

**ATTITUDES AND WILLINGNESS OF STUDENT NURSES
TOWARDS CARING FOR HIV-INFECTED PATIENTS IN
GERT SIBANDE DISTRICT, MPUMALANGA PROVINCE**

by

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DECLARATION

I declare that **ATTITUDES AND WILLINGNESS OF STUDENT NURSES TOWARDS CARING FOR HIV-INFECTED PATIENTS IN GERT SIBANDE DISTRICT, MPUMALANGA PROVINCE** is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.



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ABSTRACT

Background: Literature has shown that negative attitudes and unwillingness to care for HIV-infected patients are prevailing among healthcare workers. This study aimed to assess the attitudes and willingness of student nurses towards caring for HIV-infected patients in some public hospitals in Gert Sibande district, Mpumalanga.

Method: A contextual exploratory quantitative descriptive survey was conducted among student nurses enrolled for a four-year nursing qualification in a nursing college at Mpumalanga province. Self-administered questionnaires were completed after obtaining an informed consent.

Results: A total of 122 (70.9%) students participated in this survey. Findings showed that most participants had positive attitudes 66 (52.7%) and were willing 121 (99.1%) to care for HIV-infected patients. Significant associations were revealed between participants' previous HIV testing ($p=0.012$), age group ($p=0.009$), and their willingness to provide care to HIV-infected patients.

Conclusion: Results showed a generally positive attitude and willingness by participants to care for HIV-infected patients.

Keywords

HIV-infection; attitude; willingness; student nurses; Mpumalanga.

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Dedication

Dr BEL and my children

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CHAPTER 1

ORIENTATION OF THE STUDY

1.1 INTRODUCTION

An orientation to the research study is laid out in this chapter. Outlined is the research problem, the background to the problem, the statement of the research problem. The aim of the study including the purpose and objectives of the study, significance of the study are also discussed. The research design and research methods, including the population, sample, data collection and analysis together with the validity of the design are highlighted. Ethical considerations and limitations of the study are discussed as well.

The Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) are medical conditions with available medical treatment and should be considered as such. Unfortunately the disease has been stigmatised, and according to Maughan-Brown (2009:2), “stigma is associated with negative attitudes”. According to Ajzen (2005:3), attitude is said to be “a disposition to respond favourably or unfavourably to an object, person, institution, or event”.

Benevides-Pereira and Das-Neves-Alves (2007:565) have cited that caring for other types of patients is less demanding on the part of the health care worker than caring for HIV-infected patients. The authors further made mention of the fact that the caring act puts a strain on the physical and psychological aspects of the care-giver.

Due to stigma and attitudes of health personnel, people living with HIV/AIDS (PLWHA) have had problems when it came to accessing services in health care settings, and this has impacted negatively on the lives of PLWHAs, this is according to Li, Wu, Wu, Zhaoc, Jia and Yan (2007:753). People have rights, and being a patient does not strip any person of any rights no matter the diagnosis of the patient, and health care workers need to always uphold to those rights according to the South African Constitution (Act No 108 of 1996 (South Africa 1996:13; Welbourn & Hoare 2008:xix).

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

1.2.1 The source of the research problem

The source of the problem to this study was informed by a number of observations made by the researcher with the regard to the overflow of patients in health care facilities, presenting with HIV/AIDS related health problems. Another observation was with regard to the ratio of nurses to patients.

The outcry concerning shortage of nurses is a problem nationally, but in the already resource- stricken rural areas, the shortage brings the worst out of our health care system. Gert Sibande is one of the districts of Mpumalanga province, and it is primarily rural. Of the three districts of Mpumalanga it has the highest prevalence rate of HIV/AIDS at 38.2% and yet, the lowest population estimated at 28.2%, according to Mashimbye, Johnson, Laurence, Chikwava, Murphy, Mahlasela and Delate (2010); (Department of Agriculture, Rural Development and Land Administration 2011:2) (Department of Health, Welfare and Gender Affairs, Mpumalanga 1996:19).

As part of their training, student nurses are expected to acquire clinical competence through allocation to the wards where they can be exposed to nursing care of patients, including HIV/AIDS patients. Due to challenges brought about by shortage of nurses, the student nurses find themselves in a position where they are being used as a workforce, and thereby getting subjected to a working environment that is over-burdened by HIV/AIDS patients, this is the researcher's view.

The researcher was then prompted to ask herself whether the influx of patients with HIV/AIDS, the burden and the demand this puts on the health services and the providers of health care, was it in any way affecting the student nurses as care givers. The researcher then decided to explore the attitudes of student nurses towards giving care to HIV/AIDS patients.

The researcher cannot over-emphasise what was cited in Benevides-Pereira and Das-Neves-Alves (2007:565) that taking care of HIV-infected patients has its toll on the

health of the care worker both physically and psychologically compared to when they are caring for non-infected patients.

1.2.2 Background to the research problem

The background information about student nurses with regard to taking care of HIV/AIDS patients is provided. A general overview of HIV/AIDS in Southern Africa is given below and has been scaled down to the area where this study was conducted, with the aim of highlighting the reality and the impact of HIV/AIDS on the health care system.

The nursing students in this research belong to an Institution of Higher Learning in the Mpumalanga province (The Mpumalanga College of Nursing).

It is well said in Welbourne and Hoare (2008:xix) that HIV is rampant in our societies and we are part of those societies, much as HIV-infected people form part of the communities and societies we come from. Now is the time to take a closer look at ourselves in terms of how we perceive HIV and HIV-infected individuals in our communities.

Student nurses are a subgroup of health care providers and they are future professional nurses. Nurses and student nurses take part in the provision of direct bed-side nursing to patients infected with HIV, as a result, they are vulnerable to the risk of acquiring blood-borne infections (Zungu, Sengane & Setswe 2008:48a). Due to this possibility of exposure to blood and bodily fluids, nurses tend to be negative towards nursing the patients infected with HIV (Bektas & Kulakac 2007:888).

Van Dyk (2007:49) stated in his study that the HIV epidemic has put a burden on the providers of health care especially in South Africa with its huge number of people living with HIV/AIDS. About one in every four patients admitted in some of the SA public hospitals, is having the HIV disease. This situation thus put health care providers under occupational stress. Fear of occupational exposure to HIV gives rise to occupational stress which then manifests with signs such as burnout, fear to care for HIV-infected patients and negative attitudes (Van Dyk 2007:52).

According to Sadoh, Sadoh, Fawole, Oladimeji and Sotiloye (2009:18), issues of discrimination, fear and stigma are always associated with HIV, and the health service sector is not excluded in such practices. The researchers further cited the negative attitudes towards HIV/AIDS patients and people by health care providers, which were highlighted in other studies by other researchers (Sadoh et al 2009:18).

Nurses and student nurses have been found to possess attitudes of reluctance and unwillingness to care for HIV/AIDS patients due to fear of contracting HIV. Reluctance to give care, results in poor quality nursing care according to (Pickles, King & Belan 2009:2263).

According to Li et al (2008:147), negative attitudes have a negative bearing on the care of HIV-infected patients, and tend to affect the willingness of nurses to provide care to such patients. Bektas and Kulakac (2007:888), cited factors which were related to negative attitudes among student nurses as; knowledge deficit, fear of contagion and death. Hodgson (2006:283) took the matter further and stated that attitudes are perhaps fuelled by lack of control over the disease, that is, the fact that anti-retrovirals (ARVs) are effective only to subside progression of the disease and not to cure it.

According to the statistics as they appear below, worldwide HIV infections have been successfully managed through prevention interventions, ranging from health education to provision of pre and post exposure prophylactic treatment among others. Despite success in curbing the spread of HIV, South Africa and the rest of the world have not eradicated HIV/AIDS. The health care worker is still faced with the challenge of managing the disease through provision of treatment and provision of care to HIV-infected patients. On the other hand health care systems are faced with the challenge of negative attitudes and stigmatisation experienced by HIV/AIDS patients from the health care workers.

1.2.2.1 *Review of HIV/AIDS in Southern Africa*

According to Avert (2010), the sub-Saharan estimates put South Africa at a 17.8% prevalence of HIV/AIDS, which is fourth in position to Swaziland (25.9%); Botswana (24.8%) and Lesotho (23.6%).

The South African HIV/AIDS statistics, as reported by the Statistics South Africa (2009) in a survey conducted by the Department of Health's National Antenatal Sentinel HIV and Syphilis Survey in South Africa, 2009 and the South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey, 2009, indicate that around 29.4% of pregnant women (aged 15-49 years) were living with HIV in 2009.

The South African HIV Survey (2008), highlighted that "more than ten percent of all South Africans over two years old, were living with HIV in 2008". Provinces that recorded the highest HIV prevalence were KwaZulu-Natal (39.5%), Mpumalanga (34.7%), Free State (30.1%) and the North-west (30%). The Northern Cape and Western Cape recorded the lowest prevalence at 17.2% and 16.9% respectively, as cited in (Avert 2010). Refer to table 1.1.

Table 1.1 Estimated HIV prevalence (%) among antenatal clinic attendees, by province

| Province | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KwaZulu-Natal | 33.5 | 36.5 | 37.5 | 40.7 | 39.1 | 39.1 | 38.7 | 38.7 | 39.5 |
| Mpumalanga | 29.2 | 28.6 | 32.6 | 30.8 | 34.8 | 32.1 | 34.6 | 35.5 | 34.7 |
| Free State | 30.1 | 28.8 | 30.1 | 29.5 | 30.3 | 31.1 | 31.5 | 32.9 | 30.1 |
| Gauteng | 29.8 | 31.6 | 29.6 | 33.1 | 32.4 | 30.8 | 30.5 | 29.9 | 29.8 |
| North West | 25.2 | 26.2 | 29.9 | 26.7 | 31.8 | 29.0 | 30.6 | 31.0 | 30.0 |
| Eastern Cape | 21.7 | 23.6 | 27.1 | 28.0 | 29.5 | 28.6 | 28.8 | 27.6 | 28.1 |
| Limpopo | 14.5 | 15.6 | 17.5 | 19.3 | 21.5 | 20.6 | 20.4 | 20.7 | 21.4 |
| Northern Cape | 15.9 | 15.1 | 16.7 | 17.6 | 18.5 | 15.6 | 16.5 | 16.2 | 17.2 |
| Western Cape | 8.6 | 12.4 | 13.1 | 15.4 | 15.7 | 15.1 | 15.3 | 16.1 | 16.9 |
| National | 24.8 | 26.5 | 27.9 | 29.5 | 30.2 | 29.1 | 29.4 | 29.3 | 29.4 |

Source: (Avert 2010)

Mpumalanga was our focal area in the study, especially the district of Gert Sibande which experienced high rates of incidence and prevalence of HIV infections (Avert 2010).

The brief review above has highlighted the scourge of HIV/AIDS in South Africa and the plight of nurses of having to face the situation head-on, on daily basis. It is true that negative attitudes and fear to care for HIV-infected patients are issues of concern among health care givers and student nurses, nevertheless, nurses have a significant

role to play in the provision of HIV treatment and care (Li, Scott & Li 2008:147). According to South Africa (1996:108) patients on the other hand have a right to health care. Nurses should be able to readily accept patients infected with HIV without passing judgements which end-up putting stigmatising labels on the patient (Li et al 2008:147).

1.3 RESEARCH PROBLEM

The overburdened South African National Health System by the HIV and AIDS epidemic, the fact that Gert Sibande district of Mpumalanga Province is experiencing a high incidence and prevalence rate of HIV, and the plight of the nurses who are overwhelmed by the situation of taking care of HIV-infected patients day in and out, had contributed to outlining the research problem for this study. Student nurses are also faced with the same circumstances that other health care workers encounter on the day-to-day basis.

The researcher appreciated that studies were conducted on the health care workers around issues of attitudes, knowledge, practices and willingness of student nurses to provide care to HIV-infected patients, both globally and in South Africa. None so far, investigated the attitudes and willingness of student nurses in the Gert Sibande district in Mpumalanga, South Africa, towards caring for HIV-infected patients, which was found to be the district with the highest prevalence of HIV in the Mpumalanga Province.

It has been highlighted by Pickles et al (2009:2263) and Bektas and Kulakac (2007:888) that nurses and nursing students did possess negative attitudes and they showed reluctance towards caring for HIV-infected patients. The research problem was coined from the fact that student nurses in Gert Sibande faced the same challenges like other health workers, of experiencing the strain of caring for HIV-infected patients, therefore, the research problem for this study is: "What are the attitudes and willingness of nursing students in the Gert Sibande district in Mpumalanga province, towards caring for HIV-infected patients".

1.4 AIM OF THE STUDY

The aim of this study was to assess the attitudes and willingness of nursing students towards caring for patients infected with HIV in some public hospitals in Gert Sibande district, Mpumalanga.

1.4.1 Research purpose

Nursing renders an essential service and would do better with a workforce that is psychologically prepared to face the pressures associated with caring for HIV-infected patients. The nursing of HIV/AIDS patients requires special skills which include, among others, the identification and management of specific clinical problems, counselling techniques, the administration of patient care and the ability to communicate effectively with individuals, families and community groups. Staff caring for HIV/AIDS patients needs to acquire new attitudes, knowledge and skill.

The purpose of this study was to describe, the attitudes and willingness of student nurses towards caring for HIV/AIDS patients.

1.4.2 Research objectives

The objectives of the study were to

- describe the socio-demographic characteristics of student nurses in some public hospitals in Gert Sibande district, Mpumalanga
- explore the attitudes of student nurses towards caring for HIV-infected patients during their clinical practice
- determine the willingness of student nurse to render nursing care to HIV-infected patients during their clinical practice
- measure the association between student nurses' demographic factors and their willingness to care for HIV-infected patients

1.5 SIGNIFICANCE OF THE STUDY

I envisage this study to have a significant impact and implications for future with regard to educational preparation of the student nurses. Curricula that address knowledge deficit related to attitudes would be an added advantage in the body of knowledge of the nursing profession. The results would also help authorities to realise and appreciate the fact that students need support structures during their training to help them cope with their work place realities and potential dangers. Students would more likely be positive and open minded when caring for patients with HIV/AIDS.

1.6 OPERATIONAL DEFINITIONS

1.6.1 Attitude

In this study attitude refers to a display of a positive or negative behaviour towards a patient infected with HIV.

1.6.2 Caring

In this study caring refers to the physical, emotional and psychological responsiveness of the student nurse towards a HIV-infected patient.

1.6.3 Comprehensive nursing student

In this study student nurse refers to a first, second, third or fourth year comprehensive student of the Mpumalanga College of Nursing, who is based in any one of the nursing schools in Gert Sibande district for clinical practice. According to the South African Nursing Council Regulation (R425, 1985, Paragraph 1(iii)) it is a student whose “course of study leads to the obtaining of a qualification which confers on the holder thereof the right to register as a nurse (general, psychiatry and community) and a midwife”.

1.6.4 Human Immunodeficiency Virus

According to Du Toit and Van Staden (2009:241), The HIV as a retrovirus consisting of ribonucleic acid (RNA), and made up of a special viral enzyme called the reverse

transcriptase, which infects the CD4+ Tcells, macrophages and dendritic cells of the immune system.

1.6.5 HIV-infected patient

For the purpose of this study, it is a patient who is infected with the human immunodeficiency virus but is asymptomatic.

1.6.6 Stigma

In this study stigma refers to the negative labelling of HIV-infected patients, resulting in negative social reactions such as rejection, discrimination and avoidance (Pickles et al 2009:2269).

1.6.7 Willingness

In this study willingness refers to student nurses' readiness, eagerness and preparedness to care for HIV-infected patients (*South African Pocket Oxford Dictionary* 2006:1058).

1.7 FOUNDATIONS OF THE STUDY

The foundations of this study were based on a theory by Dorothea Orem which will provided a source of reference towards the study results. Orem's Theory of Self-Care (1991) was used to make theoretical assumptions for this study. Caring is identified as a key concept and a scientific definition of caring is provided.

1.7.1 The concept of "caring"

Maville and Huerta (2008:88) define caring as "having a personal interest in the client; it is feeling for the client; it involves an investment of the self. It is more than just the respect and valuing that occurs with unconditional positive regard".

According to Montgomery (1993:13), “caring is a way of being, a state of natural responsiveness to others. Because caring requires personal involvement, it is the antithesis of alienation, detachment, or apathy”.

“Those positive actions and deeds that a nurse would carry out to ease the pain and suffering of a sick person and his family. Caring generally requires the demonstration of humanity at its best, especially under extreme circumstances, including staff shortages. Caring is about doing for the patient what s/he cannot do due to illness; caring gives hope and eases suffering for the sick” (Zuma 2008:52).

1.7.2 Meta-theoretical assumptions of the study

Maville and Huerta (2008:469) describe the metatheoretical paradigm as those concepts used by individual disciplines to give a perspective of that particular field of study. For providing a basis of this study, the researcher focused on the key concept, which is caring. Assumptions on caring were derived from a nursing view point and Orem's Theory of Self-Care was used as a metatheoretical base in order to explain the concept of caring.

1.7.2.1 Orem's Theory of Self-Care

Dorothea Orem is the theorist who developed the Self-Care Theory. According to Bruce, Gagnon, Gendron, Puteris and Tamblyn (2010:17), it is a three dimensional theory which is divided into sub conceptual theories namely: Theory of Self-Care, Theory of Self-Care Deficit and Theory of Nursing systems.

The **Theory of Self-Care by Orem (1991)**, as cited by Bruce et al (2010:22), states that an individual's ability and capability to perform activities which are geared towards meeting personal needs, in order to maintain health and wellness of mind, body and soul, constitutes self-care. Furthermore, an individual acquires self-care through learning.

Self-care comprises of three basic components called the (i) universal self-care, which deals with sustaining basic health needs (for example eating and drinking); (ii) developmental self-care need which has to do with provision of health education and

nursing actions that will help the patient to return to the desired level of health and sustain it; and (iii) health deviation self-care entails “variations in self-care which may occur as a result of disability, illness or injury” (Bruce et al 2010:18).

The **Theory of Self-Care Deficit** by Orem (1991) as cited by Bruce et al (2010:22) pertains to the situation in the life of a person where they are incapable of taking care of themselves due to certain inhibitions. In such an instance, self-care deficit is said to exist. Nursing interventions are necessary to benefit the person in this instance where the individual has inhibited ability to perform activities and achieve self-care demands.

Theory of Nursing Systems by Orem (1991) on the other hand cites that a nurse has the ability and a role to play in supporting and helping a client to meet and maintain their health and wellness demands of the patients, as highlighted by (Bruce et al 2010:23).

Bruce et al (2010:22) cited Orem (1991) as having mentioned that nursing is the act of taking care of someone whose self-care is completely or partially impaired. The person providing the nursing care is someone who has been trained to do so.

1.7.2.2 The conceptual framework

Orem (1991) identified four concepts to form a framework of the Theory of Self-Care, which were:

Person: It is in individual who has physical and emotional requirements which will assist in the developing the self and subsequently being able to sustain one’s well-being.

Environment: The surroundings wherein the individual exists, which have an effect on the person’s ability to perform their self-care activities.

Health: This pertains to the physical form and functionality of an individual at an optimum level.

Nursing: “The acts of a specially trained and able individual to help a person or multiple people deal with their actual or potential self-care deficits” (Bruce et al 2010:16).

1.8 RESEARCH METHODOLOGY

Burns and Grove (2009:13) define a study design as a blueprint for conducting a study in order to have maximum control over variables that may interfere with the desired findings of the study.

1.8.1 Research paradigm

According to Miller and Yang (2008:15), a combination of paradigms (multi paradigm approach) can be used to yield better results than if one paradigm was used. Prior to conducting the study the researcher interviewed few students in different categories of nursing to gather possible attitude issues or concerns relating to care of HIV-infected patients, so that a good instrument could be designed. For conducting the actual study, a quantitative method was used, whereby a structured self-administered questionnaire was used to collect data. Methodology pertains to the “steps, procedures, and strategies for gathering and analysing data in a research investigation” as defined in Polit and Beck (2009:504).

1.8.2 Research design

A contextual exploratory descriptive survey was conducted among student nurses enrolled for a 4 year diploma in Mpumalanga nursing college. Self-administered questionnaires were used to collect data during mandatory class attendance. The questionnaire consisted of two parts: the first part was focusing on the socio-demographic data and the second part sought the student nurses' attitudes and willingness towards caring for HIV/AIDS patients during their clinical practice (Gallin & Ognibene 2007:102,105; Hofstee 2006:122).

To ensure their anonymity, prospective participants were not requested to write any identifiable information on the questionnaires and confidentiality of information obtained was highly maintained. Data was analysed by means of percentages, means, analysis of variance and standard deviation.

1.9 RESEARCH METHODOLOGY

Methodology pertains to the “steps, procedures, and strategies for gathering and analysing data in a research investigation” as defined in Polit and Beck (2009:504).

1.9.1 Population

Polit and Beck (2006:259) define a population as “the entire aggregation of cases that meet specified criteria”. In this study, the target population comprised of all student nurses from first to fourth year, studying at the Mpumalanga College of Nursing doing the Comprehensive Nursing Course.

1.9.2 Sampling procedure

Inclusion and exclusion criteria were applied. According to Polit and Beck (2006:259), criteria of inclusion refer to those characteristics which qualify subjects to be eligible for inclusion in a study. Those eligible for participating in this study were students who were allocated by the Mpumalanga Nursing College to do their clinical practice in the following hospitals: Bethal, Carolina, Embhuleni, Ermelo, Evander and Piet Retief hospitals the Gert Sibande district at the time the data was collected.

Exclusion criteria refer to those characteristics that subjects in the population do not possess for them to be eligible for inclusion in a study (Polit & Beck 2006:260). For the purpose of this study, those students whose clinical placement was outside of the Gert Sibande district during the time of data collection were not eligible for participation. Only students in the Gert Sibande district were given a chance to participate in the study because of two reasons, (i) cost implications and (ii) Gert Sibande district carries the highest incidence of HIV infection among the three districts of Mpumalanga, the district became a convenient one for the research.

1.9.3 The sample

A sample of convenience was used for the study. The sample consisted of all comprehensive nursing students, from first to fourth year, who were doing their clinical practice in the following hospitals: Bethal, Carolina, Embhuleni, Ermelo, Evander and

Piet Retief hospitals, and it comprised of 152 student nurses. The hospitals are located in Gert Sibande district, Mpumalanga.

1.9.4 Research setting

Mpumalanga is a province that is said to be rural in nature and is divided into three districts namely Ehlanzeni which is the lowveld region, Nkangala the highveld region and Gert Sibande the eastern highveld region, according to the Department of Agriculture, Rural Development and Land Administration (2011: 2); (Department of Health, Welfare and Gender Affairs, Mpumalanga 1996:19). Refer to figure 1.1.

