measures of conscious Death Anxiety. This scale was also used in the two studies quoted above. The scale consists of 15 items to be responded to as 'true' or 'false', with a final score which can range from 0 to 15. High scores indicate higher Death Anxiety.

Templer conducted various psychometric tests to determine the reliability and validity of his scale. To determine the internal consistency, item-total score point biserial correlation coefficients for three independent groups of subjects were utilized. Phi coefficients were computed as a means of determining relative independence of items. Since none of the coefficients of correlation between retained items exceeded 0.65, it can be inferred that there is not excessive interitem redundancy.

A test retest reliability measure was also computed by Templer, where a product-moment correlation coefficient of .83 was found. A coefficient of .76 (Kuder-Richardson Formula 20) demonstrates reasonable internal consistency for those subjects.

Criterion related validity was demonstrated by Templer (1970), using a group of psychiatric patients who were regarded as highly anxious. High anxiety patients had a DAS mean of 11.62; the control group had a mean of 6.77. A t value of 5.75 was significant at the 0.01 level (two tailed test).

Construct validity was evident by significant correlations with Boyer's Fear of Death Scale, ($r = .74$, $p < 0.05$) and the Death Anxiety Questionnaire, ($r = .51$, $p < 0.01$) (Templer, 1970).

- SECTION 6: SOCIAL SUPPORT

Section 6 was designed to measure nurses' perceived Social Support, one of the independent variables proposed in the model.

Perceived social support is recognized as a measure of interpersonal relationships that provide environmental resources integral to a person's health and social functioning, especially in major life roles, i.e., careers (Cohen & Syme, 1985). Within the context of AIDS care, the nurses' perception of Social Support may strengthen the nurses' positive attitude towards AIDS patients and motivation in caring for the AIDS patient (Gottlieb, 1983). Support for the importance of nurses' perceived Social Support in influencing their attitudes and behaviour comes from the theory of reasoned action (Ajzen & Fishbein, 1980), and from various studies. As a result of its importance this component was included in the model.

The scale chosen to measure this variable was the Personal Resource Questionnaire-85 (Brandt & Weinert, 1987), because this is the scale most often used in previous studies. The scale has also been well validated. This instrument is based on Weiss' (1974) five dimensions of social relationships: provisions of attachment, social integration, opportunity for nurturance, worth, and assistance.

Only part two of the multidimensional instrument will be used, as was done in the study by Sherman (1995). Part two consists of 25 items with a Likert seven-point response format. Brandt & Weinert (1987) established the reliability of the PRQ-85 based on three different samples of middle aged to older adults; alpha coefficients ranged from 0,87 to 0,89. The alpha coefficient was also calculated

in a study conducted by Sherman (1995) and was found to be 0,89. Construct validity of the PRQ-85 was established by a correlation of 0,58 with the Cost and Reciprocity Index, a new index of social support. Assessments of criterion related validity have moderate negative correlations with the Profile of Mood Status ($r = -0,31$, $p < 0,05$) and Beck Depression Inventory ($r = -0,48$, $p < 0,05$).

- SECTION 7: LEVEL OF ANXIETY

Section 7 of the questionnaire was designed to measure nurses' anxiety levels when treating the HIV/AIDS patient. The measurement of anxiety is the measurement of the affective evaluative dimension of nurses' attitudes and is, therefore, intended to represent the dependent variable in the proposed model (refer to Figure 4.1). Most existing anxiety instruments measure general anxiety levels only, and no appropriate existing scale could be found to measure nurses' levels of anxiety while treating HIV/AIDS patients. A new scale, therefore, had to be designed for the specific needs of this study.

In designing the scale, the IPAT anxiety scale was used as a basis for generating items to test AIDS anxiety. The IPAT anxiety scale was used as a basis because it is the most commonly used scale for measuring general anxiety levels and because it has been proven high in validity and reliability. The questionnaire, therefore, incorporates a scale for HIV Anxiety that was developed specifically for this study, and which consists of 18 items to which the respondents must agree, disagree or remain neutral.

Investigation of the validity and reliability of the new scale will be discussed in the data analysis section of the study (refer to Chapter 5).

- SECTION 8: NURSES' OPINIONS REGARDING HIV/AIDS PATIENTS

Section 8 of the questionnaire consists of four open-ended questions, which were designed to gain an understanding of nurses' level of anxiety when treating

HIV/AIDS patients. The author of the study designed this section as a control for validity of the HIV Anxiety scale in section 7.

4) SAMPLE AND PROCEDURE

The population in this study is South African Nurses. Ideally, therefore, the sample selected to participate in the survey should represent the population of nurses all over South Africa (i.e., constitute a random or stratified sample of all nurses in SA). Due to practical and financial limitations, however, only hospitals in the Gauteng region were invited to participate. Four hospitals were selected as possibilities to participate. Two are state hospitals and two are private hospitals. A letter was sent to the appropriate authorities at each hospital, i.e., Head Matrons, Public Relations Officers etc. (A copy of the letter is included as Addendum B). The letter explained all the details of the study and invited the hospital staff to participate.

Of the four hospitals which received invitations, three agreed to participate, two state and one private. I was, however, requested by all three hospitals to give a brief presentation to the ethics board for final approval before commencement of the study (a full copy of the presentation is included as Addendum C).

Once the relevant ethics boards approved the study, all nurses were sent a letter informing them of the study and inviting them to participate (a copy of the letters to nurses is included as Addendum D). The nurses were then requested to return the letter within a given period of time indicating whether they were willing to participate. Participation, therefore, was completely voluntary, which can influence bias of the sample. However, this cannot be avoided.

Initially it was decided to book different dates with each individual hospital during which the data collection would take place. On each specific day all the nurses who agreed to participate would be gathered together in a quiet room, handed a

questionnaire, to be completed within a certain time frame. This method of collecting data was intended to prevent nurses from discussing the questionnaire and contaminating each other's knowledge and responses. However, after numerous consultations with the various Matrons representing each hospital, certain practical limitations, which prevent such a controlled method of inquiry were realized. It transpired that it is completely impractical and probably also unethical to gather a group of nurses for a prolonged duration, due to shift work, emergencies, fatigue and lack of undisrupted quiet room facilities. As a result of such practical limitations it was later decided to revert to a more informal method of data collection.

Based on the response rate from each hospital, (i.e., nurses willing to participate) an appropriate number of questionnaire booklets were provided to the relevant authorities to be distributed to the nurses who agreed to participate. All hospitals received the questionnaires simultaneously and had the same cut off date of 2 weeks for the questionnaires to be completed and returned. The data collection took place over the period of 01/07/99 – 28/07/99.

CHAPTER 5

DATA ANALYSIS

The data was captured and analyzed in the SPSS 10.1 version statistical package. Each section of the questionnaire will be discussed individually.

1) SECTION 1 : DEMOGRAPHICS OF THE SAMPLE

The three hospitals which volunteered participation were Johannesburg General Hospital and Helen Joseph which are public hospitals, and Sunward Park which is a private hospital. In total 75 questionnaires were returned, of which three were eliminated due to insufficient completion, resulting in a final total of 72 completed questionnaires. Of these completed questionnaires, 25 were from Sunward Park, 38 from Johannesburg General, and 9 from Helen Joseph. A gender breakdown revealed that the sample had only 1 male nurse and 71 female nurses.

The average age of the nurses in the sample was 37 years (ranging from 22 – 62) with a standard deviation of 10, implying a reasonable spread of young versus older nurses. With regards to marital status, 48.6% of the sample are married, 27.8% have never been married, and the remaining 23.6% are either divorced, separated or widowed. The racial breakdown of the sample was 35 black respondents, 31 white respondents, 5 coloured respondents and 1 Indian respondent. Eighty two percent of the respondents in the sample are parents with an average of 1.6 children each.

The average number of years that the nurses in the sample have been working as registered nurses is 12.97 years, with a standard deviation of 9.95.

All nurses in the sample, with the exception of one respondent, are full time nurses. With regards to positioning, 50% of the respondents in the sample claim to be professional nurses, 29% claim to be chief professional nurses, 1 % claim

to be nursing managers, and the remaining 20% did not respond. One can assume that those respondents who did not respond to current position (their title) may not have a title yet, as they are enrolled nurses who are still studying.

With regards to level of satisfaction with current occupation on a scale of 1-5, where 1 equates to very satisfied and 5 equates to very dissatisfied, the overall average level of satisfaction amongst the respondents in the sample was 2.22 with a standard deviation of 1.14. Overall 63.9% of the total sample are very to moderately satisfied.

The various units in which the respondents in the sample work are displayed below, with the frequency of each unit (refer to Table 5.1).

Table 5.1

Unit	Frequency	Percent
Missing values	10	13.8
Casualty	3	4.2
Dental	7	9.7
Infection Control	1	1.4
Lab	2	2.8
Maternity	12	16.7
Medical Casualty	4	5.6
Orthopedics	13	18.1
Pediatrics	3	4.2
Pediatrics Orthopedic	3	4.2
Surgical	8	11.1
Trauma Orthopedics	4	5.6
Vascular Surgery	2	2.8
Total	72	100

58.3% of the respondents in the sample believe that 50% or less of the patients they treat are HIV positive. A further 23.6% of the respondents in the sample don't know.

43.1% of the respondents believe that the majority of the patients they treated contracted the HIV virus from heterosexual partners, whereas only 12.3% believe the majority of the patients they treated contracted the virus from a homosexual partner or a combination of a homosexual partner and IV drug use. A further 30.6% of the respondents in the sample claimed that they did not know. Within the sample, only 16.7 % of the respondents believe they know someone (family member or friend) who is HIV positive. 81.9% of the sample believe they do not know a family member or friend who is HIV positive (only 1 respondent did not reply).

2) DETERMINING FINAL SCORES ON THE SCALES OF THE QUESTIONNAIRE

- **SECTION 2: KNOWLEDGE OF HIV/AIDS**

The first step taken in the analysis of section 2 of the survey (Knowledge test) was to eliminate four of the questions. In consultation with various experts in the field (including the Psychology department of UNISA and the Nursing school of UNISA) it was decided that the four of the questions in the section were ambiguous or no longer relevant as questions testing for knowledge of HIV/AIDS. It was, therefore, decided to eliminate the following questions:

- 2.5 - All persons having antibodies to HIV must be assumed to be infected
- 2.13 - AIDS was introduced to South Africa directly from African countries North of the border.
- 2.14 - AZT is the drug used to prevent AIDS
- 2.15 - The ratio between diagnosed AIDS cases and HIV infection persons is approximately 1:3.

This resulted in a Knowledge questionnaire consisting of 26 questions instead of 30.

Once the relevant questions were eliminated the remaining items were scored, so that a correct answer would equal 1 and an incorrect answer would be equal to 0. Following this, a total score was calculated by adding all the correct answers, resulting in a total score out of 26. Missing values were regarded as incorrect answers, and awarded a score of 0.

The overall mean score for the sample was 18.70, with a standard deviation of 3.30.

- SECTION 3: JUDGEMENT OF RISK

Judgement of Risk was measured on a six point Likert scale. Four of the five items in the questionnaire load in a positive direction (the higher the score the higher the perception of risk) whereas one of the items in the questionnaire (item 5) reflects a negative scale (the higher the score the lower the perception of risk). In order for all the ratings in all the items to be comparable, the negative scale item was reversed to reflect a positive scale (i.e. all the scores for item 5 of the questionnaire were subtracted from 7).

In order to get a total score for Judgement of Risk all the items in the questionnaire were added, which resulted in a score of between 5 – 30. Consequently, 5 was subtracted from each score to bring the range of scores to between 0 – 25. This was done in order to be able to read and understand total scores more easily.

The average score of 5.87 was awarded to two respondents who did not complete all items of the test (to reduce the accumulation of missing values).

The overall mean score for the sample was 5.87, with a standard deviation of 4.84.

- SECTION 4: HOMOPHOBIA

Some items in the five point scale used in the Homophobia questionnaire load in a positive direction (the higher the score, the higher the level of Homophobia displayed by the respondent), whereas other items in the questionnaire load negatively (the higher the score, the lower the level of Homophobia displayed by the respondent). In order for all the ratings in all the items to be comparable the negative scale items were reversed to reflect a positive scale. The individual scores for these items were subtracted from 6 (the affected scores are 4.3, 4.4, 4.6, 4.10, 4.12, 4.13, 4.14, 4.15, 4.17, 4.19, and 4.21).

