

Developing a model for integration of core competencies related to  
HIV and AIDS into undergraduate nursing curriculum at the  
University of the Western Cape

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A thesis submitted in fulfilment of the requirements for the degree  
Philosophiae Doctor in Nursing in the Faculty of Community and  
Health Sciences, University of the Western Cape

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2015

## ABSTRACT

### **Developing a model for integration of core competencies related to HIV and AIDS into undergraduate nursing curriculum at the University of the Western Cape**

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PhD Thesis, School of Nursing, University of the Western Cape

The HIV epidemic is in its third decade, and there is still neither a cure nor an effective vaccine in sight. Although the number of new HIV infections and AIDS-related deaths has decreased since the early 2000s, the number of people living with HIV remains high. Sub-Saharan Africa carries the burden of the epidemic, and South Africa has the highest number of people living with HIV globally. In South Africa HIV and AIDS is one of the health priorities, and nurses' role in the fight against HIV infection is crucial, as nurses form the bulk of health care professionals in the country. The South African Government has increased its efforts in the fight against HIV infection, with the introduction of various policies and guidelines. For these policies to be implemented effectively and able to fight the HIV epidemic successfully, nurses' training needs to provide adequate preparation for nurses to attend to people living with HIV and AIDS upon graduation. The literature highlights various shortfalls in nurses' training related to HIV and AIDS care and management; in-service training has been the main training model so far, with limited emphasis on pre-service training.

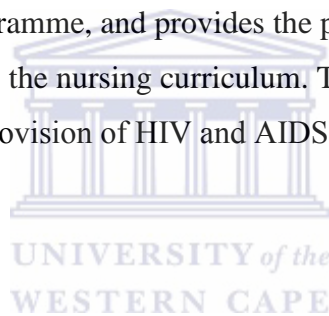
The purpose of this study was to develop a model for integration of HIV and AIDS nursing competencies into the undergraduate nursing programme at the University of the Western Cape. The study's objectives include identification of HIV and AIDS-related core competencies for a nurse in South Africa, then integration of the identified competencies into the undergraduate nursing programme, supported by the Competency, Outcome, Performance, Assessment framework, within a constructivist paradigm.

Applying the intervention research: design and development approach, the study was conducted in three phases. Data collection was carried out using nominal group technique, interviews, systematic research synthesis as well as workshops, and data were analysed qualitatively. The 112 participants included nurse educators, people living with HIV and AIDS, registered nurses in clinical practice, recent graduates, South African Nursing Council

representatives, lecturers that teach in the nursing programme as well as nurse experts on HIV and AIDS in South Africa, with 12.8% of them participating in more than one phase of the study.

Three competency categories covering seven core competencies were identified, namely: foundation (knowledge); supporting pillars (ethics, policies, interdisciplinary approach, personal and professional development); and performance (health education, holistic safe practice). Furthermore, four structural requirements were identified, namely teaching and learning strategies, learning opportunities, service readiness and staff development, forming the HIV and AIDS nursing core competency framework. Vertical and horizontal integration of the core competencies was completed, highlighting how they can be integrated into the undergraduate nursing programme, and this was validated by experts through a workshop.

The integration model which was developed is flexible, allowing further adoption into any other undergraduate nursing programme, and provides the potential to assist in the systematic integration of HIV and AIDS into the nursing curriculum. This would enhance new nurse graduates' competencies in the provision of HIV and AIDS-related care and management upon graduation.



26 February 2015

## **KEYWORDS**

HIV and AIDS

Nursing

Undergraduate

Competencies

Integration

Curriculum

COPA

## DECLARATION

I, RR Marie Modeste declare that the research entitled “*Developing a model for integration of core competencies related to HIV and AIDS into undergraduate nursing curriculum at the University of the Western Cape*” is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources used or quoted have been indicated and acknowledged as complete references

Regis Rugira Marie Modeste



Date: 26 February 2015

Signature:

## DEDICATION

I would like to dedicate this PhD dissertation to:

My father Amandin, who left us early, my brother Clement who was taken from us too soon and my son Elisee who didn't get to live.

