

**KNOWLEDGE AND PSYCHOSOCIAL WELLBEING OF NURSES
CARING FOR PEOPLE LIVING WITH HIV/AIDS AT A
REGIONAL HOSPITAL IN VHEMBE DISTRICT, LIMPOPO
PROVINCE**

BY

LUFUNO MAKHADO

STUDENT NUMBER

22891935

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NORTH WEST UNIVERSITY (MAFIKENG CAMPUS)**

SUPERVISOR

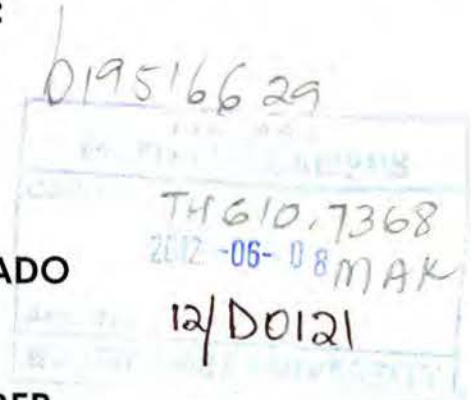
PROF M. DAVHANA-MASELESELE

CO-SUPERVISOR

DR J.O. IGUMBOR

North-West University
Mafikeng Campus Library

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Declaration

I the undersigned declare that, "Knowledge and psychosocial wellbeing of nurses caring for people living with HIV/AIDS at a regional hospital in Vhembe district, Limpopo province", is my original work and that all the sources that I have used or cited have been indicated and acknowledged by means of complete references.

Signature: _____ **Date:** _____

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ABSTRACT

HIV/AIDS continues to be a major global priority given the increasing number of infected people. Driven by their needs, clinical services for People Living with HIV/AIDS (PLWHA) are rapidly changing. Hence, the global shortage of nurses happens to be one of the greatest obstacles of dealing with the HIV/AIDS epidemic. Nurses lack the necessary information needed to adequately care for PLWHA. Some nurses are expected to continually adapt and keep up with new programmes, information and practices. The purpose of this study is to investigate knowledge and psychosocial wellbeing of nurses caring for PLWHA in order to develop guidelines to support these nurses at a regional hospital in Vhembe district.

A descriptive, cross-sectional study design was used. A cohort of 233 nurses (professional, enrolled and enrolled nursing auxiliaries) involved in the caring for PLWHA participated in the study. A structured questionnaire was used as an instrument for data collection. The instrument consisted of participants' demographic and professional characteristics, HIV/AIDS knowledge questions, the AIDS Impact Scale (AIS), Maslach Burnout Inventory (MBI), and the Beck Depression inventory (BDI). The study participants were conveniently selected from the regional hospital and stratified into three categories. Statistical Package for Social Sciences (SPSS statistics 18) computer software was used for data analysis. Knowledge levels were cross-tabulated against qualification to detect possible patterns and variations. Correlation was done to assess possible relationships between knowledge and measures of MBI and AIS as well as BDI. Regression analysis was done to establish the predictors of measures of MBI using backward and enter methods. Ethical clearance was obtained from North West University ethics committee and Department of Health.

The results showed that the HIV/AIDS knowledge level among nurses was below the average mean 7.90 (SD 9.04), revealing lack of knowledge among nurses caring for PLWHA. There was a significant level of burnout in about 50% of nurses caring for PLWHA. This study also revealed a significantly high level of burnout among assistant nurses as compared to enrolled and professional nurses. There was no significant relationship between HIV/AIDS knowledge, burnout ($r=0.00$) and depression ($r=-0.09$).

A moderate level of reported burnout was evident among nurses. Guidelines for support in respect of nurses caring for PLWHA included structured nursing educational support, organisational support with respect to employee wellness programmes, depression and burnout interventions, as well as social support. Hence, the provision of these support mechanisms may create a positive practice environment for nurses in South Africa in general, and Vhembe district of the Limpopo Province in particular.

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LIST OF ACRONYMS

AIDS	: Acquired immunodeficiency syndrome
AIS	: AIDS Impact Scale
ART	: Antiretroviral Treatment
BDI	: Beck Depression Inventory
CCMT	: Comprehensive Care Management and Treatment
CNA	: Canadian Nursing Association
DENOSA	: Democratic Nursing Organisation of South Africa
DoH	: Department of Health
EWP	: Employee Wellness Program
HCT	: HIV Counselling and Testing
HIV	: Human immunodeficiency Virus
IDU	: Injectable Drug User
IMCI	: Integrated Management of Child Illness
MBI	: Maslach Burnout Inventory
NGO	: Nongovernmental Organization
NIMART	: Nurses to Initiate and Manage Anti-retroviral Therapy
PEP	: Post Exposure Prophylaxis
PHC	: Primary health care
PLWHA	: People Living with HIV and AIDS
PMTCT	: Prevention of Mother to Child Transmission
SANAC	: South African National AIDS Council
SANC	: South African Nursing Council
SMT	: Stress Management Training
STI	: Sexually Transmitted Infection
TAC	: Treatment AIDS Campaign
TB	: Tuberculosis
UNAIDS	: Joint United Nations Programme on HIV/AIDS
UNICEF	: United Nation's Children Fund
VCT	: Voluntary Counselling and Testing
WHO	: World Health Organization

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter provides the overview of the study. The background and rationale of the study, the magnitude of HIV globally and in South Africa, the problem statement, the research questions, the purpose and significance of the study, the operationalization of terms and arrangement of chapters are outlined in this chapter.

1.2 BACKGROUND AND RATIONALE

HIV/AIDS continues to be a major global priority given the increasing number of infected people (UNAIDS, 2009:6). Although AIDS is no longer a new syndrome, global solidarity in AIDS response will remain a necessity. The increasing number of infected people varies geographically between countries and regions. Nurses form the backbone of most national health care delivery systems, including the Republic of South Africa (RSA). Nurses are therefore front line providers of care to people living with HIV/AIDS (PLWHA).

- **The Magnitude of HIV (Globally and in South Africa)**

The human immunodeficiency virus (HIV) remains a global health problem of extraordinary magnitude and scope. Almost unknown 30 years ago, HIV is so far responsible for more than 25 million deaths worldwide and for extensive demographic changes in the most heavily affected countries (UNAIDS, 2010:4). The rate of new infections continues to increase in many parts of the world including South Africa. It was estimated that there were 33.4 million PLWHA worldwide in 2008 (UNAIDS, 2009:7). In the same year, there were 2.7 million new infections and 1.7 million AIDS related deaths (UNAIDS, 2009:7). Sub-Saharan Africa remains the most highly affected region. It accounted for

67% of HIV infections worldwide. Furthermore, there was 68% and 91% new HIV infections in adults and children respectively (UNAIDS, 2009:21). An estimated 1.4 million (72%) AIDS-related deaths were documented in this region during the same period (UNAIDS, 2009:21).

According to UNAIDS (2009:8), it was indicated that the epidemic is evolving. Epidemic patterns can change over time. As the regional profiles in this report highlight, national epidemics throughout the world are experiencing important transitions (UNAIDS, 2009:8). In Eastern Europe and Central Asia, epidemics that were once characterized primarily by transmission among injecting drug users are now increasingly characterized by significant sexual transmission, while in parts of Asia epidemics are becoming increasingly characterized by significant transmission among heterosexual couples (UNAIDS, 2009:8).

There is evidence of successes in HIV prevention (UNAIDS, 2009:8). There is also growing evidence of HIV prevention successes in diverse settings. In five countries (sub Saharan Africa) where two recent national household surveys were conducted, HIV incidence is on the decline, with the drop in new infections being statistically significant in two countries (Dominican Republic Congo and United Republic of Tanzania) and statistically significant among women in a third (Zambia) (UNAIDS, 2008:12). As previously discussed, the annual number of new HIV infections globally has declined, and HIV prevalence among young people has fallen in many countries (UNAIDS, 2008:23). Globally, the coverage for services to prevent mother-to-child HIV transmission rose from 10% in 2004 to 45% in 2008 (WHO, 2009:16; UNAIDS, 2009:9), and the drop in new HIV infections among children in 2008 suggests that these efforts are saving lives.

According to UNAIDS (2009:9) improved access to treatment is having an impact. Antiretroviral therapy coverage rose from 7% in 2003 to 42% in 2008,

with especially high coverage achieved in Eastern and Southern Africa (48%) (UNAIDS, 2009:9). While the rapid expansion of access to antiretroviral therapy is helping to lower AIDS-related death rates in multiple countries and regions, it is also contributing to increases in HIV prevalence.

There was an increased evidence of risk among key populations. While high HIV prevalence has long been documented among sex workers in diverse countries worldwide, evidence was extremely limited regarding the contribution of men who have sex with men and injecting drug users to epidemics in sub-Saharan Africa and parts of Asia (UNAIDS, 2009:9). Studies have documented elevated levels of infection in these populations in nearly all regions (WHO, 2008:24). In all settings and for diverse types of epidemics, it is clear that programmes to prevent new infections among these key populations must constitute an important part of national AIDS responses.

Southern Africa remains the area most heavily affected by the epidemic. Sub Saharan Africa has the highest HIV prevalence worldwide, with each of its countries experiencing adult HIV prevalence greater than 10%. With an estimated adult HIV prevalence of 26% in 2007, Swaziland has the most severe level of infection in the world (UNAIDS, 2008). Botswana has an adult HIV prevalence of 24%, with some evidence of a decline in prevalence in urban areas (UNAIDS, 2008). Lesotho's epidemic also appears to have stabilized, with an adult HIV prevalence of 23.2% in 2008 (Khobotlo, Tshehlo, Nkonyana, Ramoseme, Khobotle, Chitoshia, Hildebrand, Fraser, 2009:14). South Africa is home to the world's largest population of people living with HIV (5.7 million) (UNAIDS, 2009:27).

For Southern Africa as a whole, HIV incidence appears to have peaked in the mid-1990s. In most countries, HIV prevalence has stabilized at extremely high levels, although evidence indicates that HIV incidence continues to rise in rural Angola (UNAIDS, 2009:27). Two rounds of household surveys indicate that

national HIV incidence significantly fell between 2004 and 2008 in the United Republic of Tanzania, and a significant drop in HIV incidence was also noted among women in Zambia between 2002 and 2007 (UNAIDS, 2009:27). Zimbabwe has experienced a steady fall in HIV prevalence since the late 1990s; studies have linked this decline with population-level changes in sexual behaviours (Gregson, Nyamukapa, Schumacher, Mugurungi, Benedikt, Mushati, Campbell, Garnett, 2011:14).

With a hyper-endemic, South Africa has more than 15% of its population living with HIV (UNAIDS, 2009:27). HIV prevalence in South Africa also varies by province, with the highest being KwaZulu-Natal Province (28%) and lowest being the Western Cape Province (5.2%) (UNAIDS, 2008:11). In 2008, Limpopo had a prevalence rate of about 8.8% in its general population and about 14% among adults between the ages of 20 and 64 (Nicolay, 2008:6). The epidemic in Limpopo has not reached a mature phase yet, but is on the increase (Nicolay, 2008:6).

According to the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates, there was a 27% increase in the number of PLWHA over a ten year period from 1999 to 2009. However, the fourth decade of the HIV epidemic has witnessed a 19% reduction in new HIV infections over the same period and a 21% reduction since 1997, which was the year in which annual new infections peaked (UNAIDS, 2010:4). The HIV incidence has fallen by more than 25% between 2001 and 2009 in 33 countries. The number of annual Acquired Immune Deficiency Syndrome (AIDS) related deaths worldwide is steadily decreasing from its peak in 2004 (UNAIDS, 2010:4), which is indicative of increased availability of antiretroviral therapy, care and support, to PLWHA and the decreasing incidence which started in the late 1990s (UNAIDS, 2010:4).

- **Provision of HIV/AIDS care and nurses**

The global shortage of nurses is one of the greatest obstacles of dealing with the HIV and AIDS epidemic (CNA, 2005:8). It is also stipulated that the strengthening of nursing capacity, knowledge and skills will improve the provision of quality care to people living with HIV and AIDS (PLWHA) (CNA, 2005:8). It is, therefore, important that all nurses have good background knowledge of HIV/AIDS in order to respond appropriately in this environment (Walusimbi & Okonsky, 2004:93). This is based on the premise that the knowledge and skills of nurses are determinants of their ability to provide quality care and to cope with the psychosocial burden of caring (CNA, 2005:8). Hence, there is a need to establish the level of HIV and AIDS knowledge and psychosocial wellbeing of nurses caring for PLWHA.

The critical shortage of nurses, inadequate knowledge and skill mix, and uneven geographical distribution of the nurses pose major barriers to achieving the health related millennium goals (MDGs) (WHO, 2010:1). According to Mohale and Mulaudzi (2008:61), low staff ratios, high workloads and a growing population leads to an increase in the utilisation of personnel with fewer skills and decline in the quality of care offered. Given the rise in HIV infection, an increase in need for care rises sharply.

AIDS is currently regarded as a chronic disease. PLWHA now live longer because of advances in treatment of HIV infection (Bartlett, Cheever, Johnson and Paauw, 2004:1). This improved survival and increased prevalence puts enormous pressure of care on nurses (Bartlett et al, 2004:1). This development has seen the introduction of many new programmes and services, including task-shifting models which further stretches the work demand on nurses (Zachariah, Ford, Philips, Lynch, Massaquoi, Janssens & Harries, 2008,550).

The pressure of caring for PLWHA on nurses has been documented in other studies. For instance, nurses caring for PLWHA have been treated with stress-related illness such as mental fatigue (Shisana, Hall, Maluleke, Stoker, Schwabe, Colvin & Chauveau, 2004:847). The devastating effect of work related stress among nurses could manifest as burnout with signs such as loss of interest in work and service users, poor work performance and dissatisfaction (Visintini, Campanini, Fossati, Bagnato, Novella & Maffei, 1996:184; Maslach & Jackson 1981:193). Davhana-Maselesele and Igumbor (2008:67) confirm that nurses caring for PLWHA are at higher risk of emotional exhaustion and stress, stigma and work related injuries including HIV infection. In the same context, nurses have also been found to lack the necessary knowledge and skills to carry out their responsibility, and this has been noted to result in work frustration (Mavhandu-Mudzusi, Netshandama & Davhana-Maselesele, 2007: 255). On the converse, knowledge about HIV/AIDS and the needs of PLWHA can help alleviate fear, anxiety and stigma associated with caring for PLWHA (Walusimbi & Okonsky, 2004).

Statistics show the magnitude of the problem worldwide with Sub-Saharan Africa as the most affected. The problem of HIV infections challenges the health care delivery system of the country concerned. Nurses as frontline providers of care need skills and resources in order to deal with the challenge.

1.3 PROBLEM STATEMENT

Knowledge deficit amongst nurses has a major impact on their daily work. This is serious, given its role in ensuring their safety and the quality of care provided to PLWHA. Despite this, nurses still lack the necessary information needed to adequately care for PLWHA.

In the same context, clinical services for PLWHA are rapidly changing, driven by their increasing needs. Nurses are hence expected to continually adapt and keep up with new programmes, information and practices. This expectation puts more pressure on them as individuals and in their work performance. The current rate of HIV infection in Limpopo province, coupled with a vacancy rate of 45% among professional nurses, 22% among enrolled nurses and 49% among enrolled nursing auxiliaries (Limpopo DoH, 2008:34), calls for a study in assessing the psychosocial wellbeing of nurses as care givers of PLWHA. This observation is also noted by Davhana-Maselesele and Igumbor (2008), and resulted in intervention programmes to address the knowledge and psychosocial needs of nurses at the regional hospital in Limpopo province. This study, therefore, seeks to describe the state of nurses' knowledge of HIV and AIDS and their psychosocial wellbeing as care givers of PLWHA at a regional hospital in Vhembe District.

1.4 RESEARCH QUESTIONS

1. What is the level of HIV and AIDS related knowledge among nurses caring for PLWHA?
2. What is the level of burnout and depression among nurses caring for PLWHA?
3. What is the impact of AIDS care among nurses as care givers?
4. What is the relationship between HIV/AIDS knowledge and psychosocial wellbeing among nurses caring PLWHA?

1.5 PURPOSE OF THE STUDY

The purpose of the study is to investigate knowledge and psychosocial wellbeing of nurses caring for PLWHA in order to develop guidelines to support nurses caring for PLWHA at a regional hospital in Vhembe district.

Objectives

The objectives of the study are to:

1. Describe the level of HIV and AIDS related knowledge among nurses caring for PLWHA
2. Establish the level of burnout and depression amongst nurses caring for PLWHA
3. Assess the impact of AIDS care among nurses as care givers
4. Determine the relationship between HIV and AIDS knowledge and the psychosocial wellbeing of nurses as care givers.
5. Develop guidelines for support to nurses caring for PLWHA based on the reported state of their psychosocial wellbeing and level of knowledge.

1.6 SIGNIFICANCE OF THE STUDY

It is hoped that the findings of this study will help policy makers and programme planners in developing policies and programmes that will help address burnout and promote positive attitude towards caring for PLWHA. The study may also identify areas for further related research. It will also explore knowledge gaps and coping strategies which may be integrated into nursing training programmes. The findings may also examine key employee wellness issues requiring attention and the development of relevant policies.

1.7 OPERATIONALIZATION OF TERMS

- **Burnout-** a combination of 'maladaptive' psychological and behavioural responses coming out from loss of interest in work and service users, dissatisfaction, heavy, stressful work activities (Visintini et al, 1996:p185).

- **Care-** in this study will be the responsibility for or attention to health, well-being, and safety of PLWHA at the hospital
- **Cognition-** the mental process of human knowing, including aspects such as awareness, perception, reasoning, and judgement (Stacey, 2007:60)
- **Depression-** a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration as a result of caring for PLWHA.
- **Knowledge-** in this study knowledge will refer to, the specific knowledge base and skills needed to render quality HIV and AIDS care.
- **PLWHA-** people living with HIV/AIDS who are taken care of by nurses at the hospital
- **Psychosocial well-being** in this study will be determined by the level of burnout, depression and the impact of AIDS on nurses' care-giving role. Individual's psychosocial wellbeing is herein defined with respect to three core domains: human capacity, social ecology and culture and values (The Psychosocial Working Group, 2003:1). In this study the focus is on the human capacity which is fundamentally constituted by the health (physical and mental) and knowledge and skills of an individual.
- **Stress-** is the change in the environment that is perceived as a threat, damage or harm, or challenge to the person's dynamic equilibrium (Nettina, 1996:13). A limited amount of stress can be a positive motivator to take action; however, prolonged or excessive stress can cause emotional discomfort, anxiety, possible panic and illness (Nettina, 1996:13). Although there are numerous definitions of stress, this study accepts the definition of the concise oxford dictionary (1991:903), as demands on nurses' physical and mental energy causes tension.

1.8 ARRANGEMENT OF CHAPTERS

The dissertation has been arranged into the following chapters:

Chapter 1: An overview of the study

Chapter 2: Literature review

Chapter 3: Research design and methods

Chapter 4: Results

Chapter 5: Discussions, conclusions, limitations, guidelines for support and recommendations

1.9 SUMMARY

This chapter outlines the overview of the study. It pays attention to the background and rationale for the study as well as the magnitude of HIV globally and in South Africa, the problem statement, the research questions, the purpose and significance of the study and the operationalization of terms. The sequential arrangement of chapters is also outlined.

CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

Although political and financial commitments and country efforts have resulted in increasing access to HIV services in recent years, the annual number of new infections remains high and continues to outpace the annual increase in the number of people receiving treatment (WHO, 2009:3). The availability and coverage of priority health sector interventions for HIV prevention, treatment and care continued to expand in low- and middle-income countries in 2008 but is still insufficient, and progress has been uneven across and within countries. Thus, the HIV pandemic remains the most serious infectious disease challenge to global public health (WHO, 2009:3) and it continues to undermine six of the eight key areas covered by the Millennium Development Goals, namely reduced poverty and child mortality, increased access to education, gender equality, improved maternal health and increased efforts to combat major infectious diseases (WHO, 2004:3).

The impact of HIV and AIDS illustrates the need for the interdependence of the global efforts to foster development and provides a strong rationale for people working on HIV/AIDS to seek synergies between their actions and efforts in order to make progress in other development fields, in particular child and maternal health (WHO, 2010:101). Reaching and exceeding the Millennium Development Goals and achieving universal coverage of essential health interventions are part of WHO's primary health care and health system strengthening strategies (WHO, 2010:2). This implies that there is a need for resources to be mobilised to ensure that PLWHA receive the necessary care and support.

In this chapter attention will be given to the literature review and the conceptual framework that guides the study. A literature review is therefore incorporated with the overview of priority interventions made globally to deal with the scourge of HIV; interventions made in South Africa; necessary resources for the provision of care to PLWHA; task shifting; impact of HIV/AIDS among health care providers (nurses); and knowledge and attitude of nurses caring for PLWHA.

2.2 OVERVIEW OF PRIORITY INTERVENTIONS MADE GLOBALLY TO DEAL WITH THE SCOURGE OF HIV.

According to WHO (2009:4), it was stipulated that more people were counselled and tested for HIV in 2008 than in the previous years. Almost half of all pregnant women living with HIV in low- and middle-income countries received antiretroviral treatments to prevent mother-to-child transmission, and more children living with HIV are benefiting from the treatment and care programmes (WHO, 2009:3). More countries, such as Malawi, South Africa and Kenya, are now phasing in efficacious antiretroviral regimens for preventing the mother-to-child transmission of HIV, including antiretroviral therapy for pregnant women who need treatment (WHO, 2009:3). The increased access to antiretroviral therapy and appropriate care has resulted in reduced mortality among people living with HIV at the country and global levels (WHO, 2009:3).