Once all the negative scores were reversed, a total score for Homophobia was calculated for each respondent by adding up all the items in the questionnaire, to get a total score of between 25 and 125. For more convenient reading and spontaneous understanding of the total scores, 25 was subtracted from all the total scores, to get total Homophobia scores ranging from 0 – 100.

In the case of missing total scores as a result of respondents not completing each item in the test, the formula suggested by the authors of the IHP Homophobia scale (Hudson & Ricketts, 1980) was used to estimate the total Homophobia score, i.e.

$$\frac{\Sigma X - 100N}{4N}$$

Eight respondent's total Homophobic scores were calculated with the use of the formula.

The overall mean score for the sample was 60.06, with a standard deviation of 11.67.

- SECTION 5: DEATH ANXIETY

As a result of a misprint in the questionnaire, item 2 of the Death Anxiety questionnaire did not have an option for respondents to reply to, and therefore most respondent failed to answer the item. The item was therefore disregarded in scoring the questionnaire, resulting in a total of 14 instead of 15 items in the test.

Responses to items were scored in such a way that an answer (true or false) which reflected Death Anxiety was coded 1 and an answer which reflected no Death Anxiety was coded 0. A total Death Anxiety score for each respondent was calculated by adding all the items of the questionnaire resulting in a total score ranging from 0 – 14.

Missing item values were replaced with a value of 0.5.

The overall mean score for the sample was 7.96, with a standard deviation of 3.34.

- SECTION 6: PERCEIVED SOCIAL SUPPORT

Perceived Social Support was measured with a questionnaire consisting of 25 items, each representing a 7 point Likert scale. Some items in the questionnaire loaded in a positive direction (the higher the score, the higher the level of Perceived Social Support) whereas other items in the questionnaire reflected a negative scale (the higher the score, the lower the level of Perceived Social Support). In order for all the ratings in all the items to be comparable the negative scale items were reversed to reflect a positive scale (i.e. all the scores for items 6.4, 6.7, 6.10, 6.16 and 6.24 of the questionnaire were subtracted from 8).

Once all the negative scores were reversed a total score for Perceived Social Support was calculated for each respondent by adding all the items in the questionnaire to get a total score of between 25 and 175. For greater

convenience, 25 was subtracted from all the total scores to get total Social Support scores ranging from 0 – 150.

Missing total scores as a result of not all items in the test having been completed, were replaced by the overall average score of 117.37. This was necessary in eight cases where respondents did not complete all items of the test.

The overall mean score for the sample was 117.37, with a standard deviation of 16.02.

- **SECTION 7: THE HIV ANXIETY SCALE**

In the case of some items the three point Likert scale used to measure HIV Anxiety loaded in a positive direction, (the higher the score, the higher the level of HIV Anxiety), whereas for other items the loading was negative (the higher the score, the lower the level of HIV Anxiety). In order for all the ratings in all the items to be comparable the negative scale items were reversed to reflect a positive scale (i.e. all the scores for item 7.1, 7.2, 7.3, 7.5, 7.6, 7.7, 7.9, 7.10, 7.12, 7.13, 7.14, and 7.15 of the questionnaire were subtracted from 4).

3) TESTING FOR RELIABILITY AND VALIDITY OF THE HIV ANXIETY SCALE

Reliability

Since the HIV Anxiety Scale was developed by the author of the study it was necessary to determine the reliability of the scale by means of an internal consistency test.

Before checking the scale for internal consistency, each item was scrutinized for extreme positive or extreme negative responses. Items which received either positive or negative responses (a score of either 1 or 3) for more than 83% of the cases were eliminated. This was necessary since such extreme scores would

inflate the calculated internal consistency of the scale. As a result of such an analyses, items 7.2, 7.9, 7.10, 7.12, 7.15 and 7.17 were eliminated. Once these extreme score items were eliminated, the remaining items were tested for internal consistency.

The Cronbach Alpha coefficient was found to be 0.50. The test also revealed that if items 7.8 and item 7.16 were eliminated, the Cronbach Alpha coefficient would increase.

A Cronbach Alpha coefficient of 0.61 was found for the remaining 10 items, which was regarded as adequate for internal consistency of the questionnaire (therefore the anxiety scale was reduced resulting in a final measurement consisting of ten items, as presented in Table 5.2).

Table 5. 2: Items included in the revised HIV Anxiety Scale

- | |
|--|
| <p>7.1 <i>Before treating an HIV patient I find myself repeatedly thinking through the pre-cautionary steps I need to take to avoid becoming infected.</i></p> <p>7.2 <i>After treating HIV infected patients I often find that my social interactions both at work and at home are affected negatively, leaving me feeling irritated and frustrated.</i></p> <p>7.3 <i>I feel certain about my ability to deal with emergency situations regardless of the risk of HIV.</i></p> <p>7.4 <i>I often have vivid dreams about HIV as a disease and HIV infected patients, that disturb my sleep.</i></p> <p>7.5 <i>After treating an HIV infected patient I often feel upset and uncomfortable for the rest of the day.</i></p> <p>7.6 <i>When treating an HIV infected patients I find that I am more conscious and aware of my actions than I normally would be.</i></p> <p>7.7 <i>I don't treat HIV/AIDS patients differently from any other patient.</i></p> <p>7.8 <i>While treating HIV infected patients I cannot relax.</i></p> <p>7.9 <i>I sometimes feel guilty or sorry for an HIV infected patient which I may have treated differently or with reluctance.</i></p> <p>7.10 <i>I think nursing staff should have the right to refuse to deal with HIV positive cases.</i></p> |
|--|

Having decided on the final revised HIV Anxiety scale, a total HIV Anxiety score for each respondent was calculated by adding up all the item scores, getting an overall anxiety score of between 10 – 30. For greater convenience, 10 was subtracted from all the total scores to get total anxiety scores ranging from 0 – 20.

With regards to missing total scores as a result of not all items in the test having been completed, the average score was awarded. This resulted in the average score of 13.01 being awarded to two respondents who did not complete all items of the test.

The overall mean score for the HIV Anxiety Scale was 6.98, with a standard deviation of 3.55.

Validity

In order to determine the validity of the HIV Anxiety Scale, an open ended section of the questionnaire (section 8) was specifically designed as an external criterion for determining nurses' anxiety.

The information provided in the open ended questionnaires was quantified by awarding a code ranging from one to three to all the responses. The allocation of 1-3 reflected the intensity of responses that reflected anxiety (i.e. 1 = no anxiety, 2 = slight anxiety, 3 = anxiety). (Included as Addendum E are some examples of the qualitative data and the coding thereof).

Once all the coding was complete a total score for the HIV Anxiety Scale was calculated by adding all items, resulting in a total score of between 4 - 12 (where the higher the score the higher the level of anxiety). Once again for more convenient reading and spontaneous understanding of the total scores, 4 was subtracted from all the total scores to get a total anxiety score ranging from 0 – 8.

Missing values were replaced with the average score of 1.6.

The overall mean score for the sample was 1.60, with a standard deviation of 1.58.

As a means of testing the validity of the HIV Anxiety Scale, a Pearson correlation test was computed between the HIV Anxiety Scale and the quantified open-ended anxiety measurement (the criterion measurement).

A Pearson's correlation coefficient of $r = 0.450$ was found, which is significant at the $p < 0.0005$ level.

This test, therefore, supports the notion that the HIV Anxiety Scale is valid.

4) EXPLORATORY DATA ANALYSIS

The interrelationship between the variables involved in the model to be tested was explored by computing Pearson's correlations between each pair of variables. The resulted correlation matrix is presented in Table 5.3.

Table 5.3

	HIV Anxiety	Knowledge	Judgement of Risk	Homophobia	Death Anxiety	Social Support
HIV Anxiety	1	-0.348**	0.416 **	0.305**	0.424 **	-0.23
Knowledge		1	-0.213	-0.151	-0.26 *	-0.045
Judgement of Risk			1	0.266*	0.218	-0.029
Homophobia				1	-0.084	-0.076
Death Anxiety					1	-0.031
Social Support						1

* Correlation significant at the 0.05 level

** Correlation significant at the 0.01 level

From Table 2 it can be seen that Knowledge, Judgement of Risk, Homophobia, and Death Anxiety as four of the five independent variables correlate with the

dependent variable, HIV Anxiety. All correlations are significant at the $p = 0.01$ level of significance.

Another interesting finding is the correlation between Judgement of Risk and Homophobia, $r = 0.266$; $p = 0.05$. This implies that the higher a nurse's Judgement of Risk, the higher the nurse's level of Homophobia.

Another significant correlation exists between nurses' Knowledge and nurses' level of Death Anxiety, $r = -0.26$; $p = 0.05$. This implies that the lower the level of Knowledge, the higher the level of Death Anxiety.

No other significant correlations occurred between any other independent variables.

The second exploratory procedure was to try and identify whether any of the biographic variables may in some way influence the dependent variable (HIV Anxiety). A correlation matrix was therefore investigated that included the variables HIV Anxiety, Age, Nursing experience, Seniority, Occupational Satisfaction (refer to Table 5.4).

Table 5.4

	Anxiety	Age	Nursing Experience	Seniority	Occupation Satisfaction
Anxiety	1	-0.279*	-0.212	-0.174	0.398 **
Age		1	0.794 **	0.555**	-0.053
N Experience			1	0.579**	-0.03
Seniority				1	0.195
O Satisfaction					1

* Correlation significant at the 0.05 level

** Correlation significant at the 0.01 level

From this matrix it is evident that Age and HIV Anxiety are correlated ($r = -0.279$; $p = 0.05$.) This implies that as age increases so anxiety decreases.

Another significant finding is the correlation between Occupational Satisfaction and HIV Anxiety ($r = 0.398$; $p = 0.01$). This implies that the higher the level of Satisfaction (low score implies high level of Satisfaction) the lower the level of HIV Anxiety.

Other significant correlations as indicated in the matrix are self explanatory and not too important within the context of the research objectives.

The biographic variable "experience in current position" was not included in the matrix as it was felt that general nursing experience was the more appropriate variable and largely captures experience in current position. The variable "experience in current position" could also be considered a nuisance variable in that it does not take into account circumstances of the current job position of a nurse.

General Education and Nursing Education were two variables that could not be included in the above matrix, as these were measurements on a nominal scale. To test whether education correlates with HIV Anxiety as well as Knowledge, the nominal data was re-coded on a scale where 1 = enrolled nurse, matric or less, 2 = Diploma and 3 = Bachelor Degree, to allow the calculation of correlation coefficients (refer to Table 5.5).

Table 5.5

	Anxiety	General Education	Nursing Education	Knowledge
Anxiety	1	-0.069	-0.003	-0.348 **
General Education		1	0.632 **	0.158
Nursing Education			1	0.037
Knowledge				1

* Correlation significant at the 0.05 level

** Correlation significant at the 0.01 level

The matrix shows no significant correlation between Education and HIV Anxiety and Education and Knowledge.

A t - test was conducted to compare black and whites nurses for each of the variables in the model, to determine if any differences occurred. Asian and coloured nurses were not included because the sample size of these two groups was too small (refer to Table 5.6).

Table 5.6

Ethnic	N	Mean	SD	t	Sig(2 tailed)
Anxiety (B)	34	8.26	2.98	3.53	0.001 **
Anxiety (W)	31	5.45	3.42		
Social Support (B)	35	116.98	17.69	-0.3	0.765
Social Support (W)	31	118.19	14.76		
Death Anxiety (B)	35	8.18	3.42	0.92	0.358
Death Anxiety (W)	31	7.45	2.96		
Homophobia (B)	35	59.76	11.09	-0.33	0.741
Homophobia (W)	31	60.7	12.05		
Judgement of risk (B)	35	7.34	4.9	2.31	0.024 *
Judgement of risk (W)	31	4.64	4.54		
Knowledge (B)	35	18.34	3.77	-1.47	0.145
Knowledge (w)	31	19.48	2.2		

* Significant at the 0.05 level

** Significant at the 0.01 level

The above table demonstrates that a significant difference does exist between the HIV Anxiety levels of Black and White nurses ($t = 3.53$; $p = 0.001$).