The setting in this study was in Bethal, Carolina, Embhuleni, Ermelo, Evander and Piet Retief public hospitals in Gert Sibande which were accredited for the clinical training of comprehensive nursing students. The respondents were obtained from those hospitals. Some of the students who were eligible to participate in the study were attending theoretical lessons at the College during the time of data collection. The researcher was able to get permission to access them.

1.9.5 Data collection

According to Burns and Grove (2009:14), data collection is “the precise, systematic gathering of information relevant to the research purpose or specific objectives, questions or hypotheses”.

1.9.5.1 Data collection process

A structured questionnaire was given out to nursing students during data collection, there were students who were visiting the surrounding clinics for community practical, the researcher managed to reach some by leaving behind the questionnaires at some nursing schools. One or two lecturers were given a brief about the research and its purpose so that they could explain to the learners and obtain consent. Not all questionnaires were returned. Those who were on block were given the questionnaires at the college. The students in the clinical areas received the questionnaire in their respective hospitals.

In all the hospitals and the college where data was collected, each time the study purpose was explained and voluntary participation was sought from the participants. A questionnaire with a covering letter explaining the ethical issues was handed out by the researcher, and participants spent on average fifteen minutes to respond to the questionnaire in English.

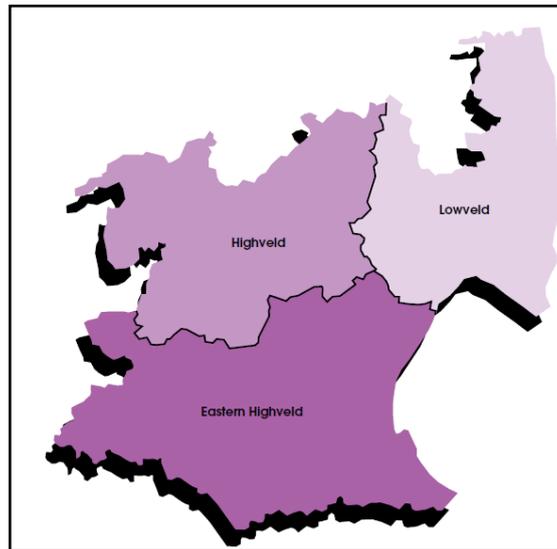


Figure 1.1 Area map of research setting

Source: (Department of Health, Welfare and Gender Affairs, Mpumalanga 1996:19)

1.9.5.2 Data collection method

A survey was conducted by use of a structured self-administered questionnaire to gather data for the study.

1.9.5.3 Data collection tool

The questionnaire consisted of a section with personal information requiring the sex, age, marital status, ethnicity and religious affiliation. The next section comprised of attitude questions which were sub- divided into questions on attitudes and those on the willingness of students towards caring for patients with HIV/AIDS (Gallin & Ognibene 2007:115; Giuseppe 2006:10, 11).

1.9.6 Data analysis

According to (Hofstee 2006:117), data analysis is a process that requires that the collected data should be turned into information. To do that, statistical analysis techniques need to be applied to the data, or textual analysis needs to be done, or a combination of both analyses.

Data was analysed on SAS, Release 9.2, running under Microsoft Windows for a personal computer. Age was summarised by calculation of the mean, median, standard deviation, and minimum and maximum values. Age was further categorised and summarised by frequency counts and percentages as with other variables, in order to give a description of the results on the items that measured attitudes and willingness to care for HIV-infected patients by the student nurses.

The Fisher Exact Test was used to test for association between the demographic characteristics and willingness of student nurses to care for HIV-infected patients, as reflected in questions B8, B10, B11 and B12, refer to annexure 5. The p-values of above ($>$) 0.05 indicate no association, and the p-values of lesser or equal to (\leq) 0.05 indicate that an association exists between the demographics and student nurses' willingness to care for HIV-infected patients.

Text analysis was done for open ended responses by an expert in qualitative research. Data was coded, clustered and interpreted.

1.10 ABBREVIATIONS

| | |
|-------|--------------------------------------|
| AEB | Accidental Exposure to Blood |
| AIDS | Acquired Immune Deficiency Virus |
| ART | Antiretroviral Therapy |
| CDC | Centre for Disease Control |
| DNA | Deoxyribonucleic Acid |
| HAART | Highly Active Antiretroviral Therapy |
| HCT | HIV Counselling and Testing |
| HCW | Health Care Worker |
| HIV | Human Immunodeficiency Virus |

| | |
|------|--------------------------------|
| MTCT | Mother-to-Child Transmission |
| NPI | Needle prick injuries |
| PEP | Post Exposure Prophylaxis |
| RNA | Ribonucleic Acid |
| STI | Sexually Transmitted Infection |
| WBC | White blood cells |

1.11 SCOPE AND LIMITATIONS OF THE STUDY

According to Burns and Grove (2009:14), these limitations were of a methodological nature. During data collection, there were students who were visiting the surrounding clinics for community practical, the researcher managed to reach some by leaving behind the questionnaires at some nursing schools. One or two lecturers were given a brief about the research and its purpose so that they could explain to the learners and obtain consent. Not all questionnaires were returned.

Response bias was also identified because not all subjects who were invited to participate, responded, which according to Polit and Beck (2006:276), constitutes bias in the response rate.

1.12 STRUCTURE OF THE DISSERTATION

Chapter 1 gives the general overview of the study. It gives the introduction to the study and further highlights the research problem in terms its background information. The aim is explained with reference to the purpose and objectives of the study. The significance of the study is included together with the definition of terms. Theoretical framework is highlighted. The following are also briefly covered, namely, the research design and methodology; scope and limitations of the study, research ethics; abbreviations; structure of the dissertation and conclusion.

Chapter 2 covers relevant literature that has been reviewed to give a background to this study.

Chapter 3 describes the research design that was used and the methodology followed in terms of sampling and sample selection; data collection including approach,

development and the characteristics of the data collection tool; and data analysis. Ethical considerations pertaining to sampling and data collection are highlighted.

Chapter 4 includes analysis, presentation and description of the research findings.

Chapter 5 outlines the conclusion of the study and recommendations made from the research results.

1.13 CONCLUSION

A general overview has been given in this chapter. Issues covered were the research problem in relation to the background information about the problem; the aim of the study was highlighted through the purpose and objectives of the study. A foundation of the study was laid through the review of facts about HIV and AIDS; and a meta-theoretical base of the study. A highlight was also given about the methodology of the research, which included the research design and data analysis. Ethical issues were outlined and study limitations were identified.

Following this chapter is the review of the literature which gives a sound base of this study, based on the previous and similar studies that were conducted about student nurses and/or health workers and their attitudes towards caring for HIV/AIDS patients.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents relevant literature that has been identified, reviewed and synthesised. In this section a brief review of the statistics about the current situation on HIV/AIDS globally and in the sub-Saharan region is given, together with overview of the basic facts about HIV pathology, for a better appreciation of this study. Another area of the review was based on the previous studies that were conducted regarding the attitudes and willingness of nurses, student nurses and other health care workers towards caring for HIV-positive people. A brief highlight of the concepts “caring” and “attitudes” is also given.

2.2 PURPOSE OF LITERATURE REVIEW

The purpose of the literature review was to explore the studies done by other researchers on the subject of attitudes and willingness by nurses and/or other health care workers to care for the human immunodeficiency virus infected patients, and patients with the acquired immune deficiency syndrome. The review gave a more informed background to the topic the researcher was currently studying.

Another area of review was the concerns arising from care of HIV-positive patients that came into play in the context of HIV/AIDS, as discussed in the next paragraph. The researcher was of the view that attitudes and willingness cannot be reviewed in isolation, since there were many variables of concern involved (see next paragraph for discussion), which are related to attitudes and willingness to care. Here the purpose was to bring in a link between attitudes and/or willingness and other issues of concern, in the context of HIV/AIDS care.

The following were identified as some of the concerns related to the care of patients in the context of HIV/AIDS:

- occupational risk of exposure to blood borne pathogens
- accidental exposure to patients' HIV-infected blood
- willingness to care for HIV patients
- perceived risk of exposure
- needle prick injuries
- attitudes of students towards HIV-infected patients
- universal precautions
- stigma associated with being HIV-positive

The literature reviewed varied in terms of HIV or AIDS or HIV/AIDS. Some research studies would refer to HIV-positive patients, some to AIDS patients, and some to both. Variability to HIV and AIDS was acceptable to the researcher, of interest was the attitudes harboured by nurses and their willingness to care for HIV/AIDS patients.

2.3 STATISTICAL REVIEW OF HIV/AIDS GLOBALLY AND IN SUB-SAHARAN AFRICA

2.3.1 Review of HIV/AIDS globally

The worldwide AIDS and HIV statistics in (Avert 2010) compiled towards the end of 2009, estimated that about 33,3 million people were living with HIV/AIDS globally in 2009, which had spiralled from 32.8 million people in 2008.

According to the 2010 UN AIDS Report on the global Aids epidemic as reported by South Africa: The Good News (2010), the global infection rate of HIV has gone down together with the death rate due to AIDS during the year 2010. Comparing the data, the year 1999 had seen infection rate of 3.1 million people worldwide and 2010 the infection rate was at 2.6 million people worldwide. Worldwide stability has been achieved in terms controlling and maintaining the HIV/AIDS epidemic.

2.3.2 Review of HIV/AIDS in sub-Saharan Africa

According to Avert (2010), of the total number of 33,3 million people estimated to be living with HIV/ AIDS, an estimated 22,5 million (68% globally) was said to be in sub-Saharan Africa by the end of 2009. Ethiopia, South Africa, Zambia, Nigeria and Zimbabwe were leading in the HIV/AIDS epidemic between 2001 and 2009 (South Africa: The Good News 2010).

According to South Africa: The Good News (2010), Nigeria had managed to get the epidemic stabilised and the four remaining countries had also managed to bring down the infection rate by at least 25%.

Recent statistics indicated that the top four countries leading in the epidemic were Swaziland (25.9%); Botswana (24.8%); Lesotho (23.6%); and South Africa at 17.8% according to Avert (2010) by the end of 2009, Nigeria had managed to get the epidemic stabilised.

A number of studies have been conducted pertaining to all or a combination of the following: (i) attitudes, (ii) knowledge, (iii) practices, and (iv) behaviour of student nurses and/or other health care providers towards patients with HIV/AIDS in different contexts in the health care system.

The reviewed literature has provided us with what other researchers have found when doing similar studies. Brink, Van der Walt and Van Rensburg (2006) **as cited in** Madisha (2008:20) mention that through literature review, a researcher can formulate a comparison base when finally interpreting the findings of the current study.

2.4 OVERVIEW OF THE HUMAN IMMUNODEFICIENCY VIRUS AND THE ACQUIRED IMMUNE DEFICIENCY SYNDROME

Du Toit and Van Staden (2009:241) define the (HIV as a “retrovirus consisting of ribonucleic acid (RNA), and made up of a special viral enzyme called the reverse transcriptase”. The HIV can change its RNA into deoxyribonucleic acid (DNA) which makes it possible for the virus to merge and take over a living cell’s genetic material.

According to Avert (2009), once the take-over happens, the virus can replicate and in the process killing the host helper T-cells which are the CD4s. Refer to figure 2.1.

The HIV enzyme integrate splices up the host cell, once integrated, a provirus (HIV DNA) is produced. In the absence of cell activation, the provirus lies dormant until the next cell activation where the HIV genes will be converted to messenger RNAs and ultimately producing HIV proteins and enzymes. New particles of viruses will then be formed and on goes the process of attacking new host cells, as cited in Avert (2009). The progression of the human immunodeficiency virus disease leads to the stage where the immune system of the individual is compromised to the extent that opportunistic infections set in, and this is called the acquired immune deficiency syndrome (AIDS). Du Toit and Van Staden (2009:242) further state that AIDS has been classified as a disease and no longer a syndrome.

The human immunodeficiency virus disease can be transmitted through different routes. The main route of transmission is penetrative sexual intercourse with an infected person. Other routes include mother-to-child-transmission, contamination with blood and its products or infected body fluids from an HIV-positive individual (Du Toit & Van Staden 2009:241).

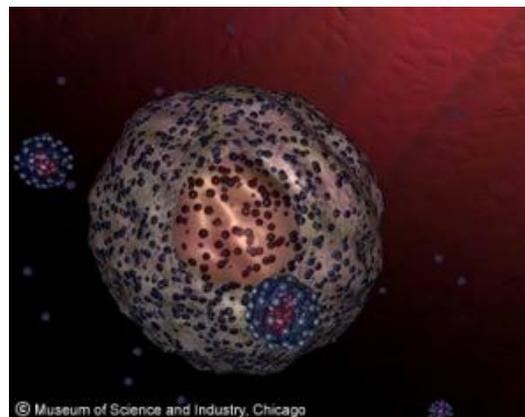


Figure 2.1 In this computer generated image, a human CD4+ WBC and the spots on its surface and the spiky blue objects in the foreground represent HIV particles

Source: (Avert 2010)

2.4.1 Routes of transmission

Sexual transmission of the human immunodeficiency virus is the primary route, especially in indigenous countries. This refers to unprotected vaginal, anal or oral sexual intercourse with a person who is infected with HIV (Feldman 2008:239). According to The Foundation for Professional Development and Southern African HIV Clinicians Society (2004:11); transmission is also exacerbated by factors like (i) high amount of circulating virus; (ii) presence of a sexually transmitted infection (STI); (iii) uncircumcised males; and (iv) dryness of vaginal mucosa, among other things. Viral transmission is also possible even when the mucosal lining is intact.

Mother-to-child transmission of the HIV is termed vertical transmission. This may happen during pregnancy, delivery of the baby and puerperium especially when breastfeeding the baby. The intra-partum period carries the highest risk of transmission, followed by breastfeeding and lastly the pregnancy stage, as cited in Avert (2010).

Transmission through breastfeeding which was rated at about 12%-29% had become an issue of concern especially to impoverished countries. The introduction of anti-retroviral treatment (ART), exclusive breastfeeding and other preventative measures have helped to reduce the spread of the virus from the mother to her born/unborn child (The Foundation for Professional Development and Southern African HIV Clinicians Society 2004:288, 290).

According to The Foundation for Professional Development and Southern African HIV Clinicians Society (2004:12), blood-borne transmission of HIV is possible through used needles and other sharps which have been contaminated with the blood of a person who is HIV-positive. Also at risk are the people receiving blood and/or organs from donors, those using intravenous drugs and the health care workers.

2.4.2 Infection in health care settings

The Foundation for Professional Development and Southern African HIV Clinicians Society (2004:12, 13) has cited cases which had been reported by the American CDC Centre for Disease Control (CDC) as early as 1997 about “occupationally acquired HIV infection among health care workers (HCWs)”. It is further highlighted that the following

factors influence occupational risk of infection (i) the fact that HIV infection prevails in the patient population; (ii) the type of exposure activities and how often those exposure activities are done; and (iii) “efficacy of transmission following exposure”. Zungu et al (2008:48a) mention that among such exposure activities, needle recapping has the highest risk of exposure.

2.4.3 Prevention of HIV

There are basic prevention strategies which are adopted worldwide which range from behavioural to technological interventions. The Foundation for Professional Development and Southern African HIV Clinicians Society (2004:13, 290) cites the prevention strategies as:

- Behavioural preventative measures which include campaigns and outreach programmes.
- Technological preventative measures as condom use, HCT (HIV counselling and testing), using sterile needles and sterile equipment.
- Post exposure prophylaxis (PEP).
- Vaccination.
- The use of anti-retrovirals.
- Exclusive breastfeeding.

Feldman (2008:74) provides an added perspective of male circumcision as being able to give some protection against HIV and other sexually transmitted infections (STIs).

2.4.4 Treatment of HIV/AIDS

According to The Foundation for Professional Development and Southern African HIV Clinicians Society (2004:179), the use of ART started as early as the late 1980s. As time went by, new drugs were discovered. With the combination of different classes of drugs used to fight the HIV infection, namely, the protease inhibitors, the nucleoside reverse transcriptase inhibitors, and the non-nucleoside reverse transcriptase inhibitors, the term “HAART” (highly active antiretroviral therapy) was developed.

The use of HAART has brought in success in the reduction of morbidity and mortality related to the human immunodeficiency virus and the acquired immune deficiency syndrome, as a result, AIDS has been classified as a chronic disease (The Foundation for Professional Development and Southern African HIV Clinicians Society 2004:179).

2.5 CONCERNS RELATED TO THE CARE OF PATIENTS IN THE CONTEXT OF HIV/AIDS

2.5.1 Occupational risk of exposure to blood borne pathogens in relation to attitudes and willingness by nurses to care for HIV-infected patients

Nursing sick patients is one of the professions that carry a high risk of exposure to HIV, Hepatitis B and C. According to Taegmeyer, Suckling, Nguku, Meredith, Kibaru, Chakaya, Muchela and Gilks (2008:304), occupational risk associated with exposure to infected body fluids is high in countries with poor resources like Kenya. Nurses were found not to adhere to precautionary guidelines related to, among others, needle disposal procedures. A contributing factor was lack of needle disposal equipment or overflowing sharps containers, together with staff shortages and the over-burdened health facilities, which increased the risk of accidental exposure to blood or body fluids of HIV-positive patients. In order to reduce the occupational risk associated with exposure to infected body fluids, access to testing and post exposure prophylaxis were increased and guidelines on needle-pricks were formulated in the Thika district of Kenya, for the health care workers (Taegmeyer et al 2008:304).

Study findings in Kenya by Taegmeyer et al (2008:307) showed that health care facilities and workers were not adhering to government preventative strategies. Needle-pricks were not reported, guidelines on the universal precautions did not exist in the facilities. Sharps containers were improvised, some of the sharps were discarded in such a manner as to reuse them. There also existed a delay in the disposal of sharps which put the health workers at a prolonged risk of exposure. This study was consistent with other research work conducted by Cornelius (2006:43) and Zungu et al (2008:48a) which showed that health care workers were either not adhering to or were inconsistent with adherence to universal precautions.

The negative attitudes by health care personnel to care for patients who were HIV-positive, could be assumed to be related to the risk of exposure to patients' HIV-infected blood. The knowledge by nurses that the kind of work they were doing carried a high risk of infection, was indicated by high emotional and physical stress, in a study conducted on South African nurses in Limpopo by Davhana-Maselesele and Igumbor (2008:67). Depression and disturbances in the moods of the nurses were also some of the manifestations related to caring for patients who were HIV-positive.

According to Sadoh, Sadoh, Fawole, Oladimeji and Sotiloye (2009:22), the contrary is true, the actual risk of infection in a health setting is not as high as it is made out to be. Though, exposure from a patient to a health care worker is higher than from a health care worker to a patient, the risk is generally low. The following examples were cited: mucous membrane exposure being estimated at 0.09% and percutaneous exposure to infected blood at 0.3% (Sadoh et al 2009:22).

Maternity nursing areas are known high risk areas in a health setting because of constant exposure to patients' blood. Mathole, Lindmark and Ahlberg (2006:133) conducted a study in Zimbabwe about provision of maternity care in the context of HIV/AIDS. The researchers reiterated the fact that there is a very high risk of HIV-infected during the provision of care in maternity care than in surgical care. A study by Van Dyk (2007:52) on caregivers working in the HIV/AIDS field in South Africa yielded that working in such an occupationally high risk area, made caregivers to experience fear related to occupationally acquired HIV infection. As a result of fear of contagion, nurses consequently became reluctant or refused to care for HIV-infected patients.

2.5.2 Accidental exposure to HIV-infected blood

Mishaps do happen in the provision of patient care either affecting the patient or the nurse, and such examples include touching blood or body fluids with unprotected hands, blood splashes into the eyes, needle pricks (discussed below), among others. It is a documented point that health care providers are concerned about being infected with HIV during the provision of care to HIV/AIDS patients (Van Dyk 2007:52). Research results have highlighted that health care workers (HCW) did experience anxiety when they were accidentally exposed to blood (Rissi, Machado & Figueiredo 2005:283).

In a study conducted by Rissi et al (2005:287) it was found that health care workers portrayed positive attitudes by believing that it was important to understand the emotional, psychosocial, physical aspects of the HIV-infected patient and treat them with care. Furthermore, accidental exposure to blood was not viewed to cause any life consequences for the health care worker (HCW), hence they believed that patients have emotional needs that must be considered. This is in line with the concept “caring” as explained by Montgomery (1993:30) which pointed out that nurses need to have knowledge and better understanding of the patient they were caring for, so that they can be able to reach out to the patient.

Another interesting finding was the fact that health care workers seemed to block away the difficulties they faced in the daily encounters of their work, and rather viewed patients as people who deserved to be cared for. Health workers tended to idealise the situation and focused more on providing care than on the possibility of risk of accidental exposure to blood (Rissi et al 2005:288). The positive attitudes and their willingness to care for HIV-infected patients by nurses displayed in a study by Rissi et al (2005:288) was a demonstration of the Theory of Self Care Deficit by Orem (1991), which is discussed in this chapter as the foundation of this study (Bruce et al 2010).

Rissi et al (2005:289) have stated that in other studies that were conducted (sources were not specified), health care workers have shown reactions of fear, and emotional problems when faced with the reality of being accidentally exposed to blood. Once exposed to blood an observation by one researcher was that, health care workers now bring out their prejudices regarding mode of infection, risk behaviours and judgements towards patients, which they initially did not associate themselves with.

2.5.3 Needle prick injuries in relation to attitudes and willingness by nurses to care for HIV-infected patients

A general consensus exists among some researchers who conducted studies on needle pricks that they carry a higher risk of exposure as compared to exposure to infected blood and body fluids by mere handling, and among such are Zungu et al (2008:48a) and Stevens and Dickinson (2007:41). According to Stevens and Dickinson (2007:41), the HIV acquisition risk is 3 in 1000 pricks. According to Zungu et al (2008:48a), needle

prick injuries constitute the highest if not commonest way in which health care workers can contract HIV and other blood-borne infections from patients.