Countries (Malawi, Peru, Ethiopia, Brazil, Thailand, Philippines, Zambia, Mali) have also started to develop and adopt innovative solutions to tackle major health systems challenges, including the chronic shortage of qualified human resources (UNAIDS, 2010:3). In many countries, HIV service delivery has been strengthened by integrating and decentralizing interventions to primary health care (WHO, 2009:4). Overall, the availability and coverage of priority health sector interventions for HIV prevention, treatment and care continued

to expand in low- and middle-income countries in 2008 (WHO, 2009:4). Hence, these interventions require enough human and medical resources, proper skills and knowledge to address the gaps impacted by HIV/AIDS.

Nevertheless, the progress has been attained unevenly across and within countries, and many gaps and challenges still remain in some countries. The volume and scope of data to measure progress in scaling up priority HIV interventions improved substantially in 2008 (UNAIDS, 2010:3; WHO, 2010:7). WHO (2009:4) reported that out of 192 United Nations Member States, only 158 reported data to WHO, UNICEF and UNAIDS, including 139 low- and middle-income and 19 high-income countries, with higher reporting rates for many indicators compared with 2007. This has allowed for more comprehensive global analysis of the health sector's achievements towards universal access to HIV prevention, treatment and care (WHO, 2009:4).

According to WHO (2010a:4), Health sector interventions for HIV prevention, treatment and care include:

- interventions based in health facilities, including information, education and supplies and services for preventing HIV transmission in health care settings; preventing sexual HIV transmission; managing sexually transmitted infections (STIs); preventing mother-to-child HIV transmission; providing harm reduction for injecting drug users (IDUs); HIV testing and counselling; preventing HIV transmission by people living with HIV; preventing the progression of HIV infection to AIDS; and the clinical management of treatment and care for people living with HIV;
- interventions based in communities, including community-based prevention; treatment preparedness and support for HIV and tuberculosis (TB); condom promotion; provision of clean injecting equipment; HIV testing and counselling; home-based care; and psychosocial support, including peer support;

- interventions delivered through outreach to most-at-risk populations, including integrated HIV testing; and counselling, treatment and care services in drop-in centres and similar locations, including mobile sites;
- activities in the health sector supporting service delivery and enabling action in other sectors, including providing leadership and governance; advocacy; strategic planning; programme management; access to medicines, diagnosis and technology to treat and prevent HIV infection and its complications; human resources; financing; and HIV and STI strategic information management systems.

The rise in programmes to deal with the impact of AIDS increased nurses duties, hence there is still the need for nurses to be capacitated with the relevant HIV/AIDS knowledge and skills in order to effectively provide the services needed.

The principles that should guide the health sector response, according to WHO (2010a:5), include those underpinning primary health care, with particular emphasis on:

- Ensuring the full and proactive involvement of governmental, nongovernmental (NGO) and private sector organizations and civil society, especially people living with HIV, including people most at risk of infection;
- Tailoring interventions to the people and places that carry the burden of the disease, taking into account the nature of the epidemic and the context (e.g. cultural traditions, social attitudes, political, legal and economic constraints) in specific settings;
- Creating a supportive enabling environment by addressing stigma and discrimination, applying human rights principles and promoting gender equity, and reforming laws and law enforcement to ensure that they adequately respond to the public health issues raised by HIV and AIDS.

The effectiveness of the HIV response is said to depend on the scale of implementation of the priority interventions (WHO, 2010a:5). Furthermore, it is

contingent on the quality and characteristics of service provision, the broad cultural and social context, and the level of community commitment to and participation in efforts to counter stigma and discrimination (WHO, 2010a:5; 2010b:8). Nurses, however, still lack the necessary support that they need to render quality care. The lack of support predisposes them to poor psychosocial wellbeing.

HIV-related stigma and discrimination are often prevalent within health services and are critical obstacles to the provision and uptake of health sector interventions (WHO, 2010a:17). WHO (2010a:17) further stipulates that stigma and discrimination are often persistent at all levels of society and sustain an environment where it is difficult for health services to attract the people who need the interventions most. It is further recommended that HIV-related stigma and discrimination can be reduced through strong leadership and concrete measures in national strategic planning and programme design and implementation (WHO, 2010a:17). Such measures can help countries reach key targets for universal access and can also promote and protect human rights and foster respect for people living with and affected by HIV/AIDS. Hence, nurses can operate well to address the burden of HIV when supported and provided with the necessary resources and knowledge.

Other factors that can enhance the effectiveness of the HIV response include a coordinated and participatory national strategic plan for HIV; a level of commitment to an HIV response consistent with human rights and fundamental freedoms; and a level of commitment to informing and consulting with the community during all phases of policy and programme design and implementation (WHO, 2010a:17). Collaboration with the community should include promoting a supportive and enabling environment for women; addressing underlying prejudices and inequalities; and including women's involvement in the design of social and health services that work for them (WHO, 2010a:17). In order to provide effective

shown successes in the prevention of mother-to-child transmission. The Department of Virology of the University of Pretoria convened a meeting of private and public health practitioners in June 2010 to debate the DoH's new antiretroviral treatment (ART) guidelines (Rossouw, et al , 2011:237). The following, as indicated in Table 2.1 below, were the goals of the 2010 ART guidelines:

Table 2.1: Goals of the 2010 ART guidelines

- Achieving best possible health outcomes in the most cost-efficient manner
- Implementation of nurse-initiated ARV-treatment
- Decentralisation of service delivery to primary health care (PHC) facilities
- Integration of services for HIV with TB, maternal and child health (including prevention of mother to child transmission), sexual and reproductive health, and wellness programmes
- Earlier diagnosis of HIV
- Prevention of HIV disease progression
- Prevention of AIDS-related deaths
- Retention of patients on lifelong therapy
- Prevention of new infections among children, adolescents and adults
- Mitigation of the impact of HIV/AIDS on society

Rossouw, et al (2011: 237). The 2010 South African guidelines for the management of HIV and AIDS: review. April 2011

Apart from these goals, health workforce, which is composed of mostly nurses, still has to face this burden and in the same context the majority of retired nurses were called for assistance. Hence, the question arises as to whether retired nurses' knowledge is convergent to the latest interventions to mitigate the burden of AIDS.

With 5.7 million or more HIV-infected individuals in South Africa, doctors alone cannot provide sufficient care. As in Malawi and Botswana it makes sense for

nurses and 'clinical associates' to broaden this base. In a randomised trial (N=812) in South Africa, doctor managed ART-related care was compared with nurse-managed care. It was found that twenty three nurses were as good as doctors in providing care (Rossouw, et al, 2011:237).

This study, therefore, lends support to nurses in the caring of HIV patients. Doctors were mostly better used for prescribing treatment and nurses for caring for the sick. Of concern was the alarmingly high level of cumulative failure at week 120 – 48% (nurse group) and 44% (doctor group) – which suggests that neither doctors nor nurses intervene adequately to prevent treatment failure, and lends further support to more frequent Viral Load monitoring. Based on Viral Load results, a nurse can give step-up adherence counselling and retest after 1 month. If re-suppression of the virus has not taken place, referral to a doctor is recommended (Rossouw, et al, 2011:237).

The role of nurses as caregivers in the HIV epidemic requires clear defining. South African Nursing council (SANC) must provide registration, legal protection and ensure adequate skills to ensure protection of the public. Sick patients will need referral for assessment and care by doctors and, once well, be referred to nurse-level care. Perhaps some nurses will be trained to manage various non-life-threatening medical conditions in the community. But nursing care will only be as good as the next tier of support (Rossouw et al, 2011:237). At present, the South African public health system shows little evidence of the resilience and goodwill that this venture will demand. The guidelines give no detail in this regard and are also silent on the role of, and guidelines for, clinical mentoring programmes for caregivers (Rossouw et al, 2011:237). SANC should have the policies in place regarding the provision of HIV/AIDS management services, to protect the public and regulate the provision of quality nursing care towards PLWHA.

There are many services and programmes in place aimed at prevention, care and treatment of HIV and AIDS in South Africa. These are services and programmes aimed at reducing the infection rate as well as AIDS related death rate. These are PMTCT, HCT, NIMART, AIDS awareness, condom use and distribution, HIV and sex education as well as TB/HIV&AIDS collaboration.

2.2.1.1 HIV Counselling and Testing (HCT)

The availability and uptake of HIV counselling and testing services continued to increase in 2008. In 66 low- and middle-income countries with comparable data, the total number of health facilities providing HIV counselling and testing increased by about 35%: from 25 000 in 2007 to 33 600 in 2008. In population-based surveys conducted between 2005 and 2008, the median percentage of respondents aged 15–49 years living with HIV who reported having ever received an HIV test and test results prior to the survey increased from about 15% (2005–2006, 12 countries) to 39% (2007–2008, 7 countries). These results can be attributed to the expansion of provider-initiated HIV testing and counselling in health care settings along with diverse client-initiated and community-based approaches. Yet despite the expansion of services, knowledge of HIV status remains low (WHO, 2009:4). The training of nurses to provide this service is still required as HCT is not the only service offered in the health care system.

A principal part of the HCT campaign is to scale up awareness of HIV in line with the South African National AIDS Council [SANAC], (2010a:6). The government aims to bring about a general discussion of HIV throughout the country by using the media. Strategies include publicizing the availability of free testing and counselling in health clinics through door-to-door campaigning and billboard messages, and using vox pops to highlight personal experiences and expel the myths and stigma of HIV. The government aims to cover 50% of the population with the campaign

message. Hence this should be addressed by the shrinking workforce of nurses, with other workloads waiting and still expected to function at their best wellbeing.

HIV testing is vitally important in order to access treatment and knowing one's status at all times. Knowledge of one's positive status can lead to behaviours that protect other people from infection. The National Strategic Plan is aiming for one quarter of all people to take a test every year by 2011, with the proportion of those ever taking a test rising to 70% (Government of South Africa, 2007:56)

There is evidence that testing levels have improved as the 2009 National Communications Survey found that 60% of all men and women studied had been tested in the last 12 months, an increase of 36% since 2006 (Government RSA, 2010:40). The percentage of those ever tested also increased significantly as the 2006 figures showed that 17% men and 38% of women had been tested at least once compared to 2009 (SANAC, 2010b:12). When testing does occur, it is very often at a late stage of infection. The HCT campaign launched in April 2010 aims to offset the problem of late or no diagnosis (SANAC, 2010b:12). Early diagnosis calls for early management and needs well capacitated and skilled nurses to provide.

The HCT campaign is a widespread strategy implemented in all health authorities whereby all patients will be counselled on the importance of knowing their HIV status and will be offered a test (UNGASS, 2010:32). Through this proactive approach, the government of South Africa aims to test 15 million people for HIV by June 2011 (UNGASS, 2010:32). According to King (2011), Figures for HCT outcomes differ across reports published around 2010 World AIDS Day (WAD), with some confirming that South Africa's testing rate had improved by 500% since the inception of the HCT campaign, with a total

of 4.68 million South Africans having been tested for HIV, 800 000 being diagnosed as HIV-positive, and 5.5 million people having been counselled for the disease. Others cite 3.7 million tested, 4 million counselled and 598 000 emerging as HIV-positive (King, 2011:2). The difficulty in tracking precise numbers is partly due to the fact that various private sector agents are also rolling out the HCT campaign, and this is a good thing (King, 2011:2). It was furthermore, added that more than 3126 nurses have been trained to accommodate the HCT campaign frameworks (King, 2011:2). The number of trained nurses does not correspond with the number of counselled and tested clients. This reflects that there is still a great need to train nurses in order to cover the expected 15million people.

By making testing and counselling provider-initiated, it is hoped that the diagnosis of HIV will take place earlier and treatment be started sooner (HIV & AIDS South Africa, 2010:5). Routine testing at healthcare facilities could prove to be a way of working round the stigma attached to HIV testing. Improving testing, however, can only be part of broader efforts to tackle the epidemic. Unless people who test positive are able to receive appropriate care following their diagnosis, individuals may see little value in being tested. The level of care provided also depends on the resources available and the level of knowledge towards the provision of care to PLWHA.

2.1.1.2 Prevention of Mother to Child Transmission (PMTCT)

An unacceptably high number of babies, around 70,000, are born with HIV every year, reflecting poor PMTCT uptake (HIV and AIDS South Africa, 2010:6). HIV and AIDS is one of the main contributors to South Africa's infant mortality rate, which increased significantly between 1990 (44 deaths per 1000 infants) and 2008 (48 per 1000), when all regions of the world saw decreases (WHO in HIV and AIDS South Africa, 2010:3).

As part of 2010 guidelines, pregnant women who are HIV-positive were said to receive treatment when their CD4 count dips below 350 cells/mm³, a welcome change from the 200 cell count threshold (UNGASS, 2010 in HIV and AIDS South Africa 2010:3). In another policy change, all other pregnant women who test HIV-positive will begin receiving treatment at 14 weeks rather than in the last term of pregnancy (Presidency RSA, 2009 in HIV and AIDS South Africa 2010:3).

HIV testing uptake among women attending antenatal clinics rose from 69% in 2006/2007 to 80% in 2007/2008. In addition, 83% of HIV-positive pregnant women received ART for PMTCT in 2009 as compared to earlier years (UNGASS, 2010:15). The National Strategic Plan target is to reach 95% of HIV positive pregnant women with PMTCT services by 2011. Figures estimating PMTCT coverage in public sector antenatal sites vary, with UNAIDS and WHO reporting 73% and the South African government reporting more than 95% in 2008 (UNGASS, 2010:12). There are more changes in the public sectors wherein almost all pregnant women are being offered PMTCT services.

2.2.1.3 Nurses to Initiate and Manage ART (NIMART)

On World AIDS Day 2009, President Jacob Zuma announced that in April 2010, the health system would accelerate its response to HIV and AIDS, expanding indications for antiretroviral treatment for pregnant women and those with tuberculosis and broadening the care and treatment platform to include all health institutions in the country. This builds on the programmes that have already seen close to 1million South Africans having access to antiretroviral treatment, and brings into reach the targets laid out in the national 2007-2011 strategic plans for HIV and AIDS (Johnson, Brun-Vézinet, Clotet, Günthard, Kuritzkes, Pillay, Schapiro, Richman, 2010:1).

South Africa has the largest antiretroviral therapy programme in the world but in proportion to hosting the world's largest epidemic (HIV and AIDS South

Africa, 2010:6), access to treatment is low. At the end of 2007, an estimated 28% of infected people were receiving ARVs. This is below average across lower and middle income countries (WHO in HIV and AIDS South Africa, 2010:6)

The government published its plan to provide public access to ARVs in November 2003, many years after evidence of the effectiveness of combination therapy in reducing mortality was reported. In contrast, many of South Africa's poorer neighbours had already begun to make treatment available. One such country is Botswana, whose "MASA" (the Setswana word for "dawn") programme began to distribute ARVs in early 2002. Furthermore, the rollout of the South African programme was very slow (HIV and AIDS South Africa, 2010:6) and nurses were not allowed to prescribe or manage ART as they were hardly trained.

Advocates of raising the treatment threshold to less than 350 cells acknowledge that this would require greater expenditure but would be cost effective in the long run. Dr Venter argues that amending guidelines to raise the treatment threshold neglects the fact that many patients are currently starting treatment long after becoming eligible for it, only once they have become seriously ill (AidsMap, 2009:5). Hence the increase in PLWHA calls for increase in health workforce and, if not, the available workforce may be overburdened by the workload increase, which may deprive their wellbeing.

2.3 NECESSARY RESOURCES FOR THE PROVISION OF QUALITY CARE TO PLWHA

The provision of quality care to PLWHA depends on human resources and medical resources. An enabling environment mainly boosts the smooth running of health care delivery. Effective service provision requires trained service providers in the right number, at the right place, at the right time, working with the right attitude, knowledge and skills, commodities (medicines, disposables, reagents) and equipment, and with adequate financing (WHO,

2009:66). It also requires an organizational environment that provides the right incentives to providers and users.

2.3.1 Human resources

Most institutions and organisations use a "working lifespan" approach to monitor the dynamics of their health workforce. The working lifespan was introduced in the *World Health Report 2006* (WHO, 2006:22). This approach focuses on the need for monitoring and evaluating each of the stages when people enter (or re-enter) the workforce, the period of their lives when they are part of the workforce, and the point at which they make their exit from it. The lifespan approach (Figure 2.1) of producing, attracting, sustaining and retaining the workforce offers a worker perspective as well as a systems approach to monitoring the dynamics of the health labour market and the strategies of each stage (WHO, 2006:23). From policy and management perspectives, the framework focuses on modulating the roles of both labour markets and state action at key decision-making junctures. In this regard, the WHO (2006:24) suggests the following working lifespan approach:

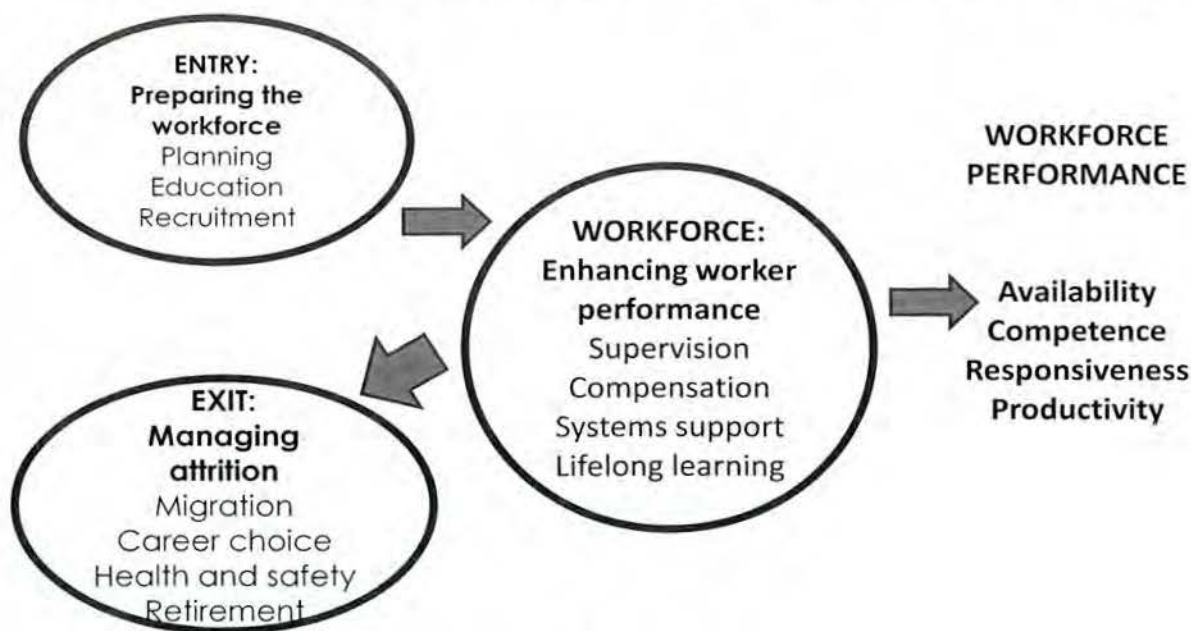
- Entry: preparing the workforce through strategic investments in education and effective and ethical recruitment practices;
- Active workforce: enhancing workforce availability, accessibility and performance through better human resources management in both the public and private sectors;
- Exit: Managing migration and attrition to reduce wasteful loss of human resources.

A central objective of policy and programmatic interventions at the entry stage is to produce and prepare sufficient numbers of motivated workers with adequate technical competencies, whose geographical and socio-cultural distribution makes them accessible, acceptable and available to reach clients and populations in an efficient and equitable manner (WHO, 2006:24). To do so requires active planning, management and budgeting across the health workforce production pipeline, with a focus on building strong health

professional education institutions, enhancing quality control mechanisms for skilled workers and strengthening labour recruitment capabilities (WHO, 2006:25). Nurses need to have a good HIV/AIDS knowledge background from nursing educational institutions to be able to address the impact of AIDS.

Strategies to improve the performance of the active health workforce focus on the availability, competence, appropriateness, responsiveness and productivity of those currently engaged in the health sector. Nurses need encouragement, support and stress free working environment to commit themselves to render health care services. Development through knowledge and skills keeps nurses carrying on caring for PLWHA and their development need to be addressed to facilitate their wellbeing. This generally involves an assessment of human resources for health (HRH) within the context of health services delivery among a wide variety of workplaces, and across the broader context of national labour markets. The following figure illustrates the working lifespan approach to the dynamics of the healthcare work force.

Figure 2.1 Working lifespan approach to the dynamics of the health workforce



Source: World Health Organization (Bowen & Zwi, 2005:5)

In many of the countries with the highest burden of HIV, international migration and domestic movement out of health sector employment contribute to the crisis in human resources (WHO, 2006:26). In some of these countries, the crisis is aggravated by civil service hiring caps and long delays between the end of education and service posting (WHO, 2006:26). HIV itself contributes to the crisis, as it increases the demand for services and infects and affects health workers (WHO in HIV and AIDS South Africa, 2010:6). They may be disabled by illness, lost to death or required to spend less time at work and more at home taking care of HIV-infected family members, attending to those family members' usual chores and attending funerals (WHO, 2006:26). Thus, the supply of healthy and productive health workers is reduced. Nurses should be well prepared through planning, and education before and during their entry to the workplace. Proper supervision, compensation and systems support and lifelong learning will enhance nurses' performance and promote their availability, competence and productivity.