Black and White nurses also vary with regards to Judgement of Risk ($t = 2.31$; $p = 0.024$).

No other significant differences between Black and White nurses were identified with regards to the independent variables.

A second set of t -tests was conducted to determine whether a significant difference exists between private and public sector nurses for the variables to be included in the final model (refer to Table 5.7).

Table 5.7

Hospital sector	N	Mean	SD	t	Sig(2 tailed)
Anxiety (Private)	25	6.71	3.62	-0.463	0.645
Anxiety (Public)	46	7.13	3.54		
Social Support (Private)	25	118.62	14.97	0.482	0.631
Social Support (Public)	47	116.7	16.68		
Death Anxiety (Private)	25	8.28	2.79	0.58	0.564
Death Anxiety (Public)	47	7.79	3.61		
Homophobia (Private)	25	60.15	12.59	0.047	0.963
Homophobia (Public)	47	60.01	11.29		
Judgement of risk (Private)	25	5.79	4.37	-0.097	0.923
Judgement of risk (Public)	47	5.91	5.11		
Knowledge (Private)	25	18.32	2.56	-0.724	0.471
Knowledge (Public)	47	18.91	3.65		

* Significant at the 0.05 level

** Significant at the 0.01 level

No significant differences were found between private and public sector nurses with regards with regards to the independent and the dependent variables.

Nurses who are parents were compared with those who are not, and nurses who have a family members or friend who is HIV positive where compared with those

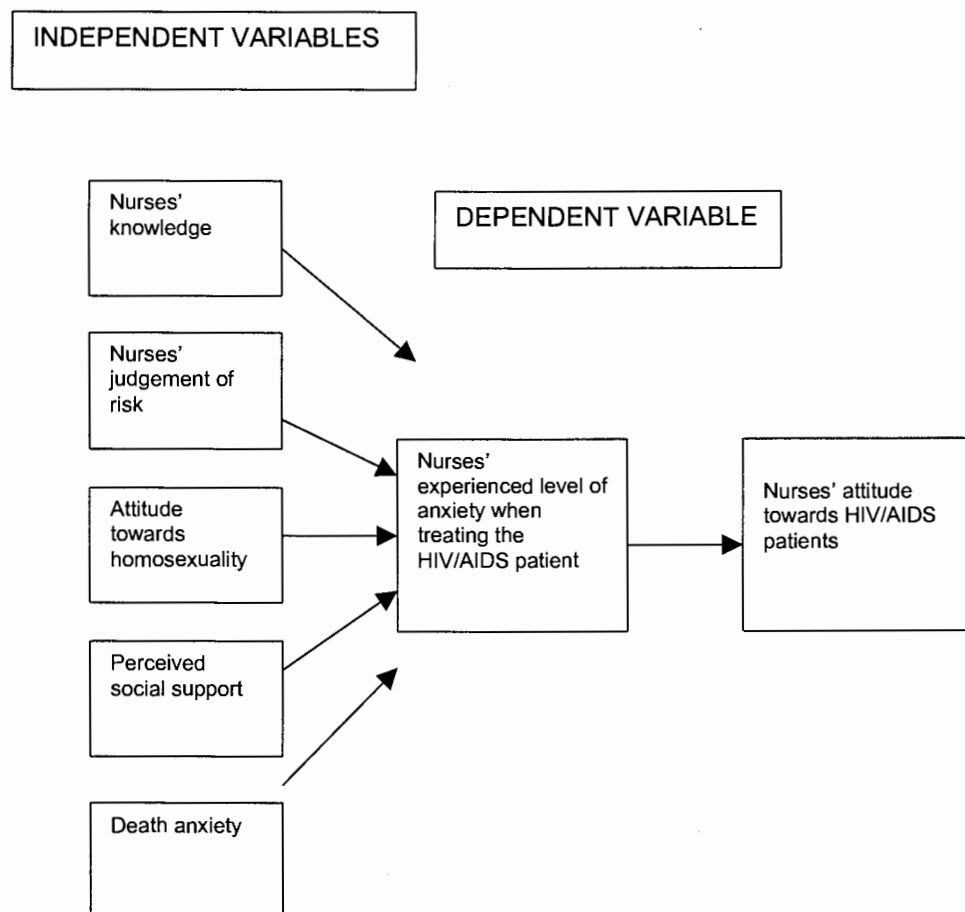
who do not have such a family member or friend, for all the variables involved in the model.

The resultant t – tests revealed no significant differences.

5) TESTING THE HYPOTHESIS

The research hypothesis, as described in chapter 3, states that most of the variation in nurses' HIV Anxiety when dealing with HIV/AIDS patients can be explained by a combination of the factors Knowledge, Judgement of Risk, Homophobia, Death Anxiety and Perceived Social Support. The resultant model is presented schematically in Figure 5.1.

Figure 5.1: Model of proposed hypothesis



To test this hypothesis, a multiple regression analysis was performed, with the HIV Anxiety Scale as the dependent variable and the five hypothesized predictors as independent variables.

The multiple regression analyses resulted in a multiple regression coefficient of $R = 0.649$, which is highly significant (with $F = 9.467$; $p < 0.005$). If R squared is used as an estimate of the variance explained by the model, about 42% of the variance in anxiety is explained by the independent variables. When testing the beta values (standardized coefficients) for each individual independent variable, it was found that four of the five variables are significant at the $p = 0.05$ level of significance (refer to Table 5.8).

Table 5.8

Variable	Regression coefficient (B)	t	Significance
Knowledge	-0.198	-1.83	0.072
Judgement of Risk	0.173	2.336	0.023 *
Homophobia	0.068	2.253	0.028 *
Death Anxiety	0.355	3.328	0.001 **
Perceived Social Support	-0.048	-2.146	0.036 *
(Constant)	8.004	1.87	0.066

* Significant at the 0.05 level

** Significant at the 0.01 level

Since it was found that Occupational Satisfaction and Age as biographical variables correlated with HIV Anxiety in the exploratory data analysis, a multiple regression analysis was repeated including Occupational Satisfaction and Age as additional independent variables.

The inclusion of Age and Occupational Satisfaction produced a more powerful model, with an $R = 0.70$ (significance of $p < 0.005$).

However, when analysing the individual unique contribution of each independent variable to the dependent variable (refer to Table 5.9) it becomes evident that the interactions of these variables with the other independent variables, alters the unique contribution of the original variables to the dependent variable.

Occupational Satisfaction appears to be an important independent variable, which contributes significantly to the dependent variable, whereas Age does not contribute significantly to the dependent variable. One can assume that the unique contribution of the variable Age is largely explained by one or more of the other variables in the model.

Table 5.9

Variable	Regression coefficient (B)	t	Significance
Knowledge	-0.194	-1.885	0.064
Judgement of Risk	0.162	2.258	0.028 *
Homophobia	0.049	1.671	0.1
Death Anxiety	0.295	2.823	0.007 **
Perceived Social Support	-0.030	-1.471	0.147
Age	-0.046	-1.435	0.157
Satisfaction	0.847	2.958	0.004 **
(Constant)	7.728	1.798	0.077

* Significant at the 0.05 level

** Significant at the 0.01 level

CHAPTER 6

DISCUSSION AND CONCLUSION

1) NURSES' KNOWLEDGE IS A CONTRIBUTING FACTOR TO NURSES' EXPERIENCED ANXIETY WHEN TREATING HIV /AIDS PATIENTS

The results of the study yielded a mean score of 18.7 out of a possible maximum of 26 for the Knowledge test. This indicates an above average score of about 72% for the Knowledge test. While one may consider this a good score, one should keep in mind when interpreting this result:

- nurses are expected to score highly on an HIV Knowledge test,
- the inherent limitation in the methodology of the research (where nurses were allowed to complete the questionnaire in their own time at home) permitted the nurses to discuss the questionnaire or to do any checking of facts they wanted to, which could have contaminated the results.
- four items of the questionnaire were eliminated due to their ambiguity and lack of relevance in testing for knowledge of HIV/AIDS.

In view of these factors one can not assume with any certainty that the results are a true reflection of nurses' high knowledge base.

It was, however, not the aim of the study to measure nurses' Knowledge, but to understand if there is any connection between nurses' Knowledge base of HIV/AIDS and their HIV Anxiety levels. Knowledge as indicated in the results of the study (refer to table 5.3 in Chapter 5) correlated with nurses' HIV Anxiety. This is consistent with the findings from other similar international and local studies. The studies by Bowman *et al* (1994), Gershon *et al* (1994), Eagly &

Bedford (1992), all confirmed the positive correlation between nurses' Knowledge and nurses' positive attitudes towards HIV/AIDS patients.

Although a correlation was found between Knowledge and HIV Anxiety, Knowledge makes no significant contribution to the overall model, i.e. when included along with Judgement of Risk, Homophobia, Death Anxiety, and Social Support to predict HIV Anxiety. This seems to imply that the variance contributed by Knowledge is adequately explained by the other variables in the model. In other words, Knowledge does not make a significant *unique* contribution to the prediction of HIV Anxiety. This appears to be consistent with the findings in various international studies which found that the knowledge-behaviour link is weak, including the study by Kohi & Horrocks (1994), and the study by Gallop *et al.* (1992) (refer to page 33 -34 in Chapter 3). The weak relationship found in these studies between Knowledge and attitude /behaviour, together with the findings from the current study confirms the suggestion from these studies that besides a sound Knowledge base, other factors must influence attitude and, therefore, unwillingness behaviour.

The study by Bond *et al.* (1990) discovered that professional nurses with graduate degrees have the highest Knowledge base and also the most positive attitudes towards HIV/AIDS patients. This was tested in the current study by correlating nurses' level of education with nurses' Knowledge and with nurses' HIV Anxiety. No significant correlation was found to confirm these finding (refer to Table 5.5 in Chapter 5). This may be as a result of re-coding the level of education of nurses from nominal data to scale data with a small range (1-3) which could influence the true correlation. This could, however, also indicate that higher level of education does not necessarily mean higher Knowledge base on the part of the nurse. Although this was indicated in the study by Bond *et al.* (1990), this was not found to be the case from the correlation mentioned above. Whether this is truly the case in South Africa or whether it was a statistical inaccuracy due to the re-coding of the nominal data, is difficult to say. As the data

stands however, Level of Education influencing Knowledge base and in turn HIV Anxiety cannot be assumed in this case.

In essence, therefore, the results of the study indicate that although a lack of knowledge is a contributing factor to nurses' HIV Anxiety and therefore nurses' attitude towards HIV/AIDS patients, other factors also play an important role and Knowledge alone cannot explain the variation in nurses' HIV Anxiety levels. These findings are consistent with the findings from the literature study in chapter three.

2) NURSES' JUDGEMENT OF RISK AS A CONTRIBUTING FACTOR TO NURSES' EXPERIENCED ANXIETY WHEN TREATING HIV /AIDS PATIENTS

From the results of the study it appears that the nurses who participated in the study on the whole have low Judgement of Risk of contracting HIV/AIDS from a patient, with an average score of 5.87 out of a possible 25. This is an encouraging finding, especially in view of the fact that the findings suggest a significant correlation between Judgement of risk and HIV Anxiety (refer to Table 5.3 in Chapter 5). The implication, therefore, is that low level Judgement of Risk indicates low level of HIV Anxiety in nurses. This confirms the findings from the literature study where various studies found that nurses' Judgement of Risk is a factor which influences nurses' attitudes and therefore willingness to care for HIV/AIDS patients (Wang *et al.*, 1993; Gershon *et al.*, 1994).

When analyzing Judgement of Risk as a contributing factor to HIV Anxiety in conjunction with other factors which could influence the variation of HIV Anxiety (refer to the regression matrix in Table 5.8 of Chapter 5), the unique contribution of Judgement of Risk remains significant. In other words Judgement of Risk is a significant contributor to the variations in HIV Anxiety even when including other factors in the model. This strengthens the argument that Judgement of Risk is a

factor which influences nurses' HIV Anxiety and therefore ultimately nurses' attitudes.

An interesting finding in the study was that no significant correlation was found between Knowledge and Judgement of Risk (refer to Table 5.3 in Chapter 5). This is contradictory to the findings in the literature study where it was found that in similar international studies, nurses with more accurate Knowledge of HIV displayed a realistic Judgement of Risk (low score) and, therefore, willingness to care for such patients (e.g., Wang *et al.*, 1993; Beaufoy *et al.*, 1988, and Meisenhelder., 1994).