All those who are affected by HIV in any way.

All the nurses and student nurses, may we be the best we can ever be in this profession.



## ACKNOWLEDGEMENTS

Glory be to God Almighty, through him all things are possible (Mark, 10, 27).

My most sincere gratitude is extended to my supervisor Prof O N Adejumo, for all the support and guidance received throughout this academic journey, your insight and encouragement, and most of all, for believing in me from the beginning! May God bless you!

Many people availed themselves for guidance in this project and provided me with support from the early stages of the study to the end. A special thank you is given to Prof T Khanyile and Dr J Farley for guidance and encouragement received since the conceptualization of the project. Prof S Terblanche, thanks for all the guidance and mentoring since the proposal stage, and checking up on me even when I least expected it! Prof Daniels thanks for all the support and guidance throughout the study.

Thanks to the SAVUSA project for support, mentoring and training during the pre-proposal period through the pre-PhD proposal development workshop.

Without funding, none of this would have been possible, hence my most heartfelt gratitude to the MRC for funding the project for two consecutive years, in addition to exposure provided through the annual conventions. My gratitude is extended to UWC CHS faculty, DVC academic office and research office for funding the project for two consecutive years, in addition to conference attendance. These funds have allowed me to carry the project to the end. I am grateful for CENTALS for funding my conference presentations, where I had an opportunity to expose the study findings, and get feedback on the way forward.

I would like to thank all the participants in the study, those that facilitated the arrangements and the institutions that provided the ethical clearance and permission to conduct the study. Without them, the study would not go ahead.

My gratitude is expressed for management team at the school of nursing for relieving me when I needed it and offering me study leave, and to my colleagues who supported and encouraged me throughout the process, and made me believe in myself when I had doubts.

I sincerely thank my sister Providence for all the support and encouragement, knowing that you will take care of everything when I am not available, helped me more than you can imagine, and there are no words to express my gratitude.

I thank my friend Uwizeyimana Didacienne for acting as my personal librarian when I needed her the most. I am grateful to Prof N de Lange from NMMU for availing herself for a visit and input provided for the study.

I thank Ms Gava and Ms Gething for transcribing and editing my work, your dedication and timeous feedback is greatly appreciated.

I extend my gratitude to my son Julien Cedric for being an inspiration in my life, my niece Elizabeth for all her kindness and prayers, my Mum Christiane for instilling in me required qualities for success in life, my niece Eunice for looking up to me, my sister Regine and niece Sarah and baby Micheal for being a source of pleasure in my life.

Last and not least, I thank my whole family and friends for support, encouragement, believing that I can always do better than I believe, and more importantly, for all the love.

Love you all, and may God bless us all abundantly!



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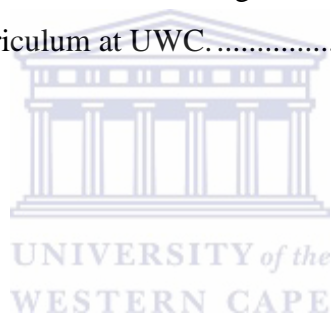
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## ABBREVIATIONS

ACTS	Advice, Counsel, Test, Support
AFASS	Acceptable, Feasible, Affordable, Sustainable and Safe
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
ARV	Antiretroviral
CANAC	Canadian Association of Nurses in AIDS care
CBE	Case-based education
CBOs	Community-based organizations
CDC	Centre for Disease Control
CINAHL	Cumulative Index to Nursing and Allied Health Literature
COPA	Competency, Outcome, Performance, Assessment
D&D	Design and development
DoH	Department of Health
EML	Essential Medicine List
ERIC	Education Resource Information Center
FBOs	Faith-based organizations
HAART	Highly active antiretroviral therapy
HE	Health education
HEAIDS	Higher Education HIV/AIDS Programme
HESA	Higher Education South Africa