SANC identifies a shortage of nurses in South Africa, but simultaneously tries to present a positive picture by noting past gains (Wildschut & Mqolozana, 2008:7). Thus it asserts, "although there may still be a shortage of qualified nurses in RSA, the positive side to this overall picture is that the growth in nursing figures is now approaching that of the population of South Africa" (SANC in Wildschut & Mqolozana, 2008:7). DENOSA also asserts that there is a shortage of nurses, stating that South Africa is "not producing/training sufficient nurses to deal with its health needs" (DENOSA in Wildschut & Mqolozana, 2008:7), and further points out that this directly impacts on the ability of the health sector to deliver an efficient service. This may be due to poor enhancement of the workforce hence it leads to attrition.

Even though clearly identifying shortages of nurses in general, as well as particular shortages at the professional nurse level in the South African health care system, Subedar (2006) carefully states that it is however, "very difficult

to quantify if there is a shortage or not...the only way you can define if there is a shortage is if the health services identify what is their need" (Subedar personal interview, November 2006). Her last statement points to the importance for the HRH Plan to identify specific areas of skills needs, so that the nursing education and training institutions have a better platform from which to try and respond more effectively to these skills needs.

Furthermore, the increase in demand for health services in the country has to be addressed by a shrinking nursing corps (Hall, 2005:8). South Africa has lost a number of professional nurses through either emigration or the decision to change profession (Hall, 2005:8). Nurses qualify annually and enrolments from higher education showed a decline for the period 1990 to 2000 (SANC, 2003 in Hall, 2005:8). Unsatisfactory working conditions at public health facilities contribute to the shortages of health professionals (Hall, 2005:8). They are expected to provide health care to increasing numbers of patients amidst insufficient resources, poor maintenance, outdated or faulty equipment and a lack of proper incentives (Landman, Mouton & Nevhutalu, 2001:6; Swanepoel, 2001:2). The working environment, working conditions and poor support systems lead health professionals to leave the public facilities to better facilities where they receive the support they desire and wish for. Provision of resources, positive practice environment and better working conditions may improve the status of the nursing health workforce.

Working with people living with HIV is labour intensive and can also be emotionally stressful and draining (WHO, 2006:26). When there are many HIV-infected people, the demand for services increases (WHO, 2006:26). High workloads, poor remunerations and poor working conditions are added disincentives for health care workers to deal with HIV (WHO, 2006:26). Moreover, working in the HIV field may also be unpopular with some health providers because they fear becoming infected with HIV or TB, or because they cannot relate easily to clients with risk behaviours of which they

disapprove. The latter is a problem especially in countries with low or concentrated epidemics, where many people living with HIV come from marginalized groups such as sex workers, injecting drug users, men who have sex with men and prisoners (WHO, 2006:26). Nurses' psychosocial wellbeing is mainly affected by the above mentioned aspects, hence for nurses to provide quality care to PLWHA, they need to be in their optimal healthy state holistically.

The combined results are that, firstly, it may be difficult to motivate health workers to take jobs related to the provision of HIV services unless they are provided with special incentives, and secondly, there is a severe shortage of skilled health workers in areas with high HIV prevalence (WHO, 2010:101). Despite these challenges, a defining feature of the response to the HIV epidemic has been the ability of communities to mobilize resources to address the impact of HIV and prevent its further spread (WHO in HIV and AIDS South Africa, 2010:6).

2.3.2 Material resources

Nurses need to feel well equipped and safe while providing care to PLWHA; they also work best in the presence of protective clothing especially gloves, goggles and masks while providing extensive care to PLWHA (Demmer, 2004:7). Availability of protective practice environment (PPE) and post exposure prophylaxis (PEP) aid the effective provision of care to PLWHA and allay anxiety from contagion on nurses (WHO, 2010:11). Nurses work in situations where there are poor protective resources which predispose them to working in fear of contagion, and hence this leads to perceived anxiety. In order to reduce the levels of anxiety among nurses, protective HIV/AIDS knowledge is of importance to those nurses providing care to PLWHA.

2.4 TASK-SHIFTING

Task-shifting is the name given to a process of delegation whereby tasks are moved, where appropriate, to less specialized health workers (WHO, 2008:1). By reorganizing the workforce in this way, task shifting presents a viable solution for improving health care coverage by making more efficient use of the human resources already available and by quickly increasing capacity while training and retention programmes are expanded (WHO, 2008:1). Several countries such as Lesotho are already using task-shifting to strengthen their health systems and scale up access to HIV/AIDS treatment and care (WHO in HIV and AIDS South Africa, 2010:6).

WHO, together with the US President Emergency Plan for AIDS Relief (PEPFAR) and the Joint United Nations Programme on AIDS (UNAIDS), has developed global guidelines for task shifting (WHO, 2008:2). These guidelines were formally launched during the first ever Global Conference on Task Shifting in Addis Ababa on 8-10 January 2008 (Treatment Action Campaign (TAC), 2010:2). One measure seen as vital in scaling-up treatment access, while making best use of available resources, is task-shifting in the health sector (TAC, 2010:2). This means permitting health care workers to become involved in particular stages of treatment provision where currently they are not allowed.

Under the task-shifting rubric, nurses, rather than doctors, can initiate antiretroviral therapy (TAC, 2010:2). It is believed task-shifting vastly increases the access points to treatment and care by reducing the 'bottlenecks' in the system created by a lack of staff able to perform certain tasks (TAC, 2010:2).

Many campaign groups support task-shifting and claim it is crucial to the goal of making HIV treatment much more widely available. Four prominent HIV/AIDS organizations called on the national and regional health departments to issue directives permitting the transfer of certain responsibilities and asked professional medical, nursing and pharmacist

bodies to support task-shifting (Medecins Sans Frontieres, 2009:553). A recent study in South Africa supported task-shifting to nurses, after it found that the care of patients receiving ART was not inferior when they were monitored by nurses rather than by doctors (The Lancet, 2010:21). This imposes the need for knowledge and skills on nurses to perfect and provide appropriately.

The country is expected to provide ARVs to almost all PLWHA whose CD4 cell count, according to the 2010 antiretroviral guideline released in February, stands at less than 200cells/mm³ and to other groups such as pregnant women, co-infected patients (TB/HIV/AIDS) and children under one year at less than 350cells/mm³ (HIV and AIDS South Africa: 2010:7). Hence, not all nurses are trained to initiate and manage ARVs (HIV and AIDS South Africa: 2010:7). Nurses need a good background to deal with the challenges put forth to address the provision of ARVs. These challenges again raise the workload challenges since their focus is not only based on the PLWHA but also on other patients (HIV and AIDS South Africa: 2010:7).

2.5 THE IMPACT OF HIV AND AIDS ON NURSES AS CARE GIVERS.

The impact of HIV and AIDS in South Africa has led to many innovative responses to the need for care and support for adults and children (HIV & AIDS in South Africa, 2010:1). These responses are largely influenced and shaped within the cultural milieu, including the values of Ubuntu (humanity) and the roles played by extended family structures, the traditional leaders and traditional healers (HIV & AIDS in South Africa, 2010:1). Significant among the responses is the development of community based models of palliative care to address the needs of clients and household members by providing home and community based services that are appropriate and that provide timely care and support within the continuum of care which extends across the health and other sectors (HIV & AIDS in South Africa, 2010:1). Approximately 5% of sub-districts have palliative care centres countrywide.

The National Palliative care guidelines have been developed to provide standard guidance for programme direction, implementation and professional practice (UNAIDS 2008:32).

Although HIV/AIDS has a major impact on the health sector, the disease cannot entirely be blamed for the challenges that health care workers have to face in South African health facilities (UNAIDS 2008:32). A number of other factors also influence the workplace. To begin with, political and economic changes in the mid-nineties had a major impact on the demand for health services in South Africa (HIV and AIDS South Africa: 2010:7). A fragmented system characterized by racial, gender, and geographic disparities is in the process of being transformed into a unified health system of equality, focusing on primary health care needs (Hall, 2005:8). As a result of this transformation, large sections of the population, who never had access to health care before, are now entitled to free health services (Hall, 2005:8). Also, better-equipped facilities are crowded due to people "shopping around" for health services (HIV and AIDS South Africa: 2010:7). In addition, many South Africans have been forced into subsidized health care over the past decade due to increases in medicine and medical services as well as rising unemployment (HIV and AIDS South Africa: 2010:7).

Little published information seems to exist on the impact of AIDS from the individual (nurses) rather than from the organizational perspective in the South African work environment. However, what is generally known is that HIV/AIDS will have an effect on people's jobs in terms of job load, stress levels, job satisfaction and performance, relationships with co-workers, and may ultimately influence their decision to leave or stay with a company. The discussion that follows will focus on literature reviewed related to burnout and depression.

2.5.1 Burnout

According to Schaufeli, Maslach and Marek (1993:255), the core of developing a better understanding of the concept of burnout lies in the prolonged nature of a stressful element in the workplace. The authors contend that burnout can be seen as a process that starts with prolonged levels of job tension that escalate to emotional exhaustion, depression and job dissatisfaction (Schaufeli et al, 1993:255). This process culminates in employees feeling detached from their work environment, with subsequent effects on their mental and physical health (Schaufeli et al, 1993:255).

Occupation, type of workplace, nature and organization of work, skills level and shortages of particular skills are factors that may determine the impact that HIV/AIDS will have on employees (Demmer, 2004:523). For example, certain occupations may hold particular challenges in terms of HIV/AIDS: educators teach learners that may frequently be absent from school to take care of ill family members, while health workers take care of patients with HIV-related illnesses and run the risk of becoming infected themselves (Demmer, 2004:523). Aiken and Sloane (1997a; 1997b) undertook research on work organization and HIV/AIDS and found that the organizational form of the unit and hospital in which AIDS care is provided has a significant impact on the emotional exhaustion experienced by nurses.

In working conditions that are particularly demanding, stress levels are likely to be high and productivity and quality of work threatened, leading to nurses' burnout. Burnout is a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind (Maslach & Jackson, 1981:99). A key aspect of the burnout syndrome is increased feelings of emotional exhaustion. As their emotional resources are depleted, nurses feel they are no longer able to give of themselves at a psychological level.

Another aspect is the development of negative, cynical attitudes and feelings about one's clients known as depersonalisation. Such negative reactions to clients may be linked to the experience of emotional exhaustion, that is, these two aspects of burnout appear to be somewhat related. This callous or even dehumanised perception of others can lead nurses to view their patients as somehow deserving of their troubles (Ryan in Maslach & Jackson, 1981:99), and the prevalence among human service professionals of this negative attitude towards clients has been well documented by Wills in Maslach and Jackson (1981:99). Another aspect of the burnout syndrome is the tendency to evaluate oneself negatively, particularly with regard to one's work with clients. Nurses feel unhappy about themselves and dissatisfied with their accomplishments on the job (Maslach & Jackson, 1981:99).

In other studies on burnout in health care workers, Van Servellen and Leake in Hall (2005:9) reported a strong association between job tension and emotional exhaustion in hospital nurses, irrespective of the unit in which they work, while Bellani, Furlani, Gneccchi, Pezzotta, Trotti and Bellotti (1996:213) and Gueiritaault-Chalvin, Kalichman, Demi and Peterson (2000:151) found that perceived workload would significantly predict burnout in AIDS caregivers. Bellani et al (1996:213) also link health care workers' fear of contagion with high burnout. Meaning the perceived workload of nurses and fear of contagion leads to distorted psychosocial wellbeing of nurses.

2.5.2 Depression

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration (WHO, 2011:1). Stress is the leading cause of depression on nurses (Lippincott, 1996:13). This tension can be due to stressors as tension-producing stimuli which result in disequilibrium with the internal, external and created environment (Neumann, 1995:22). The

effect of stressor in a hospital environment is mitigated by the number, nature, and intensity of stressors, and the timing, occurrence, and conditions of wellbeing and adaptive ability of nurses within the hospital environment (Moola, Ehlers & Hattingh, 2008:76). Hence, the psychosocial wellbeing of nurses is affected by stress and can have some impact on the quality of provision of care to PLWHA.

2.6 NURSING ETHICS AND TRAINING GAPS IN HIV AND AIDS

As we look back in the last decades, as it has been previously established, nurses recognize an ethical obligation to provide care for people living with HIV and AIDS. To meet this obligation the nurse faculty and practising nurses have an ethical responsibility to be sufficiently knowledgeable of the disease in order to:

- overcome the fears and the personal prejudice;
- prevent transmission of HIV through occupational exposure; and
- Provide competent, safe quality care (McCloskey & Grace, 1990:612).

The nursing profession, therefore, has the responsibility to assist in meeting these objectives.

This decade has a marked increase in efforts to further educate nurses about HIV and AIDS. These efforts may best be carried out through nursing's various curricula and professional associations. Just as there is no segment of the society that is not affected by HIV and AIDS, there is no area of specialization in nursing not directly affected by HIV and AIDS (McCloskey & Grace, 1990:612). It is further emphasized that nurses have the responsibility to seek out educational opportunities regarding HIV and AIDS. It is incumbent on all nursing academic programmes and specialty associations to develop, implement and evaluate HIV and AIDS educational programmes for nursing students and practicing nurses (McCloskey & Grace, 1990:613). Hence, HIV

and AIDS knowledge may be promoted at a preparatory stage of the profession.

2.7 KNOWLEDGE AND ATTITUDES OF NURSES CARING FOR PLWHA

Education about HIV and AIDS is the key to change in knowledge, attitudes, and behaviour of nurses caring for PLWHA (WHO, 2000:23). Education about HIV and AIDS must be improved in order to reduce gaps between policies and their grassroots implementation, and to ensure the adoption of effective prevention strategies (WHO, 2000:23). Research, practice and treatment for the prevention and care relating to HIV are changing so rapidly that nurses need to have continued education to remain up-to-date in their knowledge, skills and practices.

Educational opportunities are not always easy to access, and nurses and midwives may have to look for the latest information. There is no doubt that good practices are dependent upon adequate, accurate and up-to-date information (WHO, 2000:23). Much of the misinformation, myths and folklore surrounding HIV and AIDS can be corrected with ongoing education. Such education will reduce the fear, stigma, isolation, and denial of care for PLWHA (WHO, 2000:23).

Levels of knowledge regarding HIV and AIDS appear to be variable among nurses (Horseman & Sheeran, 1995:1538). Experiences of fear, stigma, isolation, discrimination and marginalization related to HIV/AIDS come from:

- Misinformation about HIV transmission;
- Fear of contracting HIV;
- Fear of caring for PLHA when the nurse/midwife fears that she/he too may have the illness;
- Religious teachings and influences related to sexuality and birth control;

- The cultural norms of silence regarding sexual practices;
- Preferences and desires; and
- Legal issues related to the misuse of legal and illegal substances, particularly intravenous drug use (WHO, 2000:37).

This means the more knowledge nurses have, the better their understanding of the disease.

Attitude derives from the Latin 'aptitude', meaning 'fitness'; fitness is to engage in the execution of the task (Reber, 1988 as cited by Effa-Heap, 1999:529). The modern usage of the term is a predisposing to act in a certain way towards some aspect of one's environment, including other people. Attitude can be positive or negative and can affect the behaviour of an individual. These attitudes serve a primary function of bringing together the diverse experiences to which an individual is exposed and forming them into a cohesive and organized whole.

It is through attitude and belief systems of an individual that environmental perception acquires meaning. Attitudes may become rigidly adhered to than assisting an individual in understanding his/her environment and the events taking place within it; they become the perception. The process of changing attitudes requires that the individual objectively examine the critical elements of the attitude and identify those components that are valid and those that are prejudgements (Gross, 1987:20).

Social psychologists describe attitude as a complex tendency of persons to behave in positive or negative ways or to respond in a favourable or unfavourable manner to social objects in his/her environment. They argue that there are three structural components of attitude, and these are the effective components which refers to positive or negative emotions about something; the behavioural component involves intentions to act in certain ways, to engage in behaviours that are somehow relevant to one's attitude,

and lastly, the cognitive component, which refers to the thinking and interpreting that goes into forming or using an attitude (Baron & Byrne, 1991:25). Davis and Houghton (1995:76) further emphasize that attitude is gained through experience and contact with the world around us. As individuals develop, they acquire a set of beliefs and attitudes that in part influence how they interact. They may be altered by new experiences and information.

2.8 CONCEPTUAL FRAMEWORK

The impact of caring for PLWHA among nurses brings along challenges that need to be addressed for them to become better care givers. The previous section dealt with literature review with regard to issues regarding caring for PLWHA. This section describes the relevance of cognitive science for this study. Definition and historical context of cognitivism, assumptions of cognitivism as well as its framework will be discussed.

2.8.1 Historical Context of Cognitivism

McCulloch and Pitts (1943:122) claim that brain functioning and mental activity could be understood as logical operations. Furthermore, the brain was thought to be a deductive machine. In the next significant development in cognitive science which occurred in 1956, guidelines for its development were set (Gardner in Stacey, 2007:60). The central idea is that human intelligence resembles computation so much that cognition, that is, human knowing, could be understood as a process of computing representations of reality. Humans are assumed to act on the basis of representations of their environment that are processed by their brains.

This definition as well as its assumptions is that cognitivism focuses on the nurses' mind and claims that the mind is an information processing device

which is the basis of rational thinking. Taking the above into consideration, it can be further emphasised that the brain is a passive mirror of reality (nurses' accurate picture) and repeated exposure makes it more accurate.

2.8.2 Assumptions of Cognitivism

According to Stacey (2007:61), the main assumptions of cognitivism are as follows:

- The brain is assumed to act as a passive mirror of reality
- The world in which human act is found, not created
- Repeated exposure to the same environment perception would strengthen connections, and so making a perception a more and more accurate representation of reality. This would form a template, stored in a particular part of the brain, against which other environmental perception are compared and categorised, forming the basis of the body's response.
- There is a fixed point of reference, external reality, and the negative feedback of the gap between the internal picture and this external reality forms a self regulating that closes the gap.
- The biological individual is at the centre of learning and acting.
- Since all the normal individuals have much the same biologically determined brain structures, and all their brains are processing symbolic representations of the same pre-given reality, there is no fundamental problem in individuals sharing the same perceptions.

The following discussion will focus on the assumptions of cognitivism, Lazarus and Folkman's cognitive appraisal theory, namely:

- Fixed point of reference;
- External reality;
- Cognitive appraisal (Lazarus & Folkman, 1986:76) and negative feedback;

- Biological individualism; and
- Symbolic representation of the pre-given reality (Stacey, 2007:61).

2.8.3 Fixed point of reference

The fixed point of reference will, in this study, refer to the nurses' caring for PLWHA. The emergence of HIV infection has added new stress factors for nurses, principally related to their relationship with HIV patients, safe working practices and fear of contagion, to name but a few (Gordin et al as cited in Visintini et al, 1996:184).

2.8.4 External reality

2.8.4.1 Types of stressors affecting nurses caring for PLWHA

The stressors are herein categorised into three groups, namely job characteristics, organisational and personal stressors as described by Demmer (2004:524). There are three categories of stressors that nurses are exposed to in the workplace:

- **Job characteristics**

According to Koekemoer and Mostert (2006:88), every occupation has its own specific job characteristics, but it is still possible to model these characteristics in two broad categories, namely job demands and job resources.

- a) job demands: these refers to those physical, psychosocial or organisational aspects of the job that require sustained physical and or mental efforts and are associated with certain physiological and psychological cost (Koekemoer & Mostert, 2006:88).
- b) Job resources: these refers to those physical, psychosocial or organisational aspects of the job that may be functional in

meeting the job demands, and may reduce the associated physiological and or psychological costs and, at the same time, stimulate personal growth and development (Koekemoer & Mostert, 2006:88). In the context of the nursing environment, the availability of nursing care resources plays a major role in the provision of quality nursing care.

- **Organisational characteristics**

These refer to the extent to which rewards and punishment are linked to the job performance. The conflict between the need to maintain their (nurses) nursing role and good performance as well as the presence of emotional factors could be stressful for nurses. According to Demmer (2004:525), less organisational support, including support from the supervisors and colleagues, exposes nurses to stress.

- **Personal characteristics**

Personal characteristics include various socio-demographic variables of the employee, self-efficacy, and social support. Physically, the nursing job can be demanding with high levels of muscular-skeletal stress, culminating in many aches and pains.

2.8.4.2 Cognitive appraisal theory and negative feedback.

Lazarus and Folkman's (1986:76) cognitive appraisal theory was adapted to describe the theoretical framework of this study. According to the two theorists, stress is a two way process: the environment produces stressors and the individual finds ways to deal with these. Cognitive appraisal is a mental process by which nurses assess two factors: "Whether a demand (job, organisational and personal characteristics) threatens nurses' well being' and "whether a nurse considers that they have the resources to meet the demand of the stressor" (Krohne, 2002:3). Lazarus' theory has two concepts,

which are cognitive appraisal (person's evaluation of the significance of what is happening for their mental health) and coping (person's efforts in thought and action to manage specific demands). Hence, in this study focus will be paid on cognitive appraisal. There are two types of cognitive appraisal: primary and secondary appraisal.

When nurses are confronted with job, organisational and personal stressors, they search for relevance of those stressors to their wellbeing (Krohne, 2002:4). Nurses, however, may try to attain this through secondary appraisal, thus through coping options. The coping option may be through blame or credit (who is responsible for certain events), coping potential (person's evaluation of the prospects for generating certain behavioural or cognitive actions) and future expectations (further course of the encounter) (Krohne, 2002:4). Hence, these patterns of primary and secondary appraisal lead nurses to negative feedback, that is, they view their encounter as either harm-loss, threat or a challenge.