A possible reason for this contradictory finding may be, as explained earlier, that the nature of the methodology may have resulted in skewed knowledge data which does not allow for an accurate correlation to be reflected. A second possible reason may be that Knowledge may not have any influence on nurses' Judgement of Risk (within the South African context).

What the findings did however reveal is that Judgement of Risk correlated significantly with Homophobia (refer to table 5.3 in Chapter 5). The implication is that nurses who are more Homophobic than others also have higher Judgement of Risk and, therefore, that in some way Homophobia influences Judgement of Risk. In accordance with this finding, one may argue that within this study, Judgement of Risk was influenced by emotive reasons (Homophobia) rather than by rational reasons (Knowledge). This is also an indication that nurses in the study still associate Homophobia with HIV/AIDS. This is contradictory to the belief that in South Africa AIDS is mostly a heterosexual rather than only a homosexual disease (Alvarado, 1990).

The results of the study also revealed that a significant difference was found between Black and White nurses' Judgement of Risk (refer to Table 5.6 in

Chapter 5). At this stage it is difficult to predict the underlying reason as many different variables within black and white cultures may be contributing towards such significant differences. This may be an interesting point of departure for further investigation.

3) NURSES' HOMOPHOBIA AS A CONTRIBUTING FACTOR TO NURSES' EXPERIENCED ANXIETY WHEN TREATING HIV /AIDS PATIENTS

The findings of the study suggest that the nurses in the sample displayed relatively average to slightly above average levels of Homophobia, with an average score of 60.06 out of a possible 100. The findings revealed that Homophobia was significantly correlated to HIV Anxiety (refer to Figure 5.3 in Chapter 5) which confirms the findings from the literature study. The studies by Schwanberg (1996), Douglas *et al.* (1985), Barrik (1988), Marram van Servellen, *et al.* (1988), Scherer *et al.* (1991), Gallop *et al.* (1992) and Dupra *et al.* (1989) all found the same relationship between Homophobia and nurses' willingness to care behaviour (refer to page 35– 37 in Chapter 3).

When analyzing Homophobia as a contributing factor to HIV Anxiety in conjunction with other factors which could contribute towards the variation in HIV Anxiety (refer to the regression matrix in Table 5.8 of Chapter 5) the unique contribution of Homophobia remains significant. The implication is that Homophobia is a significant contributor to the variations in HIV Anxiety even when including other factors in the model. This strengthens the argument that Homophobia is a factor which influences nurses' HIV Anxiety and therefore attitudes towards HIV/AIDS patients.

In a study by Young *et al.* (1990) where once again similar findings emerged, it was suggested that negative attitudes towards HIV /AIDS patients (discovered by measuring nurses' unwillingness to care for HIV/AIDS patients), reflect discomfort in dealing with Homosexuality rather than the disease itself. Jemmot

et al. (1992) similarly suggested that while there is some factual basis to the association between AIDS and Homosexuality in terms of their identification as high risk groups, attitudes seem to be determined by negative associations with Homosexuality, rather than primarily on the basis of factual information, which results in nurses' negative and ill-informed care behaviour.

These findings, therefore, suggest that if nurses are Homophobic they are less likely to display positive care behaviour towards HIV/AIDS patients, simply because they dislike homosexuals and not because they associate homosexuality with HIV/AIDS.

The findings in this study imply a different phenomenon within the South African context. Since it was found that Homophobia is significantly correlated to Judgement of Risk (refer to Table 5.3 in Chapter 5), the assumption is that nurses are not anxious to treat HIV/AIDS patients because they have a problem with homosexuality, but because homosexuality is associated with a high risk group from which they can contract the HIV/AIDS virus. In other words, whereas studies by Young *et al.* (1990) and Jemmott *et al.* (1992) suggest that unwillingness to care for HIV/AIDS patients is influenced negatively by nurses' negative attitudes towards homosexuality, this study suggests that HIV Anxiety is influenced negatively by nurses' association of Homosexuality with high risk groups. This finding may suggest that Homophobia is experienced differently and associated differently in South Africa or it may imply that the previous studies did not consider the role that Homophobia could play in Judgement of Risk.

Alternatively the correlation between Homophobia and Judgement of Risk may imply conservative nurses, who are more negative towards HIV/AIDS patients (who may be associated with promiscuity), and also towards homosexuality than others.

4) NURSES' DEATH ANXIETY AS A CONTRIBUTING FACTOR TO NURSES' EXPERIENCED ANXIETY WHEN TREATING HIV /AIDS PATIENTS

The nurses in the study experienced moderate levels of Death Anxiety with an average score of 7.96 out of a possible 14. Once again this is an encouraging finding, especially in view of the fact that Death Anxiety and HIV Anxiety were significantly correlated (refer to Table 5.3 in Chapter 5). The implication is that since Death Anxiety is significantly correlated to HIV Anxiety, a low Death Anxiety score will reduce HIV Anxiety. This argument is further strengthened by the fact that, if Death Anxiety is regarded as a contributing factor to HIV Anxiety in conjunction with other factors which could contribute towards influencing HIV Anxiety (refer to the regression matrix in Table 5.8 of Chapter 5), the unique contribution of Death Anxiety remains significant. In other words, Death Anxiety is a significant contributor to the variance in HIV Anxiety even when including other factors in the model. This confirms the findings from the literature study, specifically the study by Bliwise *et al.* (1991) and Sherman, (1995) (refer to pages 40 in Chapter 3).

An interesting finding which was revealed in the data analysis was the significant correlation between Death Anxiety and Knowledge (refer to Table 5.3 in Chapter 5). The implication is that the more knowledgeable nurses are, the less Death Anxiety they experience. Once again due to the inherent limitation in the methodology of collecting the knowledge data (nurses were able to contaminate each others knowledge base) such a correlation could reflect a statistical error. However, one could also deduce from such results that, as nurses medical knowledge base increases, so they become more aware of all possible dangers, diseased and symptoms, which invariably equips them to evaluate the possibility of death within a realistic context. This, however, is only a hypothesis and would be an interesting topic for empirical investigation.

5) NURSES' PERCEIVED SOCIAL SUPPORT AS A CONTRIBUTING FACTOR TO NURSES' EXPERIENCED ANXIETY WHEN TREATING HIV /AIDS PATIENTS

The nurses in the sample perceive themselves as having relatively high levels of Social Support with an average score of 117.37 out of a possible 150.

No significant correlation was found between Perceived Social Support and HIV Anxiety. However contradictory to this finding is the fact that when social support is analyzed in conjunction with other possible contributing factors towards HIV Anxiety, the unique contribution of Perceived Social Support becomes significant.

On first analysis this appears obscured or an odd statistical occurrence by chance. However, on further investigation into the literature it became evident that the test used in the model only tested for degree of Social Support and not for the *nature* of Social Support. Although certain studies by Weiss (1974), Gottlieb (1983) and Sherman (1995) identified perceived Social Support alone as an influencing factor of willingness or unwillingness to care for HIV/AIDS patients, other studies suggested that the nature of Social Support is the more important factor.

In a study by Preston *et al.* (1991) it was discovered that while high perceived Social Support does influence nurses positively towards caring for HIV/AIDS patients, this is true only if the nature of the support is such that significant others have positive attitudes towards HIV/AIDS patients, and towards the nurse dealing with HIV/AIDS patients. In other words, the nature of the Social Support from significant others is as important as the perceived Social Support itself. If, therefore, a nurse has a high level of perceived Social Support, but the nature of the support is such that significant others have negative attitudes towards HIV/AIDS patients or disapprove of the nurse dealing with HIV/AIDS patients, the high level of Social Support will in fact decrease positive care behaviour. This argument was further strengthened in the study by Laschinger *et al.* (1995),

where the theory of reasoned action was used. The results again suggested that the nature of Social Support is more important than the mere presence of Social Support. The theory of reasoned action (Ajzen & Fishbein, 1980) emphasizes that attitudes towards a certain phenomena (in this case nurses' attitudes towards HIV/AIDS patients) is developed out of 1) personal beliefs, and 2) subjective norms, perceptions of the expectations, support and concerns of important others with regards to the attitude topic.

The Social Support measurement used in this study (PRQ – 85) is a scale which only measures perceived social support and not the nature on the perceived social support in the context of HIV/AIDS care. The test was, therefore, unable to differentiate between positive and negative Social Support which in turn influences HIV Anxiety differently.

6) OTHER SIGNIFICANT FINDINGS FROM THE DATA ANALYSIS

The biographical variable Age correlated significantly with HIV Anxiety (refer to Table 5.4 in Chapter 5). The implication is that as age increases so HIV Anxiety decreases. Initially it was thought that this may be more a reflection of experience as older nurses are more experienced than younger nurses. Nursing experience did not correlate with HIV Anxiety, however, and therefore may not be the true underlying factor. Perhaps then it can be assumed that age is a reflection of maturity rather than experience, and that this could be another possible factor which influences HIV Anxiety.

Occupational Satisfaction was also found to be significantly correlated to HIV Anxiety. The implication here is that the more satisfied a nurse is in her job the less likely she is to experience HIV Anxiety. Occupational Satisfaction, however, by its very nature is made up of a comprehensive representation of many different variables, and therefore in a sense is a superficial contributing factor (made up of many independently significant variables). These independent

variables which constitute satisfaction, therefore, need to be explored. However one also needs to consider the possibility that a nurse may be satisfied in her job because she does not experience HIV Anxiety.

Another significant finding which was revealed in the data analysis was the significant difference between Black and White nurses' HIV Anxiety (refer to Table 5.6 in Chapter 5). It was initially thought that this may be a reflection of differences between Public and Private hospital Sectors, since 84.2 % of the black respondents in the sample worked in the Public Sector Hospitals. However, in analyzing the difference in HIV Anxiety in nurses in Public versus nurses in Private Sectors hospitals, no significant correlation was found. Therefore, one can assume that the difference in HIV Anxiety levels amongst Black and White nurses may have something to do with cultural variations. This is, however, merely speculation and could be an interesting topic for further empirical research.

7) DOES THE MODEL WORK ?

A comprehensive analysis of each independent variable has been made, together with each variables' significant correlation and contribution towards the dependent variable, the real issue at hand is the significance of the proposed model as a whole. Does the proposed model work? Do the independent variables explain a large proportion of change in the dependent variable?

The data analysis revealed that the multiple regression analysis coefficient of $R = 0.649$ is significant ($F = 9.467$; $p < 0.005$). The implication is that 42% of the variance in anxiety is explained by the independent variables. These findings support the notion that the model does in fact work. However it also indicates the possibility that other variables not investigated in this study may also influence HIV Anxiety in nurses.

What the regression analysis reveals is that the variable Knowledge's unique contribution to the variation in HIV Anxiety is not significant, but this does not mean that Knowledge is not an important variable in the model. Rather, it reveals that most of the variable's contribution is explained by its interaction with the other independent variables. It could also mean that, as discussed earlier, the Knowledge questionnaire was not sufficient in testing knowledge.

Regardless of the reason for such findings, the fact remains that, as found in many other studies and the correlation found between Knowledge and HIV Anxiety in this study, that the variable Knowledge is an important contributor towards nurses' HIV Anxiety. It should, therefore, remain in the proposed model.

A further proposition would be to include both Age and (variables which constitute) Occupational Satisfaction in the model for further studies, based on the results which revealed that the inclusion of these two variables in the model produced a more powerful model with an $R = 0.70$ (significance of $p < 0.005$).

8) WHAT DO THE RESULTS REVEAL ABOUT THE SAMPLE ?

The results indicate that the HIV Anxiety level amongst nurses in the sample was very low. Of a score ranging from 0 – 20 with 20 reflecting high anxiety and 0 indicating low anxiety, the average sample score was 6.98/ 20, with a standard deviation of 3.55. In other words, the nurses who participated in the study have low levels of Anxiety when treating HIV/AIDS patients, which implies positive attitudes towards these patients. This was confirmed by the open-ended questions which were used as a criterion for determining validity of the HIV Anxiety scale. To confirm the relevance of the proposed model all the average scores of the independent variables corresponded with this low HIV Anxiety, whereby on average nurses' high level of Knowledge (18.70/26), low Judgement of Risk (5.87/25), medium level of Homophobia (60.06/100), low to medium level of Death Anxiety (7.96/14) and high level of Perceived Social Support (117.37/150) all contribute towards a low level of HIV Anxiety.