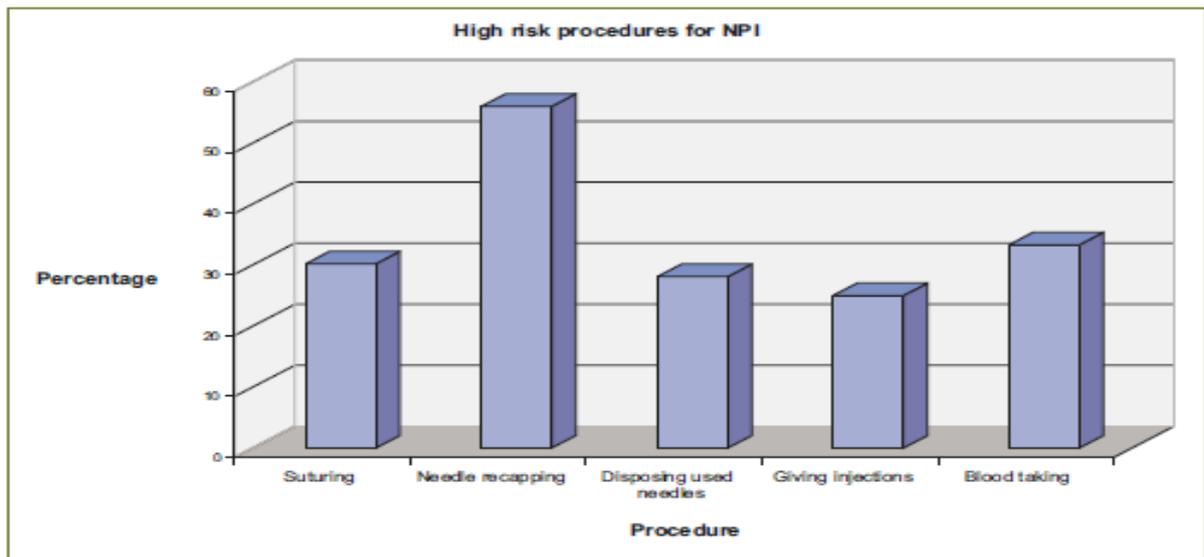


Figure 2.2 High risk procedures leading to NPI

Source: (Zungu et al 2008:48a)

Zungu et al (2008:48a) identified procedures that were associated with needle pricks and were rank ordered in terms of rates of needle pricks. Needle recapping had a high needle prick rate, taking of blood was second, third was suturing, followed by disposing used sharps, and lastly was the giving of injections. See figure 2.2. Fear to be tested after needle pricks was displayed by student nurses who felt that patients need to tested for blood-borne infections (Zungu et al 2008:48c), which in itself is a portrayal of negative attitudes towards HIV-infected patients.

2.5.4 Attitudes of nurses and nursing students towards caring for HIV-infected patients

The mode of transmission is said to be one of the factors that play a role regarding how nursing students react towards providing care to HIV-infected patients, it has an impact on their willingness to provide care to such patients, as mentioned by Cornelius (2006:42). Cornelius further cited other literature that has been reviewed, for example Peate, Suominen, Valimaki, Lohrmann and Muinonen (2002) and Stewart (1999), where results have yielded both positive and /or negative attitude results of students, which were based on how the patient contracted the infection (Cornelius 2006:42).

In a study on the culture of care of people with HIV/AIDS, Hodgson (2006:284) reviewed Valimaki et al (1998) and Lohrmann et al (2000) who made a suggestion that a person's intention to give/not to give care was related to his/her attitude. Hodgson (2006:284, 288) cited fear as the driving force towards negative attitudes.

Findings by Hodgson (2006:288) revealed that the healthcare workers had no fear of HIV, which was caused by empathy of the HCWs towards the people infected with the human immunodeficiency virus. Due to absence of fear of HIV, healthcare workers (HCWs) were generally positive towards the HIV-infected patients. Limitations were cited in his design, the setting and non-generalisability of the results.

Cai, Moji, Honda, Wu and Zhang (2007:597, 598) researched about Chinese physicians and their assistants about their knowledge, attitude, behaviour and practice (KABP). Male respondents tended to have a more positive attitude compared to their female counterparts. The more educated respondents (physicians) portrayed supportive attitudes than the less educated respondents (assistants).

A study by Oyeyemi, Oyeyemi and Bello (2006:196) on Nigerian nurses who were caring for patients with HIV/AIDS, assessed among other things, the relationship between Nigerian nurses' demographic factors and their attitudes towards caring for such patients. The findings revealed a link between some demographics as having an influence on the attitudes of nurses. Their negative attitudes were influenced by their rank, speciality, prior knowledge and having been exposed to an HIV/AIDS patient before. The lower the level of education, the more negative was the attitudes. The contrary was true based on better understanding and insight.

In a study conducted by Sadoh et al (2009:20) on health care workers, they were found to have more positive attitudes towards caring for a patient infected with the human immunodeficiency virus. The health personnel portrayed negative attitudes towards being cared for by a fellow colleague infected with the human immunodeficiency virus.

It was revealed in a study on Chinese health service providers that negative attitudes towards HIV patients were more obvious in situations where the health care workers were not getting any support from their institution, regarding provision of protective or preventative resources. Attitudes and discrimination by care providers towards HIV-

infected were observed to be reduced when precautionary resources were provided to the workers by their institution (Li et al 2007:759). The results of this study were consistent with other studies of Li et al (2008:150); Bektas and Kulakac (2010:891) and Andrewin and Chien (2008:901, 902) on discriminatory tendencies by health care workers towards HIV-infected patients.

Similarly the results of a study conducted by Bektas and Kulakac (2010:891) on the Turkish student nurses' showed positive attitudes towards caring for patients infected with the human immunodeficiency virus. The difference noted in the findings was that Turkish students had more negative attitudes towards patients infected through blood transfusion and the use of injectable drugs than those infected through mother- to-child transmission or through sexual intercourse. The extent of the attitudes observed in some cases was related to the transmission mode (Cornelius 2006:42).

Cornelius (2006:42) has rank ordered the transmission modes according to the highest stigma attached to them. First is infection through intravenous drug use, followed by infection through the sexual route, and lastly is infection through blood or mother-to-child-transmission.

2.5.4.1 Factors associated with attitudes towards care of HIV-infected patients

According to Sadoh et al (2009:22), Hodgson (2006:284) and Li et al (2008:151) some of the contributing factors for health care workers to have negative attitudes towards HIV-infected patients were:

- fearing to be infected with HIV/fear of contagion
- fear of being stigmatised
- being discriminated against
- joblessness
- lifestyle variations
- fear of death and dying
- knowledge shortcomings
- personal values

Li et al (2008:151) additionally put media as having had an influence towards fuelling the attitudes towards HIV-infected patients due to the over emphasis that was placed on the association between “HIV/AIDS, high risk and socially acceptable behaviours”.

2.5.5 HIV-related stigma in relation to attitudes and willingness by nurses to care for HIV-infected patients

Stigma has been defined by Alonzo and Reynolds (1995) as cited in Holzemer, Uys, Makoae, Stewart, Phetlhu, Dlamini, Greeff, Kohi, Chirwa, Cuca and Naidoo (2007:542), as “a powerful discrediting and tainting social label that radically changes the way individuals view themselves and are viewed as persons”.

The Belizian study on stigmatisation of HIV/AIDS patients by doctors and nurses had a portion of respondents from Cuba, Central American countries and other territories. The majority (74%) of respondents were from Belize. Associations between demographic characteristics of the respondents and the stigma were looked into, for example age, sex and religion. Religion yielded interesting findings in association with stigma towards HIV/AIDS patients (Andrewin & Chien 2008:899).

Andrewin and Chien (2008:901) categorised attitudes under different subscales. The first was the subscale “attitudes of blame/judgement”; second was the subscale “attitudes toward imposed measures”; and lastly “comfortableness dealing with HIV/AIDS patients”. The researchers stated that stigmatising attitudes were observed in the different subscales. Doctors and nurses attitudes of blame/judgement were high compared to those of imposed situations and comfortableness of caring for HIV-infected patients. The blame/judgement attitudes were observed more from female respondents who regarded themselves as highly religious. This study is consistent with the other studies that have reported the fact that health care workers who regard themselves as religious, stigmatise patients more than those who are nonreligious, especially if the HI virus was believed to have been contracted “immorally” (Andrewin & Chien 2008:902).

The following are some of the findings that were made in the Belizean study: (i) patients received differential treatment from nurses, according to their HIV status; (ii) patients’ HIV status was disclosed to other colleagues by, especially doctors; (iii) “all patients who are admitted in hospital should be tested for HIV” – was an item that was strongly

supported by health care workers; (iv) respondents sympathised or did not sympathise with HIV patients depending on how the HIV was contracted (Andrewin & Chien 2008:900, 901). Cornelius (2006:42) has rank ordered the transmission modes according to the highest stigma attached to them. Infection through intravenous drug use had the highest level of stigma, followed by infection through the sexual route, and last was infection through blood or mother-to-child-transmission, which carried the lowest stigma.

Due to stigma and discrimination HIV-positive patients tended to shy away from society and kept themselves in isolation, which was detrimental to them (Benevides-Pereira & Das Neves Alves 2007:565). There have been reported cases of health care workers whose behaviours were strongly stigmatising to the patients, where patients were either avoided or flatly refused treatment by nurses in Los Angeles County (Kinsler, Wong, Sayles, Davis & Cunningham 2007:588, 590). Kinsler et al (2007:587) further reported about their results on perceived stigma and access to care as follows: (i) health care worker was uncomfortable with the patient; (ii) a patient was treated as an inferior person; (iii) health care providers avoided patients; and (iv) patients were not given a service by the health care provider.

Holzemer et al (2007:546) conducted a study in Lesotho, Malawi, South Africa, Swaziland and Tanzania on health care providers and on people living with HIV/AIDS. A reported fact in their study was that health care providers were a source of stigma towards patients with HIV/AIDS. Nelson Mandela has been quoted by Hodgson (2006:283) as saying “many people suffering from AIDS not killed by the disease are killed by the stigma”. This quotation was cited from the 14th International AIDS Conference in 2002. This according to the researcher emphasises the fact that negative attitudes by health workers could be to the detriment of the patient and the health care delivery system.

The extent of the attitudes observed in some cases was related to the transmission mode. Cornelius (2006:42) has rank ordered the transmission modes according to the highest stigma attached to them. First is infection through intravenous drug use, followed by infection through the sexual route, and lastly is infection through blood or mother-to-child-transmission. The mode of transmission had a definite impact on the willingness by student nurses to provide care to HIV-infected patients.

In a study on nurses in Thailand towards HIV/AIDS patients, commercial sex, and the use of drugs, interesting findings were made. Stigma was described in layers or what is called co-stigma. Besides the stigma that HIV/AIDS patients experience, there would be an extra “double” or “triple” stigma if a patient was found to engage in commercial sex activities or in drug usage. The patient infected with HIV was categorised as either innocent or guilty depending on the mode of transmission, for example, transmission through blood transfusion was classified as innocent and was not stigmatised. Conversely, if transmission was through commercial sex or drug use, the patient was extremely stigmatised by the nurses (Chan & Reidpath 2007:770).

The stigma that was depicted by Mathole et al (2006:138) in their study on Zimbabwean nurses was related to nurses having to give care to pregnant women who refused to test for HIV. Refusal to do the test by the pregnant women was in-turn based on the fear of stigmatisation, discrimination and rejection. Behavioural patterns of patients were therefore used to assess patients who appeared to be sexually immoral, which in-turn was stigmatising to the patients. Stigma once again was identified as a challenge in this and other studies.

2.5.6 Willingness by nurses and nursing students towards caring for HIV-infected patients

According to Cornelius (2006:43), studies have been conducted, one such was a study by Oyeyemi et al (2006), where research results showed that students who experienced negative attitudes towards HIV-positive patients tended to be less willing to care for them. On the contrary those students having positive attitudes towards HIV patients seem to be more willing to care for them. Factors that had an impact on willingness by students to care for HIV-infected patients were perceived risk of exposure and fear of contracting the human immunodeficiency virus (Cornelius 2006:43).

Despite the level of stress and depression documented in the study by Davhana-Maselesele and Igumbor (2008:72), nurses still managed to form good relations with their patients. Nurses also had a feeling of responsibility to fight the scourge of HIV. Literature in this regard revealed that the more positive the nurses were towards the HIV-infected, the more willing they were to care for the patients (Cornelius 2006:43).

In a study by Cai et al (2007:599) on Chinese physicians and their assistants about their KABP, the results pertaining to willingness to care for HIV-positive patients by the concerned health care workers, were of an unfavourable nature. The findings were reported to be “not different” from other studies conducted previously in China. Demographic factors were taken into consideration, for example, different educational backgrounds impacted significantly on the respondents’ willingness to provide care to HIV patients. Respondents with a rural background were more unwilling to care for HIV-positive patients.

The Belizean showed that there were less negative attitudes associated with the comfortableness of caring for HIV-infected patients, compared to the attitudes of blame/judgement and attitudes toward imposed measures. There was more willingness by the health workers to care for HIV/AIDS patients (Andrewin & Chien 2008:901).

On overall, the Turkish students in a study by Bektas and Kulakac (2010:891) were willing to take care of a HIV/AIDS patient, especially if the transmission was through mother-to-child or sexually. Despite the stigmatising of the HIV-infected patients by students, they pitied the patients. Students portrayed feelings of wanting to help the patients especially because they were helpless and needed support to pull through (Bektas & Kulakac 2010:891).

2.5.7 Perceived risk of exposure

Consistency exists among different research studies done in terms of perceived risk of exposure. According to Cornelius (2006:43), findings were that students were aware of the risk of infection and experienced fear regarding the risk of exposure to HIV.

A study by Bektas and Kulakac (2010:891) showed that a small portion (34%) of the student nurses perceived a risk of infection related to the areas in which they were placed in the clinical setting. Some students even portrayed their negative attitudes when they indicated that they would not touch or eat food that was “prepared by an infected person”.

2.5.8 Universal precautions

Although student nurses are aware of the risk of contagion, some have been found not to follow universal precautions consistently. One of the studies has documented about twenty five percentage of nurses were consistent in following the universal precautions. Some students were found to protect themselves excessively when providing care to HIV-positive patients (Cornelius 2006:43).

In a study by Zungu et al (2008:48a) which was conducted among student nurses, it was found that adherence to standard precautions when handling needles was either very low or non-existent among respondents, even though the guidelines were available and accessible.

In their study on Zimbabwean nurses Mathole et al (2006:137) revealed that although nurses wanted to adhere to universally recommended precautions, they could not, because of limited resources, which appeared to be a trend in other studies. Another challenge regarding failure to adhere to precautionary measures in the Zimbabwean study was the fact that some patients had associations with the nurses. Nurses generally felt that using precautions against people they knew, would cause a social distance. Nurses' frustrations regarding care of HIV-infected patients, were also related to limited or non-use of universal precautions and having to nurse patients who were not tested for HIV (Mathole et al 2006:137).

A study by Taegmeyer et al (2008:307) on health workers, yielded that general precautionary measures were not followed during routine care of patients including HIV-infected patients. Needle-pricks were not reported, guidelines on the universal precautions did not exist in the facilities under study in Kenya. Sharps containers were improvised, some of the sharps were discarded in such a manner as to reuse them, there also existed a delay in the disposal of sharps which put the health workers at a prolonged risk of exposure. This study was consistent with other research work which showed that health care workers were either not adhering to or were inconsistent with adherence to universal precautions.

2.6 THE CONCEPT “CARING”

The process of engaging or dedicating to something (the object), where a person would give time to that object and centre one’s activities around that object. An object can be a human being, a group of people, an idea, and many other things, (Montgomery 1993:30). To explain “caring” eight elements were used, that are referred to as ingredients of caring, namely: knowing, alternating rhythms, patience, honesty, trust, humility, hope and courage. These are skills or qualities that the person who is providing care to the other should possess. In order to coin and explain the concept Montgomery (1993:30) utilised Mayerrof’s Theory of Caring (1971).

2.7 THE CONCEPT “ATTITUDE”

Attitude is defined by Johnson and Boynton (2010:19) as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour”.

Attitudes shape and influence our behaviour and if a strong negative attitude exists towards an attitude object, negative behaviour will be portrayed (Baron, Byrne & Branscombe 2007:103). There are thought processes that take place around an attitude or attitude object and appropriate behaviour towards an attitude object will follow, whether desirable or undesirable. Baron et al (2007:105) coined and explained the concept based on the Theory of Planned Behaviour by Ajzen and Fishbein (1980).

After behaviour has been rationally processed, and the outcomes considered, one would furthermore assess one’s ability to undertake that particular plan of action (Baron et al 2007:105). The concept “attitude” when applied in nursing, implies that nurses may well possess positive or negative attitudes towards HIV-infected patients, which may be evident in their behaviour, manifesting as either willingness or reluctance to care for HIV-infected patients as shaped, influenced and guided by their attitudes. This is implied by the Theory of Planned Behaviour (1991) as explained in Baron et al (2007:105).

The model below, gives an indication of a behaviour that was unplanned, based on an attitude that was triggered by a certain occurrence, and once activated the attitude will

have an influence on how one views the occurrence and ultimately behaves (positively or negatively (Baron et al 2007:106).

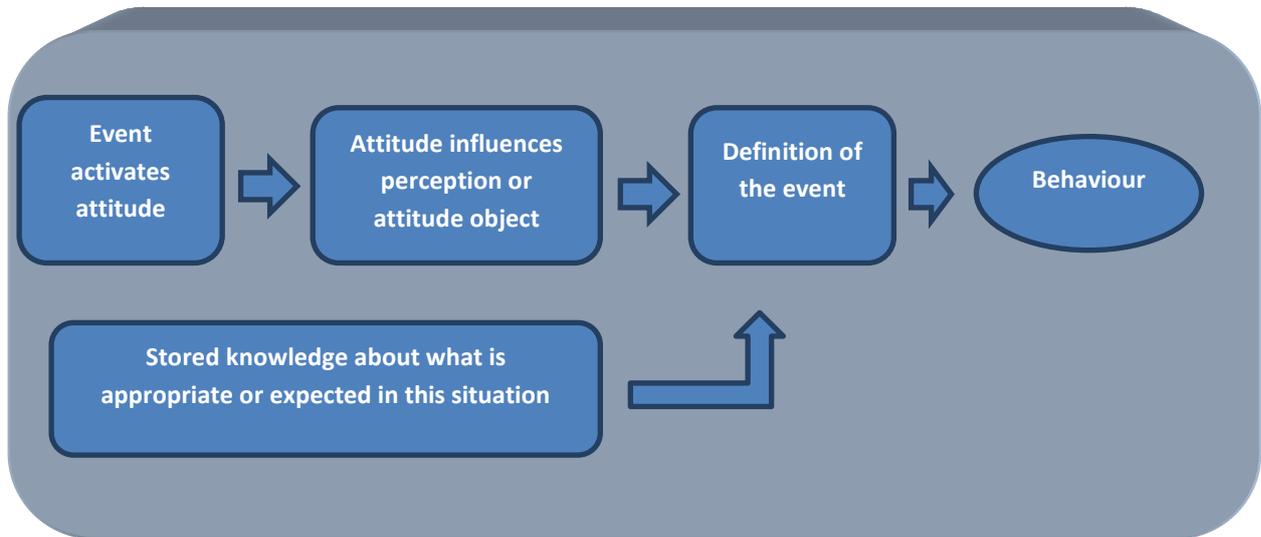


Figure 2.3 Fazio's Attitude-to-Behaviour Process Model

Source: (Baron et al 2007:111)

The implication for nursing is that attitudes influence the provision of quality patient care. Nurses therefore may need to be positively minded when caring for HIV-infected patients so as to provide support and quality patient care, researcher's opinion.

2.8 CONCLUSION

A review of the literature has depicted areas of high concern regarding the provision of care to HIV-infected individuals by the student nurses and the healthcare providers in general. Fear of contagion in the workplace, stigmatisation of patients and of health care workers by the community (Van Dyk 2007:52), accidental exposure to infected blood, perceived risk of perception, needle prick injuries (NPIs) and universal precautions, were identified among other themes, to be of concern to providers of health care. The influence of attitudes (positive/negative) on the behaviour (willingness/unwillingness to care for HIV-infected patients) of student nurses has also been described.

Care concerns in the context of HIV/AIDS, lack of support by employers and governments towards the HCWs and exposure to risky working conditions have been seen to be contributory factors pertaining to negative attitudes by health workers and student nurses towards HIV-infected patients.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter the researcher discusses the research methodology adopted for this study, that is, the research design together with the reason why the study was conducted (purpose), and the objectives of the study.

Population and sampling rationale are explained, as well as the setting under which the study was undertaken. Data collection method, process and analysis are also discussed. Lastly, details pertaining to issues of reliability, validity and ethical considerations are also explained.

3.2 RESEARCH PURPOSE

Nursing personnel render an essential service and would do better with a workforce that is psychologically prepared to face the pressures associated with caring for HIV-infected patients. The nursing of HIV/AIDS patients requires special skills which include, among others, the identification and management of specific clinical problems, counselling techniques, the administration of patient care and the ability to communicate effectively with individuals, families and community groups. Staff caring for HIV/AIDS patients needs to acquire new attitudes, knowledge and skill.

The purpose of this study was to describe, the attitudes and willingness of student nurses towards caring for HIV/AIDS patients.

3.3 RESEARCH OBJECTIVES

This study aimed to achieve the following objectives:

- describe the socio-demographic characteristics of student nurses in some public hospitals in Gert Sibande district, Mpumalanga
- explore the attitudes of student nurses towards caring for HIV-infected patients during their clinical practice
- determine the willingness of student nurse to render nursing care to HIV-infected patients during their clinical practice
- measure the association between student nurses' demographic factors and their willingness to care for HIV-infected patients

3.4 RESEARCH METHODOLOGY

3.4.1 Research paradigm

According to Miller and Yang (2008:15), a combination of paradigms (multi-paradigm approach) can be used to yield better results than if one paradigm was used. For this study the researcher used the qualitative approach to gather possible attitude issues relating to HIV from colleagues and students, so that a good instrument could be designed. For conducting the actual study, a quantitative approach was used.

3.4.2 Research design

According to Polit and Beck (2006:509), the design of a research is an overall plan for tackling objectives and questions related to the research in the process upholding the integrity of the study.

A contextual exploratory descriptive survey was conducted among student nurses enrolled for a 4 year diploma in some public hospitals in Gert Sibande district . Self-administered questionnaires were used to collect data during class and clinical attendance. The questionnaire consisted of two parts: the first part was focusing on the socio-demographic data and the second part sought the student nurses' attitudes and willingness towards caring for HIV/AIDS patients during their clinical practice (Hofstee 2006:122; Gallin & Ognibene 2007:102, 105; Thomas 2009:129).

Permission was granted by the Ethics Committee of the University of South Africa and the Mpumalanga Department of Health Research and Ethics Committee. Informed

consent was sought from the respondents and confidentiality of the information was ensured. Anonymity was maintained. Respondents participated out of free will and their responses were not tempered with, until they were analysed. Data was analysed by means of percentages, means, analysis of variance and standard deviation. Age was further categorised and summarised by frequency counts and percentages. Association between variables was done by the Fischer Exact Test.

3.5 RESEARCH METHOD

Methodology pertains to the “steps, procedures, and strategies for gathering and analysing data in a research investigation” as defined in Polit and Beck (2006:504).

3.5.1 The research setting/the environment

Madisha (2008:49) has cited De Vos (2001) saying that the environment and its surrounding, within which the research takes place, is called the research setting. It also refers to a naturalistic setting where data are collected in a real environment as Polit and Beck (2009:179) explain it.