HIV	Human immunodeficiency virus
HPV	Human Papillomavirus
HSP	Holistic safe practice
HST	Health Systems Trust
ICN	International Council of Nurses
IDA	Interdisciplinary approach
IM	Intramuscular
IMAI	Integrated Management of Adolescent and Adult Illness
IMCI	Integrated Management of Childhood illness
INH	Isoniazid
IR: D&D	Intervention research: Design and development
IR-KD	Intervention research: Knowledge development
IR-KU	Intervention research: knowledge utilization
ITECH	International Training & Education Center for Health
IV	Intravenous
JBI	Joanna Briggs Institute
JBI-NOTARI	Joanna Briggs Institute - Narrative, Opinion and Text Assessment Review Instrument
JHPIEGO	Johns Hopkins Program for International Education in Gynecology and Obstetrics
LFT	Liver function test
MDG	Millennium Development Goals



MEDLINE	Medical Literature Analysis and Retrieval System Online
NGOs	Non-governmental organizations
NGT	Nominal group technique
NHIVNA	National HIV Nurse Association
NIM-ART	Nurse-initiated and managed ART
NOTARI	Narrative, Opinion and Text Assessment Review Instrument
NPOs	Non-profit organizations
NQF	National Qualifications Framework
NSP	National Strategic Plan
OBE	Outcome-based Education
OI	Opportunistic infections
PALSA plus	Practical Approach to Lung Health and HIV/AIDS in South Africa
PEP	Post Exposure Prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PICT	Provider initiated counselling and testing
PMTCT	Prevention of mother-to-child transmission
PPD	Personal and professional development
Pre-EP	Pre-exposure prophylaxis
RSA	Republic of South Africa
SANAC	South African National AIDS Council
SANC	South African Nursing Council

SAQA	South African Qualifications Authority
SLM	Skills laboratory method
SQ	Subcutaneous
SRS	Systematic research synthesis
STIs	Sexually transmitted infections
TAC	Treatment Action Campaign
TB	Tuberculosis
UNAIDS	United Nations Programme on HIV and AIDS
UNGASS	United Nations General Assembly Special Session on AIDS
UNICEF	United Nations Children's Fund
USA	United States of America
UWC	University of the Western Cape
VCT	Voluntary counselling and testing
VL	Viral load
WCCN	Western Cape College of Nursing
WHO	World Health Organization



# CHAPTER 1: INTRODUCTION

## 1.1 Background

For more than 30 years now, the human immunodeficiency virus (HIV) that causes acquired immunodeficiency syndrome (AIDS) has been documented as an epidemic, and the Joint United Nations Programme on HIV and AIDS (UNAIDS) reported that by the end of 2013, about 35 (33.2–37.2) million people were living with HIV globally (UNAIDS, 2014a, 2014b). Although the number of people living with HIV globally has increased, partly because of increased availability of treatment for HIV and AIDS, at a global level, there has been a 38% decrease in incidence rate from 2001 to 2013, and a 35% decrease in AIDS related deaths from 2005 to 2013 (UNAIDS, 2014b). A 33% decrease in new infection was noted in the Sub Saharan Africa region between the year 2005 and year 2013, while a 39% decrease in new HIV infection was noted in South Africa in the same period (UNAIDS, 2014a).

South Africa has been reported to be the country that has the highest number of people living with HIV in the world, with an estimation of 6.3 million (6.0–6.5 million) people being recorded as living with HIV, and about 340 000 new HIV infections by the end of 2013 (UNAIDS, 2014a). By the end of 2012, it was estimated that about 5.3 million people were in need of antiretroviral treatment (ART) in South Africa, based on the WHO 2013 ART criteria guidelines that recommend early initiation of ART (UNAIDS, 2013a). The burden of HIV has been noted to be high at a global level, with mortality having been noted to increase from 0.30 million in 1990 to 2.4 million recorded at the end of 2005., with a decrease being noted at 1.6 million in 2012 and to 1.5 million in 2013 (Lozano et al., 2013; UNAIDS, 2013a, 2014a; 2014b). In South Africa, as far back as 2001 the burden of HIV was documented as being high, with about 62% of children admitted in one academic hospital infected with HIV, and about 54% of adults admitted to medical wards at a tertiary institution infected with HIV (Colvin, Dawood, Kleinschmidt, Mullick, & Lalloo, 2001; Pillay, Colvin, Williams, & Coovadia, 2001). More recently higher numbers have been reported in more specialized units, with about 80% of patients consulted at a tertiary hospital's infectious disease unit infected with HIV (Pandie, van der Plas, Maartens, & Mendelson, 2012).