This Low Level of HIV Anxiety (as the evaluative dimension of nurses' attitudes) in a sense contradicts the findings in previous studies, where nurses' unwillingness to care for HIV/AIDS patients (as the evaluative dimension of nurses' attitudes) was found to be very high (refer to pages 22 - 24 in Chapter 2). This may be a reflection of a South African trend, whereby nurses have become desensitized to HIV/AIDS patients due to the very high rate and rapid growth of the epidemic, which far exceeds that of most other countries in which similar studies were conducted. It may also be the case that since most studies conducted previously were conducted at the start of the epidemic, such findings simply reflect a change in nurses' attitudes towards HIV/AIDS patients as a result of time and desensitization, globally. It may also be a reflection of the nature of the sample; i.e. voluntary participation may have resulted in a skewed sample of positive and proactive nurses and not all types of nurses. One should be careful not to generalize the findings of the data to the general population, as the sample was not representative of all nurses in South Africa. These results are representative only of three hospitals within the Gauteng region.

9) CONCLUSION

HIV/AIDS is a fast growing epidemic, and remains a huge threat to all South Africans, of all races, ages and genders. The epidemic has affected an approximate 4.7 million South Africans, with still no cure. Central to this epidemic are nurses themselves who will have to deal with an extraordinary number of patients affected by the virus. As a result, the focus of the study was to try and understand how they perceive and accept working with HIV/AIDS patients and how frightened they are by it. Although numerous findings in the literature study suggested that nurses have negative attitudes towards HIV/AIDS patients, the results of this study reflect a different picture. Nurses from the sample of this study displayed low levels of HIV Anxiety when treating HIV/AIDS patients, which implies positive attitudes towards these patients. These are encouraging findings,

especially in view of the fact that much more HIV/AIDS nursing care will be needed in the years to come.

When investigating all the possible component factors which contribute towards nurses' HIV Anxiety and, therefore, ultimately nurses' attitudes towards HIV/AIDS patients, the results of the study support most findings from the literature study. The proposed model for the study which was developed with the guidance of previous studies and findings, was proven to be effective, in that Judgement of Risk, Homophobia, Death Anxiety, Social Support are all component factors which influence nurses' HIV Anxiety levels and, therefore, nurses' attitudes. Although Knowledge was not found to be significant in its unique contribution, it is still believed to be an important component, even if only slightly.

Contradictions have, however, emerged. In certain previous studies it was found that increased Knowledge in nurses would decrease Judgement of Risk in nurses. This study revealed that increased Homophobia instead increases Judgement of Risk. In this case therefore Judgement of Risk is influenced by an emotive reason as opposed to a rational one. It also implies that, as opposed to the belief that in South Africa the general public associates HIV/AIDS with heterosexuality, this research in fact shows that nurses in South Africa still associate homosexuality with HIV/AIDS.

Although the model was found to be relevant, the fact that only 42% of HIV Anxiety can be explained by the proposed factors tested in the model indicates that other uninvestigated variables may be at play. Such variables could include Age and Occupational Satisfaction. This can be deduced from the regression analysis conducted in the study which included both these two variables in the model and revealed that the model as a result was strengthened. Another possible consideration is that a variable such as membership of an ethnic group (Black or White) could be a significant variable. Such an investigation is

suggested because HIV Anxiety levels in Black and White nurses differed significantly.

Perfecting the model would imply the possibility for nursing institutes to eventually use the model as a tool to find the best possible candidates to treat HIV/AIDS patients: candidates who would feel comfortable in treating HIV/AIDS patients and who would, as a result, give optimal treatment. This might, however, not be necessary at all, especially in view of the fact that low levels of HIV Anxiety was found amongst most participants in the study.

Either way, nurses remain central to the HIV/AIDS epidemic, and further and ongoing studies amongst nurses are essential, in order to understand the nature of the interaction between them and HIV/AIDS patients. The challenge is to continue to provide support groups and ongoing training programs, to address issues such as knowledge, fear, homophobia, positive social support (if it is not provided by the family) and death anxiety. These are the issues which so far and in conjunction with this study have proven to be significant factors. Other factors, however, may be identified in further research and, therefore, could also be included as relevant issues.

In closing, it was believed as a result of the findings from the literature, that nurses have negative attitudes towards HIV/AIDS patients. Numerous international studies confirmed this belief, and it was assumed that the same applied to nurses in South Africa. Contrary to this belief, however, the findings from this study suggest that nurses are not as negative as originally thought. So whether it is a South African phenomenon or a global phenomenon which has changed over time, one still needs to say to all South African nurses - "thank you, for choosing to care".

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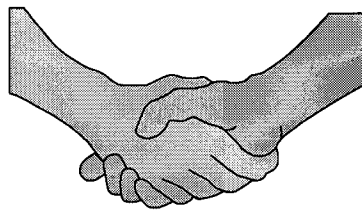
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ADDENDUM A: QUESTIONNAIRE



Nurses' experiences of HIV/AIDS patients

A Nursing Study

June 1999

"As nurses, it is the awareness of our own feelings and experiences which may promote our well being and that of our patients" Deborah Sherman (1992). The contribution of your time to this study and open, honest expression of your feelings and perceptions are therefore greatly appreciated.

Thank - you.



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SECTION 1

DIRECTIONS: Please answer the following questions about yourself and your background. The questions will help me describe the nurses in the study.

1.1 Gender: (Circle the number of your answer)

- 1 MALE
- 2 FEMALE

1.2 Your present age: _____ YEARS.

1.3 Your present marital status: (Circle the number)

- 1 NEVER MARRIED
- 2 MARRIED
- 3 SEPARATED
- 4 DIVORCED
- 5 WIDOWED

1.4 Which of the following best describes your racial or ethnic background? (Circle the number)

- 1 BLACK
- 2 WHITE
- 3 INDIAN
- 4 COLOURED
- 5 HISPANIC
- 6 ASIAN
- 7 OTHER (SPECIFY) _____

1.5 Are you a parent? (Circle the number)

- 1 NO
- 2 YES

1.6 If you are a parent, how many children do you have? _____

1.7 What is the highest level of education you have attained? (Circle the number)

- 1 DIPLOMA DEGREE IN NURSING
- 2 BACCALAUREATE DEGREE IN NURSING
- 3 BACCALAUREATE DEGREE NON-NURSING
- 4 MASTERS DEGREE IN NURSING
- 5 MASTERS DEGREE NON NURSING
- 6 DOCTORAL DEGREE IN NURSING
- 7 DOCTORAL DEGREE NON-NURSING
- 8 OTHER (SPECIFY): _____

1.8 What was your basic nursing education? (Circle the number)

- 1 DIPLOMA PROGRAMME
- 2 BACCALAUREATE – NURSING
- 3 OTHER (SPECIFY): _____

1.9 For how many years have you practiced as a registered nurse?

_____ YEARS

1.10 What is your employment status in your current nursing position? (Circle the number)

- 1 FULL TIME
- 2 PART TIME

1.11 Which of the following best describe your current position/ post? (Circle the number)

- 1 PROFESSIONAL NURSE
- 2 CHIEF PROFESSIONAL NURSE
- 3 NURSING SERVICE MANAGER
- 4 DIRECTOR OF NURSING

1.12 How long have you worked in your current position? (Circle the number)

- 1 LESS THAN ONE YEAR
- 2 1 YEAR TO 2 YEARS
- 3 THREE YEARS TO LESS THAN 5 YEARS
- 4 5 YEARS OR MORE

1.13 How would you describe your overall satisfaction with your current nursing position? (Circle the number)

- 1 VERY SATISFACTORY
- 2 MODERATELY SATISFIED
- 3 AVERAGE SATISFACTION
- 4 MODERATELY DISSATISFIED
- 5 VERY DISSATISFIED

1.14 In which unit/ ward are you currently practicing?

1.15 What percentage of patients for whom you provide care for have been diagnosed with HIV/AIDS? (Circle the number)

- 1 25% OR LESS
- 2 26% TO 50 %
- 3 51% TO 75%
- 4 MORE THAN 75%
- 5 I DON'T KNOW

1.16 Do you have any family member or close friends who have been diagnosed with HIV/AIDS? (Circle the number)

- 1 NO
- 2 YES

1.17 The majority of HIV/AIDS patients you have cared for during this last year have been: (Circle the number)

- 1 HOMOSEXUALS
- 2 I.V. DRUG USERS
- 3 EQUAL NUMBER OF BOTH THE ABOVE
- 4 INDIVIDUALS INFECTED BY BLOOD TRANSFUSION
- 5 INDIVIDUALS INFECTED BY THEIR PARTNERS
- 6 I DON'T KNOW
- 7 OTHER (SPECIFY)_____

SECTION 2

DIRECTION: Please indicate whether the statements listed below, are true or false.

N.B. This is not an exam. We are trying to determine the general knowledge of nurses and would like to have your spontaneous response. Please do not go and look this up.

(Circle the number of your answer).

- | | | |
|---|---------|----------|
| 2.1 HIV infection is another name for AIDS. | 1. TRUE | 2. FALSE |
| 2.2 AIDS was first diagnosed in the last decade. | 1. TRUE | 2. FALSE |
| 2.3 There is a cure for AIDS. | 1. TRUE | 2. FALSE |
| 2.4 AIDS is associated with a short incubation period. | 1. TRUE | 2. FALSE |
| 2.5 All persons having antibodies to HIV must be assumed to be infected. | 1. TRUE | 2. FALSE |
| 2.6 Name one specific blood test used for the detection of antibodies to the HIV virus. | | |
- _____

2.7 AIDS patients are found generally to suffer from which of the following conditions?

- | | | |
|-----------------------|---------|----------|
| Deficiency of T-cells | 1. TRUE | 2. FALSE |
| Deficiency of B-cells | 1. TRUE | 2. FALSE |
| Wasting | 1. TRUE | 2. FALSE |
| Obesity | 1. TRUE | 2. FALSE |
| Dementia | 1. TRUE | 2. FALSE |
| Reduced lymph nodes | 1. TRUE | 2. FALSE |
| Enlarged lymph nodes | 1. TRUE | 2. FALSE |

2.8 Which of the following complications may be seen in an AIDS patient?

Kaposi's sarcoma	1. TRUE	2. FALSE
Candida (oral thrush)	1. TRUE	2. FALSE
Osteosarcoma	1. TRUE	2. FALSE
Hepatitis B	1. TRUE	2. FALSE
Pneumocystic pneumonia	1. TRUE	2. FALSE
Flavivirus (yellow fever)	1. TRUE	2. FALSE

2.9 HIV may be transmitted through

Sexual intercourse	1. TRUE	2. FALSE
Shaking hands	1. TRUE	2. FALSE
Insect bites	1. TRUE	2. FALSE
Sharing needles for drugs	1. TRUE	2. FALSE
Sneezing or coughing	1. TRUE	2. FALSE

2.10 Persons with HIV are infected for life. 1. TRUE 2. FALSE

2.11 HIV virus can be killed after being exposed to heat of 56°C for half an hour. 1. TRUE 2. FALSE

2.12 The incidence of AIDS is highest in the Black population in S.A. 1. TRUE 2. FALSE

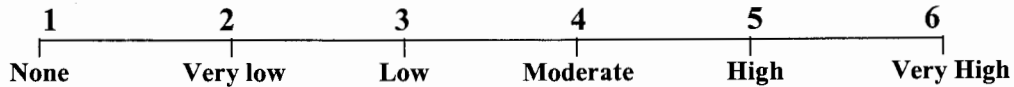
2.13 AIDS was introduced to South Africa directly from African countries North of the Border. 1. TRUE 2. FALSE

2.14 AZT is the drug used to prevent AIDS. 1. TRUE 2. FALSE

2.15 The ratio between diagnosed AIDS cases and HIV infection persons is approximately 1:3. 1. TRUE 2. FALSE

SECTION 3

DIRECTIONS: Please read each statement and decide how intensely you agree or disagree with the statement. Then mark your answer on the answer scale which follows each statement.