In this study, the geographical environment was mainly the Gert Sibande district of Mpumalanga Province. The hospitals which are accredited to place student nurses for their clinical practice are: Embhuleni, Bethal, Carolina, Ermelo, Evander and Piet Retief hospitals.

Another part of the research setting was the Mpumalanga College of Nursing which is situated in the Ehlanzeni district, and it is the main Institution of Higher Learning for nurses in the Mpumalanga province.

Nurses are given theoretical content at the College on a block system, for the clinical component of their training; they are placed in different accredited nursing schools located in public hospitals throughout the province.

Gert Sibande district was the preferred choice for the researcher for a number of reasons, (i) the district has a high incidence of HIV/AIDS compared to the two other

districts; (ii) the proximity of the area to the researcher and (iii) affordability in terms of costs.

3.5.2 Sampling procedure

3.5.2.1 Population

The population consisted of all student nurses studying towards a Comprehensive Course in Nursing, with the resultant qualification of a Diploma in General Nursing (with midwifery, community and psychiatric qualification as well, as per the SANC Regulation R425). The student nurses that formed the study population were all trainees of the Mpumalanga College of Nursing, where they are given the theoretical content of the course of training. The students are in their first, second, third and fourth year of training.

For the practical content student nurses are placed in different nursing schools located in the public hospitals in the three districts of Mpumalanga Province (Gert Sibande, Nkangala and Ehlanzeni districts).

3.5.2.1.1 Criteria of inclusion

Criteria of inclusion, or eligibility criteria as Polit and Beck (2006:499) refer to them, are those specific characteristics which make elements of the population eligible for selection to participate in a study.

3.5.2.1.2 Criteria of exclusion

Polit and Beck (2006:499) define exclusion criteria as those specific characteristics that certain elements in the population do not possess and are therefore not eligible for inclusion in a sample.

In this study, comprehensive students who did not belong in the Gert Sibande district were excluded. Also excluded were students who happened to be absent from their clinical areas during data collection, either because of sickness or being off duty.

3.5.2.2 *The sample*

3.5.2.2.1 *Sampling method*

Non probability sampling design was used and the sampling method chosen for this study was convenience sampling (Polit & Beck 2006:261). Only students in the Gert Sibande district participated in the study together with students from Gert Sibande nursing schools who were on Block at the time of collecting data. The sample selected was most convenient in terms of (i) cost implications and (ii) Gert Sibande district carries the highest incidence of HIV infection among the three districts of Mpumalanga.

3.5.2.2.2 *Sample size and characteristics*

The sample comprised of all male and female comprehensive nursing students practising in the Gert Sibande hospitals accredited for clinical practice, and females were in the majority. A total of 172 students were invited to participate. The training level ranged from first to fourth year of training.

3.5.3 Data collection

Data collection is referred to as 'the gathering of information to address a research problem' by Polit and Beck (2006:498). For the purpose of this study a structured data collection tool was used where the respondents were requested to respond to statements, indicating desirability or non-desirability of the statement by use of a Likert scale.

3.5.3.1 *Data collection method*

The Quantitative Self-Report Technique was used as an approach to data collection. According to Polit and Beck (2006:294), this entails structuring questions before hand concerning what the researcher needs to know. Such formally structured instrument is then used as a data collection tool or instrument. The method adopted by the researcher in this study was the use of a structured questionnaire, which was issued to participants to respond to.

3.5.3.2 *Development and testing of the data collection instrument*

The researcher developed the data instrument after interviews with students doing the Clinical Associate course, concerning issues and areas of concern when nursing HIV-infected patients. According to Polit and Beck (2006:294), the data tool was further reviewed by the supervisor and the statistician for clarity, quantifiability and sensitivity to respondents.

The instrument was structured with fixed-alternative questions and it allowed for open ended questions where the respondents were given a chance to respond in their preferred way (Polit & Beck 2006:294). Piloting of the data tool was done, though on a very small scale. The tool seemed clear and understandable.

3.5.3.3 *Characteristics of the data collection instrument*

The data collection tool was a structured questionnaire which had basically two parts:

Part I consisted of demographic information of respondents in terms of age, gender, ethnicity, religion, marital status, level of training and whether they had taken an HIV test and when was that.

The next part of the data collection tool comprised of questions which were subdivided into questions on attitudes regarding the care of HIV-infected patients and questions on the willingness towards caring for patients with HIV (Gallin & Ognibene 2007:115; Giuseppe 2006:10).

Part II subsection (i) comprised of questions assessing the attitudes of students towards caring for HIV-infected patients. The 5-point Likert scale was used in this part of the tool. The responses ranged from “strongly agree”, “agree”, “I don’t know”, “disagree”, and “strongly disagree”.

The subsection had seven attitude items in a closed ended form. One item out of the seven had a portion of an open ended response where respondents were asked to state a reason for their choice.

Part II subsection (ii) was made up of five items which assessed the respondents' willingness to care for HIV-infected patients. All five items were in the closed ended form of questioning, where respondents were required to respond with a "Yes", "No", "I don't know", "Neutral", or "I can't remember".

Four out of the five items had a portion where the respondent could give an open ended response by providing a reason for the choice he/she had made.

3.5.3.4 Data collection process

Permission was sought and granted by the Mpumalanga Research and Ethics Committee, the Ethics Committee of the University of South Africa, Director of Hospital Services (Mpumalanga), the Chief Executive Officer of Gert Sibande district, the principal of Mpumalanga Nursing College, the Chief Executive Officers of the six public hospitals where data was supposed to be collected.

Two weeks prior data collection, e-mail messages were sent to the Heads of the targeted institutions informing them of the dates for data collection.

The researcher visited respective institutions, reporting to the Nursing Service Managers and the Principals of the nursing schools where the student nurses were placed. Respondents were briefed about the research project, purpose and the data collection method thereof. Ethical issues were explained and maintained throughout.

In one hospital ten student nurses were visiting the nearby clinic on the day of the data collection, five out of ten students were delayed due to transport problems and the researcher was able to access them.

In six out of seven institutions the nursing school and the nursing service section were not informed about the dates and the research itself, hence some students were not available to take part in the research. Some students were either on night duty or were day off.

3.5.3.5 Ethical considerations related to data collection

3.5.3.5.1 Permission

Permission was granted by the Ethics Committee of the University of South Africa, furthermore, the Mpumalanga Department of Health Research and Ethics Committee's approval was sought and granted.

3.5.3.5.2 Informed consent

According to Silverman (2010:155), informed consent involves the giving of information regarding the pros and cons of the intended research to the participants so that they can make informed choices. Consent was first sought from the respondents, after explaining the reason for the study, the aim and the purpose and the methods to be implored.

3.5.3.5.3 Confidentiality

Respondents were assured about the confidentiality of their responses. The data was handled and kept confidential at all times by the researcher Silverman (2010:155) contends that all research information that is supplied to the researcher must be respected and be kept private.

3.5.3.5.4 Free will

No student was coerced to participate in the study. All participation was voluntary, without any intimidation or conditions out of free will as explained by Silverman (2010:153).

3.5.3.5.5 Anonymity

No form of identification of respondents in terms of names or numbers was used on the data tool. There was no way a particular response could be linked to a particular respondent (Silverman 2010:155).

3.5.3.5.6 Responses

The responses from the respondents were kept as classified information, and originality was ensured by not tempering with the filled in questionnaires until they were submitted for analysis (Madisha 2008:60).

3.5.4 Data analysis

Data analysis is a process of organising and synthesising data collected, as explained by Polit and Beck (2006:498). Data was analysed on SAS, Release 9.2, running under Microsoft Windows for a personal computer as per the statistician advice.

Age was summarised by calculation of the mean, median, standard deviation, minimum and maximum values. Age was further categorised and summarised by frequency counts and percentages as with other variables, in order to give a description of the results on the items that measured attitudes and willingness to care for HIV-infected patients by the student nurses.

In the case of Likert Scale assessments, the counts in the two categories “SA” (strongly agree) and “A” (agree) were combined and the outcome was described as “agreed to a greater or lesser extent”. Similarly the counts in the two categories “SD” (strongly disagree) and “D” (disagree) were combined and the outcome was described as “disagreed” to a greater or lesser extent.

The Fisher Exact Test was used to test for association between the demographic characteristics and willingness of student nurses to care for HIV-infected patients, as reflected in questions B8, B10, B11 and B12, refer to annexure 5. The p-values of above ($>$) 0.05 indicate no association, and the p-values of lesser or equal to (\leq) 0.05 indicate that an association exists between the demographics and student nurses' willingness to care for HIV-infected patients.

Thematic analysis was done for open-ended responses by an expert in qualitative research (Van Dyk 2007:53). Data was coded, clustered in order to identify themes from the responses and interpreted.

3.6 SCOPE AND LIMITATIONS OF THE STUDY

The population was the nursing students studying towards a comprehensive nursing qualification in the Mpumalanga College of Nursing, who are distributed to hospitals in all the three districts of the province. The study was focused in one district of the Province excluding the other two.

3.6.1 Methodological limitations

Limitations are said to be restrictions of any nature which can end up affecting the generalisability of the research results by Burns and Grove (2009:14).

3.6.1.1 *Sample limitations*

The respondents were obtained in only one district in the province (Gert Sibande). Research results therefore are limited to that particular district and cannot be generalised to the nursing students in the other two districts.

Another flaw was in the fact that the targeted Nursing College of Nursing has other student nurses who are not doing the Comprehensive course and were excluded from the study. This also affected the generalisability of results to all student nurses studying at the College of Nursing.

3.6.1.2 *Limitations in data collection*

During data collection, there were students who were visiting the surrounding clinics for community practical, the researcher managed to reach some by leaving behind the questionnaires at some nursing schools. One or two lecturers were given a brief about the research and its purpose so that they could explain to the learners and obtain consent. Not all questionnaires were filled in because some students went off duty before they could be informed about the study.

The researcher only sought permission to access the College and the respective public hospitals, but not the clinics; as a result the students in the clinics could not be accessed.

Response bias was also identified because not all subjects who were invited to participate, responded, which according to Polit and Beck (2006:276), constitutes bias in the response rate.

3.7 INTERNAL AND EXTERNAL VALIDITY OF THE STUDY

3.7.1 Validity

According to Thomas (2009:107), validity refers to the extent to which the instrument measures what it was intended for.

The data instrument that was used in this study was designed following a review of some of the studies conducted on attitudes of student nurses and other health workers regarding care of HIV-infected patients. The researcher identified some common themes from the literature, and questions were designed out of those. In this study, the researcher attempted to address issues of construct and face validity (Thomas 2009:107). The data instrument did not cover all the necessary content, as a result content validity was not sufficiently ensured (Thomas 2009:107).

Credibility pertains to performing specific activities that increase the trustworthiness of the reported findings (Stommel & Wills 2004:289). Prior to collecting data, the researcher engaged with the participants to establish relationships of trustworthiness and participants were encouraged to be as honest as possible especially when responding to open-ended questions.

3.7.2 Reliability

According to Thomas (2009:105), reliability refers to the data instrument being able to yield same results if and when used again in a different group of individuals.

The instrument that was used in this research was structured and was consistent in all respondents. The test-retest reliability was ensured (Thomas 2009:105).

3.8 CONCLUSION

This chapter highlighted the purpose and objectives of the study as the basis for the research methodology. Research design was explained. Outlined in the methodology were the research setting; sampling procedure followed; including the eligibility criteria, sample size and characteristics.

Data collection processes were explained also highlighting the ethical considerations involved. Data analysis process was looked into. The study limitations and measures to ensure reliability and validity were addressed. The following chapter will address the interpretation of the analysed data.

CHAPTER 4

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter presents the analysis of the research findings. Data is presented in tables, pie diagrams and bar graphs. Presentation of demographic analysis is provided, a description of the association between demographic characteristics and the attitude and willingness of the respondents towards caring for HIV-infected patients is also described. The results of the analysis pertaining to attitudes and willingness of student nurses towards caring for HIV-infected patients are presented. A discussion of the research results is also presented in this chapter.

4.2 STATISTICAL ANALYSIS AND INTERPRETATION OF RESULTS

A total of one hundred and seventy two student nurses were eligible to participate in the study, but only 122 were accessible and gave an informed consent to take part in the research. There was a response rate of 70.9%.

4.2.1 Respondents' demographic data

4.2.1.1 *Age distribution*

Age was summarised by calculation of the mean, median, standard deviation, and minimum and maximum values. The research results indicated that the participants' ages ranged from 19-45 years. The mean age was 26.96 and the median was 25. Two values were missing 2 (1.64%). There was 120 (98.36%) response to the age question. The minimum age value was 19 and the maximum age value was 45, with a standard deviation of 6.09. Table 4.1 illustrates the figures.

Table 4.1 Analysis of age with the means procedure

| Frequency (n) | Missing | Mean | Median | Standard deviation | Minimum age | Maximum age |
|---------------|---------|-------|--------|--------------------|-------------|-------------|
| 120 | 2 | 26.96 | 25.00 | 6.09 | 19.00 | 45.00 |

The majority of the participants fell within the age bracket of 19-26 years 72 (59.01%), followed by those within 27-34 years of age at 30 (24.59%). Participants who belonged to the age group from 35-42 years were 15 (12.30%), and lastly those within the age group of 43-50 years were 3 (2.46%). Non-response was at 2 (1.64%). Demographic characteristics are summarised in tabular form, in figure 4.1, showing each variable, the frequency and the response rate in percentage.

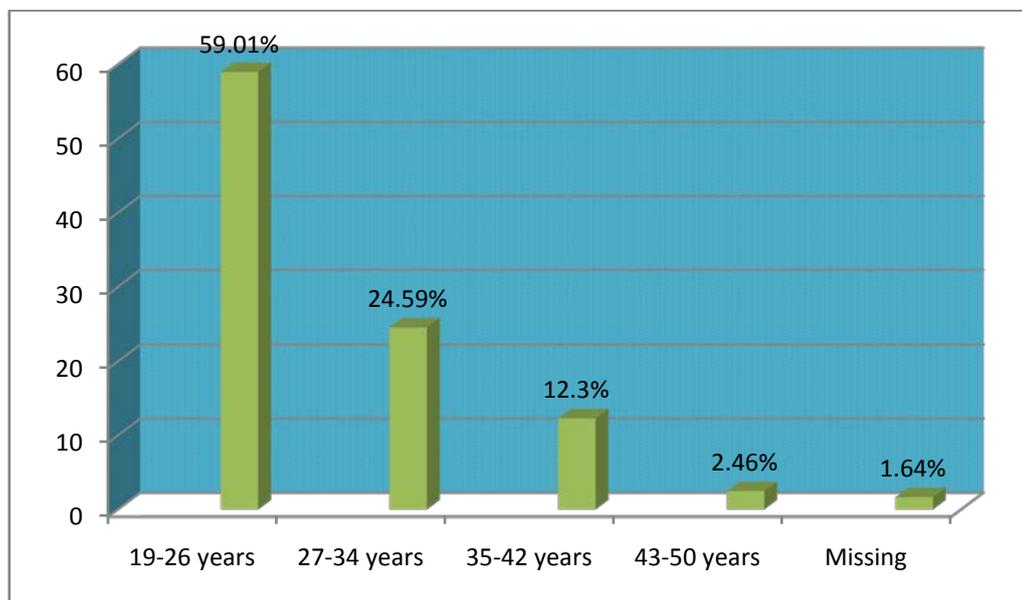


Figure 4.1 Participants' age distribution (n=122)

4.2.1.2 Gender distribution

With regards to gender distribution of the respondents 43 (35.20%) were males and 79 (64.80%) were females, as shown in figure 4.2.

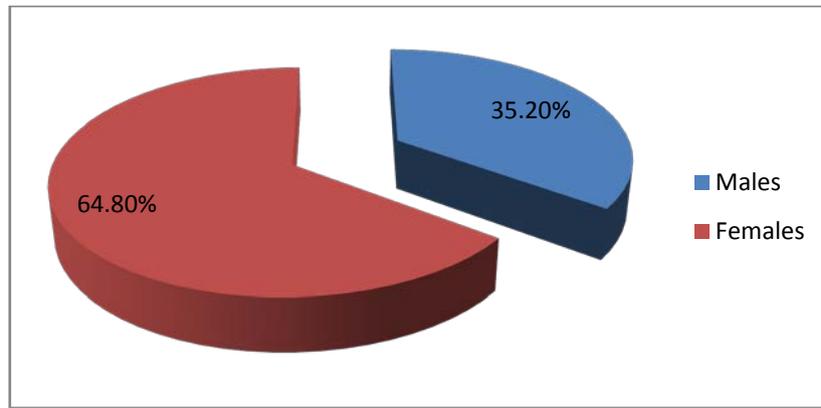


Figure 4.2 Gender distributions of participants (n=122)

4.2.1.3 Distribution of participants' home language

Table 4.2 is a presentation of participants' home language. The results showed that the highest proportion of participants 58 (47.54%) belonged to the Zulu speaking group, followed by Seswati speaking at 34 (27.87%). Sotho speaking (North, South Sotho and Tswana) accounted for 16 (13.11%) of the respondents. The analysis also showed that respondents were predominantly African 117 (95.90%).

Table 4.2 Participants' home language distribution (n=122)

| Home language | n | % |
|---------------|------------|---------------|
| Zulu | 58 | 47.54 |
| Seswati | 34 | 27.87 |
| South Sotho | 9 | 7.38 |
| Ndebele | 5 | 4.10 |
| North Sotho | 4 | 3.28 |
| Tswana | 3 | 2.45 |
| Tsonga | 2 | 1.64 |
| Afrikaans | 1 | 0.82 |
| Coloured | 1 | 0.82 |
| Venda | 1 | 0.82 |
| Unknown | 4 | 3.28 |
| Total | 122 | 100.00 |

4.2.1.4 Distribution of participants' religious denominations

A total of 116 (95.08%) respondents indicated that they were Christians belonging to different denominations (e.g. Catholic 10 (8.20%), Apostolic 25 (20.48%), Methodist

9 (7.40%), Anglican 5 (4.10%) and Pentecostal 5 (4.10%). Others reported that they belonged to other denominations 62 (50.81%). Those who did not respond to the item were 6 (4.91%). The missing responses were 6 (4.91%), and there were no atheists among the respondents 0 (0.00%).

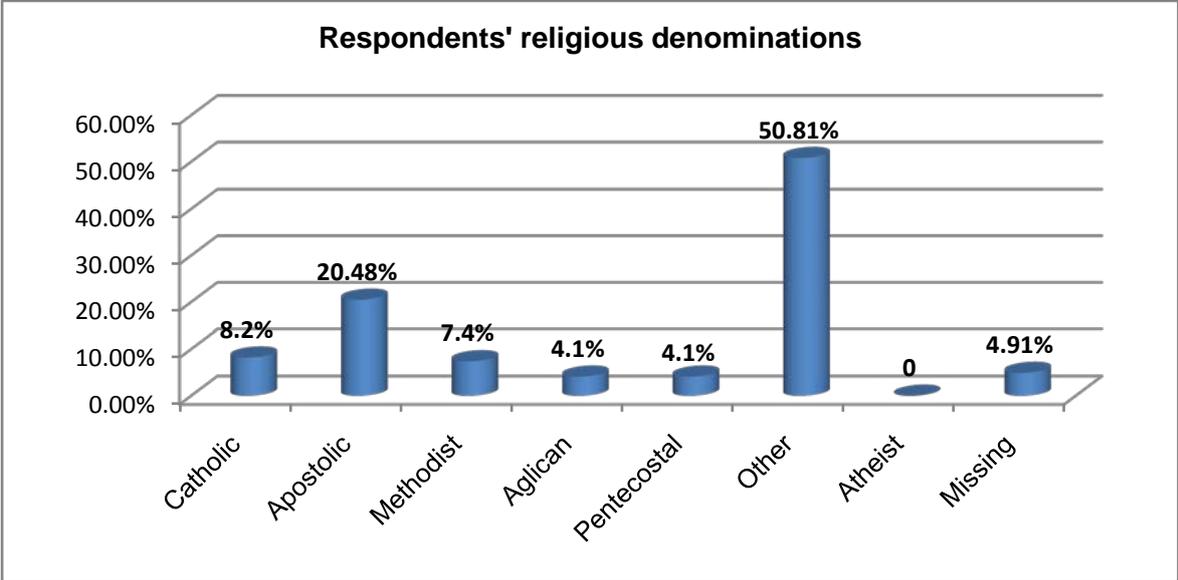


Figure 4.3 Distribution of respondents' religious denominations (n=122)

4.2.1.5 Respondents' marital status

Figure 4.4 illustrates the respondents' marital statuses which is categorised as respondents with partners (co-habiting, married or in a relationship), which constituted 15 (12.30%), and those without partners (either single or widowed) were in the majority at 107 (87.70%).

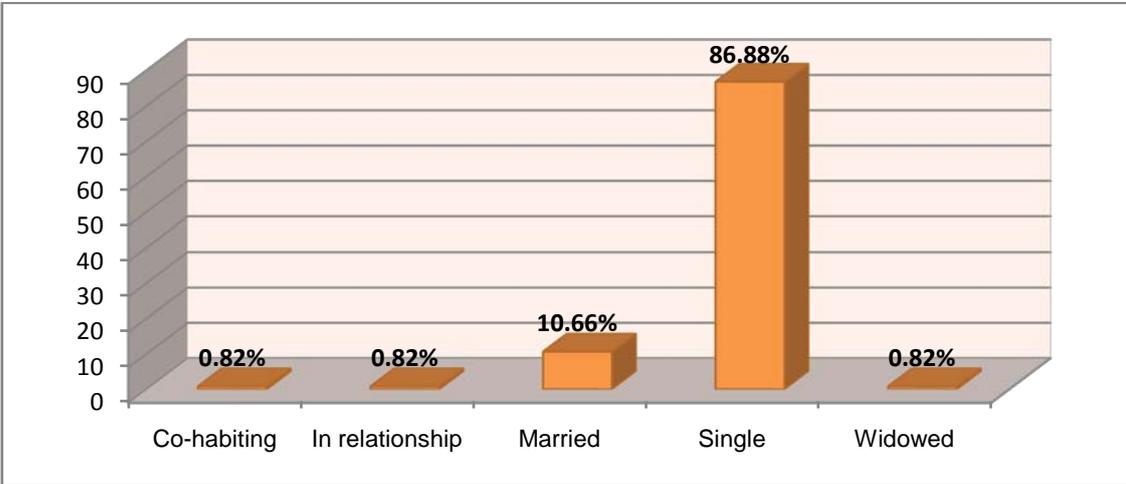


Figure 4.4 Distribution of respondents' marital status (n=122)

4.2.1.6 Respondents' level of training

The results showed that the majority of the respondents were in their first year of training and constituted 52 (42.62%). The second highest group was the third years 39 (31.97%), followed by the second years at 22 (18.03%). The least represented were those participants who belonged to the fourth year of their training 8 (6.56%), and the missing response was 1 (0.82%) which is presented as unknown as shown in figure 4.5.