## **1.2 Effects of the HIV epidemic**

The HIV epidemic has a number of negative effects for the individual who is infected, the family, the community as a whole, as well as the country experiencing the epidemic, and these effects are experienced in all sectors of life, such as the social and economic sectors (Campbell, Scott, Madanhire, Nyamukapa, & Gregson, 2011). Once the person is infected with HIV the immune system is attacked, and with time this results in the person getting sick more often, as many infections manifest. This increased morbidity has a negative effect because the person's ability to work is reduced, and the person who is infected with HIV starts taking more days off, missing out on whatever activities the person was formerly involved with (Delobelle et al., 2009). When the infected person is the breadwinner this reduced ability to provide for the family has a negative impact on the whole family. Even in cases where the infected person is not the breadwinner, family members often spend more time looking after the sick family member and more funds are spent in caring for the infected person, again adding to the financial pressure on the family.

At a more global level, the health system is overburdened by the increased number of people living with HIV. As noted in the literature (Zulu & Lehmann, 2004; Basson & Roets, 2013) the HIV epidemic impacts nurses as health care providers, because the epidemic brings with it increased demands on health care services as a result of the increased number of people who are getting sicker, and the increased mortality of their patients, colleagues and family members as a result of HIV and AIDS-related illnesses. The HIV epidemic necessitates a more global response covering all sectors of life.

## **1.3 Global response to the HIV epidemic**

In June 2001 a number of countries came together at the United Nations General Assembly Special Session on AIDS (UNGASS) and signed the Declaration of Commitment on HIV/AIDS. This Declaration reaffirmed previous commitments made by heads of state, such as the United Nations Millennium Declaration of September 8, 2000; The Abuja Declaration and Framework for Action for the Fight Against HIV/AIDS, Tuberculosis and other Related Infectious Diseases in Africa, of April 27, 2001; The Central Asia Declaration on HIV/AIDS, of May 4, 2001; the European Union Programme for Action: Accelerated action on HIV/AIDS, Malaria and Tuberculosis in the context of poverty reduction, of May 14, 2001, and many more (UNAIDS, 2002). Together the heads of state committed to halt the spread



of HIV, reverse the epidemic, increase health care access and strengthen health care systems in the fight against HIV (UNAIDS, 2002).

In 2006 a similar meeting recognised the urgent need to achieve universal access to HIV treatment, prevention, care and support for HIV, and with the 2011 United Nations Political Declaration on HIV and AIDS: ‘Intensifying our Efforts to Eliminate HIV and AIDS’, indicators were set to monitor progress, with 2015 as the deadline. Some of the set indicators as noted in the mid-term review of progress for South Africa include: a 50% reduction in sexual transmission of HIV and transmission of HIV among those who inject drugs, elimination of HIV infections in children, reduction of AIDS-related maternal deaths, provision of ART to 15 million people living with HIV, and a 50% reduction in tuberculosis (TB) deaths among those living with HIV, among others (Republic of South Africa (RSA), 2013). A number of guidelines have been produced by the World Health Organization (WHO), including Integrated Management of Adolescent and Adult Illness (IMAI), that recommends that nurses be trained to provide primary care for HIV (WHO, 2004), Integrated Management of Childhood Illness (IMCI), prevention of mother-to-child transmission (PMTCT), ART guidelines, and many more.

There have been a great deal of research, interventions and funding focusing on addressing the HIV epidemic, and the advent of highly active antiretroviral therapy (HAART) and more accessible generic treatment has reduced the number of people that die as a result of HIV and AIDS. This is noted by a decrease in AIDS related deaths which was reported at 35% at a global level since year 2005 to 2013, and 48 % in South Africa between the years of 2005 and 2013 (UNAIDS, 2014a). Similarly, the prevention interventions are bearing fruit as the statistics are showing a decrease in incidence rate (UNAIDS, 2013a; 2014a; 2014b).