Circle Only One Number

- | | | | | | | |
|--|---|---|---|---|---|---|
| 3.1 My risk of contracting the AIDS virus
from taking a medical history from an
AIDS virus infected person is: | 1 | 2 | 3 | 4 | 5 | 6 |
| 3.2 My risk of contracting the AIDS virus
from performing a physical exam on an
AIDS virus infected person is: | 1 | 2 | 3 | 4 | 5 | 6 |
| 3.3 My risk of contracting the AIDS virus
from being in the same room with an
AIDS virus infected person is: | 1 | 2 | 3 | 4 | 5 | 6 |
| 3.4 In the absence of a needle prick injury,
my risk of contracting the AIDS virus
from drawing blood on an AIDS virus
infected patient is: | 1 | 2 | 3 | 4 | 5 | 6 |

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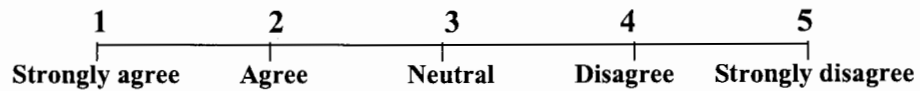
SECTION 4

DIRECTIONS: Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

1	2	3	4	5
Strongly agree	Agree	Neutral	Disagree	Strongly disagree

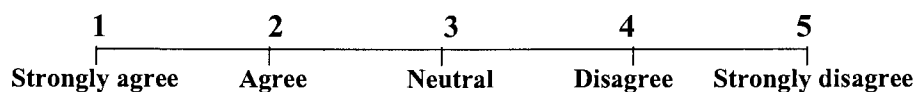
Circle Only One Number

- | | | | | | |
|--|---|---|---|---|---|
| 4.1 I would feel comfortable working closely with a male homosexual. | 1 | 2 | 3 | 4 | 5 |
| 4.2 I would enjoy attending social functions at which homosexuals are present. | 1 | 2 | 3 | 4 | 5 |
| 4.3 I would feel uncomfortable if I learned that my neighbour was homosexual. | 1 | 2 | 3 | 4 | 5 |
| 4.4 If a member of my sex made a sexual advance towards me I would feel angry. | 1 | 2 | 3 | 4 | 5 |
| 4.5 I would feel comfortable knowing that I was attractive to members of my sex. | 1 | 2 | 3 | 4 | 5 |
| 4.6 I would feel uncomfortable being seen in a gay bar. | 1 | 2 | 3 | 4 | 5 |



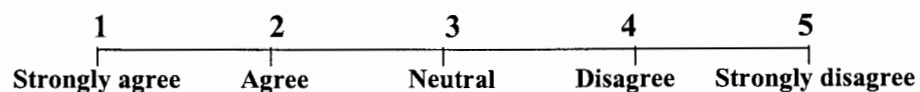
Circle Only One Number

- | | | | | | |
|--|---|---|---|---|---|
| 4.7 I would feel comfortable if a member of my sex made an advance towards me. | 1 | 2 | 3 | 4 | 5 |
| 4.8 I would feel comfortable if I found myself attracted to a member of my sex. | 1 | 2 | 3 | 4 | 5 |
| 4.9 I would feel disappointed if I learned that my child was homosexual. | 1 | 2 | 3 | 4 | 5 |
| 4.10 I would feel nervous being in a group of homosexuals. | 1 | 2 | 3 | 4 | 5 |
| 4.11 I would feel comfortable knowing that my clergyman was homosexual. | 1 | 2 | 3 | 4 | 5 |
| 4.12 I would deny to members of my peer group that I had friends who are homosexual. | 1 | 2 | 3 | 4 | 5 |
| 4.13 I would feel that I had failed as a parent if I learned that my child was gay. | 1 | 2 | 3 | 4 | 5 |
| 4.14 If I saw two men holding hands in public I would feel disgusted. | 1 | 2 | 3 | 4 | 5 |



Circle Only One Number

- | | |
|--|-------------------------------|
| 4.15 If a member of my sex made an advance toward me I would be offended. | 1 2 3 4 5 |
| 4.16 I would feel comfortable if I learned that my daughter's teacher was a lesbian. | 1 2 3 4 5 |
| 4.17 I would feel uncomfortable if I learned that my spouse or partner was attracted to members of his or her sex. | 1 2 3 4 5 |
| 4.18 I would like to have my parents know that I had gay friends. | 1 2 3 4 5 |
| 4.19 I would feel uncomfortable kissing a close friend of my sex in public. | 1 2 3 4 5 |
| 4.20 I would like to have friends of my sex who are homosexual. | 1 2 3 4 5 |
| 4.21 If a member of my sex made an advance toward me I would wonder if I was homosexual. | 1 2 3 4 5 |



Circle Only One Number

- | | |
|--|--------------------------------------|
| <p>4.22 I would feel comfortable if I learned
that my best friend of my sex was
homosexual.</p> | <p>1 2 3 4 5</p> |
| <p>4.23 If a member of my sex made an
advance towards me I would feel
flattered.</p> | <p>1 2 3 4 5</p> |
| <p>4.24 I would feel comfortable knowing
that my son's male teacher was
homosexual.</p> | <p>1 2 3 4 5</p> |
| <p>4.25 I would feel comfortable working
closely with a female homosexual.</p> | <p>1 2 3 4 5</p> |

SECTION 5

DIRECTIONS: If a statement is true or mostly true as applied to you, circle number 1. If a statement is false or mostly false as applied to you, circle number 2.

- | | | |
|---|---------|----------|
| 5.1 I am very much afraid to die. | 1.TRUE | 2. FALSE |
| 5.2 The thought of death seldom enters my mind. | | |
| 5.3 It does not make me nervous when people talk about death. | 1. TRUE | 2. FALSE |
| 5.4 I dread to think about having to have an operation. | 1. TRUE | 2. FALSE |
| 5.5 I am not at all afraid to die. | 1. TRUE | 2. FALSE |
| 5.6 I am not particularly afraid of getting cancer. | 1. TRUE | 2. FALSE |
| 5.7 The thought of death never bothers me. | 1. TRUE | 2. FALSE |
| 5.8 I am often distressed by the way time flies so rapidly. | 1. TRUE | 2. FALSE |
| 5.9 I fear dying a painful death. | 1. TRUE | 2. FALSE |
| 5.10 The subject of life after death troubles me greatly. | 1. TRUE | 2. FALSE |

- | | | |
|---|---------|----------|
| 5.11 I am really scared of having a heart attack. | 1. TRUE | 2. FALSE |
| 5.12 I often think about how short life really is. | 1. TRUE | 2. FALSE |
| 5.13 I shudder when I hear people talking about World War 3. | 1. TRUE | 2. FALSE |
| 5.14 The sight of a dead body is horrifying to me. | 1. TRUE | 2. FALSE |
| 5.15 I feel that the future holds nothing for me to fear. | 1. TRUE | 2. FALSE |

SECTION 6

DIRECTIONS: Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree

Circle Only One Number

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 6.1 There is someone I feel close to who makes me feel secure. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.2 I belong to a group in which I feel important. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.3 People let me know that I do well at my work (job, homemaking). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.4 I can't count on my relatives and friends to help me with my problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.5 I have enough contact with the person who makes me feel special. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.6 I spend time with others who have the same interests I do. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree

Circle Only One Number

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 6.7 There is little opportunity in my life to be giving and caring to another person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.8 Others let me know that they enjoy working with me (job, committees, projects). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.9 There are people who are available if I needed help over an extended period of time. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.10 There is no one to talk to about how I am feeling. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.11 Among my group of friends we do favours for each other. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.12 I have the opportunity to encourage others to develop their interests and skills. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.13 My family lets me know that I am important for keeping the family running. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree

Circle Only One Number

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6.14 I have relatives or friends that will help me out even if I can't pay them back. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.15 When I am upset there is someone I can be with who lets me be myself. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.16 I feel no one has the same problems as I. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.17 I enjoy doing little extra things that make another person's life more pleasant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.18 I know that others appreciate me as a person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.19 There is someone who loves and cares about me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.20 I have people to share social events and fun activities with. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.21 I am responsible for helping provide for another person's needs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree

Circle Only One Number

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6.22 If I need advice there is someone who would assist me to work out a plan for dealing with the situation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.23 I have a sense of being needed by another person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.24 People think that I'm not as good a friend as I should be. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6.25 If I got sick, there is someone to give me advice about caring for myself. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION 7

DIRECTIONS: Please read each statement and decide whether you agree or disagree with the statement. Then mark your answer on the answer scale which follows each statement.

Circle Only One number

	Agree	Uncertain	Disagree
7.1 Before treating an HIV patient I find myself repeatedly thinking through the pre-cautionary steps I need to take to avoid becoming infected.	1	2	3

	Agree	Uncertain	Disagree
7.2 While treating HIV infected patients I often feel knots in my stomach or dizziness and pains in my head.	1	2	3

	Agree	Uncertain	Disagree
7.3 After treating HIV infected patients I often find that my social interactions both at work and at home are affected negatively, leaving me feeling irritated and frustrated.	1	2	3

	Agree	Uncertain	Disagree
7.4 I feel certain about my ability to deal with emergency situations regardless of the risk of HIV.	1	2	3

	Agree	Uncertain	Disagree
	1	2	3
7.5 I often have vivid dreams about HIV as a disease and HIV infected patients, that disturb my sleep.			

	Agree	Uncertain	Disagree
	1	2	3
7.6 After treating an HIV infected patient I often feel upset and uncomfortable for the rest of the day.			

	Agree	Uncertain	Disagree
	1	2	3
7.7 When treating an HIV infected patients I find that I am more conscious and aware of my actions than I normally would be.			

	Agree	Uncertain	Disagree
	1	2	3
7.8 While treating a patient who is not known to be HIV infected, I rarely find myself wondering whether they are infected with HIV but not yet diagnosed.			

	Agree	Uncertain	Disagree
	1	2	3
7.9 While treating HIV infected patients I am constantly aware of infection risk.			

	Agree	Uncertain	Disagree
	1	2	3
7.10 After treating an HIV infected patient I feel drained, tired and unable to function effectively for the remainder of the day.			

7.11 I don't treat HIV/AIDS patients differently from any other patient.	Agree 1	Uncertain 2	Disagree 3
7.12 After treating an HIV infected patient, I often have difficulty falling asleep that same evening.	Agree 1	Uncertain 2	Disagree 3
7.13 While treating HIV infected patients I cannot relax.	Agree 1	Uncertain 2	Disagree 3
7.14 I sometimes feel guilty or sorry for an HIV infected patient which I may have treated differently or with reluctance.	Agree 1	Uncertain 2	Disagree 3
7.15 I wake up in the night worrying about having to deal with HIV positive patients, and have difficulty falling asleep again.	Agree 1	Uncertain 2	Disagree 3
7.16 I seldom think of the risk of contracting HIV/AIDS when using a syringe while treating HIV positive patients.	Agree 1	Uncertain 2	Disagree 3

	Agree	Uncertain	Disagree
7.17 I tend to perspire and tremble when I think of or anticipate treating an HIV infected patient.	1	2	3

	Agree	Uncertain	Disagree
7.18 I think nursing staff should have the right to refuse to deal with HIV positive cases.	1	2	3

SECTION 8

DIRECTION: Please answer these question as honestly as possible in your own words.

8.1 Should HIV/AIDS patients be treated differently from any other patients with a contagious disease, and if so, why?

8.2 Explain how you feel when treating an HIV/AIDS patient?

8.3 What do you think about during and after treating HIV/AIDS patients?

8.4 Do you have any concerns about treating HIV/AIDS infected patients, if so, what are they and why do they concern you?

**YOUR PARTICIPATION IN THIS STUDY IS TRULY
APPRECIATED.**

THANK – YOU.



ADDENDUM B:
LETTER TO HOSPITALS

Giuliana Zorrer
Audience Research
Radio Park Henley Road
Auckland Park 2092
J.H.B
Tel: 714-2074
Fax: 714-4350

13 April 1999

RE: Request to participate in research study.

Dear Teresa

I am currently completing a Master's degree in Research Psychology at Unisa, as well as my internship in Research Psychology at the SABC Research Unit. As part of my degree requirements I am conducting a study of nurses' attitudes towards patients infected with HIV/AIDS.