The gap between internal perception and the external reality forms a self-regulating process (Stacey, 2007:70).

- Harm-loss refers to any kind of harm, loss or damage that has already been sustained such as injury, loss of self-esteem or loss of friendship (Lazarus, 1981:213).
- Threat refers to the anticipated harm, loss or damage. In threat instance, nurses offer nursing care in fear of contagion (Gordin et al, 1987:185), fear of stigma from both inside and outside the hospital setting and fear of losing patients (Miller, 1991:446).
- Challenge occurs when the judgement involves assessing whether a transaction holds the potential for harm, for mastery or for gain (Lazarus, 1991:213). Here, nurses judge if they influence the outcome themselves (Lazarus, 1991:213). That is, nurses see the stressor as a challenge that they feel confident to overcome and master (Krohne, 2002:4) while utilising the resources available.

2.8.5 Biological individualism: emotional exhaustion, depersonalisation, depression and job satisfaction.

According to Gramstad (1999:1), "Biological individualism" implies that people are all different, *as individuals*, and since these differences are inherent, they are hard to change. Individuals may show different effects of their cognitive appraisal such as emotional exhaustion, depersonalisation, depression and job satisfaction.

2.8.6 Symbolic representations of the pre-given reality: burnout and resilience

Symbolic representations of the pre-given reality is characterised by burnout and resilience. The devastating effects of work related stress among nurses could manifest as burnout with signs like loss of interest in work and PLWHA, poor work performance and dissatisfaction (Visintini et al, 1996:192).

Characteristics of the person and situation may identify resilient processes, but only if they lead to healthier outcomes following stressing circumstances (Reich et al, 2010:4). Resilience is said to be recovery or how well the individual bounces back and recovers fully from the challenge (Masten, 2001:234; Rutter, 1987:328).

This section utilised deductive reasoning as the study is quantitative in nature. Cognitive science was used to explain the connection between nurses and their environment as well as their patients. Cognitivism was divided into fixed point (nurses), external reality (environment), cognitive appraisal and negative feedback, biological individualism (centre of knowing and acting) and symbolic representations of the pre-given reality (burnout and resilience) which leads to the nature of care provided to PLWHA.

Summary

This chapter consisted of two sections. It elaborated on the overview of priorities made globally in response to HIV/AIDS and the South African intervention perspective of HIV/AIDS, outlining the major or priority interventions made to counteract the increase of HIV/AIDS. It also outlined the prevention strategies in place. The health workforce that is needed to provide the required services which includes the required human resources, that is, equivalent nurse-patient ratio. In order to allay anxiety, it also required material resources such as enough protective utensils for nurses caring for PLWHA. The task shifting due to increased HIV/AIDS intervention programme that requires nurses to perform duties that they have no experience in and training to perform such duties. The impact of HIV/AIDS on nurses caring for PLWHA includes burnout and depression. This is due to the nature of care that nurses provide to the PLWHA. The training gaps, and knowledge and attitudes of nurses caring for PLWHA were outlined. In this chapter a conceptual frame work of nurses caring for PLWHA was elaborated in this chapter.

CHAPTER 3

RESEARCH DESIGN AND METHODS

INTRODUCTION

This chapter presents the research approaches adopted for the study. The following sections are incorporated in this chapter: study design; a description of the study setting and target population and sampling procedure, instrumentation, data collection procedure and how data was analysed as well as ethical considerations of the study.

3.1 STUDY DESIGN

A descriptive, cross sectional study design is used. Descriptive design is the study in which trend is described and relationship between variables is examined (Brink, 1996:214). This method is used because it describes trends and examines relationship between variables in one point in time. Questionnaires were used to obtain information regarding participants' knowledge and psychosocial wellbeing with regard to their care giving role to PLWHA.

3.2 STUDY SETTING

The study was carried out in the Limpopo province. Limpopo province is one of the nine provinces of South Africa situated at the far northern eastern side of the country, constituting 11.3% of 47, 9 million South African populations. It is the fourth most populated province in the country. It consists of five districts which are Capricorn, Mopani, Sekhukhune, Vhembe and Waterberg. It is mostly rural and the second poorest province in South Africa (Statistics South Africa, 2007). It has 2 provincial tertiary, 6 regional and 34 district hospitals, 22 health centres, 396 fixed clinics and 3977 mobile clinics. The workforce consists of 2109 and 2929 professional nurses working at primary health care

facilities and district hospitals, respectively and having a vacancy rate of 45% (Limpopo Department of Health, 2008:32). There are 1907 enrolled nurses and 3132 enrolled nursing auxiliaries with the vacancy of 78% and 61%, respectively (Limpopo Department of Health, 2008:32). The study was conducted at a regional hospital in Vhembe district as a project within a broader study conducted by Davhana-Maselesele and Igumbor (2008) and resulted in the intervention programmes to address the knowledge and psychosocial needs of nurses at a regional hospital.

3.3 TARGETED POPULATION AND SAMPLING PLAN

The study targeted all nurses employed at the regional hospital where the study was conducted. Convenient sampling was used in the study. Convenient sampling is a type of sampling that is suitable for heterogeneous populations because the inclusion of small subgroups percentage-wise can be ensured (Van der Walt in De Vos et al, 2005:200). Stratification consisted of nurses who were divided into a number of strata which are mutually exclusive, and the members of which are homogenous in terms of their characteristics (De Vos, 2005:200). The population consisted of 568 nurses. The sample size was 233, which was proportionate according to the different strata. The participants were stratified by the level of training, so that they were divided into professional, enrolled nurses, and enrolled nursing auxiliaries. Efforts were made conveniently to have an equal representation of the nursing categories.

The hospital population was made up of the following:

Professional Nurses	N1 = 265
Enrolled Nurses	N2 = 142
Enrolled nursing auxiliaries	N3 = 161
Total	N = 568

- The sample size was arrived at by using the following formula (Schaeffer, Mendenhall & Ott, 2006:46):

$$n \geq \left(\frac{1}{n_0} + \frac{1}{N} \right)^{-1}$$

n is the sample size.

n_0 is a sample size for proportion.

Z^2 is the abscissa of the normal curve that cuts off an area at the tails.

N is the total population size ($N = 568$)

$$n_0 = \frac{Z_{0.025}^2 * \frac{1}{4}}{(\text{margin of error})^2}$$

This became,

$$n_0 = \frac{1.962^2 * \frac{1}{4}}{(0.05)^2} = 384.16$$

Hence, the total sample size became

$$n \geq \left(\frac{1}{384.16} + \frac{1}{568} \right)^{-1} = 229.167$$

This was then rounded up to make n to be 230.

The population 230 is then allocated proportionately to the three groups of nurses. An exact number of 240 questionnaires were distributed and 233 were returned fully completed. The population and sample size were broken down into the following strata:

- Total population = 568 sample size=233
- Professional nurses = 265 sample size=109
- Enrolled nurses = 142 sample size=58
- Enrolled nursing auxiliaries = 161 sample size=66

3.4 INSTRUMENTATION

A self-administrated questionnaire was used to collect data from the participants. The instrument incorporated patient demographic and professional profile, HIV/AIDS knowledge questions (Forrest & Kanabus, 2003:1), the Maslach burnout inventory (MBI) (Maslach & Jackson, 1981:193), the AIDS impact scale (AIS) (Bennett, Miller, & Ross, 1995:146), and the Beck's depression inventory (BDI) (Beck, 1967:125).

The first part of the instrument composed of participants' demographic information. Demographic variables were inclusive of, amongst others gender, age, qualification and current educational enrolment, level of education, duration of employment per allocation in the present ward and in the hospital, and lastly, unit of operation.

The HIV/AIDS knowledge questionnaire was derived from Forrest & Kanabus (2003:1) composed of HIV and AIDS prevention and precaution, agent and immunology, transmission and incidence, course and manifestations, and general knowledge questions. HIV/AIDS related questions were asked to differentiate between HIV and AIDS. Importance of sexuality and precautions was included in the questionnaire. Knowledge of and attitudes towards condoms and relationships with others, experience with HIV and AIDS as well as HIV testing was included in the questionnaire. Questions composed of multiple and true/false questions.

The AIDS Impact Scale contains 28 items measuring the impact of HIV/AIDS while caring for PLWHA. The scale is grouped into five scales: 'stigma and discrimination', 'identification with others', 'social reward', 'grief and loss' and 'gay affiliation' (Bennett, Kelaher & Ross, 1993:215). Each of these scales was designed to measure a different way of coping with stress related to working with HIV-infected patients. Reliability and validity study of the version

of the AIS confirmed the presence of five dimensions underlying the AIS items (Visintini et al, 1996:186), four of these replicated those originally described by Bennett, et al, (1991:184), while the 'gay affiliation' scale was substituted by 'peer relationship' scale as according to Visintini et al, (1996:186). These consist of a combination of positively worded items e.g. "I am rewarded by my patient's gratitude for the work that I do" and negatively worded items e.g. "Seeing my patients suffer and die is very difficult" (Bennett et al, 1995:146). A three point Likert scale (0=low to 2=high) was used instead of a five point Likert rating scale (strongly agree to strongly disagree), to determine the level of the impact of AIDS perceived from low to high. The breakdown of AIS according to Bennett (1991:134), is shown in Table 3.1 below.

Table 3.1: AIS scale

Scales	Positive loading items	Negative loading items
Peer relationship	5,22,25	21
Stigma and discrimination	13,17,19,20,36	None
Identification with patients	6,14,15,16,23,27	None
Grief and loss	1,3,7,9,24,28	None
Social reward	4,12,18	None

Bennett, Kelaher, and Ross 1991

The MBI (Maslach & Jackson, 1981:193) is a 22-item designed to measure burnout under three dimensions: personal accomplishment, emotional exhaustion and depersonalization. Cut-offs scores based on tertiles for low, medium and high burnout level were described for each scale total score. The MBI was used to measure the endurance to work performance and exhaustion in service delivery in relation to level of stress in the workplace (Maslach, Jackson & Leiter,1996:193). The MBI takes about 10-15 minutes to fill. Complete instructions were provided for the respondents (Maslach et al,1996:195).

Personal accomplishment composed of items like; "I can easily understand how my recipients feel about things", "I feel I am positively influencing other people's lives through any work", and "I have accomplished many worthwhile journeys in the job". Emotional exhaustion consisted of items such as "I feel burned out from my work", "I feel fatigued when I get up in the morning and have to face another day on the job", and "I feel emotionally drained from my work". Similarly depersonalisation contained items "I don't really care what happens to some recipients", "I feel I treat some recipients as if they were impersonal objects", and "I've become more callous toward people since I took this job"

The cut-off points were described with reference values of the Center of Advanced Studies on Burnout Syndrome (NEPASB), presented on table 3.2 below

Table 3.2: MBI scale cut-off points

Components	Cut-off points		
	Low	Medium	High
Emotional exhaustion	0-15	16-25	26-54
Depersonalization	0-02	02-08	09-30
Personal accomplishment	0-33	34-42	43-48

Values of the MBI scale developed by the Center of Advanced Studies on Burnout Syndrome, 2001 (Benevides-Pereira, 2001:84)

The BDI (Beck, 1967:125) is a series of questions developed to measure intensity, severity, and depth of depression. Its long form composed of 21 questions, each designed to assess symptom common among people with depression (Polgar, 2003:1). Participants' aggregate score on the BDI were rated from normal to extreme depression. Individual questions of the BDI assess mood, pessimism, and sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicidal ideas, crying, irritability, social withdrawal, body image, work difficulties, insomnia, fatigue, appetite, weight

loss, bodily preoccupation, and loss of libido. Items 1 to 13 assess symptoms that are psychological in nature, while items 14 to 21 assess more physical symptoms (Polgar, nd:2). The cut-off points are as described on the table below:

Table 3.3: BDI cut-off points

Normal (BDI score 0 - 10)	Normal to mild depression (0 – 16)
Mild mood disturbance (BDI score 11 - 16)	
Borderline Clinical Depression (17 – 20)	Borderline to Moderate depression (17 – 30)
Moderate depression (BDI score 21 - 30)	
Severe depression (BDI score 31 - 40)	Severe to extreme depression (31 and above)
Extreme depression (BDI score more than 40)	

A persistent score of 17 or above indicates you may need professional treatment

(<http://www.drcordas.com/education/mooddisorders/Scoring%20the%20Beck%20Depress.pdf>)

3.5 RELIABILITY AND VALIDITY

The study used MBI, BDI, AIS and AIDS questionnaires. The instrument has been tested for validity and reliability in different cultures and languages around the world, including Venda. The instruments were found to be valid and reliable in measuring what they should measure. An earlier study done among the same population by Davhana-Maselesele and igumbor (2008:70) confirmed a number of aspects, as follows: BDI's Cronbach's Alpha of 0.9 was obtained and the MBI with the Cronbach's Alpha of 0.78 as well as the AIS with the Cronbach's Alpha of 0.78. This confirms that instruments were valid and reliable.

3.6 DATA COLLECTION PROCEDURE

Data collection was done during both day and night shifts. Appropriate measures to include all wards in the hospital were taken by providing each ward with an opportunity to attend the information session of the study.

3.7 DATA ANALYSIS

Statistical Packages for Social Sciences (SPSS) (PASW statistics 18) computer software was used for data analysis. Knowledge levels were cross tabulated against demographic and professional characteristics, qualification to detect possible patterns and variations. The means and standard variations of all continuous variables were calculated. Results presentations included frequency tables generated by the statistical packages. Bivariate correlation was done to assess possible relationships between knowledge and emotional exhaustion, depersonalization and personal accomplishment and the measures of AIS.

The differences in means of scales and variables across demographic professional characteristics (Qualification) were compared through a one-way ANOVA. The ANOVA was complemented with multiple comparisons using the Fisher's least significant difference (LSD) Post-Hoc Test that is, comparing differences in averages of a variable between and within groups. Regression analysis was done to establish the predictors of measures of MBI scale using the backward and enter methods.

3.8 ETHICAL CONSIDERATIONS

The proposal was initially presented at the departmental level (Department of Nursing Sciences); it was also presented to North West University ethics committee for ethical clearance. Since the study is under a major study by

Prof. Davhana-Maselesele, viz., "Caring for carers: responding to nurses needs" the permission to conduct the study, ethical clearance of the major study was used. The researcher also underwent an online course on ethical issues. The following modules were undertaken: Social and Behavioural Responsible Conduct of Research and Human Research - Social & Behavioural Researchers & Staff.

CONFIDENTIALITY, ANONYMITY AND PRIVACY

The researcher ensured that all collected data was stored in locked place and electronic data was saved in a password protected environment where only the researcher had access. No names of the participants and hospital were divulged.

INFORMED CONSENT

Voluntary participation and written consent of all participants were sought and detailed information about the research was given. Participants were recruited from their respective allocated wards at the hospital. Information about the study was provided, and if they agreed, a written consent form was signed. Following appropriate explanation of the study, participants were given the study's information sheet (appendix 2) and consent form (appendix 1) to read and sign if they were willing to participate in the study. They were then handed the questionnaires to fill at their most preferable time and in their private environment. Participants were informed about their right to withdraw from the research at anytime without any coercion.

BENEFITS AND FREEDOM FROM HARM

Participants were informed that the research is of no harm to them. The study protected the rights and dignity of the participants. The researcher adhered to the rules and standards of planning, implementing, evaluation and reporting of research to ensure the quality of research. The results of the research were disseminated to the institution involved.

3.9 SUMMARY

A quantitative approach was used with a descriptive cross-sectional study design. Within a population of 568, a sample size of 233 nurses were selected randomly and stratified into three strata. An instrument was used which was composed of demographic characteristics of participants, AIS, MBI and BDI. Ethical considerations were taken in to account and the procedure for data collection and how data was analysed.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

The results presented in this chapter are structured according to the objectives of the study. The objectives include describing the HIV and AIDS related knowledge of nurses caring for PLWHA; to establish the level of burnout amongst nurses caring for PLWHA; and to determine the relationship between HIV/AIDS knowledge and psychosocial wellbeing, as well as to develop guidelines for support to nurses caring for PLWHA based on the reported state of their psychosocial wellbeing and level of knowledge.

Given that previous studies (Davhana-Maselesele and Igumbor, 2008) have noted differences among nurses based on their qualifications, the results presented below are stratified accordingly. This resulted in three strata or categories of nurses namely; professional nurses, enrolled nurses and enrolled nursing auxiliaries. In measuring the psychological wellbeing of nurses, this study used the MBI, AIS and BDI scales. These scales are further disaggregated into their respective subscales. The MBI subscales are emotional exhaustion, depersonalisation and personal accomplishment. There are five AIS subscales namely; social reward, grief and loss, stigma/discrimination, peer relationship/loss tolerance, and identification with others. The BDI scale aggregate scores are also presented. The difference in means of scales and variables across demographic characteristics (Qualification) were compared with one-way ANOVA, hence complemented with multiple comparisons using the LSD Post-Hoc Test. The relationship between knowledge and MBI, AIS and BDI was correlated. Regression analysis was done to establish the predictors of measures of MBI scale using the backward and enter methods.

4.2 PROFESSIONAL AND DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

A total of 240 questionnaires were distributed with the aim having extras in case of questionnaires not completely filled and 233 were returned. Most responses (36.9%) came from the medical and palliative wards, followed by surgical wards (26.2%) and maternity wards (14.6%). The sample was mostly made up of professional nurses (47%), followed by enrolled nursing auxiliaries (28%) and enrolled nurses (25%). Table 4.1 shows a breakdown of the frequency and percentage distribution of participants' professional and demographic characteristics.

Table 4.1: Frequencies and Percentages of Participants' Professional and Demographic Characteristics

Demographic characteristic	Professional nurse(n=109)	Enrolled nurse (n=58)	Enrolled nursing auxiliaries(n=66)
Age			
21-30	40(36.7%)*	0	22(33.3%)
31-40	21(19.3%)	27(46.6%)*	19(28.8%)
41-50	30(27.5%)	21(36.2%)	24(36.4%)*
50 and above	18(16.5%)	10(17.2%)	1(1.5%)
Gender			
Male	14(12.8%)	11(19.0%)	27(40.9%)
Female	95(87.2%)*	47(81.0%)*	39(59.1%)*
Current enrolment			
Not enrolled	99(90.8%)*	32(55.2%)*	64(97.0%)*
Enrolled	10(9.2%)	26(44.8%)	2(3.0%)
Ward allocation			
OPD/Casualty	9(8.3%)	6(10.3%)	3(4.5%)
Medical and palliative wards	41(37.6%)*	22(37.9%)*	23(34.8%)
Surgical wards	20(18.3%)	16(27.6%)	25(37.9%)*
ICU/OT/Private ward	13(11.9%)	7(12.1%)	14(21.2%)
Maternity wards	26(23.9%)	7(12.1)	1(1.5%)

Demographic characteristic

Years of service at hospital

Less than 2 years	7(6.4%)	08(13.8%)	9(13.6)
2-4 years	44(40.3%)*	25(42.2%)*	23(34.8%)
5-10 years	14(12.8%)	6(10.3%)	33(50.1%)*
11-20 years	18(16.2%)	19(33.7%)	1(1.5%)
Above 20 years	26(24.3%)	0	0

*highest frequencies and percentages

Most of the professional nurses were in the 21-30 years age group (37%), while most of the enrolled nurses (47%) and enrolled nursing auxiliaries (36%) were in the 31-40 and 41-50 year age groups respectively. Female nurses dominated the study participants in all the categories; this may be due to the fact that nursing had been female dominated.

At the time of this study, about 45% of the enrolled nurses were currently studying to further their education while about 9% of the professional nurses were enrolled for post basic nursing courses and 3% of the enrolled nursing auxiliaries had enrolled for the enrolled nursing course. Higher proportions of the professional and enrolled nurses were based in the medical and palliative wards, Hence; they deal HIV and AIDS patients and the terminally ill more than other wards. Enrolled nursing auxiliaries (38%) were mostly based in the surgical wards.

The years of experience of professional nurses ranged from about 1 to 27 years with a mean of 10.69 (SD=9.04). When years of experience were categorized, most of the professional nurses (40%) had been working for between 2 to 4 years. Similarly, about 42% of the enrolled nurses have been working for between 2 and 4 years. On the other hand, there were more enrolled nursing auxiliaries participants (50%) with 5-10 years experience.

4.3 OBJECTIVE 1: LEVEL OF KNOWLEDGE ABOUT HIV AND AIDS.

The highest possible knowledge assessment score was 20. The total score obtained by all the participants ranged from 1 to 9.5 with an average of 7.90 (SD=1.24). Only professional nurses obtained a mean knowledge score (8.04; SD=1.47) that was above the group average. The average knowledge score was 7.75 (SD=1.13) and 7.82 (SD=0.82) for the enrolled nurses and enrolled nursing auxiliaries, respectively. Table 2.1 below shows the responses of the three categories of nurses to the knowledge assessment questions.

Table 4.2: HIV and AIDS Knowledge Questionnaire.