#### **1.4 South Africa’s response to HIV**

In South Africa the epidemic is also being taken seriously, and at the national level, policies have been introduced to provide comprehensive care and management to people living with HIV and AIDS (Address by President Jacob Zuma on the occasion of World AIDS Day, 2009). As noted by the Minister of Health, HIV and AIDS is one of the most important challenges that South Africa is facing, and the fight against this HIV epidemic is one of the Government’s top priorities (Department of Health (DoH), 2010a). There have been numerous drives to increase the number of people that are being tested and know their status.

Various education programmes have been launched for prevention, and ART is more accessible in the country, with the recent introduction of fixed-dose combinations as preferred first-line for ART in April 2013, making it easier for those on HAART to have a less demanding regimen of medication (WHO, 2013). This strong political commitment can also be seen from the major domestic funding for response to HIV infection, with spending of about US \$1.9 billion per year (Johnson, 2012; UNAIDS, 2013b).

The new policies include changes in the guidelines on care and management of HIV and AIDS, namely guidelines on the timing of ART initiation, increasing the number of people that are being tested, those that are being initiated on ART and monitored by nurses, and the integration of TB and HIV care and management in all health care services (DoH, 2007, 2010; RSA, 2013). It is in this vein that the South African Government has developed the 2007–2011 National Strategic Plan on HIV, STI and TB (NSP) and set the target of increasing the number of new adults starting ART to 420 000 (80% of new AIDS cases) by 2011, and a target of increasing the proportion of adults started on ART and managed by nurses to 80% (DoH, 2007). Targets were also set to reach a proportion of 35% of children started on ART by nurses, with 70% children on ART being managed by nurses by 2011 (DoH, 2007). The 2012–2016 NSP further aims to ensure that 80% of those who need ART are receiving it, that at least 70% of those must still be alive and maintained on treatment (South African National AIDS Council (SANAC), 2011). Furthermore, the 2012-2016 NSP aims at ensuring that new HIV and TB infections as well as AIDS related deaths are halved; that HIV-related stigma is reduced, and that legal frameworks are being used to protect the rights of those living with HIV (SANAC, 2011). In addition to this, intervention 3.1.4 of the 2012–2016 NSP requires earliest enrolment as well as access to appropriate HIV and TB treatment for those who are diagnosed with HIV and TB (SANAC, 2011).

All the new policies and plans are in line with the global move to provide integrated services addressing various patient needs through a continuum of care (WHO/UNAIDS/United Nations Children’s Fund (UNICEF), 2010), and all health care providers play a large role in their implementation to ensure success. It is important to note that for these policies to be implemented successfully, nurses – being one of the important category of health workers in increasing access to care – need to be adequately trained so that upon graduation they are able to provide such care in accordance with national priorities and strategies, because health care providers are essential in the implementation of policies and guidelines related to HIV and

AIDS care and management (Bharat & Mahendra, 2007; Knebel, Puttkammer, Demes, Devirois, & Prismo, 2008; Rispel, 2008; Breier, Wildschut, & Mgqolozana, 2009; Harrowing & Mill, 2010; Yiu, Mak, Ho, & Chui, 2010; Burlew, Puckett, Bailey, Caffrey & Brantley, 2014). The training of those who provide HIV care and management is important because it enhances effective care and management of patients and the effectiveness of services in terms of planning, and ensures that the best treatment is offered (Rackal et al., 2011). It has also been noted that the educational training of nurses needs to prepare them to practice at a basic level of competency and safety (Kickey, 2010).