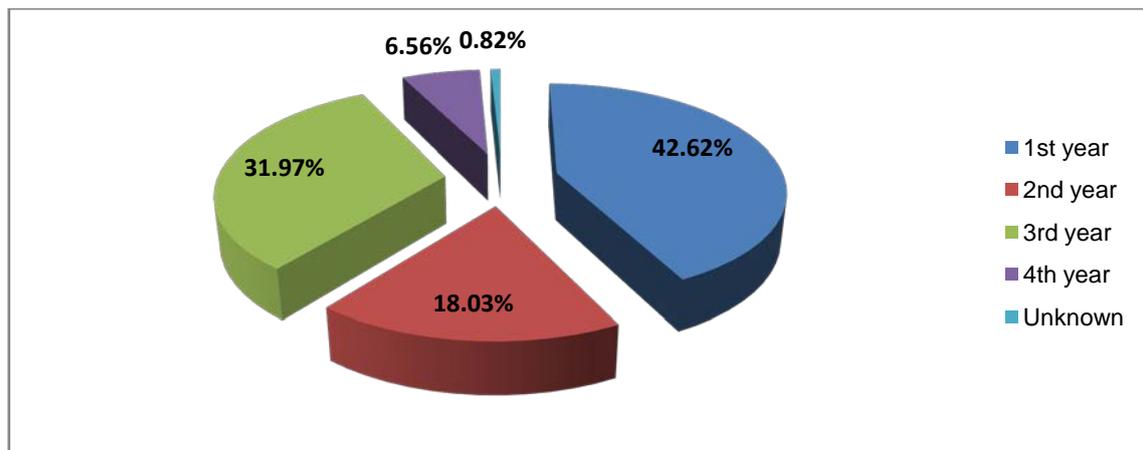


Figure 4.5 Percentage distribution of respondents' level of training (n=122)

4.2.1.7 Participants' HIV testing responses

The analysis showed that all respondents 122 (100%) responded to this item. According to figure 4.6, the bar diagram shows that most of the respondents reported that they underwent testing for HIV 107 (87.7%), whilst the least of them stated that they were never tested for HIV 15 (12.30%).

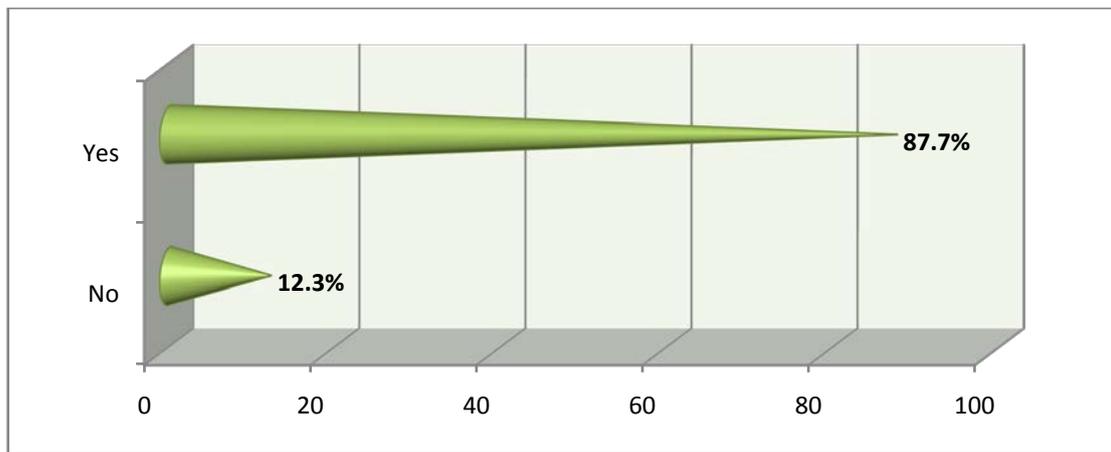


Figure 4.6 HIV testing responses of respondents (n=122)

4.2.1.8 Distribution of years in which respondents tested for HIV

With regards to the year in which respondents underwent HIV testing, the results showed that not all of them responded to this question. Only 105 (86.07%) gave their responses. As shown in table 4.3, most of those who responded to the question 56 (45.9%), indicated that they had recently (i.e. during the year 2011) tested for HIV, while only 23 (18.9%) of the respondents reported to have undergone HIV testing in the year 2010. Respondents who reported to have been tested from 2008-2009 constituted 15 (12.3%), and from 2002-2007 only 11 (9.2%) underwent an HIV testing. The missing responses were 17 (13.93%).

Table 4.3 Respondents' distribution of year for HIV testing (n=122)

| Year | n | % |
|--------------|------------|---------------|
| 2002-2007 | 11 | 9.02 |
| 2008-2009 | 15 | 12.30 |
| 2010 | 23 | 18.85 |
| 2011 | 56 | 45.90 |
| Missing | 17 | 13.93 |
| Total | 122 | 100.00 |

The demographic characteristics are summarised in tabular form, in table 4.4 showing each variable, the frequency and the response rate in percentage.

Table 4.4 Summary of demographic characteristics of respondents (n=122)

| Demographic characteristic | n | % |
|-----------------------------------|------------|---------------|
| Age | | |
| 19-26 | 72 | 59.01 |
| 27-34 | 30 | 23.59 |
| 35-42 | 15 | 12.30 |
| 43-50 | 3 | 2.46 |
| Missing | 2 | 1.63 |
| Total | 122 | 100.00 |
| Gender | | |
| Females | 79 | 64.75 |
| Males | 43 | 35.25 |
| Total | 122 | 100.00 |
| Cultural groups | | |
| Afrikaans | 1 | 0.83 |
| Coloured | 1 | 0.83 |
| Ndebele | 5 | 4.13 |
| North Sotho | 4 | 3.30 |
| South Sotho | 9 | 7.44 |
| Swati | 34 | 28.10 |
| Tsonga | 2 | 1.65 |
| Tswana | 3 | 2.48 |
| Venda | 1 | 0.83 |
| Zulu | 58 | 47.93 |
| Unknown | 3 | 2.48 |
| Missing | 1 | 0.00 |
| Total | 122 | 100.00 |
| Religious denominations | | |
| Catholic | 10 | 8.20 |
| Apostolic | 25 | 20.48 |
| Methodist | 9 | 7.40 |
| Anglican | 5 | 4.10 |
| Pentecostal | 5 | 4.10 |
| Other | 62 | 50.81 |
| Atheist | 0 | 0.00 |
| Missing | 6 | 4.91 |
| Total | 122 | 100.00 |
| Marital status | | |
| Co-habiting | 1 | 0.82 |
| In a relationship | 1 | 0.82 |
| Married | 13 | 10.66 |
| Single | 106 | 86.88 |
| Widowed | 1 | 0.82 |
| Total | 122 | 100.00 |

| Demographic characteristic | n | % |
|-----------------------------------|------------|---------------|
| Level of training | | |
| 1 st year | 52 | 42.62 |
| 2 nd year | 22 | 18.03 |
| 3 rd year | 39 | 31.97 |
| 4 th year | 8 | 6.56 |
| Missing | 1 | 0.82 |
| Total | 122 | 100.00 |
| Tested for HIV | | |
| No | 15 | 12.30 |
| Yes | 107 | 87.70 |
| Total | 122 | 100.00 |
| Year tested | | |
| 2002-2007 | 11 | 9.20 |
| 2008-2009 | 15 | 12.30 |
| 2010 | 23 | 18.85 |
| 2011 | 56 | 45.90 |
| Missing | 17 | 13.93 |
| Total | 122 | 100.00 |

4.2.2 Attitudes of respondents towards caring for HIV-infected patients

The study findings pertaining to participants' responses on questions related to their attitudes regarding the care of HIV-infected patients are presented in this section. The 5-Point Likert scale was used and respondents were given an option to indicate their responses with "*strongly agree*", "*agree*", "*don't know*", "*disagree*" or "*strongly disagree*".

The responses of "agree" (a) and "strongly agree" (sa) were combined and categorised as "agree to a greater or lesser extent". The same was done to "disagree" (d) and "strongly disagree" (sd), they were grouped as "disagree to a greater or lesser extent". The disagree/strongly disagree response displayed a positive attitude, and the agree/strongly agree response displayed a negative attitude. "I don't know" response was symbolised by (k). Participants' responses to this item are presented in table 4.5.

Table 4.5 shows a summary of the statements related to participants' attitude and the participants' responses. It should be noted that two of the questions (B6 & B7) did not depict attitudes but rather concern regarding the care of HIV-infected patients.

Table 4.5 Summary of participants' responses to attitude statements (n=122)

| Variable | n | % |
|--|------------|---------------|
| HIV-infected patients should be nursed in isolation (B1) | | |
| Agree to a greater or lesser degree (sa + a) | 25 | 20.49 |
| Disagree to a greater or lesser degree (sd + d) | 81 | 66.39 |
| I don't know | 13 | 10.66 |
| No response | 3 | 2.46 |
| Total | 122 | 100.00 |
| HIV-infected patients have themselves to blame (B2) | | |
| Agree to a greater or lesser degree (sa + a) | 16 | 13.11 |
| Disagree to a greater or lesser degree (sd + d) | 90 | 73.78 |
| I don't know | 16 | 13.11 |
| Total | 122 | 100.00 |
| There should be a policy stating that all patients must be tested for HIV when admitted to hospital (B3) | | |
| Agree to a greater or lesser degree (sa + a) | 80 | 65.57 |
| Disagree to a greater or lesser degree (sd + d) | 35 | 28.69 |
| I don't know | 7 | 5.74 |
| Total | 122 | 100.00 |
| Nurses should always use protective gear when taking care of HIV-infected patients, irrespective of the type of procedure they are doing (B4) | | |
| Agree to a greater or lesser degree (sa + a) | 85 | 69.67 |
| Disagree to a greater or lesser degree (sd + d) | 30 | 24.60 |
| I don't know | 6 | 4.91 |
| No response | 1 | 0.82 |
| Total | 122 | 100.00 |
| HIV-infected patients are better off at home than in hospital (B5) | | |
| Agree to a greater or lesser degree (sa + a) | 13 | 10.65 |
| Disagree to a greater or lesser degree (sd + d) | 14 | 77.06 |
| I don't know | 94 | 11.47 |
| No response | 1 | 0.82 |
| Total | 122 | 100.00 |
| I experience anxiety when dealing with HIV-infected patients (B6) | | |
| Agree to a greater or lesser degree (sa + a) | 50 | 40.98 |
| Disagree to a greater or lesser degree (sd + d) | 62 | 50.82 |
| I don't know | 8 | 6.56 |
| No response | 2 | 1.64 |
| Total | 122 | 100.00 |
| I am concerned about the possibility of infection through accidental exposure to blood of a patient who is HIV-positive (B7) | | |
| Agree to a greater or lesser degree (sa + a) | 110 | 90.16 |
| Disagree to a greater or lesser degree (sd + d) | 8 | 6.56 |
| I don't know | 2 | 1.64 |
| No response | 2 | 1.64 |
| Total | 122 | 100.00 |

4.2.2.1 Participant's responses towards isolating HIV-infected patients

With regards to the item on nursing HIV-infected patients in isolation the findings revealed that the majority of the respondents 81 (66.39%) disagreed to a greater or lesser extent with the statement, which was a display of positive attitudes, whilst 25 (20.49%) agreed to a greater or lesser extent, showing negative attitudes towards caring for patients infected with HIV. Thirteen (10.66%) did not know, and the “no response” was 3 (2.46%). Refer to figure 4.7.

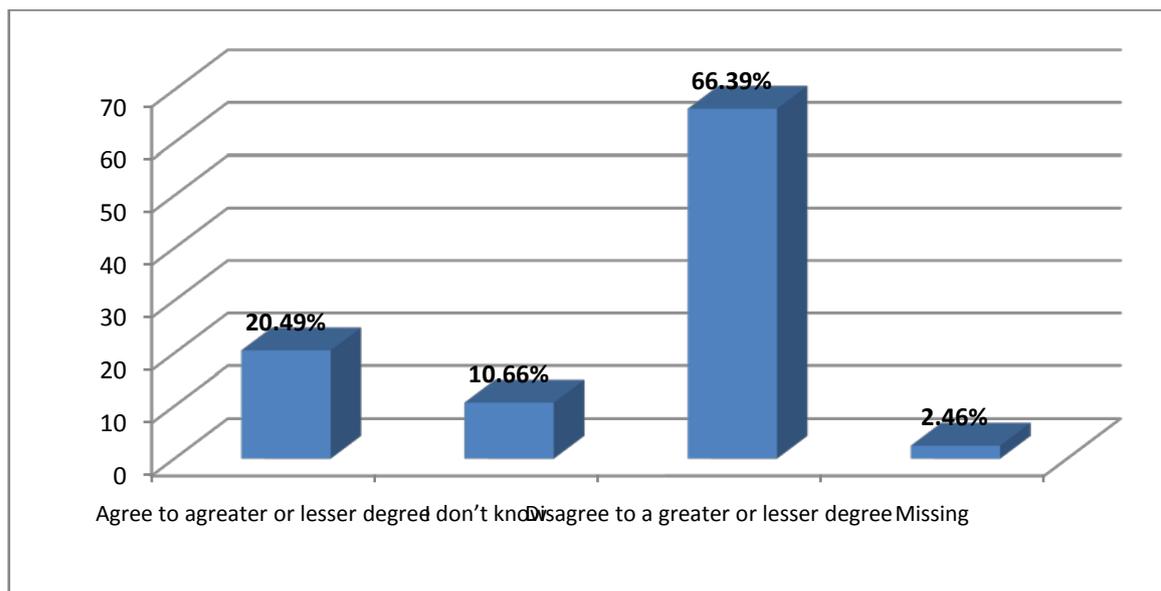


Figure 4.7 Distributions of responses on isolating a HIV-infected patient (n=122)

4.2.2.2 HIV-infected patients have themselves to blame

With regards to the item on whether HIV-infected patients have to blame themselves for being HIV-infected, most participants 90 (73.78%) showed a positive attitude by disagreeing with the statement, and 16 (13.11%) agreed that patients have themselves to blame for being HIV-positive, thereby displaying negative attitudes. Sixteen (13.11%) did not know whether the HIV-infected patients had themselves to blame or not. See figure 4.8 for a diagrammatic presentation.

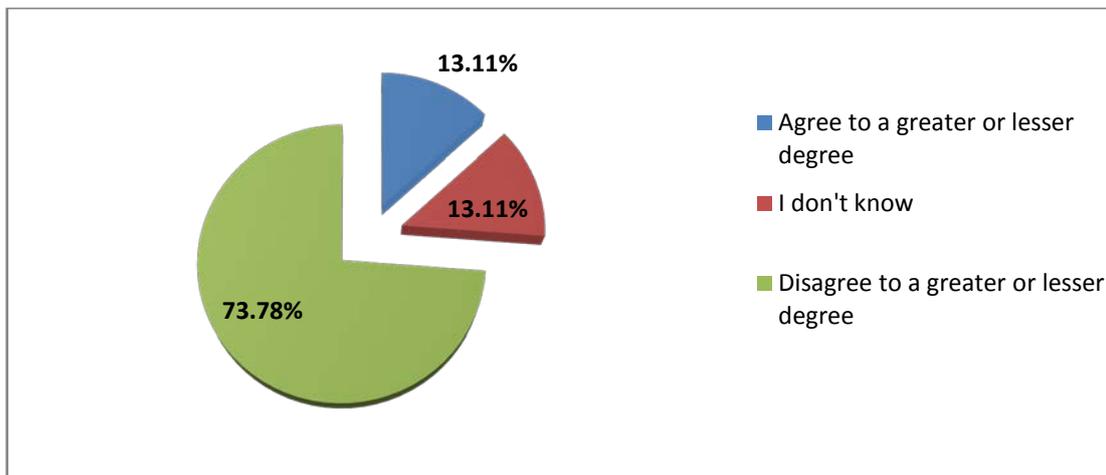


Figure 4.8 Responses on whether patients have themselves to blame for being HIV-infected (n=122)

4.2.2.3 Participants' responses on a policy that must enforce HIV testing when patients are admitted to hospital

The results showed that most of the respondents 80 (65.57%) agreed to a greater or lesser extent with the notion of having an institutional policy to enforce HIV testing when patients are admitted to hospitals. This response implied negative attitudes; and only 35 (28.69%) of the respondents did not agree with the statement. Those who indicated that they did not know were 7 (5.74%).

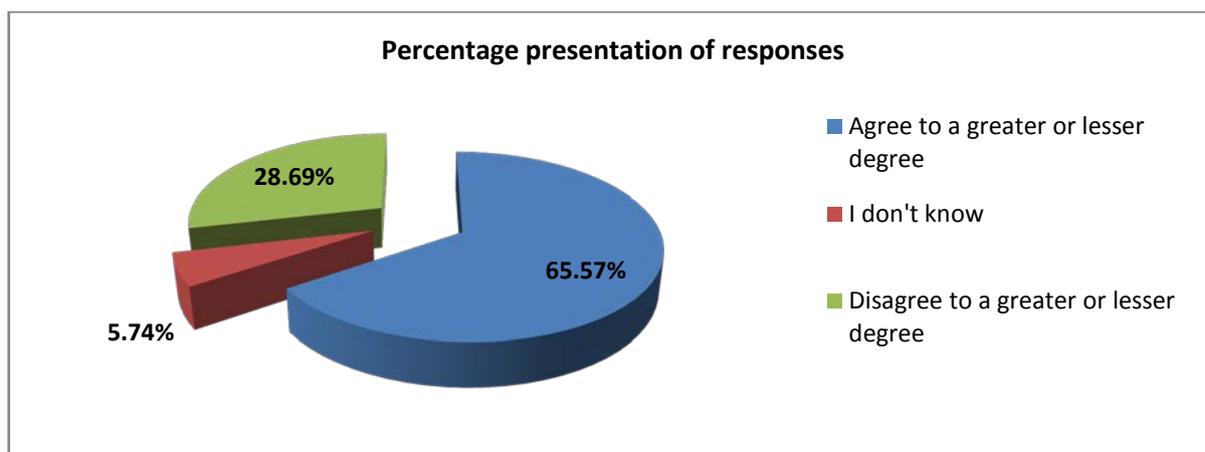


Figure 4.9 Responses on policy that enforces HIV testing on patients when admitted to hospital (n=122)

4.2.2.4 Responses on whether nurses should always wear protective gear irrespective of the type of procedure they are doing

As shown in figure 4.10, a bigger number of the responses on this item displayed negativity by the respondents. The majority of the respondents 85 (69.67%) agreed with the item statement and 30 (24.60%) did not agree that protective gear must always be worn by nurses when carrying out procedures, irrespective of what type of procedure it is. The “I don’t know” responses constituted 6 (4.91%) of the responses, whilst 1 (0.82%) did not respond to the item statement.

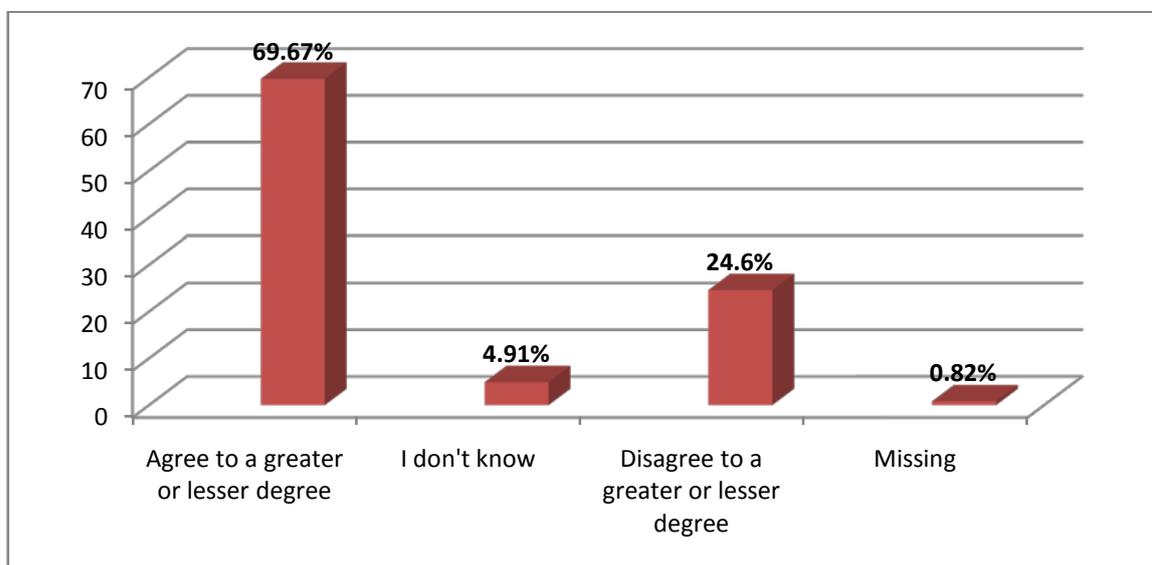


Figure 4.10 Distribution of responses regarding the wearing of protective gear at all times (n=122)

4.2.2.5 Participants’ responses on whether HIV-infected patients are better off at home than in hospital

According to figure 4.11, of the total respondents, 94 (77.06%) disagreed to a greater or lesser extent with the statement, which was a display of positive attitudes by participants. Those who agreed to a greater or lesser extent with the statement were 13 (10.65%). “I don’t know” responses were at 14 (11.47%) and no response to the item statement was at 1 (0.82%).