Question/statement	Answers	PN %	EN %	AN %
		N=109	N=58	N=66
More women are Infected with HIV than men	Incorrect	37.6	19.0	22.7
	Correct	62.4	81.0*	77.3
HIV and AIDS are the same thing	Incorrect	11.9	25.9	22.7
	Correct	88.1*	74.1	77.3
The window period is 10 months long	Incorrect	19.3	5.2	3.0
	Correct	80.7*	80.7*	97.0*
Sexually transmitted diseases increase the risk of HIV	Incorrect	4.6	1.7	1.5
	Correct	95.4*	98.3*	98.5
Approx. how many people are Infected with HIV worldwide?	Incorrect	51.4	56.9	30.3
	Correct	48.6	43.1	69.7
How can you tell if somebody has HIV or AIDS?	Incorrect	14.7	17.2	54.5
	Correct	85.3*	82.8*	45.5
Which protects you most against HIV Infection?	Incorrect	4.6		
	Correct	95.4*	100*	100*
What are the specific symptoms of AIDS?	Incorrect	17.4	15.5	28.8
	Correct	82.6*	84.5*	71.2
HIV is a...	Incorrect	5.5		
	Correct	94.5*	100*	100*

Question/statement Cont....	Answers	PN %	EN %	AN %
		N=109	N=58	N=66
Is there a cure for AIDS?	Incorrect	8.3	19.0	16.7
	Correct	91.7*	81.0*	83.3*
When Is World AIDS Day held?	Incorrect	10.1	37.9	25.8
	Correct	89.9*	62.1	74.2
Is there a difference between HIV and AIDS?	Incorrect	20.2	13.8	9.1
	Correct	79.8	86.2*	90.9*
What percentage of those Infected with HIV are women?	Incorrect	61.5	60.3	72.7
	Correct	38.5	39.7	27.3
Worldwide, what Is the age range most infected with the HIV?	Incorrect	48.6	60.3	27.3
	Correct	51.4	39.7	72.7
Is It possible to prevent women Infected with HIV from having an Infected baby?	Incorrect	28.4	48.3	6.1
	Correct	71.6	51.7	93.9*
A healthy HIV-positive person has a several needs that should be fulfilled to ensure a functional and productive life. Select the most appropriate needs	Incorrect	1.8	00	00
	Correct	98.2*	100*	100*
When can an Infected mother transmit HIV to her baby?	Incorrect	31.2	53.4	81.8*
	Correct	68.8	46.6	18.2

* High percentage. PN- Professional nurses, EN- Enrolled nurses, ENA- Enrolled nursing auxiliaries.

4.3.1 Training and Workshops

Nurses varied when it came to receiving any training or workshop in relation to HIV and AIDS. Enrolled nurses had more training 55.2% when compared to professional (34.9%) and enrolled nursing auxiliaries (39.4%). This was the response received after the question, "did you receive any training or

workshop on HIV and AIDS?" The breakdown of level of training and workshop can be found in Figure 4.1.

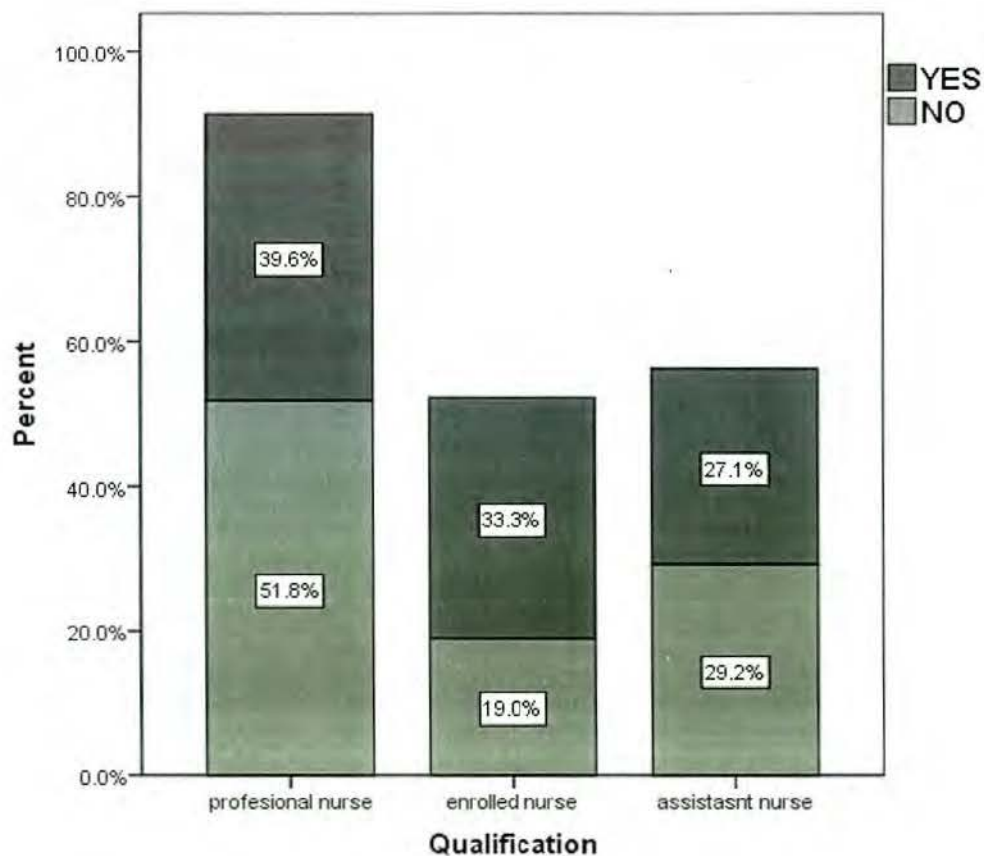


Figure 4.1: Training received

Most professional nurses (46.3%) and enrolled nurses (38.2%) only received training in HIV and AIDS when they were expected to do VCT. Hence, the majority of enrolled nursing auxiliaries (59.3%) received HIV/AIDS workshop/training when there was a workshop conducted at the hospital. Approximately 27% of professional nurses, 24 of enrolled nurses and 37% of enrolled nursing auxiliaries received training when they were still students. There was, however, a significant difference between the groups ($p=0.00$). Refer to Table 4.3.

Table 4.3: I Received Training/Workshop in HIV/AIDS when

	Qualification			x ² (P)
	PN	EN	ENA	
	N=109	N=58	N=66	
I was still a student	26.8%	23.5%	37%	27.21 (0.00)
There was a workshop conducted at the hospital	19.5%	32.4%	59.3%	
I was expected to do VCT	46.3%	38.2%	0	
When I was delegated to work at the HIV and AIDS clinic	0	5.9%	3.7%	
Any other	7.3%	0	0	

4.3.2 Preventive Knowledge

Knowledge about HIV/AIDS prevention was found to be very high amongst the groups. This was assessed using different questions. The participants were, for instance, asked if "*sexually transmitted diseases increases the risk of HIV*", very high proportions of the different categories provided correct answers to such questions. When asked, "*which of the following protects you most against HIV infection?*" All enrolled and enrolled nursing auxiliaries answered correctly-100%, while about 95% of the professional nurses provided the correct answer. When asked, "*Is it possible to prevent women from being infected with HIV from having an infected baby?*" Relatively lower percentage of professional ($\pm 72\%$) and enrolled nurses ($\pm 52\%$) provided correct answers.

About 60% of all the participants knew what PEP is. This was evident after being asked "*do you know what post-exposure prophylaxis (PEP) is?*". About 63%, 60% and 55% of professional nurses, enrolled nurses and enrolled nursing

auxiliaries, respectively, knew what PEP is. There was a significant difference between the groups ($p=0.00$) (Table 4.4).

Table 4.4: Knowledge about Post Exposure Prophylaxis (PEP).

	Qualification			
	PN N=109	EN N=58	ENA N=66	Pearson Chi-square (P-value)
Yes	63.2%	60.3%	54.5%	24.08(0.00)
No	36.8%	39.7%	45.5%	
Is PEP available in this hospital?				
Yes	68.8%	72.4%	83.3%	24.08(0.00)
No	0.9%	13.8%	1.5%	
Don't know/not sure	30.3%	13.8%	15.2%	

The majority of all the participants (73.8%) knew of the availability of PEP at the hospital. About 22% of all the participants did not know or were not sure if it was available at the hospital. Similarly, about 30% of professional nurses did not know or were not sure if it was available. This proportion among professional nurses was high when compared to the approximately respective 14% and 15% of enrolled and enrolled nursing auxiliaries, who did not know or were not sure if PEP was available at the hospital. There was a huge significant difference between the variables ($p=0.00$). This data is shown in Table 4.4

4.4: OBJECTIVE 2: LEVEL OF PSYCHOSOCIAL WELLBEING

4.4.1 Maslach Burnout Inventory (MBI)

Table 4.5 presents the assessment of the participants' level of burnout by their qualification categories.

Table 4.5: Measures of MBI Across Nursing Categories

	Qualification			
	PN N=109	EN N=58	ENA N=66	X ² (p-value)
Emotional Exhaustion-MBI				
Low	49.5%	50%	54.5%	13.14(0.01)
Medium	20.2%	29.3%	6.1%	
High	30.3%	20.7%	39.4%	
Depersonalization-MBI				
Low	13.8%	13.8%	22.7%	7.97(0.09)
Medium	20.2%	34.5%	18.2%	
High	66.1%	51.7%	59.1%	
Personal Accomplishment-MBI				
Low	80.7%	86.2%	95.5%	7.52(0.02)
Medium	19.3%	13.8%	4.5%	
High	0	0	0	

MBI-EE- low=0-15, medium=16-25, high=26-54; MBI-D- low=0-2, medium=3-8, high=9-30; MBI-PA- low=0-33, medium=34-42, high=43-48

About 51% of the respondents had a low MBI-EE score, and 18% and 31% had a medium and high MBI-EE score, respectively. Enrolled nursing auxiliaries (39%) had high Emotional Exhaustion as compared to the professional (30%) and enrolled nurses (21%). The use of chi-square showed a significant difference (p=0.01) between the groups.

A high proportion of nurses in all categories had a relatively high percentage of depersonalisation. A high score shows a high degree of burnout while a low score shows a low degree. High level of depersonalisation was shown by professional nurses with about 66% scoring high, followed by enrolled nursing auxiliaries and enrolled nurses scoring about 59% and 52%, respectively, (See

Table 4.5) Very few participants had a low score of depersonalisation. About 17% of participants had low depersonalization and 61% had high depersonalization. About 14% of professional and enrolled nurses, and 27% enrolled nursing auxiliaries had low depersonalisation. Therefore, there was no significant difference ($p=0.09$) between the groups.

The majority of nurses in all categories (86.3%) had low for personal accomplishment scores. Enrolled nursing auxiliaries (96%) had low personal accomplishment, followed by enrolled nurses (86%) and professional nurses (81%). None of the participants had high personal accomplishment. There was a significant difference between the groups ($p=0.02$). See Table 4.5.

Table 4.6 presents the mean scores of personal accomplishment, emotional exhaustion and depersonalisation.

Table 4.6: Burnout Subscale Mean Scores on the MBI

variable	Mean	SD.	Min.	Max.	N.
Personal accomplishment	22.86	8.76	4.00	40.00	233
Emotional exhaustion	17.76	12.28	.00	46.00	233
Depersonalization	10.48	6.69	.00	26.00	233

Further descriptive analysis, as presented in the above table, revealed a mean personal accomplishment of 22.86 (SD=8.76), a mean emotional exhaustion score of 17.76 (SD=12.28) and a mean depersonalisation score of 10.48 (SD=6.69)

4.4.2 The Impact of Caring for PLWHA on Nurses.

Table 4.7 presents the measures of AIS, and these are subdivided as follows:

Table 4.7: Measure of AIS scale

IMPACT SCALE Item Statistics									
	Professional nurse (n=109)			Enrolled nurse(N=58)			Enrolled nursing auxiliary(N=66)		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
AIDS impact scale measures of peer relationship/loss tolerance									
Seeing my patients suffer and die is very difficult.	6.4%	24.8%	68.8%	17.2%	15.5%	67.2%	3.0%	9.1%	87.9%
I feel the distress that my patient is going through.	13.8%	30.3%	56.0%	15.5%	17.2%	67.2%	4.5%	3.0%	92.5%
I become friends with many of my patients and suffer when they die.	25.7%	21.1%	53.2%	22.4%	25.9%	51.7%	16.7%	47.0%	36.4%
I am rewarded by my patients' gratitude for the work I do.	30.3%	21.1%	46.6%	20.7%	20.7%	58.6%	1.5%	50.0%	48.6%
I feel a responsibility to help deal with the Impact of AIDS in our society	18.3%	25.7%	56.0%	22.4%	37.9%	39.7%	33.3%	15.2%	51.5%
AIDS impact scale measures of identification with others									
When I look at my patients I think I'll end up like that.	43.1%	22.9%	33.9%	20.7%	27.6%	51.7%	25.8%	54.5%	19.7%
I am working in this area due to my involvement in home based care.	42.2%	32.1%	25.7%	60.3%	6.9%	32.8%	33.3%	40.9%	25.8%
I identify strongly with my patients	21.1%	29.4%	49.5%	27.6%	20.7%	51.7%	16.7%	15.2%	68.2%
I have a lot in common with my patients	33.0%	14.7%	51.4%	36.2%	25.9%	37.9%	4.5%	53.0%	42.4%
There are many aspects of my patients' life that remind me of my own	38.5%	22.9%	38.5%	32.8%	25.9%	41.4%	28.8%	36.4%	34.8%
AIDS impact scale measures of social reward									
I am highly regarded by my friends due to my work in the AIDS unit.	32.1%	33.9%	33.9%	46.6%	36.2%	17.2%	33.3%	33.3%	33.3%
My friends recognize that my work in the area of AIDS is a valuable contribution to society	19.3%	27.5%	53.2%	20.7%	27.6%	51.7%	7.6%	53.0%	39.4%
I receive status and recognition due to my involvement in the area of AIDS	41.3%	30.3%	28.4%	55.2%	20.7%	24.1%	25.8%	28.8%	45.5%
My friends encouraged me to apply for a job in the area of AIDS	51.4%	13.8%	34.9%	58.6%	6.9%	34.5%	56.1%	9.1%	34.8%
AIDS impact scale measures of grief and loss									
I have trouble coping with the number of deaths on the unit	21.1%	39.4%	39.4%	27.6%	22.4%	50.0%	3.0%	21.2%	75.8%
I feel helpless watching a patient suffer in the final stages of his illness	19.3%	22.0%	58.7%	24.1%	13.8%	62.1%	3.0%		97.0%
I feel powerless because no matter what I do my patients with AIDS will die	48.6%	20.2%	31.2%	32.8%	24.1%	43.1%	7.6%	21.2%	71.2%
I have had to deal with many losses due to AIDS	27.5%	31.2%	41.3%	27.6%	41.4%	31%	4.5%	43.9%	51.5%
AIDS impact scale measures of stigma and discrimination									
People move away from me at social functions if they hear that I work in the area of AIDS	52.3%	27.5%	20.2%	72.4%	10.3%	17.2%	63.6%	3.0%	33.3%
Some friends have had less contact with me since I started working with AIDS patients	60.6%	27.5%	11.9%	56.9%	17.2%	25.9%	63.6%	12.1%	24.2%
I suffer stigma/discrimination outside of work due to the area in which I work	65.1%	16.5%	18.3%	62.1%	25.9%	12.1%	28.8%	19.7%	51.5%
I suffer stigma/discrimination from other staff at the hospital due to the unit in which I work.	53.2%	22.9%	23.9%	44.8%	29.3%	25.9%	48.5%	19.7%	31.8%

4.4.2.1 Stigma and Discrimination

Enrolled nursing auxiliaries had the highest percentage of participants, about 52% and 33%, experiencing stigma and discrimination especially with the items *"I suffer stigma/discrimination outside work due to the area in which I work"*; *"people move away from me at social functions if they hear that I work in the area of AIDS"*, respectively, while professional and enrolled nurses had the highest percentages, scoring low impact of stigma and discrimination. See Table 4.7.

4.4.2.2 Peer Relationship or Loss of Tolerance

The item, *"seeing my patients suffer and die is very difficult"* was perceived as a high by all nursing categories, with highest enrolled nursing auxiliaries at 88%, followed by professional nurses at 69% and enrolled nurses at 67%. Majority of all categories agreed with the item *"I feel the distress that my patient is going through"*. Almost all (93%) enrolled nursing auxiliaries agreed with this statement, while about half (56%) of the professional nurses and two-thirds (67%) of the enrolled nurses agreed with it. See Table 4.7.

4.4.2.3 Social Reward

About 53% and 52% of the professional and enrolled nurses, respectively scored high social reward on the item, *"my friends recognise that my work in the area of AIDS is a valuable contribution"* while only about 39% of enrolled nursing auxiliaries scored high on the same item. About half of the professional nurses (52%), enrolled nurses (59%) and enrolled nursing auxiliaries (56%) scored low on the item, *"my friends encouraged me to apply for a job in the area of AIDS"*. Just about one third of all nursing categories had scored high on the item, *"I am highly regarded by friends due to my work in the AIDS unit"*. About 46% of enrolled nursing auxiliaries scored high on the item *"I receive status and recognition due to my involvement in the area of AIDS"*, while a relatively small percentage of professional nurses (28%) and enrolled nurses (24%) scored high on social reward. See Table 4.7.

4.4.2.4 Identification with Others

Enrolled nursing auxiliaries (68%) strongly agreed with the statement "*I identify strongly with my patients*", followed by enrolled (52%) and professional nurses (50%). In item, "*I have a lot in common with my patients*" professional nurses (51%), enrolled nurses (38%) and enrolled nursing auxiliaries (42%) strongly agreed with the statement. The item, "*there are many aspects of my patients' life that remind me of my own*", was agreed to by 39% of professional nurses, 41% of enrolled nurses and about 35% of enrolled nursing auxiliaries. See Table 4.7.

4.4.2.5 Grief and Loss

A relatively higher percentage of enrolled nursing auxiliaries showed a high AIDS impact in this AIS subscale when compared to professional and enrolled nurses. The sub-scale is made up of the following items: "*I have trouble coping with the number of deaths on the unit*", "*I feel helpless watching a patient suffer in the final stages of his illness*", "*I feel powerless because no matter what I do my patients with AIDS will die*", and "*I had to deal with many losses due to AIDS*". There were about 76%, 97%, 71% and 52% of enrolled nursing auxiliaries agreeing with the items, respectively. See Table 4.7.

One way ANOVA of the measure of AIDS impact scale was done and the results are as follows: there was a significant difference between the means of nursing categories by AIS stigma and discrimination ($p=0.02$), AIS Peer relationship/loss tolerance ($p=0.01$) and AIS grief and loss ($p=0.00$). The mean scores of enrolled nursing auxiliaries were higher than of professional and enrolled nurses in AIS scale stigma and discrimination (mean=3.36), peer relationship (mean=7.58), and grief and loss (mean=7.15). The Table 4.8 shows the mean scores within measures of AIS scale.

Table 4.8: One-way ANOVA of the measures of AIDS impact scale

Measures of AIS	N	Mean	SD	F	P-value
AIS Stigma and discrimination					
Professional nurse	109	2.43	2.00	3.81	.024
Enrolled nurse	58	2.44	2.29		
Enrolled nursing auxiliaries	66	3.36	2.76		
AIS peer relationship/loss of tolerance					
Professional nurse	109	6.88	2.81	1.78	.017
Enrolled nurse	58	6.86	2.46		
Enrolled nursing auxiliaries	66	7.58	2.16		
AIS Identification with others					
Professional nurse	109	5.26	2.81	1.05	.35
Enrolled nurse	58	5.40	2.46		
Enrolled nursing auxiliaries	66	5.81	1.82		
AIS social reward					
Professional nurse	109	4.06	2.30	2.16	.12
Enrolled nurse	58	3.47	2.26		
Enrolled nursing auxiliaries	66	4.30	2.36		
AIS grief and loss					
Professional nurse	109	5.03	2.11	24.57	.000
Enrolled nurse	58	5.21	2.45		
Enrolled nursing auxiliaries	66	7.15	1.38		

Enrolled nursing auxiliaries had significantly higher mean scores than professional and enrolled nurses in AIS stigma and discrimination subscales when using the LSD post hoc test to compare the three categories of nursing. It suggests that those with higher qualifications suffered lower impact of AIDS caring on the aspect of stigma and discrimination. Enrolled nursing auxiliaries had a significantly higher mean AIS grief and loss as compared to other nursing categories. Table 4.9 shows the LSD post hoc comparison of the mean AIS subscales by level of qualification.

Table 4.9: LSD Post Hoc comparison of the mean AIS scale and domain scores by qualification

Multiple Comparisons LSD				
Dependent Variable	(I) Q	(J) Q	MD (I-J)	Sig.
AIS stigma and discrimination	PN	EN	-.02	.964
		ENA	-.93*	.010
	EN	PN	.01	.964
		ENA	-.91*	.029
	ENA	PN	.93*	.010
		EN	.92*	.029
AIS peer relationship or loss tolerance	PN	EN	.02	.964
		ENA	-.69	.083
	EN	PN	-.02	.964
		ENA	-.71	.122
	ENA	PN	.69	.083
		EN	.71	.122
AIS identification with others	PN	EN	-.13	.739
		ENA	-.56	.152
	EN	PN	.13	.739
		ENA	-.42	.345
	ENA	PN	.56	.152
		EN	.42	.345
AIS social reward	PN	EN	.59	.112
		ENA	-.24	.508
	EN	PN	-.59	.112
		ENA	-.84*	.045
	ENA	PN	.24	.508
		EN	.84	.045
AIS grief and loss	PN	EN	-.18	.587
		ENA	-2.12*	.000
	EN	PN	.18	.587
		ENA	-1.94*	.000
	ENA	PN	2.12*	.000
		EN	1.94*	.000

PN- professional nurse; EN-Enrolled nurse; ENA- Enrolled nursing auxiliary *. The mean difference is significant at the 0.05 level.