### **1.5 Educational preparation of nurses**

Nurses form the bulk of health care providers in the South African health system, as is the case in many other countries. Bearing that in mind, their participation in fighting the HIV epidemic is crucial. Not only are nurses involved in providing HIV care and management, they are also crucial in the HIV prevention efforts (Zulu & Lehmann, 2004). However, there have been reports that during their pre-service training, nurses in developing countries are not adequately prepared for practice required for HIV and AIDS care and management, while employers in health care services want graduates that are ready to enter the workplace and able to perform, with the expectation that further training will be minimal (Cowan, Norman, & Coopamah, 2007; Knebel et al., 2008). Furthermore, Zuber, McCarthy, Verani, Msidi and Johnson (2014) noted that it is unclear how educational preparation of nurses in pre-service training is approached with regard to implementation of the strategy to scale up HIV treatment. In addition to the reported inadequacies in pre-service nursing training, questions have been raised about the decreased competency of nurses as well as their experience with such an important health challenge for the population they must serve upon graduation (Raisler & Cohn, 2005; Knebel et al., 2008; ; Rispel, 2008; Breier et al., 2009; Evans & Ndirangu, 2009). This deficiency was also noted in the study by Dohrn, Miller and Bakken (2006), where 30% of the 86 nurses who attended short-term training related to HIV and AIDS gave incorrect responses to questions about blood tests, and about 51% could correctly identify the policy on infant feeding.

A situational analysis by an external reviewer with various nursing institutions in South Africa looked at the current practice of HIV integration in the nursing curriculum and noted some gaps (Johns Hopkins Program for International Education in Gynecology and

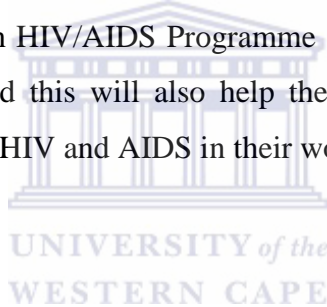
Obstetrics (JHPIEGO), 2009). The JHPIEGO report recommended an increased focus on resources for the education of nurses to ensure successful care and management of people living with HIV, including nurse-initiated and managed ART (NIM-ART) as prescribed by the NSP for HIV/AIDS 2007-2011 (JHPIEGO, 2009). The report further recommends the integration of competencies in HIV and AIDS, and NIM-ART throughout the pre-service programme (JHPIEGO, 2009).

The recommendation to include HIV in the undergraduate nursing programme has been made by Puplampu, Olson, Ogilvie and Mayan (2014), and earlier recommendations to integrate competencies related to HIV and AIDS have also been made previously at a global level at the WHO meeting in 2007, as documented by Renggli et al. (2008) and Shah et al. (2008). To introduce the guidelines followed in the care and management of HIV into pre-service training has also been recommended by Bharat and Mahendra (2007). Furthermore, consensus was reached in the 2010 WHO report of the Second Technical Reference Group Meeting on Nursing and Midwifery Education experts, that work must be done to reform nursing and midwifery education to provide for inclusion of tasks related to HIV care and management, such as prescription of ART in the pre-service curricula and scope of practice. However, there has been limited focus on integration of HIV care and management in the pre-service curriculum and where it has been attempted it has been noted to be fragmented and done on an ad hoc basis. How to revise the nursing education for HIV management and care inclusion at the basic and advanced level is still a problem (Renggli et al., 2008; Shah et al., 2008; Dohrn, Nzama, & Murrman, 2009; McNabb et al., 2009; WHO, 2002; 2010). As noted by Zulu and Lehmann (2004), the development of comprehensive HIV and AIDS training that includes initial training for nurses is a challenge.

The training of nurses in HIV and AIDS care and management has been largely done through in-service training, which has been noted to be acceptable as an emergency measure as well as for the purpose of continuous development to fit the rapidly changing science (Renggli et al., 2008; WHO, 2010). However, in-service training has been noted to be very expensive, and staffs attending the in-service training are taken away from work for a period of one to two weeks, increasing the workload of those who do not attend. In addition, access to in-service training has been noted to be unequal, the attrition rate has been noted to be high and these negative effects seem to lessen the long-term benefits of in-service training (Renggli et al., 2008; Shah et al., 2008; Dohrn et al., 2009; McNabb et al., 2009; WHO, 2010). The

attrition after in-service training has been documented to be as high as 32%, as noted in Ethiopia, where up to 10% of those who underwent in-service training in HIV management and care were not working in the field in HIV care, despite being at the same institution, and only 60% of those trained were still at the site and working with HIV (McNabb et al., 2009).