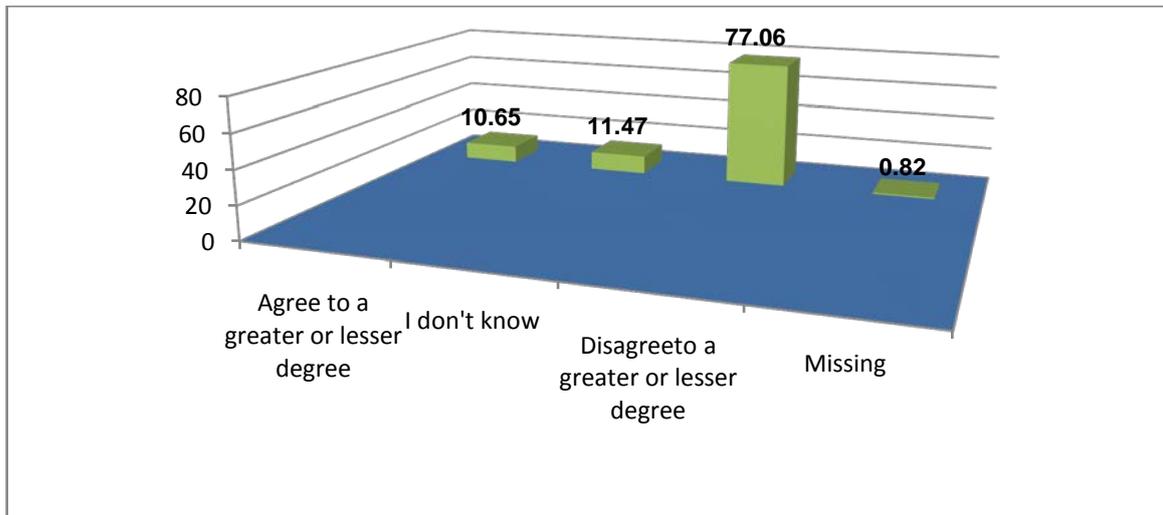


Figure 4.11 Responses on whether HIV-infected patients are better off at home than in hospital (n=122)

4.2.2.6 Responses on experiencing anxiety when dealing with HIV-infected patients

With regards to participants' responses on experiencing anxiety when dealing with HIV-infected patients, the results showed that the non-response rate was at 2 (1.64%), and the "I don't know" responses were at 8 (6.56%). There was not much of a difference between those who agreed to a greater or lesser extent 50 (40.98%) and those who disagreed to a greater or lesser extent 62 (50.82%).

4.2.2.7 Participants' responses on being concerned about the possibility of infection through accidental exposure to blood of a patient who is HIV-positive

With regards to participants' responses on being concerned about the possibility of acquiring infection through accidental exposure to blood of a patient who is HIV-infected, the results showed that most of the respondents 110 (90.16%) agreed to a greater or lesser extent with the statement, which did not elicit attitudes of the respondents, but rather, concern about caring for HIV-infected patients. Of the respondents, 8 (6.56%) disagreed with the statement and 2 (1.64%) responded with "I don't know", and non-response was at 2 (1.64%).

The results further showed that on average, the majority of the respondents (54.10%) showed positive attitudes towards caring for a patient infected with HIV, whilst 35.90% responses displayed negative attitudes of participants towards caring for a HIV-infected patient. Those who did not know were 9.18% and 0.82% was no response. A generally positive attitude was yielded by the results of the study.

4.2.3 Willingness of the respondents to care for HIV-infected patients

The results showed that respondents' willingness to care for HIV-infected patients has been summarised in table 4.8. Participants were required to respond with a "yes"/"no" or in between responses of (i.e. *neutral, I don't know, or I can't remember*) for this item.

4.2.3.1 Participants' responses on willingness to nurse a patient who is HIV-positive

As shown in table 4.6, out of a total of 122 (100%) responded, those who responded with a "yes" to demonstrate a strong positive response were 121 (99.18%), and only 1 (0.82%) respondent indicated the unwillingness to nursing (take care of) a patient infected with HIV.

Table 4.6 Responses to the statement on willingness to nurse a HIV-positive patient (n=122)

| Willingness to nurse a HIV-positive patient | n | % |
|--|------------|---------------|
| Yes | 121 | 99.18 |
| No | 1 | 0.82 |
| Total | 122 | 100.00 |

4.2.3.2 Responses on having ever taken care of a HIV- positive patient at home

Regarding the question of whether respondents had ever taken care of a HIV-infected person at home, the results showed that there was a 99.18% response to the statement, of which 62 (50.82%) responded with a "yes" to having taken care of a patient with HIV at home. Of the respondents 55 (45.08%) indicated that they never

took care of a HIV-positive person at home, and 4 (3.28%) could not remember. Non-response was rate was 1 (0.82%).

Table 4.7 Responses to having taken care of a patient with HIV at home (n=122)

| Have you ever taken care of a HIV-positive patient at home? (B9) | n | % |
|--|------------|---------------|
| Yes | 62 | 50.82 |
| No | 55 | 45.08 |
| I can't remember | 4 | 3.28 |
| No response | 1 | 0.82 |
| Total | 122 | 100.00 |

4.2.3.3 Participants’ responses on whether they would avoid nursing a patient on the basis of refusal to test for HIV

Figure 4.12 illustrates that the majority of respondents 112 (91.80%) did not support the statement of avoiding nursing a patient on the basis that he/she refused to undergo the HIV testing, which displayed strong positivity and willingness to care for any patient, irrespective of the HIV infection. Only 10 (8.20%) responded that they would avoid nursing a patient if he/she refuses to test for the HIV.

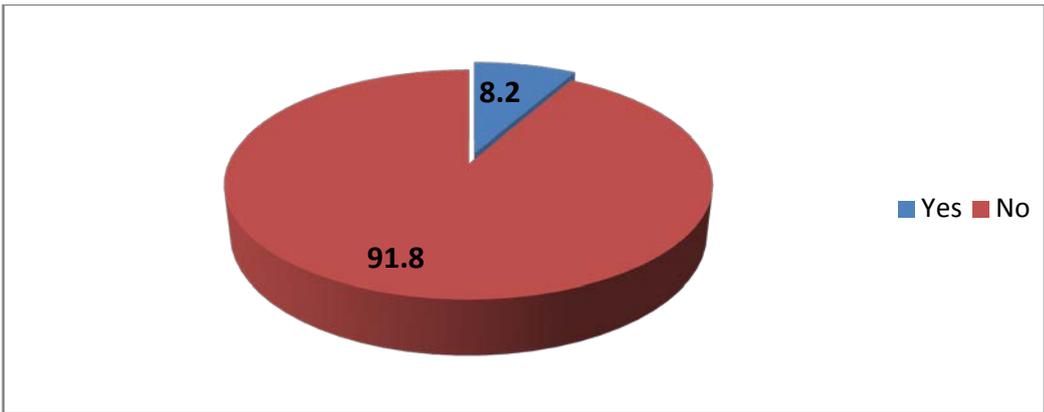


Figure 4.12 Responses on whether participants will avoid nursing a patient if he/she refuses to test for HIV (n=122)

4.2.3.4 Responses on willingness to care for HIV-infected patients even after being accidentally exposed to HIV-infected body fluids from a patient

According to the results, a strong willingness to continue caring for HIV-infected patients despite being accidentally exposed to the HIV-infected body fluids was demonstrated by 88 (72.13%) of the responses. Seven (5.74%) respondents reflected that they would not be willing to continue caring for HIV-infected patients, whilst 23 (18.85%) responded with “I don’t know”. Of the respondents 4 (3.28%) did not respond to the statement. See figure 4.13.

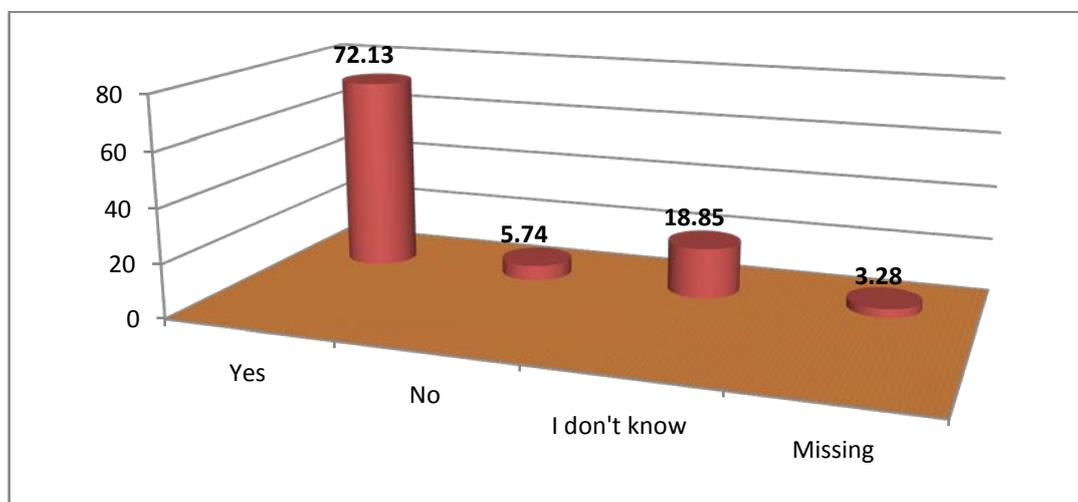


Figure 4.13 Participants’ responses on their willingness to continue caring for a HIV-infected patient even after accidental exposure to HIV-infected body fluids (n=122)

4.2.3.5 Responses on being comfortable to take care of a HIV-infected patient

Despite the generally positive attitudes and willingness to care for HIV-infected patients that have been observed so far, the majority 81 (66.39%) of the participants mentioned that they were not comfortable nursing a HIV-infected patient. Only 13 (10.66%) responded that they are comfortable to nurse a patient infected with the HIV. Twenty five (20.49%) of the respondents had neutral responses, and there was a non-response rate of 3 (2.46%). Refer to figure 4.14.

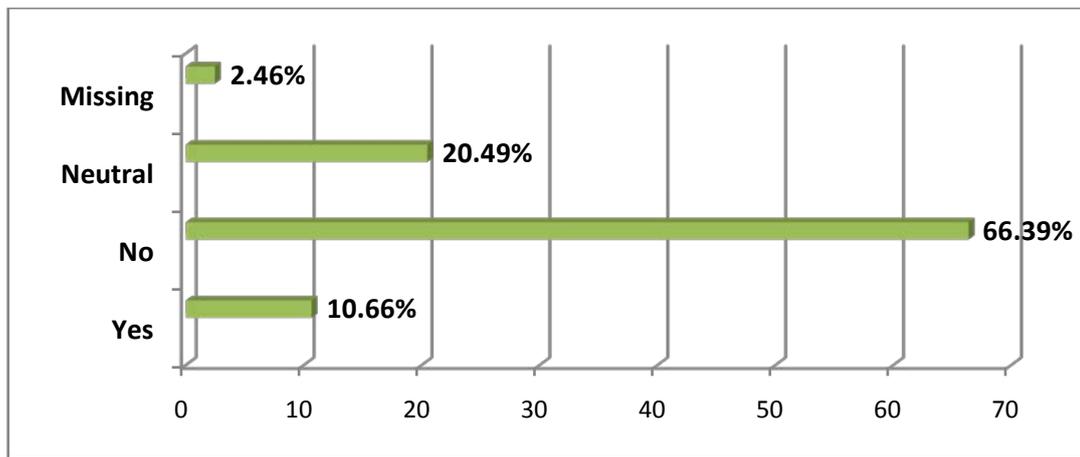


Figure 4.14 Distribution of participants' responses on how comfortable they are towards caring for a HIV-infected patient (n=122)

In summary the results demonstrated strong willingness by the student nurses to take care of patients who are infected with HIV during their clinical practice, though the results also highlighted the fact that even though they were willing, but they were not comfortable with it. See table 4.8 for a tabular summary.

Table 4.8 Summary of participants' responses to willingness item statements (n=122)

| Variable | n | % |
|---|------------|---------------|
| Are you willing to nurse a patient who is HIV-positive? (B8) | | |
| Yes | 121 | 99.18 |
| No | 1 | 0.82 |
| Total | 122 | 100.00 |
| Have you ever taken care of a HIV-positive patient at home? (B9) | | |
| Yes | 62 | 50.82 |
| No | 55 | 45.08 |
| I can't remember | 4 | 3.28 |
| Total | 122 | 100.00 |
| I will avoid nursing a patient if he/she refuses to test for HIV (B10) | | |
| Yes | 10 | 8.20 |
| No | 112 | 91.80 |
| Total | 122 | 100.00 |

| Variable | n | % |
|---|------------|---------------|
| After Accidental exposure to HIV-infected body fluids from a patient, I would still be willing to take care of HIV-infected patients (B11) | | |
| Yes | 88 | 72.13 |
| No | 7 | 5.74 |
| I don't know | 23 | 18.85 |
| Missing | 4 | 3.28 |
| Total | 122 | 100.00 |
| I am comfortable nursing an HIV/AIDS patient (B12) | | |
| Yes | 13 | 10.66 |
| No | 81 | 66.39 |
| Neutral | 25 | 20.49 |
| Missing | 3 | 2.46 |
| Total | 122 | 100.00 |

4.2.4 The measure of association between student nurses' demographic factors and their willingness to care for HIV-infected patients

In this discussion a measure of association between the demographic characteristics and individual item statements on willingness are described. It should be noted that P-values of >0.05 indicate no association, while p-values of ≤ 0.05 indicate an association between a demographic characteristic and willingness to care for HIV-infected patients.

4.2.4.1 Association between demographics and nursing a patient who is HIV-positive

The measure of association between respondents' demographic characteristics and their willingness to nurse a HIV-positive patient was evaluated and the research findings indicated that no significant association existed between the ages of the respondent and their willingness to nurse a HIV-positive patient ($p=0.4000$). Females (100%) appeared to be more willing than males (97.67%) but no significant association ($p=0.3525$) existed between gender and willingness to care for a HIV-positive patient. Ethnic affiliation ($p=1.0000$) did not bear any significant association with the care of HIV-positive patients and neither did religion ($p=1.0000$).

Willingness to nurse a patient infected with HIV was not associated with whether the respondents had partners or were single ($p=1.0000$). Having undergone HIV testing or not ($p=0.1230$) and the year of testing ($p=1.0000$) were also found not to have an association with the willingness of student nurses to care for HIV-infected patients. Although the levels of willingness was observed to be higher among the first year students (100%), third year (100%) and fourth year students (100%) in comparison with the 2nd years (95.45%), but no significant association was found to exist between level of training and willingness to care for HIV-positive patients ($p=0.2479$). The p-values have been summarised in table 4.9.

Table 4.9 Association between demographics of respondents and their willingness to nurse a patient who is HIV-positive (n=122)

| Variable | Total | Are you willing to nurse a patient who is HIV-positive? (Yes: %) | P-value |
|----------------------|-------|--|---------|
| Age | | | |
| 19-26 | 72 | 100.00 | 0.4000 |
| 27-34 | 30 | 96.67 | |
| 35-42 | 15 | 100.00 | |
| 43-50 | 3 | 100.00 | |
| Missing | 2 | 100.00 | |
| Gender | | | |
| Females | 79 | 100.00 | 0.3525 |
| Males | 43 | 97.67 | |
| Ethnic groups | | | |
| Afrikaans | 1 | 100.00 | 1.0000 |
| Coloured | 1 | 100.00 | |
| Ndebele | 5 | 100.00 | |
| North Sotho | 4 | 100.00 | |
| South Sotho | 9 | 100.00 | |
| Swati | 34 | 100.00 | |
| Tsonga | 2 | 100.00 | |
| Tswana | 3 | 100.00 | |
| Venda | 1 | 100.00 | |
| Zulu | 58 | 98.28 | |
| Unknown | 3 | 100.00 | |
| Missing | 1 | 100.00 | |

| Variable | Total | Are you willing to nurse a patient who is HIV-positive? (Yes: %) | P-value |
|--------------------------------|-------|--|---------|
| Religious denominations | | | |
| Catholic | 10 | 100.00 | 1.0000 |
| Apostolic | 25 | 100.00 | |
| Methodist | 9 | 100.00 | |
| Anglican | 5 | 100.00 | |
| Pentecostal | 5 | 100.00 | |
| Other | 62 | 100.00 | |
| Atheist | 0 | 0.00 | |
| Missing | 6 | 100.00 | |
| Marital status | | | |
| Co-habiting | 1 | 100.00 | 1.0000 |
| In a relationship | 1 | 100.00 | |
| Married | 13 | 100.00 | |
| Single | 106 | 99.06 | |
| Widowed | 1 | 100.00 | |
| Missing | 1 | 100.00 | |
| Level of training | | | |
| 1 st year | 52 | 100.00 | 0.2479 |
| 2 nd year | 22 | 95.45 | |
| 3 rd year | 39 | 100.00 | |
| 4 th year | 8 | 100.00 | |
| Missing | 1 | 100.00 | |
| Missing | 1 | 100.00 | |
| Tested for HIV | | | |
| No | 15 | 93.33 | 0.1230 |
| Yes | 107 | 100.00 | |
| Year tested | | | |
| 2002-2006 | 8 | 100.00 | 1.0000 |
| 2007-2009 | 18 | 100.00 | |
| 2010-2011 | 79 | 100.00 | |
| Missing | 17 | 100.00 | |
| Missing | 17 | 100.00 | |

4.2.4.2 Association between participants' demographics and willingness to provide care to a patient who refuses to test for HIV

Respondents' age group from 43-50 years (100%) had demonstrated high willingness to care for a patient who refuses to test, compared to other age categories, refer to table 4.10. Overall, no association was found to exist between the ages of the respondents and their willingness to care for a patient with HIV ($p=0.4013$). Same applied to other demographic factor. Gender had no association ($p=0.3206$) and neither did ethnic grouping, which had ($p=0.0777$).

The results showed that the majority of the participants (95.08%) were Christians who belonged to a variety of religious denominations, but no association was established between religion and willingness to care for a patient who refuses to take the HIV test ($p=0.1226$). Marital status ($p=1.0000$) could not be associated with willingness to care, neither could level of training which had a value of ($p=0.1184$). Students at their second year of study (100%) demonstrated a higher level of willingness than students at other levels of study, see table 4.10. No association was established between having done the HIV test ($p=0.3548$); the year in which the HIV test was done ($p=1.0000$) and willingness by student nurses to provide care to HIV-infected patients.

Table 4.10 A summary of association between respondents' demographics and willingness to provide care to a patient who refuses to test (n=122)

| Variable | Total | I will avoid nursing a patient if he/she refuses to test for HIV (No: %) | P-value |
|----------------------|-------|--|---------|
| Age | | | |
| 19-26 | 72 | 93.06 | |
| 27-34 | 30 | 93.33 | |
| 35-42 | 15 | 80.00 | |
| 43-50 | 3 | 100.00 | |
| Missing | 2 | 100.00 | 0.4013 |
| Gender | | | |
| Females | 79 | 93.67 | |
| Males | 43 | 88.37 | 0.3206 |
| Ethnic groups | | | |
| Afrikaans | 1 | 100.00 | |
| Coloured | 0 | 0.00 | |
| Ndebele | 4 | 80.00 | |
| North Sotho | 3 | 75.00 | |
| South Sotho | 9 | 100.00 | |
| Swati | 31 | 91.18 | |
| Tsonga | 1 | 50.00 | |
| Tswana | 3 | 100.00 | |
| Venda | 1 | 100.00 | |
| Zulu | 55 | 94.83 | |
| Unknown | 3 | 100.00 | |
| Missing | 1 | 100.00 | 0.0777 |

| Variable | Total | I will avoid nursing a patient if he/she refuses to test for HIV (No: %) | P-value |
|--------------------------------|-------|--|---------|
| Religious denominations | | | |
| Catholic | 9 | 100.00 | 0.1226 |
| Apostolic | 23 | 91.20 | |
| Methodist | 9 | 88.89 | |
| Anglican | 5 | 100.00 | |
| Pentecostal | 5 | 80.00 | |
| Other | 65 | 90.77 | |
| Atheist | 0 | 0.00 | |
| Missing | 6 | 100.00 | |
| Marital status | | | |
| Co-habiting | 1 | 100.00 | 1.0000 |
| In a relationship | 1 | 100.00 | |
| Married | 13 | 92.31 | |
| Single | 106 | 91.51 | |
| Widowed | 1 | 100.00 | |
| Level of training | | | |
| 1 st year | 52 | 94.23 | 0.1184 |
| 2 nd year | 22 | 100.00 | |
| 3 rd year | 39 | 84.62 | |
| 4 th year | 8 | 87.50 | |
| Missing | 1 | 100.00 | |
| Tested for HIV | | | |
| No | 15 | 86.67 | 0.3548 |
| Yes | 107 | 92.52 | |
| Year tested | | | |
| 2002-2006 | 8 | 100.00 | 1.0000 |
| 2007-2009 | 18 | 94.44 | |
| 2010-2011 | 79 | 91.14 | |
| Missing | 17 | 100.00 | |

4.2.4.3 Association between demographics of respondents and willingness to care for a patient after accidental exposure to HIV-infected body fluids from a patient

Table 4.11 illustrates that age ($p=0.2242$), gender ($p=0.9406$), ethnic group ($p=0.6298$), religious denomination ($p=0.0541$), could not be associated with the willingness of respondents to care for HIV-infected patients after being accidentally exposed to HIV-infected body fluids from a patient. Neither could marital status ($p=0.4895$), level of training ($p=0.8390$) and year of HIV testing ($p=0.7123$).

The results also showed a statistically significant association ($p=0.0120$) between those who did the HIV test (78.64%) and those who never tested (46.67%) regarding their willingness to care for HIV-infected patients after being accidentally exposed to HIV-infected body fluids from a patient. The respondents who previously tested for HIV demonstrated higher willingness to continue caring for HIV-infected patients despite having been put at risk of HIV infection.

Table 4.11 A summary of association between demographics and willingness to care for HIV-infected patients after accidental exposure to HIV-infected body fluids from a patient (n=122)

| Variable | Total | After accidental exposure to HIV-infected body fluids from a patient, I would still be willing to take care of HIV-infected patients (Yes %) | P-value |
|----------------------|--------------|---|----------------|
| Age | | | |
| 19-26 | 69 | 71.01 | 0.2242 |
| 27-34 | 29 | 75.86 | |
| 35-42 | 15 | 80.00 | |
| 43-50 | 3 | 100.00 | |
| Missing | 6 | 100.00 | |
| Gender | | | |
| Females | 79 | 75.32 | 0.9406 |
| Males | 43 | 73.17 | |
| Ethnic groups | | | |
| Afrikaans | 1 | 100.00 | 0.6298 |
| Coloured | 0 | 0.00 | |
| Ndebele | 3 | 60.00 | |
| North Sotho | 3 | 75.00 | |
| South Sotho | 7 | 77.78 | |
| Swati | 22 | 68.75 | |
| Tsonga | 2 | 100.00 | |
| Tswana | 3 | 100.00 | |
| Venda | 1 | 100.00 | |
| Zulu | 43 | 76.79 | |
| Unknown | 3 | 100.00 | |
| Missing | 5 | 100.00 | |

| Variable | Total | After accidental exposure to HIV-infected body fluids from a patient, I would still be willing to take care of HIV-infected patients (Yes %) | P-value |
|--------------------------------|--------------|---|----------------|
| Religious denominations | | | |
| Catholic | 9 | 77.78 | 0.0541 |
| Apostolic | 22 | 72.73 | |
| Methodist | 7 | 57.14 | |
| Anglican | 5 | 60.00 | |
| Pentecostal | 5 | 100.00 | |
| Other | 64 | 75.00 | |
| Atheist | 0 | 0.00 | |
| Missing | 10 | 100.00 | |
| Marital status | | | |
| Co-habiting | 1 | 100.00 | 0.4895 |
| In a relationship | 1 | 100.00 | |
| Married | 12 | 91.67 | |
| Single | 103 | 71.84 | |
| Widowed | 1 | 100.00 | |
| Missing | 4 | 100.00 | |
| Level of training | | | |
| 1 st year | 50 | 76.00 | 0.8390 |
| 2 nd year | 22 | 81.82 | |
| 3 rd year | 37 | 67.57 | |
| 4 th year | 8 | 75.00 | |
| Missing | 5 | 100.00 | |
| Tested for HIV | | | |
| No | 15 | 46.67 | 0.0120 |
| Yes | 103 | 78.64 | |
| Missing | 4 | 100.00 | |
| Year tested | | | |
| 2002-2006 | 7 | 100.00 | 0.7123 |
| 2007-2009 | 18 | 83.33 | |
| 2010-2011 | 76 | 75.00 | |
| Missing | 21 | 100.00 | |

4.2.4.4 Association between demographic characteristics of respondents and whether they are comfortable nursing a patient with HIV

The results of this study revealed an association between age groups of participants and being comfortable with nursing a patient infected with HIV. A significant statistical association ($p=0.0099$) existed between different age groups. Respondents within the age group from 35-42 (86.67%) were found to be more comfortable with providing care

to HIV-infected patients, followed by those from 27-34 years of age (86.21%), and 19-26 years (60%). The results showed that respondents from 43-50 years (33.33%) reported to be less comfortable in providing care to patients infected with HIV. See table 4.12.