The aim of the study is to determine whether nurses experience any increased level of anxiety when dealing with HIV/AIDS patients, and if so, what factors contribute to this raised level of anxiety. Factors that will be considered include nurses' levels of death anxiety, homophobia, social support structures, judgement of risk and knowledge of the HIV virus. Many studies of the same nature have been conducted in America and European countries but the results that were obtained may not be relevant in the South African context.

As part of the process of collecting data I require the participation of a number of state and private hospitals in the Gauteng area. I am, therefore, requesting you to consider allowing members of your nursing staff to participate in this study on a voluntary basis. Participation would involve distribution of the questionnaire to all the members of the nursing staff willing to participate, after I have had an opportunity to brief them on the nature of the study. The nurses may then complete

the questionnaire in their own time, to be returned completed within a given time limit of a few days.

The study is completely anonymous and once completed, the hospitals involved will receive a full report on the findings. A full presentation of the results with recommendations can also be arranged, if desired, where all interested parties in the study will be invited to attend.

The study is under the supervision of Dr Piet Kruger of the Institute for Social and Health Sciences at Unisa (012-429-6235) as well as Prof Fred van Staden of the Psychology Department at Unisa (012-429-8251). Please feel free to contact either person with any queries concerning the study.

If you are interested in participating I will send you a copy of the questionnaire before the initiation of the study. I can also send you the initial research proposal and literature study presented to the Psychology Department at Unisa on request. I plan for the study to commence in the beginning of May.

Please let me know whether you are willing to participate as soon as possible, and also if you have any further queries.

Yours sincerely

Giuliana Zorrer

Intern Research Psychologist

Registration number PSIN 0063312

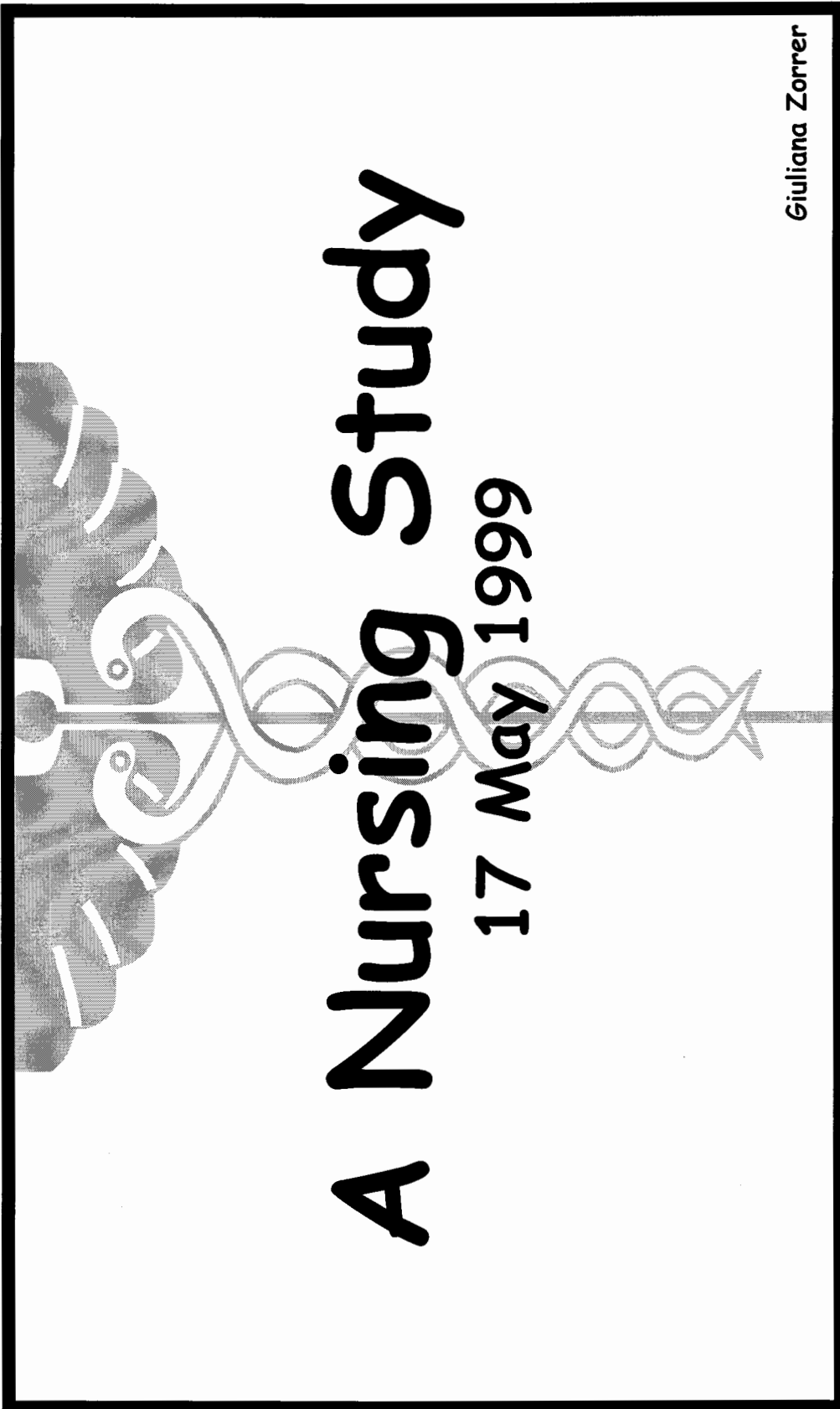
Tel (W) 714-2074

Tel (H) 894-7488

Cell 083-5220-022

ADDENDUM C:

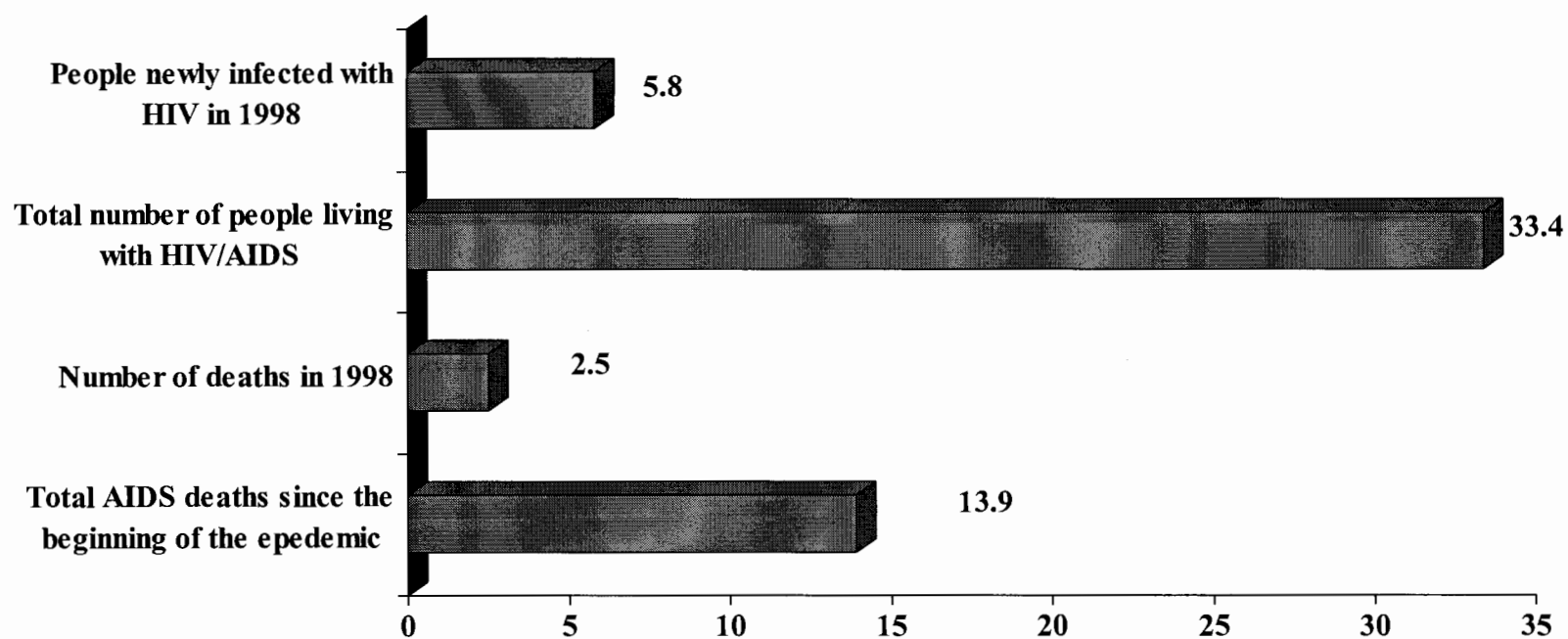
PRESENTATION TO HOSPITALS



What motivated the study ?

- ➡ Personal experience.
- ➡ Increased prevalence of the HIV virus, globally.

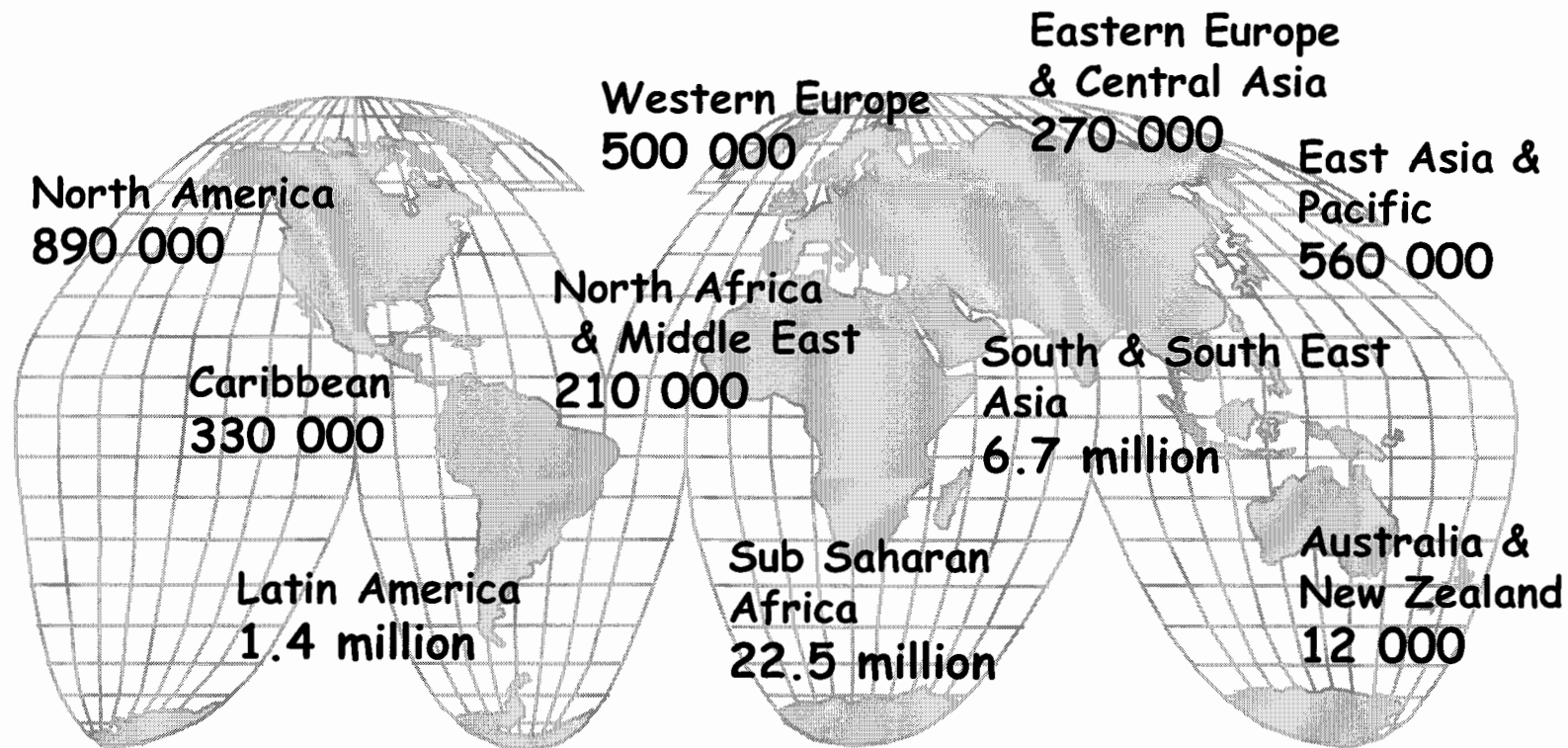
Global summary of the HIV/AIDS epidemic, December 1999