4.4.3 Measures of Depression among Nurses

The 21-item Beck's Depression inventory with a scale of 0 to 3, a Cronbach's Alpha of 0.93 was obtained and a total mean of 21.31 (SD=1.16) among all

nurses. The total BDI-score ranged from 0 to 63. Sadness had the highest mean score (1.60; SD=1.27) followed by a sense of failure (1.39; SD=1.16), fatigability (1.33; SD=1.27), dissatisfaction (1.28, SD=1.12) and insomnia (1.24; SD=1.21). Depression was categorised into three categories, which is, normal to mild depression, borderline to moderate depression and severe to extreme depression. Table 4.10 below indicates the Beck's depression inventory rating across the qualification variables.

Table 4.10: Level of depression among nurses caring for PLWHA.

Qualification	BECK'S DEPRESSION INVENTORY RATING			Pearson Chi-square (p-value)
	(0 - 16)	(17 - 30)	(31 and above)	
Professional nurse (n=109)	47.7%	29.3%	22.9%	7.08(0.13)
Enrolled nurse (n=58)	32.8%	34.5%	32.7%	
Enrolled nursing auxiliaries (n=66)	45.4%	19.7%	34.8%	
Total (N=233)	40.3%	27.9%	28.8%	

Normal to mild depression= **0-16**, borderline to moderate depression=**17-30**, severe to extreme depression=**31 and above**.

About 35% of enrolled nurses showed clinical borderline to moderate depression. This was followed by professional nurses at 29%. Enrolled nursing auxiliaries (35%) had the most severe to extreme depression, as compared to enrolled (33%) and professional nurses (23%).

4.5. CORRELATION OF KNOWLEDGE AND THE MEASURES OF PSYCHOSOCIAL WELLBEING.

Total knowledge score was correlated against measures of psychosocial wellbeing, that is, measures of MBI, AIS and the BDI, for all nursing categories.

Table 4.11, 4.12, 4.13 and 4.14 show the correlation coefficients of knowledge and psychosocial wellbeing.

Table 4.11 show a correlation between total knowledge score, measures of MBI, measures of AIS and the BDI across all participants.

Table 4.11: Pearson correlations of the total knowledge score, MBI, BDI and AIS

Name	TKS	MBI-PA	MBI-EE	MBI-D	BDI	AIS-S&D	AIS-PR/LT	AIS-I	AIS-SR
TKS	1								
MDI-PA	.00	1							
MBI-EE	-.12	.31**	1						
MBI-D	-.13*	.17**	.79**	1					
BDI	-.16*	.09	.15*	.11	1				
AIS-S&D	-.17**	.03	.49**	.55**	-.04	1			
AIS-PR/LD	-.12*	.18**	-.00	.14*	-.08	.34**	1		
AIS-I	-.01	.16*	.18**	.24**	.02	.41**	.59**	1	
AIS-SR	.00	.09	-.00	.09	.07	.34**	.49**	.46**	1
AIS-G&L	-.08	.03	.02	.09	-.07	.29**	.66**	.55**	.31**

** . Correlation is significant at 0.01 levels (2-tailed). * . Correlation is significant at 0.05 levels (2-tailed). Keys= TKS- Total Knowledge Score; MBI-PA- Personal Accomplishment, MBI-EE- Emotional exhaustion, MBI-D- Depersonalisation; BDI- Beck Depression inventory; AIS-S&D- Stigma and Discrimination, AIS-PR/LT-Peer Relationship or Loss Tolerance, AIS-I-Identification with others, AIS-SR-Social Reward and AIS-G&L- Grief and Loss

Correlation coefficients of the identified variables are reported in Table 4.11. The level of reported stigma and discrimination caused by working with PLWHA was significantly associated with emotional exhaustion ($r=0.49$) and depersonalisation ($r=0.55$). The stigma and discrimination and peer relationship or loss tolerance of the AIDS impact scale had no relationship

with the total knowledge score of HIV ($r=-0.12$ and $r=-0.17$ respectively). The total Knowledge score had no association with the BDI ($r=-0.16$), emotional exhaustion ($r=-0.12$) and depression ($r=-0.13$).

Table 4.12 presents the correlation coefficients of total knowledge score, measures of MBI, BDI and AIS domains for professional nurses

Table 4.12 Correlation Coefficients of Total Knowledge Score, Measures of MBI, BDI and AIS Domains for Professional nurses.

Name	TKS	MBI-PA	MBI-EE	MBI-D	BDI	AIS-S&D	AIS-PR/LT	AIS-I	AIS-SR
TKS	1								
MDI-PA	.00	1							
MBI-EE	.05	.20*	1						
MBI-D	.03	.06	.71**	1					
BDI	-.09	.13	.33**	.27**	1				
score									
AIS-S&D	-.10	.00	.45**	.56**	.20*	1			
AIS-	-.18	.03	-	-.04	-.02	.16	1		
PR/LD			.28**						
AIS-I	.04	.06	-.04	.08	.03	.34**	.51**	1	
AIS-SR	.02	-.03	-.19	-.04	-.04	.32**	.56**	.56**	1
AIS-G&L	-.07	-.04	-.09	.11	-.15	.17	.69**	.58**	.39**

**. Correlation is significant at 0.01 level (2-tailed).*. Correlation is significant at 0.05 level (2-tailed).

There was a significant positive relationship between emotional exhaustion (EE) and depression among professional nurses ($r=0.71$), the BDI score ($r=0.33$), stigma and discrimination (S&D) ($r=0.45$) and a significant negative association with peer relationship or loss tolerance (PR/LT) ($r=-0.28$). AIS measures had a moderate to strong significant relationship with each other, that is, identification with others was significant positively with S&D ($r=0.34$)

and PR/LT ($r=0.51$). Among professional nurses, social reward was significantly positively associated with all other four measures of AIS.

Table 4.13 shows the correlation coefficients of total knowledge score, measures of MBI, BDI and AIS domains for enrolled nurses

Table 4.13: Correlation Coefficients of Total Knowledge Score, Measures of MBI, BDI and AIS Domains for Enrolled Nurses.

Name	TKS	MBI-PA	MBI-EE	MBI-D	BDI	AIS-S&D	AIS-PR/LT	AIS-I	AIS-SR
TKS	1								
MDI-PA	-.06	1							
MBI-EE	-.22*	.40**	1						
MBI-D	-.18*	.11*	.73**	1					
BDI	-.49**	.34*	.49**	.42**	1				
AIS-S&D	.07	-.07	.34**	.19*	.11*	1			
AIS-PR/LD	-.12*	.20*	.21*	.10*	.16*	.40**	1		
AIS-I	-.00	.34**	.44**	.31*	.43**	.45**	.69**	1	
AIS-SR	-.21*	-.05	.39**	.29*	.54**	.42**	.29*	.49**	1
AIS-G&L	-.09	.12*	.23*	.08	.12*	.34**	.79**	.68**	.22

*

** . Correlation is significant at 0.01 level (2-tailed). * . Correlation is significant at 0.05 level (2-tailed).

With enrolled nurses, a moderate significant association of total knowledge score and the BDI score ($r=-0.49$) was evident. The total knowledge score had a weak association with emotional exhaustion ($r=-0.22$), social reward ($r=-0.21$) and no relationship with PR/LT ($r=-0.12$). Emotional exhaustion had a strong significant relationship with depersonalisation ($r=0.73$), and moderate significant relationship with BDI ($r=0.49$) and emotional exhaustion had a moderate significant association with measures of AIS. As indicated in Table

4.13, there was a strong significantly positive association between the measures of AIS.

Table 4.14 indicates the correlation coefficients of total knowledge score, measures of MBI, BDI and AIS domains for enrolled nursing auxiliaries

Table 4.14: Correlation Coefficients of Total Knowledge Score, Measures of MBI, BDI and AIS Domains for Enrolled Nursing Auxiliaries.

Name	TKS	MBI-PA	MBI-EE	MBI-D	BDI	AIS-S&D	AIS-PR/LT	AIS-I	AIS-SR
TKS	1								
MDI-PA	.09	1							
MBI-EE	-.56**	.47**	1						
MBI-D	-.53**	.42**	.92**	1					
BDI	.11	-.24*	-.34**	-.26*	1				
AIS-S&D	-.60**	.18	.70**	.74**	-.39**	1			
AIS-PR/LD	.02	.58**	.41**	.47**	-.44**	.56**	1		
AIS-I	-.25*	.27*	.48**	.54**	-.55**	.55**	.72**	1	
AIS-SR	.16*	.51**	.01	.15	-.13	.29*	.53**	.21	1
AIS-G&L	-.01	.19	.16	.05	-.16	.34**	.48**	.29*	.25*

** . Correlation is significant at 0.01 level (2-tailed). * . Correlation is significant at 0.05 level (2-tailed).

The total knowledge score had a strong significant association with emotional exhaustion ($r=0.56$), depersonalisation ($r=0.53$) and stigma and discrimination ($r=0.60$). The level of reported EE was strongly and significantly associated with depersonalisation ($r=0.92$), and stigma/discrimination ($r=0.70$). Measures of AIS were significantly associated with each other.

A moderate significant relationship was evident between AIS and MBI ($r=0.31$), and significantly no relationship between BDI and MBI ($r=0.19$). TKS

had no relationship with the measures of psychosocial wellbeing ($r=-0.12$ for AIS, $r=-0.11$ for MBI and $r=-0.16$ for BDI)

Multiple regression analysis was conducted to assess whether or not the professional and demographic characteristics of nurses predicts the measures of burnout on nurses caring for PLWHA. The analysis control for professional and demographic characteristics (including age, gender, qualification, period of allocation in the ward, ward allocated, total knowledge score, period of service in the hospital and level of training) was done using backward regression. The outcomes of the regression are presented in the Tables 4.15 to 4.20 .

Table 4.15 presents a regression of professional and demographic characteristics on personal accomplishment.

Table 4.15: Regression Coefficients of Professional and Demographic Characteristics and Personal Accomplishment

Model	r	r ²	Adjusted r ²	Std. Error	F	Sig.
1	.857 ^a	.734	.660	6.188	9.996	.000 ^a
2	.856 ^b	.734	.671	6.088	11.798	.000 ^b
3	.849 ^c	.721	.667	6.125	13.373	.000 ^c

a. Predictors: Period of service in the hospital, Gender, Age, Qualification, Period of allocation in the ward, Ward allocated, Total knowledge score, Level of training

b. Predictors: Period of service in the hospital, Gender, Age, Period of allocation in the ward, Ward allocated, Total knowledge score, Level of training

c. Predictors: Period of service in the hospital, Gender, Age, Period of allocation in the ward, Ward allocated, Level of training

In model 1, period of service, gender, age, qualification, period of allocation in the ward, ward allocated, total knowledge score and level of training contributed to the prediction of personal accomplishment with an adjusted r^2 of 0.66. The period of service in the hospital, and in terms of gender, age, period of allocation in the ward, ward allocated, total knowledge score and level of training were the significant contributors to the prediction of personal accomplishment with adjusted r^2 of 0.67. In model 3, the period of service in the hospital, and in terms of gender, age, period of allocation in the ward, ward allocated and level of training contributed to the prediction of personal accomplishment significantly with an adjusted r^2 of 0.67.

Table 4.16 presents the regression coefficients of professional and demographic characteristics on personal accomplishment.

Table 4.16: Regression Coefficients of Professional and Demographic Characteristics on Personal Accomplishment

Model	Un-standardized		Standardized	T	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Total knowledge score	1.567	1.370	.177	1.143	.262
Age	8.307	1.989	.626	4.176	.000
Gender	-12.663	3.469	-.468	-3.650	.001
Qualification	.447	2.356	.022	.190	.851
Level of training	-13.910	2.955	-.884	-4.708	.000
Ward allocated	-1.213	.299	-.558	-4.064	.000
Period of allocation in the ward	-2.716	.967	-.330	-2.810	.009
Period of service in the hospital	1.283	.317	.822	4.045	.000

Using the beta values in Table 4.16 as a measure of relative importance, the level of training contributed more to the prediction of personal accomplishment, followed by period of service in the hospital and in terms of age.

Table 4.17 shows a regression of professional and demographic characteristics on emotional exhaustion.

Table 4.17: Regression of Professional and Demographic Characteristics and Emotional Exhaustion

model	r	r ²	Adjusted r ²	Std. Error	F	Sig.
1	.724 ^a	.524	.393	10.49807	3.989	.003 ^a
2	.723 ^b	.522	.411	10.34202	4.681	.001 ^b
3	.718 ^c	.516	.422	10.23816	5.508	.001 ^c
4	.714 ^d	.509	.433	10.14452	6.647	.000 ^d
5	.702 ^e	.492	.431	10.16281	8.000	.000 ^e

a. Predictors: (Constant), Period of service in the hospital, Gender, Age, Qualification, Period of allocation in the ward, Ward allocated, Total knowledge score, Level of training

b. Predictors: (Constant), Period of service in the hospital, Gender, Age, Qualification, Period of allocation in the ward, Ward allocated, Level of training

c. Predictors: (Constant), Period of service in the hospital, Gender, Age, Period of allocation in the ward, Ward allocated, Level of training

d. Predictors: (Constant), Period of service in the hospital, Gender, Age, Ward allocated, Level of training

e. Predictors: (Constant), Gender, Age, Ward allocated, Level of training

In model 1 of Table 4.17, the period of service in the hospital, gender, age and qualification, period of allocation in the ward, ward allocated, total

knowledge score and level of training contributed to the prediction of emotional exhaustion with adjusted r^2 of 0.39 and had reached significance.

According to Model 2 of Table 4.17, the period of service in this hospital, Gender, Age, Qualification, Period of allocation in this ward, Ward allocated, and the level of training, contributed to the prediction of emotional exhaustion with adjusted r^2 of 0.41 and had also reached significance.

In model 3, only the period of service in this hospital, Gender, Age, Period of allocation in this ward, Ward allocated and Level of training had contributed to the prediction of emotional exhaustion with adjusted r^2 of 0.42. In model 4, Period of service in this hospital, Gender, Age, Ward allocated and Level of training contributed to the prediction of emotional exhaustion with r^2 of 0.43 while in model 5, Gender, Age, Ward allocated and Level of training contributed to the prediction with r^2 of 0.43.

Table 4.18 presents the regression coefficients of professional and demographic characteristics on emotional exhaustion.

Table 4.18: Regression Coefficients of Professional and Demographic characteristics on Emotional Exhaustion

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
5	Gender	-.417	.317	-.197	-1.315	.197
	Level of training	-.695	.168	-.564	-4.146	.000
	Ward allocated	-.053	.026	-.311	-2.058	.047

The beta values in Table 4.18 presented that level of training had more contribution to the prediction of emotional exhaustion. This is followed by ward allocated and gender with the lowest beta value.

Table 4.19 below shows a regression of professional and demographic characteristics on depersonalisation.

Table 4.19: Regression of Professional and Demographic Characteristics on Depersonalisation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718 ^a	.516	.403	.52507
2	.718 ^b	.516	.422	.51662
3	.718 ^c	.515	.439	.50865
4	.718 ^d	.515	.456	.50104
5	.710 ^e	.504	.460	.49940

a. Predictors: (Constant), Period of service in this hospital, Gender, Qualification, Period of allocation in this ward, Ward allocated, Total knowledge score, Level of training

b. Predictors: (Constant), Period of service in this hospital, Qualification, Period of allocation in this ward, Ward allocated, Total knowledge score, Level of training

c. Predictors: (Constant), Qualification, Period of allocation in this ward, Ward allocated, Total knowledge score, Level of training

d. Predictors: (Constant), Qualification, Ward allocated, Total knowledge score, Level of training

e. Predictors: (Constant), Qualification, Ward allocated, Level of training

In model 1 of Table 4.19, the period of service in this hospital, Gender, Qualification, Period of allocation in this ward, Ward allocated, Total knowledge score and Level of training, contributed to the prediction of depersonalisation with an adjusted r^2 of 0.40, and in model 2, Period of service in this hospital, qualification, the period of allocation in this ward,

Ward allocated, Total knowledge score, and Level of training, contributed with an adjusted r^2 of 0.42.

According to model 3, Qualification, Period of allocation in this ward, Ward allocated, Total knowledge score, and the level of training, contributed to the prediction of depersonalisation with an adjusted r^2 of 0.44, in model 4, Qualification, Ward allocated, Total knowledge score, and level of training contributed with an adjusted r^2 of 0.46, and in model 5, Qualification, Ward allocated, and level of training, contributed to the prediction of depersonalisation with an adjusted r^2 of 0.46.

Table 4.20 presents the regression coefficient of professional and demographic characteristics on depersonalisation

Table 4.20: Regression Coefficients of Professional and Demographic Characteristics on Depersonalisation

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
5	Qualification	.340	.176	.264	1.931	.062
	Level of training	-.452	.136	-.449	-3.331	.002
	Ward allocated	-.053	.019	-.384	-2.765	.009

The Level of training weighed more in the contribution to the prediction of depersonalisation as suggested by the beta values, followed by ward allocated and with lowest beta value was qualification, with less contribution to the prediction of depersonalisation.

Chapter 5

DISCUSSIONS, LIMITATIONS, GUIDELINES, RECOMMENDATIONS AND CONCLUSIONS OF THE STUDY

5.1 INTRODUCTION

The study described the level of HIV and AIDS related knowledge, and the level of psychosocial wellbeing among nurses caring for PLWHA, as well as the relationship between HIV/AIDS knowledge and psychosocial wellbeing among nurses caring for PLWHA. A descriptive cross-sectional study was conducted at a regional hospital in Limpopo. Data was collected using psychometric instruments comprising MBI, AIS and BDI scales, HIV and AIDS knowledge questionnaires to measure the level of burnout, HIV/AIDS knowledge, depression and the impact of AIDS on Nurses' caring for PLWHA. The objectives of the study were to describe the level of HIV/AIDS knowledge; establish the level of burnout and depression; assess the impact of AIDS care among nurses caring for PLWHA; and to describe the relationship between HIV/AIDS knowledge and psychosocial wellbeing among nurses caring for PLWHA; to develop guidelines for support to nurses caring for PLWHA based on the reported state of psychosocial wellbeing and level of knowledge. This chapter focuses on discussions, application of the conceptual framework to the findings of the study, limitations, guidelines for support to nurses caring for PLWHA, conclusions and recommendations of the study.

5.2. DISCUSSIONS OF FINDINGS OF THE STUDY

5.2.1. Level of HIV/AIDS Related Knowledge among Nurses Caring for PLWHA

The results of the study showed that the knowledge level about HIV/AIDS among nurses caring for PLWHA was below average, and there were still some misconceptions. These results are on the same line with the study done by Walusimbi and Okonsky (2004:96). The low level of HIV/AIDS knowledge of "precaution and prevention" and "agent and immunology" among nurses

caring for PLWHA was of great concern because it is imperative that nurses perform their role safely in caring for PLWHA.

The low level of HIV/AIDS knowledge that was revealed from the findings may be due to the limited number of nurses trained as only about 41% of nurses were trained on HIV/AIDS, while 59% were not trained. This shows a great need of training and workshops for all categories of nurses. Previous studies indicate that HIV/AIDS knowledge level can be enhanced with planned educational programmes about HIV/AIDS (Lohrman et al, 2000 & Uwakwe in Walusimbi & Okonsky, 2004:98). Given the high number of HIV/AIDS patients seen in the regional hospital, the demonstrated HIV/AIDS knowledge gap among nurses in this hospital, and the level of interest in HIV/AIDS programmes, designing a structured curriculum to increase the HIV/AIDS knowledge among nurses is of paramount importance.

Ramathuba and Davhana-Maselesele (2011:34), recommended the need for education on HIV and AIDS to support nurses in their care giving role, wherein lack of knowledge was said to be the main barrier to provision of quality care. This was also supported by the study done by Effa-Heap (1997:18), indicating that 70% of nurses felt that they should receive specialized training in order to safely carry out the nursing care of HIV/AIDS regardless of where they work. It was further emphasized that the nursing of people living with HIV/AIDS requires special skills.

5.2.2. Level of Burnout, Depression and the Impact of AIDS Care among Nurses Caring for PLWHA

There was a significant level of burnout among the nurses caring for PLWHA, as almost 50% of them reported high emotional exhaustion, and about 61% reported high depersonalisation. About 50% of respondents were scored as

either moderate or high level of burnout as compared to the findings of Hayter (1999:987), stating that 66% of informants scored as either moderate or high burnout cases. About 49% of nurses had emotional exhaustion; whereas enrolled nursing auxiliaries showed more emotional exhaustion than professional and enrolled nurses. A number of nurses (61%) reported high depersonalisation whereas professional nurses reported high depersonalisation than other groups. A remarkable trend was low scores on the personal accomplishment scale; with only 14% of participants scoring as moderate cases and no high personal accomplishment scores was obtained. The lower the personal accomplishment, the higher is the chance for burnout. Majority of respondents (86%) had low personal accomplishment. These findings reveal that the higher the depersonalisation and emotional exhaustion perceived by nurses, the lower the personal accomplishment among the nurses. This shows a significant level of burnout amongst participants.