No association was found with gender ($p=0.6319$), ethnic group ($p=0.8422$), religious denominations ($p=0.9004$), marital status ($p=0.5489$), level of training ($p=0.7793$), tested for HIV ($p=0.3958$) and year of testing ($p=0.5230$).

Table 4.12 Association between participants' demographics and their comfortableness towards nursing a patient infected with HIV (n=122)

| Variable | Total | I am uncomfortable nursing an HIV-infected patient (No %) | P-value |
|--------------------------------|-------|---|---------|
| Age | | | |
| 19-26 | 70 | 60.00 | 0.0099 |
| 27-34 | 29 | 86.21 | |
| 35-42 | 15 | 86.67 | |
| 43-50 | 3 | 33.33 | |
| Missing | 5 | 100.00 | |
| Gender | | | |
| Females | 79 | 69.23 | 0.6319 |
| Males | 43 | 65.85 | |
| Ethnic groups | | | |
| Afrikaans | 1 | 0.00 | 0.8422 |
| Coloured | 1 | 100.00 | |
| Ndebele | 5 | 80.00 | |
| North Sotho | 4 | 75.00 | |
| South Sotho | 9 | 66.67 | |
| Swati | 32 | 62.50 | |
| Tsonga | 2 | 50.00 | |
| Tswana | 3 | 66.67 | |
| Venda | 1 | 100.00 | |
| Zulu | 57 | 68.42 | |
| Unknown | 3 | 100.00 | |
| Missing | 4 | 100.00 | |
| Religious denominations | | | |
| Catholic | 9 | 66.67 | 0.9004 |
| Apostolic | 22 | 68.18 | |
| Methodist | 8 | 37.50 | |
| Anglican | 5 | 100.00 | |
| Pentecostal | 5 | 80.00 | |
| Other | 64 | 70.31 | |
| Atheist | 0 | 0.00 | |
| Missing | 9 | 100.00 | |

| Variable | Total | I am uncomfortable nursing an HIV-infected patient (No %) | P-value |
|--------------------------|--------------|--|----------------|
| Marital status | | | |
| Co-habiting | 1 | 0.00 | |
| In a relationship | 1 | 100.00 | |
| Married | 12 | 75.00 | |
| Single | 104 | 67.31 | |
| Widowed | 1 | 100.00 | |
| Missing | 3 | 100.00 | 0.5489 |
| Level of training | | | |
| 1 st year | 51 | 62.75 | |
| 2 nd year | 22 | 72.73 | |
| 3 rd year | 37 | 70.27 | |
| 4 th year | 8 | 87.50 | |
| Missing | 4 | 100.00 | 0.7793 |
| Tested for HIV | | | |
| No | 15 | 73.33 | |
| Yes | 104 | 67.31 | |
| Missing | 3 | 100.00 | 0.3958 |
| Year tested | | | |
| 2002-2006 | 7 | 100.00 | |
| 2007-2009 | 18 | 72.22 | |
| 2010-2011 | 77 | 62.34 | |
| Missing | 20 | 100.00 | 0.5230 |

4.3 THEMATIC PRESENTATION OF OPEN-ENDED RESPONSES

This section provides an interpretation and presentation the research results based on the participants' responses to the open-ended questions on attitudes and willingness of student nurses to care for HIV-infected patients.

4.3.1 HIV-infected patients should be nursed in isolation

Though student nurses responded both positively and negatively, the majority of their responses appeared to take a positive stand point of view with regard to the nursing of patients who are HIV-infected. It became clear from the responses of students that their majority was positive in their willingness to nurse such patients. In support of the positive remarks made by the students, the following categories were identified during data analysis:

Positive statements with regard to the nursing of HIV-positive patients the willingness to nurse patients who are HIV-positive was associated with the following positive categories:

- Isolation of patients perceived to be associated with rejection, stigma and discrimination
- Patients need nursing care and support
- Perception of HIV as a normal disease
- Perceived psychological effects of isolating HIV-positive patients

Negative statements with regard to nursing of HIV-positive patients: Apart from the positive statements made by the student nurses, negative statements also emerged from the data. Fewer responses were identified from the answers made by the students to be negative.

4.3.2 Are you willing to nurse a patient who is HIV-positive?

All the respondents were positive with regard to the statement that measured their willingness to nurse a patient who is HIV-positive. The majority of student nurses gave more positive remarks regarding their willingness to nurse such patients. They felt the responsibility to nurse HIV-positive patients due to the fact that it is a nurse's role to render care to such patients and they of the opinion that such patients deserved the love and support of the nursing personnel. This is what they had to say about this theme:

"...we have to take care of them...", "...if I don't take care of them, who will?", "...they deserve to be loved...", "...we must give them support...", "...patients need us emotionally, physically and spiritually...", "...nursing HIV-positive patients is not a glorification but patients need a sense of belonging..."

The student nurses who responded to this statement indicated that reasons why it was important for themselves to nurse patients who are HIV-positive. This included the facts that such patients belonged to their families and communities. They also mentioned that such patients were human beings just like nurses. They were convinced that even themselves they might need care if they were to be HIV-positive at some time. These are verbal quotes to support the theme:

“...every patient must be nursed irrespective of status...”, “...they are our families and community...”, “...they are still human beings...”, “...I might need to be taken care of if I am HIV+...”

Student nurses also indicated their willingness to nurse HIV-positive patients due to the reasons that they get personal fulfilment when their patients recover in their presence. They said the following:

“...if patients improve under my care, I feel empowered...”, “...I must go home with pride knowing that I have helped somebody...”

Another very important reason given by student nurses for their willingness to nurse HIV-positive patients was the fact that HIV and AIDS were similar to other chronic diseases and the fact that HIV is not a communicable disease. This is what they wrote to substantiate their willingness HIV-positive patients in their wards:

“They are not infectious on touch...”, “...HIV is the same as other diseases...”, “...HIV is like any chronic disease...”, “...care is not only physical, I talk to them to make them feel positive about themselves...”

Though the student nurses were very much willing to nurse HIV-positive patients in their care, they were also cognisant of the fact that units with HIV-positive people should be treated as high risk environments and that nurses working in such settings should be provided adequate protection and allowances. This is what they wrote to substantiate this theme:

“HIV ward to be regarded as high risk area...”, “...workers to be given high risk allowance...”, “...PEPr must be available...”

4.3.3 I will avoid nursing a patient if he/she refuses to test for HIV

Though this statement was negatively formulated it became clear that student nurses did not agree to it. The majority of responses made by the study participants revealed the fact that instead avoiding nursing HIV-positive patients, they in fact had an obligation to nurse such patients. The researcher identified three different themes regarding statement, namely: the perceive obligation to (1) nurse the patient irrespective of the status, (2) facilitate HIV testing, and (3) protect themselves. These themes are discussed briefly below.

4.3.3.1 *The obligation to nurse the patient irrespective of their HIV status*

In this theme the study subjects perceived the obligation to nurse HIV-positive patients. These subjects mentioned various reasons that made them feel being obliged to nurse people who are HIV-positive and these ranged from perceiving patients as human beings, their right to health care to the duty of a nurse to provide care. The following are quotes substantiating this theme:

“...patient is a human being...”, “...patient has right to health care”, “...I have a duty to serve...”, “... you are there for the patient...”, “...I must provide care to the patients...”, “...I have to support the patient...”, “...patients to be treated the same regardless of their behaviour or attitude”

4.3.3.2 *The obligation to facilitate HIV testing among patients*

Apart from the student nurses' perceived obligation to nurse HIV-positive patients it became clear that they also perceived the obligation facilitate testing among their patients. In this theme student nurses were of the opinion that though patients had a right to choose as nurses they had to educate, encourage and even convince patients to undergo HIV testing in order for them to know their status. This is what they wrote as substantiation of this theme:

“I will encourage the patient to test...”, “...I will convince the patient to test...”, “...patient will suffer the consequences if he/she does not test...”, “...patients still need to be educated about the disease...”, “...patient has right to choose to be tested...”

4.3.3.3 The perceived obligation to protect one’s self

In addition to the obligation to support patients in their HIV testing, it also became clear that subjects were obliged to protect themselves from being infected. In this theme subjects did not portray a negative attitude except that they were concerned about themselves. Some went on to mention the fact that some patients might pose a risk to nurses by deliberately exposing them to danger of being infected with HIV. As a result, some student nurses were of the opinion that nurses have to nurses each and every patient as if he/she was HIV-positive. This is what student nurses had to about this theme:

“...the patient may be having motives behind...”, “...patients tend to try to infect nurses on purpose...”, “...nurse has a duty to protect herself...”, “...the nurse is in danger...”, “...I will prevent the risk of being infected...”, “...I treat all pts as if they are HIV+...”

4.3.4 After accidental exposure to HIV-infected body fluids from a patient, I would still be willing to care of patients

With regard to willingness to care for patients after being accidentally exposed to HIV-infected body fluids, the majority of student nurses were concomitant in terms of their future willingness. Student nurses’ responses were positive about their future to patients. Some of them indicated that it would depend on what happened and they were also not willing to blame patients for their exposure to infected body fluids. This question yielded six (6) categories that are discussed below.

4.3.4.1 Response would depend on the incidence

Some student nurses were not precise about their future response regarding being infected by HIV after exposure to infected body fluids. They indicated that their willingness to nurse future HIV-positive patients will depend on the incidence of their infection. They made it clear that if the infection was deliberate they would not be willing to nurse such patients in future. This is what students had to say about their willingness following exposure to infected fluids:

“...depends on how it happened...”, “...don’t know because it has not happened yet ...”, “...it will not be easy...”, “...the patient deliberately exposed me, Won’t continue nursing patient...”, “...it is unfair to get infected whilst trying to help...”, “...maybe because I did not use precautionary measures...”

4.3.4.2 Response would depend on the moral duty to care

Some student nurses highlighted their duty to care for the ill, they mentioned the fact that at some time may be they would also need to be cared for when they are HIV-positive. This is what they had to say about their duty to care:

“...patients need our care...”, “...I have a duty to take care of patients if you ignore the patients, tomorrow it will be you...”, “I cannot choose which patients I want to help...”

4.3.4.3 Acceptance of the situation and institution of measures to continue with life

The majority of positive responses regarding the subjects’ willingness to nurse HIV-positive patients after being exposed to infected body fluids came from people who appeared to be positive about the outcome of the situation. The subjects who made such positive responses were willing to accept the situation and look for alternative measures to live positively. Some indicated that they would either use treatment or protective measures in future. This is what they said about this theme:

“...will protect myself onwards...”, “...I will be given PEP...”, “...I will be careful next time...”, “...I will already be infected anyway and I will need health care soon...”, “...I will take medication and get on with life...”, “...henceforth, I will be scared to nurse HIV patients...”, “...so that others can help my kids after I pass away...”, “...me and the patient will be on the same level now and sharing same problems...”, “...all jobs have unpleasant situations...”, “...I got support from the occupational health nurse after I was exposed, so I am able to continue...”

4.3.4.4 Anxiety, shock and psychological trauma as responses to being infected

Some subjects indicated that they would be very psychologically affected by the incidence. They mentioned shocked and anxious as their psychological responses to the situation. Some could not be specific except that they would be very psychologically affected. This is what they had to say about their response:

“I will experience anxiety of being exposed to the same accident again...”, “...will experience psychological trauma...”, “I don’t know how shock will affect me...”, “I will be anxious...”, “...HIV is killing, I will be psychologically affected...”, “...It will always be on my mind that I can die trying to help HIV patients...”

4.3.4.5 Suffering from a more serious illness

Some subjects were of the opinion that their response might largely be influenced by their health at the time of the incidence. They mentioned that they themselves might be suffering from serious illnesses or they may also be HIV-positive. Therefore, the incidence might not be alarming to them. This is what they had to say:

“I may be suffering from a more serious illness than HIV...”, “I may also be HIV+, it won’t affect me...”

4.3.4.6 Patients cannot be blamed for the infection

Some of the subjects were very positive about their willingness to further nurse HIV-positive patients after being exposed to infected body fluids due to the fact that they would not blame or judge the patient. This is what they had to say:

“...patients cannot be blamed, not intentional...”, “it is not the pt’s fault that I am accidentally exposed...”, “...an accident happens it is not planned...”

4.3.5 I am uncomfortable nursing a HIV/AIDS patient

Though student nurses were fearful of nursing HIV-positive patients, more of their statements were positive and regarded HIV-positive patients as human beings that deserve to be nursed and be supported. This theme became divided into five (5) categories which are discussed below.

4.3.5.1 Responsibility to nurse patients

Subjects’ statements regarding their unwillingness to care for the HIV-positive patients were more on the positive territory. The majority of student nurses were of the opinion that patients need nurses; they are human beings, willingness to help and that patients need to be supported. This is what student nurses had to say:

“I have to nurse patients...”, “...patients need us...”, “...they are still human beings...”, “...I want patients to improve and become better...”, “...if I don’t nurse HIV patients my purpose is not served...”, “...I am willing to help...”, “...We have to persevere...”, “...Patients must be supported...”, “...more nurses need to be employed to help deal with HIV patients...”, “...you may need to nurse somebody in your family in future, or yourself to be nursed...”

4.3.5.2 Fear associated with the risk of being infected

Student nurses were of the opinion that nursing HIV-infected patients was associated with the risk of being infected with the virus. The majority who raised these statements were fearful of the environment with HIV-positive people and they termed it “risky”. Those who raised such statements were uncomfortable to nurse HIV-positive patients. This is what they had to say about it:

“...HIV working environment is stressful...”, “...I may get infected...”, “...risk factors make me...”, “...uncomfortable...”, “...is risky but we cannot reject them...”, “...I may also be infected...”, “...fear of infection...”, “...I am still afraid of people with HIV...”, “...I am afraid of AEB...”, “...was once pricked by a needle from an infected patient...”, “I have accepted the situation...”

4.3.5.3 Equal treatment of all patients irrespective of HIV

Some student nurses were advocating for equal treatment of patients who are HIV-positive. They felt it was not necessary to discriminate against those who were HIV-positive due to the fact that HIV was similar to other chronic illnesses. This is what they had to say:

“...cannot discriminate...”, “...HIV is the same as other diseases...”, “...treat HIV patients like any others...”, “...I don’t treat pts according to their diagnoses...”, “...I don’t show negative attitudes towards patients...”

4.3.5.4 Nurse-patients and practice of precautionary measures

In the process of rendering equal treatment to all the patients, subjects mentioned that it was important to take extra precautionary measures by wearing protective clothing. They also mentioned that they do get thoughts of being infected now and again. This is what they had to say about precautionary measures to prevent being infected:

“...for as long as I use protective gear...”, “...have to be highly careful not to infect myself...”, “...be extra careful...”, “...ensure that we avoid the

spread to us...”, “...we get thoughts of being infected but do the best of our abilities...”

4.3.5.5 Patients’ attitude towards health care staff

In addition to practicing caution during the process of nursing HIV-positive people, student nurses were more concerned about the attitudes of some HIV-positive patients who were perceived to be barbaric and wishing that their nurses would also be infected with the virus. They also mentioned that some patients wished to rape some nurses with the aim of infecting them. Some raised the concerns about those patients who were always complaining and blaming everybody about their condition. These are their verbatim comments:

“...HIV patients have attitudes and are disrespectful...”, “...some patients are barbaric and they make means to rape or infect the nurse...”, “...HIV patients always complain and blame everybody for everything...”

4.4 DISCUSSION OF THE RESULTS

4.4.1 Respondents’ socio-demographics

In this study most of the respondents reported that they had tested for HIV, and those who tested recently between the years 2010 and 2011 were in the majority, and showed more willingness and a positive attitude to caring for HIV-infected patients. A bigger portion of respondents were single, with few being committed to a partner, but this did not have any significant impact on the study results.

Students who were at all four levels of training were included in this study, though students in their first year of training were in the majority. In contrast to the study by Pickles et al (2009:2267) which highlighted as one of the limitations in studies done by Chan et al (2007), Madumo and Peu (2006), Earl and Penny (2003), Peate et al (2002), Petro-Nustas et al (2002), Valois et al (2001), Lohrmann et al (200;) and Ngan et al (2000) the fact that the nursing students were at the same level of training.

Adrewin and Chien (2008:902) made mention of the fact that because different studies employ different demographic variables, it becomes a difficult task to effectively compare and contrast demographics among them, nevertheless, the most common demographic characteristics are discussed below.

In this study the results showed that the majority of the participants were females, and furthermore, the results demonstrated positive attitudes by female participants towards HIV-infected patients, as compared to Adrewin and Chien (2008:903), whose research results revealed female nurses as having prejudicial attitudes towards patients infected with HIV, than their male counterparts. In this study most respondents fell in the 19-26 years age bracket. The two dominant language groups were Zulu and Swati. Majority of respondents indicated that they were Christians but belonging to different denominations. Being a Christian, yielded positive results in the current study, in terms of attitudes and willingness to care for HIV-infected patients. In contrast to the study results of Adrewin and Chien (2008:902), which revealed stigmatising attitudes towards HIV-infected patients by the nurses who regarded themselves as highly religious.

4.4.2 Associations between respondents' demographics and their willingness to care for HIV-infected patients

The results of this study showed that no associations existed between demographic characteristics and the students' willingness to care for a patient who is HIV-positive, and a patient who refused to test for HIV whilst admitted in hospital and was under their care. Students who indicated that they had previously tested for HIV, significantly showed strong willingness to continue caring for HIV-infected patients even after being exposed to HIV-infected body fluids from patients, than those who were never tested. Contrasting the current research was the study conducted by Li et al (2008:151) showing that nursing students tended to be unwilling to provide care to HIV-infected patients after they were exposed to a needle-stick injury. Again in the current study, nursing students within the age bracket 43-50 showed significant discomfort towards caring for HIV-infected patients, which was found to be consistent with the study by Adrewin and Chien (2008:903) which depicted a tendency by the older age group of HCW's of being uncomfortable towards caring for HIV-infected patients. The results of Oyeyemi et al (2006:201) indicated neutrality of participants in terms of being comfortable or uncomfortable towards caring for patients infected with HIV. The

discomfort experienced by the student nurses in this research did not suggest that they were unwilling to care for patients infected with HIV, based on the positive statements and responses they made, for example:

“I have to nurse patients...”, “...patients need us...”, “...they are still human beings...”.

The results of this study showed that the respondents felt that they could not put blame on the patient for accidental exposure to HIV-infected body fluids; they also felt that it is their responsibility to be more careful when dealing with HIV-infected patients. Students strongly felt that nurses have a duty to protect themselves against any threat of infection, as a result, they cannot put any blame on the patients should such infection take place. The same sentiments were expressed by participants in the study which was conducted by Stevens and Dickinson (2007:43), who stressed the importance of protecting oneself when handling HIV-infected patients. The current study results yielded expressions by student nurses, regarding their role and obligation towards their patients, as Orem’s Self Care Theory postulates that a nurse has to play a role of supporting and helping patients to meet and maintain their health and wellness needs (Bruce et al 2010:17).

4.4.3 Attitudes towards provision of care to HIV-infected patients

The results of this study revealed that a generally positive attitude existed among the student nurses regarding their provision of care to patients infected with HIV. This study produced similar results as with studies conducted by Davhana-Maselesele and Igumbor (2008:72), Oyeyemi et al (2006:201) also with studies by Madumo and Peu (2006), Ngan et al (2000); and Stewart (1999) which were cited in Pickles et al (2009:2266, 2267), where generally positive attitudes and or willingness were observed among respondents. Contrasts existed between the results of this study and those produced by, for example, Andrewin and Chien (2008:901, 902), Bektas and Kulakac (2007:891), Holzemer et al (2007:542) and Mathole et al (2006:138) where it was indicated that the nurses had generally negative attitudes and had tendencies of stigmatising the HIV-infected patients, but this study indicated that nursing students were more compassionate and empathetic towards HIV-infected patients.

The majority of the students in the current study felt it was wrong to isolate HIV-infected patients for no particular reason, especially one that was not favourable to the patient because isolating patients was associated with rejection, stigma and discrimination and this had negative psychological effects on the patients. The results of the current study are in contrast with those from a similar study conducted by Li et al (2008:150) whereby the authors reported that the majority of participants in their study indicated that patients with HIV must be isolated. In this study, some students were in favour of isolation but had positive explanations that isolation should be done to save the patient the embarrassment of being seen by others. Few nurses felt that patients should be isolated so that they do not spread the infection to others.

Furthermore the results of this study showed that positive attitudes were indicated by the students who in their majority expressed that HIV-infected patients should not be blamed for their statuses because they did not bring the disease upon themselves, and that anybody could end up having the HIV.

The Patients' Rights Charter was born out of The Constitution of the Republic of South Africa, which clearly indicates that all citizens have equal rights. Students demonstrated respect to human rights by expressing that they would encourage and teach patients to undergo HIV testing, rather than to avoid caring for a patient who refused to undergo HIV testing, and strongly indicated that the right to test lies with the patient. Having acknowledged that patients had rights, the majority of students contradicted their responses by indicating that a policy which enforces patients to test for HIV when admitted in hospital, should be in place. The researcher was of the opinion that there could be an existence of knowledge gaps in terms of HIV legislation.

Contrary to generally positive attitudes held by nursing students, majority indicated that nurses should always use protective gear when taking care of HIV-infected patients, irrespective of the type of procedure they are performing on the patient. Most of the students neither agreed or disagreed that HIV patients are better off at home than in hospital.