Source: WHO epidemic update
December 1998

Million

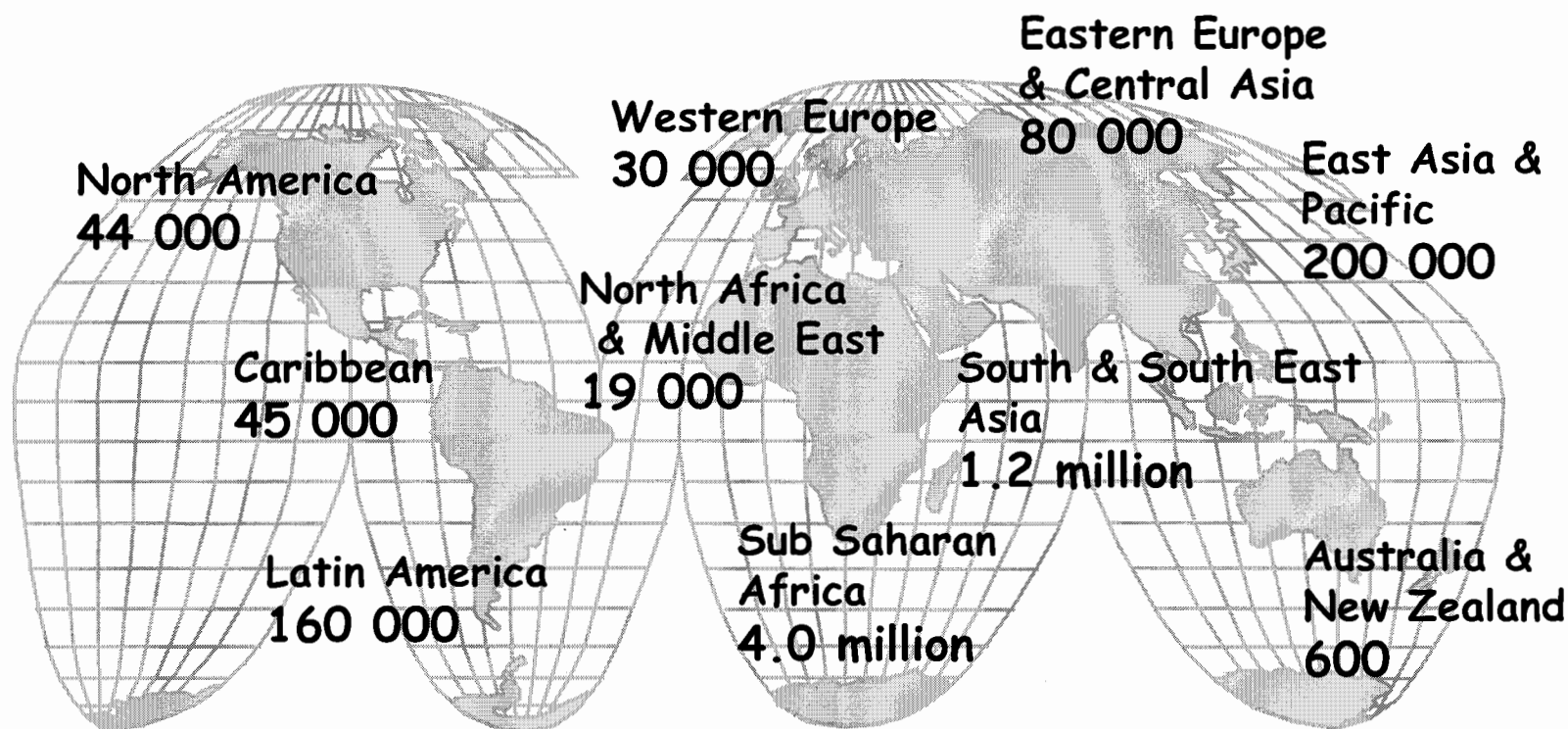
Adults and children estimated to be living with HIV/AIDS as of end 1998



Source: WHO epidemic update
December 98

Total: 33.4 million

Estimated number of adults and children newly infected with HIV during 1998



Source: WHO epidemic update
December 98

Total: 5.8 million

South Africa

- South Africa, which trailed behind some of its neighbours in HIV infection levels at the start of the 1990s, is unfortunately catching up fast: one in seven new infections on the continent last year are believed to be in South Africa.
- According to the latest National Survey results released by the Department of Health, some 20% of all pregnant women were found to be infected. At least one third of these women are likely to pass the infection on to their baby.

Source: WHO epidemic update
December 98

Who does this affect ?

- Central to this fast growing epidemic is the nursing profession, which is called upon increasingly to provide direct patient care, family counselling, AIDS education e.t.c.
- Therefore nurses are considered to be the most important people in the life of an HIV/AIDS patient.
- Places the nursing profession under great pressure, leaving the profession to face new challenges.

How do nurses feel about treating HIV/AIDS patients?

- Some studies in America and Europe suggest that nurses are reluctant and anxious to treat HIV/AIDS infected patients. These studies investigated certain factors which could be contributing to such fears and anxiety. These factors include homophobia, death anxiety e.t.c

Do these findings apply within the South African context?

- Few studies around this issue have been conducted in South Africa, and the studies which were conducted investigated only a few contributing factors to anxiety and reluctance.
- Therefore it would be inaccurate to generalise such results within the South African context.

Motivation for study

- Although most relevant studies investigated contributing factors towards anxiety and reluctance, most did not investigate the effect of the combination of influencing factors. Some focussed on knowledge alone and others on homophobia alone, but few attempted to combine more than two factors in their investigation.
- Few studies have been conducted in South Africa (a developing country as opposed to a developed country, where most studies were conducted).
- The need for a study in South Africa is further magnified by the fact that South Africa has been amongst those countries with a rapid spread of HIV/AIDS.

How will the study help?

- It will help identify whether an anxiety problem amongst nurses does in fact exist or not.
- If a problem does exist, one will have a better understanding as to why it does exist, and steps can be taken to address relevant issues.

The Proposed Study

- To study is aimed at investigating whether factors such as:
 - Knowledge
 - Judgement of risk
 - Homophobia
 - Death anxiety
 - Perceived social support
- influence nurses' anxiety levels when treating HIV/AIDS patients.

Method

- All relevant staff at the selected hospitals will be sent a letter informing them of the study and inviting them to participate. The staff who agree will be given a questionnaire booklet to be completed in their own time and to be returned within a given time limit(approximately one week).

The final report and results

- On completion of the study, the hospitals involved will receive a full report on the findings.
- A full presentation of the results with recommendations can also be arranged, if desired, where all interested parties in the study will be invited to attend.

ADDENDUM D: LETTERS TO NURSES

Dear Colleague

This is an invitation extended to all nurses to participate in a research study. The study is been conducted in the Gauteng area to evaluate nurses' opinions and perceptions of the HIV virus. It was decided that, since nurses are always in such close contact with HIV patients, their opinions and thoughts are valuable to our study. All that is required of you is to complete a questionnaire booklet, in your own time and to return it within a given time limit. It is recommended that you complete the questionnaire when you are relaxed, comfortable and have time to answer as honestly as possible. It is important that you answer the questions spontaneously and sincerely, since there is no right or wrong answer, only opinions. The study is completely anonymous, therefore no names of participants or hospitals will be included in the final report, unless requested by the individuals themselves.

Should you decide to participate, please tick the yes option beneath and return.

Thank-You

Giuliana Zorrer

Intern Research Psychologist

☐

Yes
(I would like to
participate)

☐

No
(I will not be
participating)

ADDENDUM E: EXAMPLES OF CODING SECTION 8

RN	Hosp	Question 8.1	Question 8.2	Question 8.3	Question 8.4
		Should HIV /AIDS patients be treated differently from any other patients with a contagious disease, and if so, why ?	Explain how you feel when treating an HIV/AIDS patient ?	What do you think about during and after treating HIV/AIDS patients ?	Do you have any concerns about treating HIV/AIDS infected patients, if so, what are they and why do they concern you ?
002	01	<p>No. I don't think they should at all. The patient is an individual, a person in his own right. I have made an oath that I will nurse any patient with or without HIV. I have not worked with a lot of HIV positive patients but I am very comfortable with them. I am there to ease there circumstances and pain, and that is what I will do</p> <p>Code = 1</p>	<p>I am calm and at peace, friendly and helpful. I am careful and will not unnecessarily expose myself to the illness, but I will not let the patient feel uncomfortable</p> <p>Code = 2</p>	<p>I feel sorry for the patient, but I do not allow the illness to influence my emotions. I can walk out of the door and sleep peacefully.</p> <p>Code = 1</p>	<p>The only thing that bothers me about the patient is the psychological part of the illness. I want them the accept their situation and stay positive, so that they do not fall into depression and their immunity deteriorates to such an extent that they do not have any strength to carry on. I will also help with the process of been positive, I will feel happy if I succeed in this.</p> <p>Code = 1</p>

003	01	NA	Scared/Insecure	To clean myself properly	Yes getting infected with HIV
		No code awarded	Code = 3	Code = 3	Code = 3
023	01	If a patient has contracted HIV by sleeping around I do not have any worry about them it was what they deserved. They must be handled differently. If they have contracted it through a blood transfusion, they need not be treated differently, it was not their fault. nursing staff must be informed if a patient is HIV positive.	It makes me more careful. I am scared that I will prick myself with a needle. I feel uncomfortable to work with the patient and to go into the room.	I feel dirty and I want to wash and bath the whole time. I always wonder how they have contracted HIV.	I always wonder if their family knows they have HIV. Do they have children that they are leaving behind, how have they contracted HIV?
		Code = 2	Code = 3	Code = 3	Code = 2

028	02	Yes. Because they are the highly infected patients, who puts one's life at risk.	I feel insecure, more so if the patient has exposed wounds or is bleeding.	I think of whether I have contracted the HIV virus or not	NA
		Code = 3	Code = 3	Code = 3	No code awarded
051	02	I don't think they should be treated differently, the important thing is to take pre-cautionary measures.	I just feel empathy because I believe that I have to accept things which I cannot change.	I just feel good for giving him/her that total nursing care irrespective of being HIV patients.	My concern is that people are infected every day and there is no treatment.
		Code = 2	Code = 1	Code = 1	Code = 1

057	02	<p>They MUST be treated differently because AIDS is an infectious disease. The nursing care measure is done in a careful manner unlike uninfected patients. E.g. Take precautions about needle pricking, handling of body fluids.</p> <p>Code = 2</p>	<p>Fear of the disease Precautions should be taken by nursing staff. Counselling empathy and support must be given to them. They must be made to feel that they are still wanted as human beings.</p> <p>Code = 3</p>	<p>I always think of the danger I am putting myself in when treating these patients especially when having cuts on my hands.</p> <p>Code = 3</p>	<p>Yes. HIV should not be made as a secrecy to enable medical and nursing staff to treat them promptly. It should also not be a secret disease to partners , friends relatives and at the work. HIV /AIDS should be under notifiable diseases like TB</p> <p>Code = 2</p>
069	03	<p>I don't think they should be treated differently from other patients, they are as ill as any other patient. They need not be isolated like patients with contagious diseases. HIV AIDS is not contagious so they can be nursed in a universal ward.</p> <p>Code = 1</p>	<p>It brings a deep sense of reality in me. There is that sadness cause I know somebody who is dear to me who is positive. I always pray to God to be given compassion and love so that I can treat that patient equally as others. To see that patients as any other patient in need.</p> <p>Code = 1</p>	<p>My whole perspective has drastically changed of treating a patient that is HIV positive. I feel good inside if I have given this patient proper nursing care. I feel satisfied knowing that there is a patient who is comfortable regardless whether the patient is HIV positive or not.</p> <p>Code = 1</p>	<p>My concern is with the patients who are deserted by their relatives and close family . These patients are not emotionally supported by their beloved one's.</p> <p>Code = 1</p>