This study reveals significantly high level of burnout amongst enrolled nursing auxiliaries as compared to the enrolled and professional nurses. This is in agreement with the study done by Davhana-Maselesele and Igumbor (2008:72), stating significantly, a high level of burnout noted among nurses without professional training who were also receiving lesser social and organisational rewards and with higher reports of stigmatisation by peers when compared to the level of depression, rewards and stigmatisation reported by professionally trained nurses caring for PLWHA. The findings of this study was contrary to the findings of the study done by Jodas and Haddad (2009:195), stating that people with greater education are more prone to burnout. This interplay may be influenced by the context such as the role played by those with lower educational status in caring for PLWHA, where in some contexts, they spend most of their time performing patient care than professional nurses.

The correlation between emotional exhaustion, depersonalisation and AIS stigma and discrimination was significantly strong. Hence knowledge of HIV/AIDS had no correlation to these measures of MBI, AIS and BDI among nurses. It was not a predictor of burnout and depression. Enrolled nursing auxiliaries reported more grief and loss especially on the items, *"I feel helpless watching a patient suffer in the final stages of his illness"*, *"I feel powerless because no matter what I do my patients with AIDS will die"*, and *"I have trouble coping with the number of deaths on the unit"* as compared to other categories of nurses. These findings opposed the findings of Visintini et al (1996:198), stipulating that measures of grief such as *"I feel helpless watching a patient suffer in the final stages of his illness"*, are important predictors of depersonalisation, as most of enrolled nursing auxiliaries had a mild to moderate depersonalisation. Hence most of professional nurses had moderate to high depersonalisation and reported less grief and loss. This study showed that depersonalisation and AIS grief and loss had no significant relationship. According to (Demmer, 2004:2), depersonalisation is defined as the negative feeling towards patients whilst AIS grief and loss are referred to as empathy feeling towards the patients (Cohen & Lazarus 1983:64).

The study also noted a trend between 'stigmatization and discrimination' and depersonalisation. A moderate to strong significant correlation was evident with regard to stigma and discrimination' and depersonalisation amongst the nursing categories. Hence, enrolled nursing auxiliaries had the strongest correlation. It was also emphasized by Li et al. (2007:262) that norms are important contributors to negative feelings reported by nurses. Koekemoer and Mostert (2006:88), stated that people working in the human services might not only develop negative thoughts and behaviours towards their patients only but also towards their work. Nurses may be showing stigma and discrimination toward PLWHA as a result of depersonalisation.

5.2.3. The Relationship between HIV and AIDS Knowledge and Psychosocial Wellbeing of Nurses Caring for PLWHA.

There were weak or no relationship between HIV and AIDS knowledge and burnout, depression and AIDS impact among the nurses grouped. However, when nursing categories were ungrouped, a moderate significant correlation was evident between HIV and AIDS knowledge, burnout's emotional exhaustion and depersonalisation, and AIS's stigma and discrimination amongst enrolled nursing auxiliaries.

It is of importance that nurses have an understanding about burnout and depression, and the consequences they (burnout and depression) can cause in nurses professional and personal life. Understanding what burnout and depression are, why they happen, and their signs can help nurses deal with the situation before it spirals out of control.

The above discussions showed the need for in-service training and workshops related to HIV/AIDS knowledge due to the reported lack of HIV/AIDS related knowledge. The shortage of a protective practice environment because the majority of nurses did not know the availability of PEP, which is regarded as a priority to nurses caring for PLWHA, and assists in providing nurses with a sense of security. This may be one of the influencing factors toward nurses' anxiety which is said to contribute to nurses' burnout. Burnout was significant among two thirds of the nurses who participated in the study hence one third showed resilience towards caring for PLWHA. Knowledge had no significant impact on the level of psychosocial well being of nurses caring for PLWHA. However, nurses without professional training, that is enrolled nursing auxiliaries and enrolled nurses, reported more burnout than resilience.

5.3 APPLICATION OF THE CONCEPTUAL FRAMEWORK TO THE FINDINGS OF THIS STUDY: NURSE-ENVIRONMENT-PLWHA RELATIONSHIP

The findings of this study are hereunder conceptualised within the conceptual framework set in chapter two of the study. The conceptual framework was adapted from the main assumptions of cognitivism, and Lazarus and Folkman's cognitive appraisal theory. The study focused on the nurses caring for PLWHA namely, professional, enrolled nurses and enrolled nursing auxiliaries, herein referred to as fixed point.



Fig 5.1 Fixed point adapted from the cognitivism theory.

5.3.1 External Reality

The study revealed that nurses are affected by their job characteristics both physically and psychologically. Emotional demands with regard to patients' needs, suffering and the environment characterized with patient death and increase in the number of those infected may place nurses in a stressful state (Hall, 2004:32; Hudson, 2001:3; Lee, 2002:88 & Peters et al, 2005:57). The study found a moderate identification of nurses with their patients and according to Bennett (1991:190), it was stated that when nurses tend to identify with their patients they become stressed from providing extra emotional care and support. Stigma and discrimination within nurses caring for PLWHA was also revealed moderately, and enrolled nursing auxiliaries were reported to be highly stigmatized and discriminated both within and outside the hospital than the other nursing categories. This was supported by Bennett (1991:190), stating that

nurses suffer stigma both in and out of the hospital setting due to their involvement in caring for PLWHA.

As indicated in the discussions earlier, the majority of nurses reported that resources to furnish them with HIV/AIDS information were inadequate. Lack of job related resources such as information, human and material resources needed to furnish and stimulate nurses' personal growth and development exposes nurses to stress and risk for contagion (Koekemoer & Mostert, 2006:88). Lack of information may predispose nurses to poor self-efficacy, risks and more work-related stress.



Fig 5.2 External reality: job characteristics, personal and organisational stressors

Poor organizational support was revealed because most nurses reported low social rewards within and outside the hospital. Demmer (2004:525) indicated that maintaining the nursing role and good performance among nurses caring for PLWHA can be stressful. Lower social/organizational rewards may expose the nurse to stress. According to Demmer (2004:525), less organizational support exposes nurses to stress. The findings from this study revealed that the majority of nurses felt used up at the end of the day as well as fatigued when they get up in the morning and have to face another day on the job. This implies that the physical demands of caring for PLWHA leave nurses tired and exhausted.

Demmer (2004:525) indicate that the nursing job can be demanding physically, with high levels of musculoskeletal stress, culminating in many pains and aches.

The demanding nature of the nursing job indicates that the external reality of nurses caring for PLWHA is characterised by factors that have a negative impact on their psycho-social wellbeing. Whilst the job characteristics may not be easily changed; personal and organisational stressors can be avoided to enhance a positive working environment. Thus, this will in turn improve the nursing care rendered to patients.

5.3.2 Negative Feedback and Cognitive Appraisal

Nurses deal with stressors differently. The study revealed that nurses resorted to different ways of approaching the stressors. The majority of nurses resorted to harm-loss (51%) hence; about 35% resorted to threat. Nurses (35%) felt frustrated about their caring role, drained emotionally from their role and felt like they are at the end of their rope. Nurses reported that they have trouble coping with the number of deaths on the unit, they feel helpless watching a patient suffer in the final stages of his/her illness, they feel powerless because no matter what they do, their patients with AIDS will die and they had dealt with many losses due to AIDS. That is, they reported to suffer grief and loss. Pamela (2001:172), in agreement, indicated that victims of stress are recognized to be at high risk; researchers increasingly agree that nurses are also at risk of suffering grief and loss.

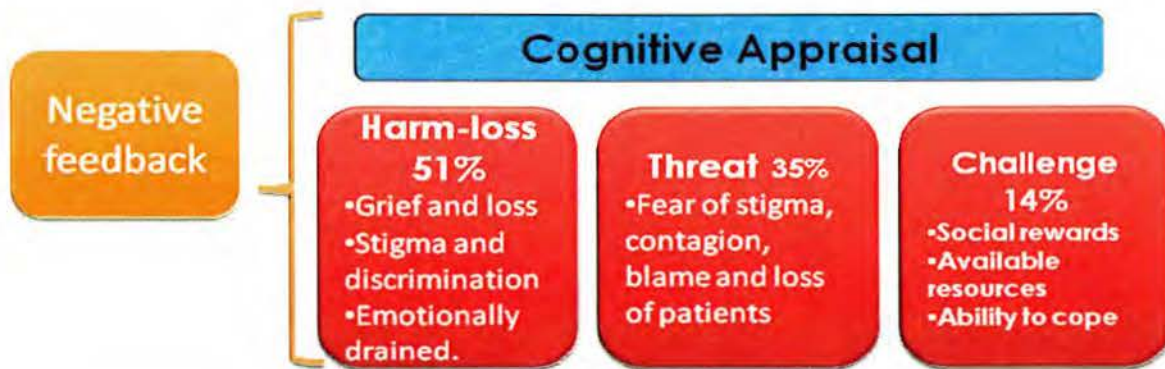


Fig 5.3 Negative feedback and cognitive feedback

Furthermore, nurses fear stigma and discrimination within and out of the hospital; they also fear blame, thus they feel that patients blame them for some of their problems. Miller (1991: 446) and Gordin et al (1987:185) emphasized that nurses offer nursing care in fear of contagion, stigma and losing patients. As a result, a harm-loss or anticipated threat depersonalization and emotional exhaustion can develop, and the nurse may have low personal accomplishment and depression (Demmer, 2004:4). The results of this study are consistent with Demmer's findings.

Nurses' Cognitive appraisal of a negative environment leads to a negative response. This further complicates their caring role as they become emotionally drained, making it more difficult for them to render effective nursing care.

5.3.3 Biological Individualism: Emotional Exhaustion, Depersonalisation, Depression and Job Satisfaction.

As indicated in figure 5.4, the study revealed a moderate level of depersonalization and emotional exhaustion, and low personal accomplishment across all nursing categories. Hence, depersonalization, emotional accomplishment and personal accomplishment are measures of

burnout. The majority of nurses reported moderate to extreme depression across all nursing categories.

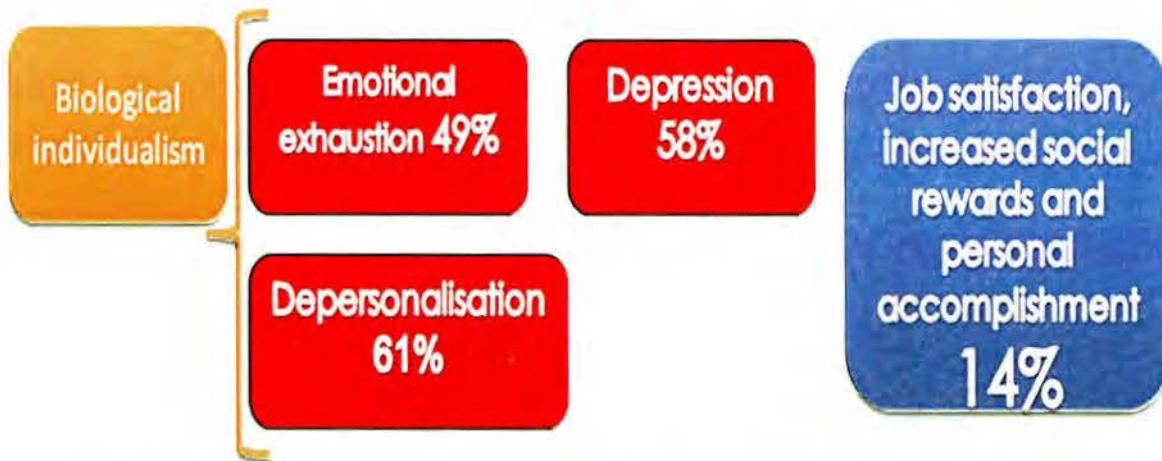


Fig 5.4 Biological individualism: emotional exhaustion, depersonalisation, depression and job satisfaction.

A limited number of nurses caring for PLWHA had low emotional exhaustion and depersonalization, meaning they may be free of burnout or not showing signs of burnout. These nurses chose to face the stressor or encounter as a challenge, hence only 14% showed a moderate personal accomplishment. According to Krohne (2002:4), nurses may see the stressor as a challenge that they feel confident to overcome and master, while utilizing the available resources. This response leads to resilience that develops among nurses as a result of caring for PLWHA.

Biological individualism showed that there was less job satisfaction and moderately high depersonalisation, depression and emotional exhaustion. This reveals that most of the nurses are not satisfied with the work environment and these impacts on the care they render.

5.3.4 Symbolic Representation of the Pre-Given Reality: Burnout and Resilience.

The majority of nurses caring for PLWHA, as indicated in the discussions of the findings, reported more burnout and, only a limited number of nurses showed resilience towards caring for PLWHA. For nurses, the implications of burnout can be far-reaching (Coman, D.C. 2010:8). Its impact extends to their own health, sense of well-being and overall attitude to their jobs and career (Coman, D.C. 2010:8).

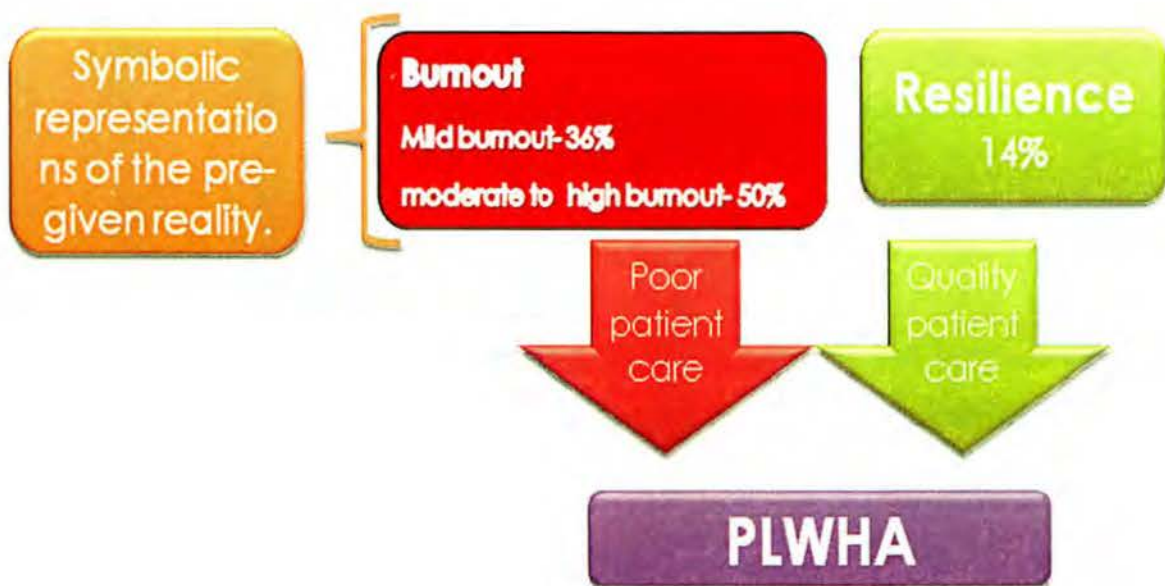


Fig 5.5 Symbolic representation of the pre-given reality: burnout and resilience

The implications of burnout may lead to poor patient care towards PLWHA. On the other hand, limited number of nurses who reported moderate resilience may provide quality care to PLWHA.

Figure 5.6 represents the complete framework on the findings of this study.

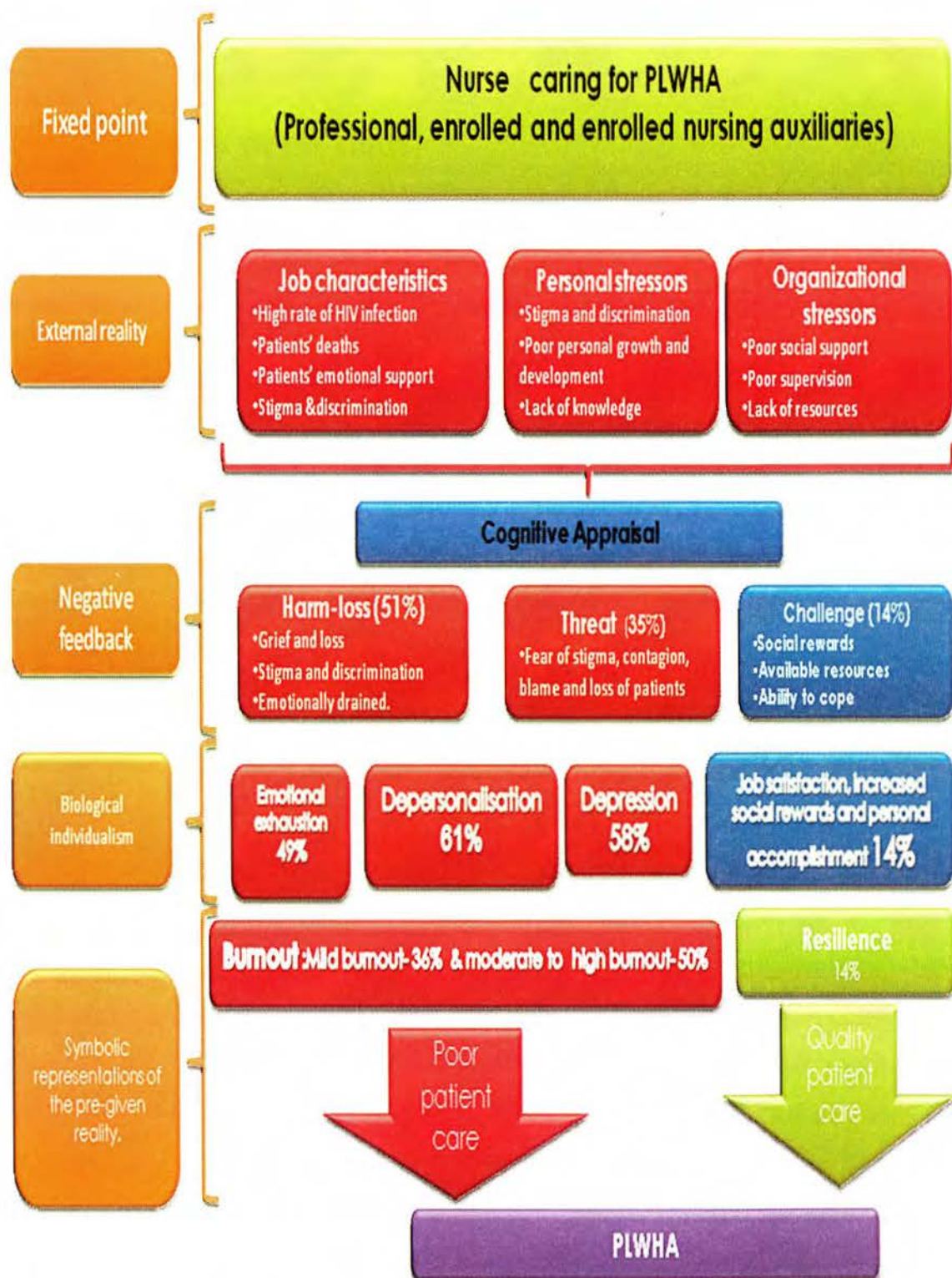


Fig 5.6 Conceptual framework: Nurse-Environment-PLWHA.

The quality of care provided to PLWHA may depend on the psychosocial state of the nurses caring or providing care for them. Hence, not all nurses may show signs of burnout; others may tend to be resilient.

5.4. LIMITATIONS OF THE STUDY

The study was conducted at one regional hospital in the Vhembe district of the Limpopo province where PLWHA are cared for. Findings of this study cannot be generalised to all hospitals within the province as the contexts are different. Thus the sample will not be representative of the different setting.

5.5. GUIDELINES FOR SUPPORT TO NURSES CARING FOR PLWHA.

The guidelines for support to nurses caring for PLWHA are hereby proposed to be made with reference to: Nursing education and organizational support.

5.5.1 Nursing Education:

Information support can be implemented on a compulsory basis for all nursing categories, that is, professional, enrolled nurses and enrolled nursing auxiliaries. It is important for managers to have a policy in place for educational programmes and induction courses that are supposed to be attended by nurses, and should be made compulsory or nurses should receive credits on the skills and job-content knowledge acquired (Ramathuba & Davhana-Maselesele, 2011:35) and implementation as well as follow-ups should be done. Nursing education can be restructured to accommodate workplace nurses, newly employed nurses and student nurses. This can be attained by implementing the following:

- Continuous professional development (CPD): all nurses in the hospital should receive in-service training and undergo workshops so as to meet the latest developments of HIV/AIDS intervention strategies. There is a need for nurses to be well equipped with relevant up-to-date knowledge to aid the provision of quality care to PLWHA. Well structured HIV/AIDS training, workshops and seminars can increase

nurses' knowledge and hence promote quality care provision. This statement is in agreement with the study done by Oluwatosin (2007:80) stating that attendance of training, workshops and seminars increases knowledge. Work based training should be facilitated as a compulsory initiative to all nurses. This should be done to prepare and keep nurses up-to-date as to be conversant with the rapidly growing task-shifting. The increase in the provision of HIV/AIDS training and workshops can improve the level of HIV/AIDS knowledge among nurses.

- Orientation of the newly employed staff: all newly employed staff members should be well orientated to the institutional programmes and they should be offered proper training to alleviate any form of anxiety that can arise due to the new environment or ward situation.
- Nursing education curriculum: nursing education institutions should include or integrate HIV/AIDS management into their curriculum. This will prepare student nurses to be well conversant with HIV/AIDS care, treatment and support. Programmes such as PMTCT, HCT, NIMART, comprehensive care management and treatment (CCMT) of HIV and AIDS, Adherence course, and integrated management of child illnesses (IMCI) and TB/HIV collaborative management should be integrated into the nursing curriculum. The use of HIV/AIDS research conferences and seminars to capacitate nurses with the latest information can be of greater importance.