4.4.4 Willingness towards provision of care to HIV-infected patients

The study results indicated that the majority of the students were willing to provide care to patients infected with HIV, consistent with the studies by Sadoh et al (2009:19), Valimaki et al (2010:678). An interesting finding was that those who indicated that they had tested for HIV before were in particular, more willing to provide care to the patients. Despite showing positive attitudes and willingness to care for HIV-infected patients, there was a noticeable concern about providing care to these patients. Mixed feelings were depicted from the results, by the fact that students were willing to provide care to HIV-infected patients, small majority were not anxious about it, but large majority were strongly concerned about the possibility infection, as in the study by Bektas and Kulakac (2007:893), where fear of contagion was expressed by the participants. The researcher was of the opinion that students created an impression which was suggestive of their lack of choice in the situation where they found themselves having to provide care to HIV-infected patients or be without a job. An impression of helplessness was depicted by the researcher and could have been masked by the student's acknowledgement of 'duty to provide care' and 'duty to protect themselves' against any risk of infection. There were nevertheless, those few students who openly suggested that HIV work area be declared a high risk area with some form of compensation or allowance.

The majority of the student nurses' responses were positive about their future after being exposed to HIV-infected body fluids from patients. Some even mentioned how "ok" they were with the provision of post exposure prophylaxis because then it meant that there was still life after accidental exposure to infected body fluids (AEB). Some of them indicated that it would depend on how they got exposed and they were also not willing to blame patients for their exposure to infected body fluids. Orem's Self Care Theory (1991) by Bruce et al (2010:17) was used as a base for this study and postulates that when a health care deficit exists in patients, a nurse who has the ability, knowledge and skill should take over and meet the health needs of the patient, and the study results also supported that notion. The student nurses showed an obligation to care for the HIV-infected in their time of need. The results further indicated the fact that student nurses who had previous experience or exposure to an HIV-infected patient, were more willing to care for HIV-infected patients than those who did not, showing consistency with study by Oyeyemi et al (2006:202).

4.5 CONCLUSION

The results of this study basically indicated that the student nurses had generally positive attitudes towards HIV-infected patients and were willing to take care of them. They regarded being HIV-infected as a medical condition like any chronic medical condition they had a role to care for the patients. The positive nature of the results is what the nursing profession needs. It is envisaged that positive students will produce positive and effective professional nurses who will be able to provide and maintain quality nursing care needed by all patients regardless of their HIV status. It is also consoling to see that future nurses are having such positive attitudes towards providing care to patients in the context of HIV and AIDS.

CHAPTER 5

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

5.1 INTRODUCTION

This chapter lays out the summary of the research findings, the limitations of the study, conclusions drawn from the research findings and contributions of this study are also described. Recommendations are made in order to improve attitudes and willingness of student nurses towards caring for HIV-infected patients.

A summary of the research findings together with the conclusions drawn are described in this chapter. Conclusions drawn with reference to the study objectives and are based on the findings of this study. The study limitations have been described as well as the recommendations with nursing practice implications as well as recommendations for further research are provided in this chapter.

5.2 SUMMARY

The purpose of this study was to identify and describe the attitudes and willingness of student nurses towards caring for HIV-infected patients. The study was conducted in one district area (Gert Sibande) in Mpumalanga Province. A contextual exploratory descriptive survey was used to conduct the study. Data collection was through a structured self-administered questionnaire which was handed out to student nurses in Gert Sibande district to respond to.

Findings from the reviewed literature showed that the prevalence of HIV infection has been estimated to be high in sub-Saharan Africa. South Africa was rated to be the third highest country with the HIV prevalence of 17.8%. The Mpumalanga Province had the second highest prevalence and incidence of HIV/AIDS at 34.7%. The HIV epidemic has put a burden on the health care system and the providers of health care (Van Dyk 2007:49). Nurses and student nurses face daily challenges of dealing with the scourge

of HIV/AIDS, which is evident through the over-flow of public hospitals, over-burdened with patients presenting with HIV-related conditions and illnesses. This overwhelming situation of handling HIV-infected patients on daily basis, superimposed by the existing shortage of nurses, has been seen to be putting nurses under a lot of strain. Nurses and nursing students have been observed to be having negative reactions towards HIV-infected patients, due to, among others, fear of contagion. HIV-infected patients visiting health care facilities have complained and reported negative attitudes, stigmatisation, and unwillingness by nurses to care for them cases and in some cases refusal by nurses to care for them.

The purpose of this study was to identify and describe the attitudes and willingness of student nurses in Gert Sibande district towards caring for HIV-infected patients, and the objectives of the study were to

- describe the socio-demographic characteristics of student nurses in Gert Sibande
- explore the attitudes of student nurses towards caring for HIV-infected patients during their clinical practice
- determine the willingness of student nurses to render nursing care to HIV-infected patients during their clinical practice
- measure the association between student nurses' demographic factors and their and willingness to care for HIV-infected patients

A quantitative contextual exploratory descriptive survey was used to conduct the study. The research population was the comprehensive nursing students who were studying at the Mpumalanga Nursing College towards a four year Diploma in General Nursing (midwifery, psychiatry and community).

A sample of convenience was used for this research, and it comprised of only the comprehensive nursing students whose area of clinical practice was in Gert Sibande district.

The data collection tool was a fully structured questionnaire. The tool was self-administered by the respondents. The questionnaire comprised of closed ended questions. Some of the closed-ended questions had an open-ended portion. The data

tool was self-formulated and pre-tested on few students in a different category than the comprehensive student nurses.

The data tool was divided into sections and was intended to elicit the following information:

- Part I: Demographic information of respondents.
- Part II subsection (i): Attitudes of student nurses towards caring for HIV-infected patients.
- Part II subsection (ii): Willingness of student nurses towards caring for HIV-infected patients.

Data was analysed both quantitatively and qualitatively. Quantitative analysis made use of the SAS, Release 9.2, running under Microsoft Windows for a personal computer. Thematic qualitative analysis was done on open-ended responses.

5.3 SUMMARY OF FINDINGS

The following conclusions were drawn after analysis, interpretation and findings of the research.

5.3.1 Demographic findings

The demographics of the students did not have a significant bearing on the research results, except in the case of students who already knew their HIV status, who portrayed significant positive willingness to care for patients infected with HIV. Irrespective of being male or female, level of training, marital status, religious affiliation, ethnic group, HIV status, the students in the Gert Sibande district were generally willing to provide care to HIV-infected patients.

5.3.2 Attitudes of student nurses towards caring for HIV-infected patients

The nursing students in the Gert Sibande district of the Mpumalanga province possess positive attitudes towards patients infected with HIV and are more than willing to provide care to such patients. Apart from their perceived obligation to nurse HIV-positive

patients, they were willing to encourage and teach patients regarding HIV testing, in order for them to know their status. They still respected a patient's decision of testing or not testing. Subjects felt obliged to protect themselves from being infected, but did not portray negative attitudes except that they were concerned about themselves.

5.3.3 Willingness of student nurses towards caring for HIV-infected patients

The study subjects perceived the obligation to nurse HIV-positive patients. The majority took a positive stand point and it became clear that the majority were positive in their willingness to nurse such patients.

Despite being exposed to the risk of HIV infection, with no provision of high risk allowances, as some suggested, the student nurses were much willing to nurse HIV-positive patients in their care.

Though student nurses were fearful of nursing HIV-positive patients, more of their statements were positive and regarded HIV-positive patients as human beings that deserve to be nursed and be supported. Student nurses were of the opinion that nursing HIV-infected patients was associated with the risk of being infected with the virus.

5.4 RECOMMENDATIONS

The following recommendations **are** made based on the findings of the research:

- The inclusion of HIV /AIDS as a subject in the nursing curriculum, which is going to address the learning needs of student nurses in terms of understanding the needs of a patient infected with HIV, so as to improve and maintain quality nursing care for patients by student nurses.
- Workshops on values clarification for student nurses before they are exposed to HIV-infected patients in their clinical practice, because not all student nurses demonstrated positive attitudes and willingness to care for HIV-infected patients.
- Nursing curricula should also include extensive teaching about HIV legislation including internal and external work policies on HIV/AIDS.

- Nurse educators to inculcate attitudes of positivity and provide support to the nursing students especially in the early stages of training and generally during their whole course of training.

5.5 FURTHER RESEARCH

Further research is needed which includes all Comprehensive nursing students studying with the Mpumalanga College of Nursing, so that the results could be generalised to all comprehensive nursing students in the Mpumalanga Province.

An interesting finding was the fact that students who underwent HIV testing before, were more willing to nurse HIV-infected patients than those who never tested, further research could be done to get the causal factors.

5.6 CONTRIBUTIONS OF THIS STUDY

The research findings which yielded generally positive attitudes and willingness by student nurses to care for HIV-infected patients showed that the HIV/AIDS education that has been offered to health workers by the government and other non-governmental stakeholders in the form of workshops has somehow yielded positive results.

Though the research findings were locally based in a particular district of Mpumalanga, they can be utilised as a reference point for further research in other locally based settings or a national research setting.

Study results can also be used by relevant stakeholders to inform decisions related to HIV/AIDS teaching programmes.

5.7 LIMITATIONS OF THE STUDY

The respondents were obtained in only one district in the province (Gert Sibande). Research results therefore are limited to that particular district and cannot be generalised to the comprehensive nursing students in the other two districts.

Only the comprehensive student nurses were involved in the study, other categories of students studying at the particular nursing college were excluded from the study.

The fourth year students were poorly represented in the sample due to the fact that most hospitals in the research setting were not accredited to provide clinical training to fourth years.

5.8 CONCLUSION

The study managed to establish that the nursing students of Mpumalanga College of Nursing who are practising in accredited clinical facilities in the Gert Sibande District of Mpumalanga Province, have positive attitudes and are willing to render nursing care to patients infected with HIV during their clinical practice. The socio-demographic characteristics of the students did not have a significant impact or influence on their willingness to care for HIV-infected patients.

Positive attitudes and a spirit of willingness to care for HIV-infected patients are a necessity in order to encourage, promote and provide quality nursing care which is full of compassion. The government still has a big role to play, that of providing continuous workshops on HIV/AIDS, to let nurses remember that they also have a critical role to play in meeting the health care demands of the patients, infected or not infected with HIV as postulated by Orem's Self Care Theory (1991).

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ANNEXURE 1

Request to conduct research



Embhuleni Hospital

ANNEXURE 1

To The Head of Research and Ethics Committee Mpumalanga Province
Mr MA Machaba
Acting CEO – Embhuleni Hospital
Dr R Ejike

CC Heads of the following facilities:
Mpumalanga College of Nursing
Bethal Hospital
Carolina Hospital Ermelo
Evander Hospital
Piet Retief Hospital
Gert Sibande District

From Ms OMM Sehume (Lecturer Embhuleni Hospital)

Date 09.05.2011

Subject **REQUEST TO COLLECT DATA FROM THE LEARNERS DOING THE COMPREHENSIVE COURSE AT THE MPUMALANGA NURSING COLLEGE AND THE RESPECTIVE NURSING SCHOOLS FOR RESEARCH PURPOSES.**

Background

HIV/AIDS is a problem to the health sector. South Africa is one of the countries hardest hit by the disease, and this impacts negatively, to those given the task of caring for HIV/AIDS patients. Forming part of the health care providers, student nurses are also affected by the situation.

Discussion

I am a lecturer at Embhuleni hospital studying towards a Masters' degree in Health Studies. My research topic is: The attitudes and willingness of student nurses towards caring for HIV-infected patients. I am requesting to collect data from the Comprehensive Nursing students (first to fourth year) at the Mpumalanga College of Nursing and their respective clinical placement areas. Due to financial constraints, the data will be collected from Gert Sibande district. I have attached a copy of my research proposal and the ethical clearance certificate from my institution. Students will be provided with a questionnaire which they will fill in, out of free will. No student will be coerced or intimidated in any way.

Financial implications

All costs will be incurred by the researcher. There will be no financial implications for the department.

Thank you.

Ms OMM Sehume (**Lecturer Embhuleni Hospital**).

ANNEXURE 2

**Permission to conduct research
granted**

ANNEXURE 2

20/05 2011 15:29 FAX 01376683458

HEALTH

001

MPUMALANGA PROVINCIAL GOVERNMENT

Building No.8
No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200
Republic of South Africa



Private Bag X 11213
Nelspruit, 1200
Tel: 013 766 3429
int: +27 13 766 3429
Fax: 013 766 3491
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Department of Health

Litiko Letemphilo

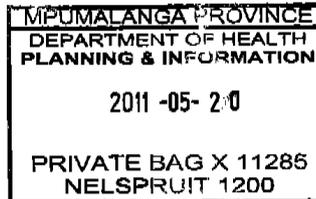
Umyungo WezaMaphilo

Departement van Gesondheid

Enquiries: Molefe Machaba (013) 766 3009/3172

20 May 2011

Ms Mamane Odila Monica Sehume
Embhuleni Hospital
Private Bag X1001
Elikwatini
1192



Dear Ms Sehume

APPLICATION FOR RESEARCH & ETHICS APPROVAL: ATTITUDES AND WILLINGNESS OF STUDENT NURSES TOWARDS CARING FOR HIV-INFECTED PATIENTS

The Provincial Research and Ethics Committee has approved your research proposal in the latest format that you sent. No issues of ethical consideration were identified.

Kindly ensure that you provide us with the report once your research has been completed.

Kind regards,


Molefe Machaba
Research and Epidemiology

20/05/2011
Date



Siyanakekela



ANNEXURE 2

3

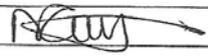
e) Supervisor/ co-supervisor (In the case of research undertaken as part of an academic requirement)

| Name | Department/Institution/Facility | Signature |
|---------------|---------------------------------|-----------|
| PROF ZUNGU LI | UNISA | |
| | | |

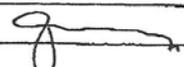
f.) Medical Manager (Please obtain the approval of the Hospital Superintendent if any of you research will involve specific hospital personnel, equipment, data, etc.)

| Name | Department/Institution/Facility | Signature |
|------------|---------------------------------|---------------------------------|
| DR R. EIKE | EMBHULENI HOSPITAL | SEE SIGNED LETTER ANNEXURE 2 |
| | | |
| | | |

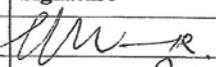
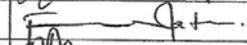
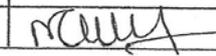
g.) District Manager/CEO (Please obtain the approval of the District Manager/CEO in charge of the particular district in which your research is intended to take place).

| Name | District | Signature |
|--------|----------------------|--|
| Nenoni | Gez Sibande District |  |
| | | |

h.) Chief Director Hospital Services/ Primary Health Care.

| Name | Chief Directorate | Signature |
|--------------|-------------------|---|
| Dr Jan Mungo | Hospital Services |  |

i.) Please list any other involved department/ institution/ facility heads involved in your research.

| Name | Department/Institution/ Facility | Signature |
|-------------------|----------------------------------|--|
| Maryse T JULU | MPUMALANGA COLLEGE OF NURSING |  |
| Ms F BG NYATHI | CAROLINA HOSPITAL |  |
| Ms A. E. MACHANTA | BETHAL HOSPITAL |  |
| T-R. ZONDO | ERMELO HOSPITAL |  |
| MR D. SWIGELAAR | PIET RITIEF HOSPITAL | |
| MS NG HRATWAYO | EVANDER HOSPITAL |  |



Embhuleni Hospital

To The Head of Research and Ethics Committee Mpumalanga Province
Mr MA Machaba
Acting CEO – Embhuleni Hospital
Dr R Ejike

CC Heads of the following facilities:
Mpumalanga College of Nursing
Bethal Hospital
Carolina HospitalErmelo
Evander Hospital
Piet Retief Hospital
Gert Sibande District

From Ms OMM Sehume (Lecturer Embhuleni Hospital)

Date 09.05.2011

Subject **REQUEST TO COLLECT DATA FROM THE LEARNERS DOING THE COMPREHENSIVE COURSE AT THE MPUMALANGA NURSING COLLEGE AND THE RESPECTIVE NURSING SCHOOLS FOR RESEARCH PURPOSES.**

Background

HIV/AIDS is a problem to the health sector. South Africa is one of the countries hardest hit by the disease, and this impacts negatively, to those given the task of caring for HIV/AIDS patients. Forming part of the health care providers, student nurses are also affected by the situation.

Discussion

I am a lecturer at Embhuleni hospital studying towards a Masters' degree in Health Studies. My research topic is: The attitudes and willingness of student nurses towards caring for HIV-infected patients. I am requesting to collect data from the Comprehensive Nursing students (first to fourth year) at the Mpumalanga College of Nursing and their respective clinical placement areas. Due to financial constraints, the data will be collected from Gert Sibande district. I have attached a copy of my research proposal and the ethical clearance certificate from my institution. Students will be provided with a questionnaire which they will fill in, out of free will. No student will be coerced or intimidated in any way.

Financial implications

All costs will be incurred by the researcher. There will be no financial implications for the department.

Thank you.

Ms OMM Sehume (**Lecturer Embhuleni Hospital**)

RECOMMENDED _____

Signature 

Dr Ejike (Acting CEO – Embhuleni Hospital)

Date 2011/05/13

ANNEXURE 3

**Clearance Certificate from the
University of South Africa**



**UNIVERSITY OF SOUTH AFRICA
Health Studies Research & Ethics Committee
(HSREC)
Faculty of Human Sciences
CLEARANCE CERTIFICATE**

Date of meeting: 9 November 2010

Project No: 3047-192-3

Project Title: Attitudes and willingness of student nurses towards caring for HIV-infected patients

Researcher: Mamane Odila Monica Sehume

Supervisor/Promoter: Prof LI Zungu

Joint Supervisor/Joint Promoter: N/A

Department: Health Studies

Degree: Masters in Public Health

DECISION OF COMMITTEE

Approved

Conditionally Approved

**Prof TR Mavundla
RESEARCH COORDINATOR**

**Prof MC Bezuidenhout
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES**

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE 4

**Letter to participant to get verbal
permission**

COVERING LETTER

A survey of attitudes and willingness of Mpumalanga Comprehensive Nursing students regarding care of HIV-infected patients, in the Gert Sibande District.

I am a Public health officer working for the Department of Health, Mpumalanga, in the Gert Sibande District. I am conducting a study to determine the attitudes and willingness of student nurses towards caring for HIV-infected patients. The findings of this study will be used to make recommendations for interventions geared towards student support structures. Due to resource constraints, only students placed in the Gert Sibande nursing schools are invited to participate in the study.

Participation in the study is voluntary. No names of respondents are required. The questionnaire has no numbers or any form of identification of respondents whatsoever.

Thank you

Ms OMM Sehume (**Lecturer Embhuleni Hospital**)

ANNEXURE 5

Questionnaire

QUESTIONNAIRE

PART A

Personal Information

Please tick the appropriate box

A1 Age.

| |
|--|
| |
|--|

A2 Gender.

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

A3 Ethnicity.

| | | | | | |
|---------|--------------------------|-------------|--------------------------|--------|--------------------------|
| Swati | <input type="checkbox"/> | North Sotho | <input type="checkbox"/> | Venda | <input type="checkbox"/> |
| Zulu | <input type="checkbox"/> | South Sotho | <input type="checkbox"/> | Tsonga | <input type="checkbox"/> |
| Ndebele | <input type="checkbox"/> | Tswana | <input type="checkbox"/> | Xhosa | <input type="checkbox"/> |

A4 Religion.

| | | | |
|-----------|--------------------------|----------------------|--------------------------|
| Catholic | <input type="checkbox"/> | Pentecostal | <input type="checkbox"/> |
| Apostolic | <input type="checkbox"/> | Atheist | <input type="checkbox"/> |
| Methodist | <input type="checkbox"/> | Other (specify)..... | <input type="checkbox"/> |
| Anglican | <input type="checkbox"/> | | <input type="checkbox"/> |

A5 Marital status.

| | | | |
|---------|--------------------------|---------------------|--------------------------|
| Married | <input type="checkbox"/> | Divorced | <input type="checkbox"/> |
| Single | <input type="checkbox"/> | Co-habiting | <input type="checkbox"/> |
| Widowed | <input type="checkbox"/> | Other(specify)..... | <input type="checkbox"/> |

A6 Level of training.

| | | | | | | | |
|----------------------|--------------------------|----------------------|--------------------------|----------------------|--------------------------|----------------------|--------------------------|
| 1 st Year | <input type="checkbox"/> | 2 nd Year | <input type="checkbox"/> | 3 rd Year | <input type="checkbox"/> | 4 th Year | <input type="checkbox"/> |
|----------------------|--------------------------|----------------------|--------------------------|----------------------|--------------------------|----------------------|--------------------------|

A7 Have you been tested for HIV?

| | | | |
|-----|--------------------------|----|--------------------------|
| Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
|-----|--------------------------|----|--------------------------|

A8 If you did undergo the test, please state the year.

PART B(i)

Questions on attitudes regarding care of HIV/AIDS patients

Please tick the appropriate response on a scale of strongly agree (SA), agree (A), I don't know (K), disagree (D) and strongly disagree (SD)

| SA | A | K | D | SD |
|----|---|---|---|----|
| | | | | |

B1 HIV infected patients should be nursed in isolation.

Please state a reason for your choice

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

B2 HIV-infected patients have themselves to blame for being infected

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

B3 There should be a policy stating that all patients must be tested for HIV when admitted in hospital

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

B4 Nurses should always use protective gear when taking care for HIV infected patients irrespective of the type of procedure they are doing

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

B5 HIV positive patients are better off at home than in hospital.

B6 I experience anxiety when dealing with HIV positive patients.

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

B7 I am concerned about the possibility of infection through accidental exposure to blood of a patient who is HIV positive.

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

PART B (ii)
Questions on willingness to care for HIV-infected patients

B8 Are you willing to nurse a patient who is HIV positive?

| | |
|-----|----|
| Yes | No |
|-----|----|

Please provide an explanation below:

B9 Have you ever taken care of an HIV positive patient at home?

| | | |
|-----|----|------------------|
| Yes | No | I can't remember |
|-----|----|------------------|

B10 I will avoid nursing a patient if he/she refuses to test for HIV

| | |
|-----|----|
| Yes | No |
|-----|----|

Please provide an explanation for your choice

B11 After accidental exposure to HIV infected body fluids from a patient, I would still be willing to take care of HIV-infected patients.

| | | |
|-----|----|------------|
| Yes | No | Don't know |
|-----|----|------------|

Please explain your choice

B12 I am uncomfortable nursing an HIV/AIDS patient

| | | |
|-----|----|---------|
| Yes | No | Neutral |
|-----|----|---------|

Please explain your choice