Furthermore, it has been demonstrated that gaining the acquired knowledge should enable nurses to be more receptive and adaptable to changes in their roles and contribute to employee satisfaction and improved morale (Swansburg cited in Ramathuba & Davhana-Maselesele, 2011:34).

5.5.2 Organizational Support:

The Department of Health (DoH) and hospitals as an institution should participate actively in developing workplace policies and programmes that ensure maximum protection and care for those affected by HIV/AIDS. Workers need to be strengthened and empowered to mobilize their workforce on HIV/AIDS issues through information, education and communication, training and support. Most studies stated that the most common strategy for managing stress and burnout among nurses in AIDS care is the provision of support groups (Demmer, 2004:7, Kalichman & Gueiritaault-Chalvin, Demi, 2000:35, Schernoff, 1990:5). Hence the employer, supervisors and unit managers should provide nurses with workplace support groups, offer supportive supervision and a supportive work environment as a way of alleviating stress and burnout.

- **Employee wellness programmes (EWP)** - Employee wellness programmes can be designed to assist employees in dealing with the primary and secondary causes of stress and should be inclusive of counselling and psychological services for employees. When a wellness programme is introduced, there should be enough resources to offer the programme. The support colleagues will give to each other will help in improving employee's holistic health. Social influences are a major part of a healthy life style. In addition to encouraging others around you to promote wellness in the workplace, encouragement will also be received from colleagues. Hospitals can build employee wellness programmes to suit the needs of their employee base, and offer rewards and incentives to motivate workers to participate. Customizable employee wellness plans may include a variety of benefits, classes, and programmes for workers, all designed to promote a safe and healthy working environment. EWP can be linked with the following measures:

- **Personal coping resources:** recent studies suggested that burnout prevention should be tailored to individual needs and focus on enhancing personal coping resources (Demmer, 1999:612). Internal

coping strategies should be encouraged, but most importantly, nurses should be taught, trained and mentored on how to determine the most appropriate coping strategies for use with specific stressors (Gueirita-Chalvin et al, 2000:157)

- **Supportive work environment:** teamwork involves the sharing of information which leads to reflective consciousness, normalising experiences and alleviating emotional reactions to stress (Ivey, Ivey & Simek-Morgan, 1997:197). Provision of positive practice environment may reduce the stress related burnout of nurses, hence, promote a good working environment.
- **Debriefing sessions:** the employer should find a viable way to support nurses by providing an environment where nurses can feel comfortable voicing their concerns and anxieties (Taerk, Gallop & Lancee, 1993:13; Elford, 1991:402), and should acknowledge and understand the legitimacy of nurses' concerns (Elford, 1991:402).
- **Stress management:** Stress Management Training (SMT) and stress management policy or guideline can be employed by hospitals as a way to get employees to either work through stress or to manage their stress levels; to maintain stress levels below that which might lead to higher instances of burnout. These guidelines for managing stress in the work environment should include recognising stress at work as a health and safety problem; access to counselling; assessing the causes of stress in the workplace; introducing measures to reduce and prevent stress, and arrangements for employees suffering the results of stress.
- **Depression and burnout interventions:** costs of burnout have generated various intervention strategies. The interest in job engagement has led to a focus on how to promote this positive state rather than just on how to reduce the negative state of burnout. Although some interventions have been implemented, there has been almost no evaluation of their effectiveness (Demmer, 2004:530). It is therefore important to emphasize the individual

strategies to deal with burnout and these strategies should be developed and focused on job context as well as the nurses caring for PLWHA.

The primary emphasis has been on individual strategies to deal with burnout rather than social or organizational ones, this is despite the fact that research has found that situational and organizational factors play a bigger role in burnout. Future progress in burnout interventions will depend on the development of strategies that focus on the job context as well as the people who work within it. Further research may be conducted that links certain interventions such as narrative writing or topic-specific training to reductions in physiological and psychological stress.

5.5.3 Social Support

Social support has been seen as one of the largest predictors of reductions in burnout and stress for workers. This can be enhanced by nurses' involvement within support groups, debriefing sessions as well as organisational activities within the organisation. Creating an organizationally-supportive environment as well as ensuring that employees have supportive work environments can mediate the negative aspects of burnout and stress. Supervisors can help nurses to identify rewarding aspects of their job and to develop ways of maximizing the benefits of caring for PLWHA.

5.6. RECOMMENDATIONS FOR FURTHER RESEARCH

It is important for managers to have a policy in place for educational programmes and induction courses that should be attended by nurses, and be made compulsory or nurses should receive credits on the skills and job-content knowledge acquired (Ramathuba & Davhana-Maselesele, 2011:35) and implementation as well as follow-ups should be made.

Areas for further research include:

- identification possible personal variables such as personality traits, ways of coping, available social supports and current and past stressful life events that could contribute to depression
- Investigating factors contributing to the inadequate implementation of support programmes for nurses caring for PLWHA
- Determining effects of in-service training, seminars, conferences and workshops among nurses caring for PLWHA.
- Exploring nursing role as a caregiver to PLWHA 'beyond just nursing care.
- Establishment of nurses' wellness (physical, psychological and social) monitoring tool.

5.7. CONCLUSION

The importance of this study was formulating a working description of the level of HIV/AIDS related knowledge, burnout, depression and the impact of AIDS among nurses caring for PLWHA, over and above establishing the relationship between HIV/AIDS knowledge and psychosocial wellbeing of nurses caring for PLWHA. The outcome of this study could consequently inform planning, implementation and evaluation of nursing education, nursing cognition and behaviour change interventions.

The study showed the low level of HIV related knowledge among nurses caring for PLWHA. Most evident was the prevalence of misconception reported by nurses with regard to differentiating between HIV and AIDS. The study revealed a Low level of training among nurses. Lack of HIV/AIDS preventive knowledge was evident from the study.

A moderate level of reported burnout was evident among nurses. In addition, it was revealed that measures of burnout among nurses varied with professional characteristics. AIDS had more impact on enrolled nursing auxiliaries than other nursing categories. Enrolled nursing auxiliaries reported more severe to extreme depression than other nursing categories. These findings may point to differences in social support and HIV/AIDS knowledge needs across professional characteristics.

The study clearly highlighted no relationship between HIV/AIDS related knowledge and psychosocial wellbeing of nurses caring for PLWHA. Hence, a strong association was evident between the measures of AIDS impact, as well as measures of burnout. There was no relationship between depression and measures on burnout and AIDS impact.

In a nutshell, for nurses to be well capacitated and supported in their care giving role, nursing education with regard to HIV/AIDS still need an improved approach.

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APPENDIX 1: Ethical clearance



NORTH-WEST UNIVERSITY
YUNIBESITHI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
INSTITUTIONAL OFFICE

®

ETHICS APPROVAL OF PROJECT

This is to certify that the next project was approved by the NWU Ethics Committee:

Project title:

Knowledge and psychosocial wellbeing of nurses caring for people living with HIV/AIDS
at a regional in Vhembe District of Limpopo Province

Student/Project leader: Prof. M Maselesele

Ethics number: NWU-00030-11-A9

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Expiry date: 2016/05/30

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project.

Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.

The formal ethics approval certificate will follow shortly.

Yours sincerely

A handwritten signature in black ink, appearing to be 'M. Maselesele', written over a horizontal line.

Appendix 2

KNOWLEDGE AND PSYCHOSOCIAL WELLBEING OF NURSES CARING FOR PEOPLE LIVING WITH HIV/AIDS AT THE REGIONAL HOSPITAL IN VHEMBE DISTRICT

L. MAKHADO

DEPARTMENT OF NURSING SCIENCE: Faculty of Agriculture, Science and Technology
NORTH WEST UNIVERSITY, MAFIKENG CAMPUS

CARING FOR CARE GIVERS: RESPONDING
TO THE HIV and AIDS NEEDS OF NURSES

Statement of Information for Nurses Participating in the Study

Purpose of the Study

The overall aim of the study is to determine the Knowledge and psychosocial wellbeing of nurses caring for PLWHA.

Procedures

You are requested to participate in a survey that will take between 45 and 60 minutes. If you agree to participate, you will be given a questionnaire and you can complete it yourself. You will also be requested to participate in the interviews. The purpose of this consent form is to ask your permission to do so. If you agree to participate, we shall ask you to sign a consent form. However, this form will not be linked to your answers. Your answers will not be viewed by any of your professional colleagues or supervisors and will not in any way affect your job. They will be seen only by the researcher, who is not affiliated with the hospital, and will be stored in a locked place under their control. Your name will not appear on the interview record. The risks to you as a participant in this study are minimal. You will be asked about hospital policies and procedures, and about your knowledge and practices in dealing with HIV and AIDS, either in the hospital or at home. You will also be asked how hospitals can be more responsive to the HIV and AIDS needs of health workers. Although you will not receive an immediate benefit from this research, you and your colleagues may benefit from this research in the future, if it succeeds in identifying ways of better supporting hospital staff with regards to their HIV and AIDS needs.

If you are living with HIV and AIDS or have family members living with the disease, you need not reveal this information to the interviewer and your privacy will be respected. However, we hope you will feel comfortable enough to open up about your ideas about HIV and AIDS as a health worker, as your information will be particularly important for other health workers in the same position.

Right to Refuse or Withdraw

Your participation in this research is voluntary. You do not have to participate. If you do choose to participate, but prefer not to answer certain questions, you are free to do so. You are also free to terminate the interview and withdraw from the study at any time. It is also possible that you will be invited to participate in an additional interview in the future, as part of the same research.

You are free to ask questions before signing the consent form. If you have questions during the course of the study, you may contact me:

Mr. LUFUNO MAKHADO
NORTH WEST UNIVERSITY
CELL 0735170169
TEL 018 389 2236
arleneolly@yahoo.com

Appendix 3

Informed Consent Form (University of North- west (Mafikeng Campus))

Title of Project: knowledge and psychosocial wellbeing of nurses caring for people living with HIV/AIDS at a regional hospital in Vhembe district

Principal Investigator: (Lufuno Makhado)

Participant's Printed Name: _____

I would like invite you to take part in a research study, which seeks to describe knowledge and psychosocial wellbeing of nurses caring for people living with HIV/AIDS. Taking part in this study is entirely voluntary. If you decide to participate you must sign this form to show that you want to take part.

I understand that:

1. I am free to end my involvement or to recall my consent to participate in this research at any time.
2. Information given up to the point of my termination of participation could however still be used by the researcher.
3. The researcher grants anonymity and that data will under no circumstances be reported in such a way as to reveal my identity.
4. The researcher will make no reimbursement for information given on my participation in this study

Signature of the participant

Signature of the researcher

Appendix 4

HIV AND AIDS KNOWLEDGE QUESTIONNAIRE

Demographic Information:

Age:	
Gender:	
Qualification:	
If Student, Name of the Programme:	
Level of Training:	
Ward Allocated:	
Period of allocation in this ward:	
Years of Service in this Hospital:	

SECTION I GENERAL KNOWLEDGE

1. Please answer each of the following questions by circling your appropriate response

Question	True	False	Don't know
1. More women are infected with HIV than men	1	2	3
2. The window period is 10 months long	1	2	3
3. Sexually transmitted diseases increase the risk of HIV	1	2	3

5. Approx. how many people are infected with HIV worldwide?
1. 3.5 million
 2. 25 million
 3. 42 million
6. How can you tell if somebody has HIV or AIDS?
1. Because of the way they act
 2. They look tired and ill
 3. You cannot tell
7. Which protects you most against HIV infection?
1. Contraceptive Pills
 2. Condoms
 3. Spermicide Jelly
8. What are the specific symptoms of AIDS?
1. A rash from head to toe
 2. Your big toe aches every third Saturday of the month, especially when the weather is cold
 3. There are no specific symptoms of AIDS

9. HIV is a...
1. Virus
 2. Bacteria
 3. Fungus
10. When is World AIDS Day held?
1. January 1st
 2. June 1st
 3. December 1st
11. What percentage of those infected with HIV are women?
1. 19%
 2. 46%
 3. 74%
12. Worldwide, what is the age range most infected with HIV?
1. 0-14 years old
 2. 15-24 years old
 3. 25-34 years old
13. Is it possible to prevent women infected with HIV from having an infected baby?
1. Yes
 2. No
 3. Only if she takes a special drug

2a. A healthy HIV-positive person has a several needs that should be fulfilled to ensure a functional and productive life. Select the most appropriate needs

1...Good nutrition	2...Treatment of opportunistic infection
3....ARVs (anti-retroviral drugs)	4.....Don't know/not sure

2b. When can an infected mother transmit HIV to her baby?

1.....An infected mother cannot transmit HIV to her baby	
2...During pregnancy	3.....During delivery
4.....Numbers 2, 3 and 5	5...During breastfeeding
6....Don't know	

2c. How knowledgeable would you say you are about HIV and AIDS issues? (circle only one answer):

1.....Extremely knowledgeable
2.....Knowledgeable
3.....Only a little knowledgeable
4.....Unknowledgeable

Please turn over the page.

SECTION II: WORK ENVIRONMENT

3a. Sometimes people are afraid that they could get HIV and AIDS because of the nature of their work (e.g. from accidental needle prick, blood spillage etc.). How concerned are you about contracting HIV and AIDS at work (circle only one answer)

- 1.....Very concerned 2.....Somewhat concerned
3.....Not concerned at all 4.....Don't know
5.....Not applicable (e.g. doesn't work directly with patients)

3b. Have you ever had a situation at work where you have been afraid you were infected with HIV (e.g. through a needle prick, lack of protective clothing, gloves tearing etc.)?

- 1.....Yes 2.....No (Go to Q4a)

3c. How many times has that happened in the last 12 months? _____ times

4a. Do you know what Post-Exposure Prophylaxis (PEP) is?

- 1.....Yes (go to 4b) 2.....No

4b. Could you please describe what it is?

4c. Is PEP available in this hospital?

- 1.....Yes 2.....No 3.....Don't know/Not sure

4d. Have you ever sought PEP?

- 1.....Yes, every time I needed it
2.....Yes, some of the times I needed it
3.....No, I have never sought it (go to Q4f)

4e. When you sought PEP the last time, did you get it?

- 1.....Yes 2.....No

4f. If you have never sought PEP, did not seek it last time you needed it or sought it but somehow did not get it, what was the main reason for that? (circle only one answer)

- 01.....Did not need it (e.g. have never had an accident that could expose me to HIV)
02.....Did not have enough information about PEP
03.....Did not want to take the HIV test
04.....PEP not available
05.....Did not know where to go
06.....Was afraid of going through the process

07.....Other (specify)

5a. If you thought you were infected with HIV and AIDS at work, what would you do?
(Circle all that apply)

- | | |
|--------------------------------------|---|
| 01.....I do not know what I would do | 02.....I would not tell anyone at work |
| 03.....I would tell a colleague | 04.....I would tell my supervisor |
| 05.....I would seek treatment | 06.....I would go to get tested for HIV |
| 07.....I would go for counseling | 08.....I would rinse the site |
| 09.....I would pray | 10.....I would not do anything |
| 11.....I would tell a family member | 88.....Other (specify) |
-

6. If you had HIV and AIDS and free ARVs were available at your hospital where would you prefer to obtain them? (circle only one answer)

- | | |
|---|--|
| 1....Obtain them at the hospital where I work | 2....Obtain them from somewhere else even if I have to pay |
| 3....Do without them | 4....Can't decide |

7. If you had an option, would you prefer to: (Circle one answer)

- | | |
|-------------------------------------|---|
| 01.....Work with HIV& AIDS patients | 02...Work with other kinds of patients instead |
| 03.....It would not matter | 04.....Not applicable (I do not work with patients) |

8a. Did you receive any training on HIV and AIDS?

- | | |
|----------------------|----------|
| 1.....Yes (go to 8b) | 2.....No |
|----------------------|----------|

8b. I received training/workshop on HIV and AIDS when:

- 01.....I was still a student
02.....there was a workshop conducted at the hospital
03.....I was expected to do VCT
04.....when I was delegated to work at the HIV & AIDS clinic
88.....Any other please specify

What role do you expect your employer to play in assisting you in caring for People Living With HIV and AIDS—

27. In the last six months, how many times have you done any of the following to learn about HIV & AIDS? (circle appropriate number of times)

	Number of times		
a. Read a brochure/pamphlet	0	1-2	3-4 over 4
b. Seen a poster		0	1-2 3-4 over 4
c. Watched a video		0	1-2 3-4 over 4
d. Attended a seminar/workshop		0	1-2 3-4 over 4
e. Participated in a group discussion	0	1-2	3-4 over 4
f. Sought counseling or information on HIV & AIDS	0	1-2	3-4 over 4
g. Discussed HIV & AIDS with someone	0	1-2	3-4 over 4
h. Taken material home to read	0	1-2	3-4 over 4

28. We have reached the end of the questionnaire. Are there any issues you would have wanted to have addressed but were not included? Or do you have any comments you would like to make? If so, please make them here (you can continue at the back of this page).

SECTION 3

AIDS IMPACT SCALE (AIS)

Low= 0, Medium=1 High=2

	0	1	2
1. Seeing my patients suffer and die is very difficult.			
2. When I look at my patients I think 'I'll end up like that'.			
3. I feel the distress that my patients are going through.			
4. I am highly regarded by my friends due to my work in the AIDS unit.			
5. I am working in this area due to my involvement in Home Based Care			
6. I identify strongly with my patients.			
7. I have trouble coping with the number of deaths on the unit.			
8. I have had to deal with many losses due to AIDS.			
9. I feel helpless watching a patient suffer in the final stages of his illness.			
10. I think it is important for the community to help combat problems associated with AIDS.			
11. I have a lot in common with my patients.			
12. My friends recognize that my work in the area of AIDS is a valuable contribution to society.			
13. People move away from me at social functions if they hear that I work in the area of AIDS.			
14. I become friends with many of my patients and suffer when they die.			
15. I am rewarded by my patients' gratitude for the work I do.			
16. I feel a responsibility to help deal with the impact of AIDS in our society.			
17. Some friends have had less contact with me since I started working with AIDS patients.			
18. I receive status and recognition due to my involvement in the area of AIDS.			
19. My Family is unhappy that I am working in the area of AIDS.			
20. I suffer stigma/discrimination outside of work due to the area in which I work.			
21. AIDS is mainly a sexual immoral disease.			
22. I receive support from my peers due to my involvement in the AIDS unit.			
23. There are many aspects of my patients' lives that remind me of my own.			
24. I am grieving for the loss of patient lives due to AIDS.			
25. My friends encouraged me to apply for a job in the area of AIDS.			
26. I suffer stigma/discrimination from other staff at the hospital due to the unit in which I work.			
27. I feel guilty when I have to say no to a person who has AIDS and needs help.			
28. I feel powerless because no matter what I do my patients with AIDS will die.			

SECTION 4

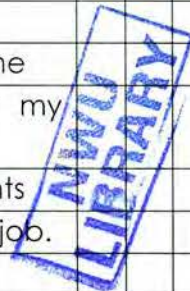
MASLACH BURNOUT INVENTORY (MBI)

How often

Never =0; A few times a year or less =1; Once a month or less = 2

A few times a month =3; Once a week =4; A few times a week =5; Every day =6

	0	1	2	3	4	5	6
1. I feel emotionally drained from my work							
2. I feel used up at the end of the day							
3. I feel fatigued when I get up in the morning and have to face another day on the job							
4. I can easily understand how my recipients feel about things							
5. I feel I treat some recipients as if they were impersonal objects							
6. Working with people all day is really a strain for me.							
7. I deal very effectively with the problems of my recipients							
8. I feel burned out from my work.							
9. I feel I am positively influencing other people's lives through any work							
10. I've become more callous toward people since I took this job							
11. I worry that that this job is hardening me emotionally							
12. I feel very energetic.							
13. I feel frustrated about my job.							
14. I feel I am working too hard on my job.							
15. I don't really care what happens to some recipients.							
16. Working with people directly puts too much stress on me							
17. I can easily create a relaxed atmosphere with my recipients.							
18. I feel exhilarated after working closely with my recipients							
19. I have accomplished many worthwhile journeys in the job.							
20. I feel like I'm at the end of my rope.							
21. In my work I will deal with emotional problems very calmly							
22. I feel recipients blame me for some of their problems.							
23. I consider my job to be stressful							



Circle Yes or No for the following questions:

	YES	NO
24. I laugh out loud at least once or twice during the typical work day		
25. I use appropriate help to manage my work stresses.		
26. I work with one or more individuals who I consider to be friends outside the workplace.		
27. I discuss workplace stresses with these friends.		
28. Stressors in my personal life contribute to my job stress.		

SECTION 5

BECK DEPRESSION INVENTORY (BDI)

As a result of caring for HIV/AIDS patients do you experience any of the following?

Rating from 0- lowest score to 3- highest

	0	1	2	3
1. Sadness				
2. Pessimism				
3. Sense of failure				
4. Dissatisfaction				
5. Guilt				
6. Expectation of punishment				
7. Dislike of self				
8. Self Accusation				
9. Suicidal ideation				
10. Episodes of crying				
11. Irritability				
12. Social withdrawal				
13. Indecisiveness				
14 Change in body image				
15. Retardation				
16. Insomnia				
17. Fatigability				
18. Loss of appetite				
19. Loss of Weight				
20. Somatic preoccupation				
21. Low level of energy				

THANK YOU FOR YOUR TIME