In order to change the situation there has been a global trend in an attempt to strengthen the HIV training in the pre-service training of health professionals, and examples are documented for Uganda, Ethiopia, Zambia, Mozambique, Haiti and Tanzania (Knebel, et al., 2008; Renggli et al., 2008). It has been noted that the urgent need to provide HIV and AIDS care and management requires that more health care providers are educated, trained and deployed to provide the needed services for HIV and AIDS (Burlew et al., 2014). In addition to training nurses on management and care of HIV at higher education institutions in a country with such a high number of people living with HIV infection, there is a need to teach student nurses to apply the learnt knowledge to their own lives for prevention and self-management. As noted in the Higher Education HIV/AIDS Programme (HEAIDS) (2010), there is a need to develop such competency, and this will also help the new graduates to cope with the emotional impact of dealing with HIV and AIDS in their workplace upon graduation.



## **1.6 Problem statement**

HIV epidemic is a major problem globally, and South Africa is greatly affected, being the country with the highest number of people living with HIV and AIDS. The extent of the problem has justified efforts being made to fight the HIV epidemic at a global and national level. The success of such efforts depends on the health care workers who are involved with the care and management of the people living with HIV and AIDS, and nurses make up the bulk of that group. However, the literature highlighted deficiencies in the nurses' competencies to provide care and management, and as noted by Madumo and Peu (2006), student nurses themselves in South Africa have reported a need for curriculum innovation with regard to HIV care and management. The same has been reported by Petro-Nustas (2000) in Jordan, Peate, Suominen, Välimäki, Lohrmann and Muinonen (2002) in Britain, Shah et al. (2008) in Uganda and Zachariah et al. (2009) in the Sub-Saharan Africa region. Inadequate integration of HIV-related competencies in the nurses' curriculum has also been documented by the JHPIEGO report, in which gaps were noted and the integration of HIV throughout the undergraduate nursing programme was recommended (JHPIEGO, 2009). It is

important to prepare new graduates with competencies relating to HIV and AIDS in a holistic manner instead of focusing mainly on delivery of ART, an issue identified by Relf et al. (2011b).

Relf et al. (2011a) have noted that there is lack of agreement on core competencies related to HIV and AIDS for the training of nurses in Southern African countries and globally. As a result, where competencies seem to be integrated in the curriculum it is often on an ad hoc basis and the absence of a systematic approach to integration may lessen the effectiveness and comprehensiveness of the training of nursing students with regard to HIV and AIDS core competencies (JHPIEGO, 2009; Relf et al., 2011a). Therefore there is a need to ascertain agreeable nursing core competencies that will be relevant and suitable for training of nurses on HIV and AIDS in South Africa, and following this to develop a model of integrating those core competencies into an existing undergraduate nursing curriculum in the context of the community served.

## **1.7 Research purpose**

The purpose of the study is to determine HIV and AIDS-related competencies for nurses, and to design and develop a model for integration of the identified core competencies related to HIV and AIDS into the nursing curriculum at the University of the Western Cape (UWC).

## **1.8 Research objectives**

The objectives of this research study were as follows:

- To identify the required HIV and AIDS related core competencies for a new nurse graduate to provide HIV and AIDS care and management in South Africa.
- To design and develop an integration model to guide the integration of the identified core competencies related to HIV and AIDS that will be embedded into the four-year nursing degree curriculum at UWC.
- To validate the developed model for integration of HIV and AIDS core competencies that will be embedded into the four-year nursing degree curriculum at UWC.

## **1.9 Research questions**

On the basis of the above, the following were the research questions in this study:

- What are the core competencies related to HIV and AIDS required by a new nurse graduate that will enable the nurse to provide comprehensive care and management to patients living with HIV and AIDS?
- How can the identified core competencies related to HIV and AIDS be integrated and embedded in the four-year nursing curriculum at UWC?
- Does the developed model for integration integrate the core competencies related to HIV and AIDS into the four-year nursing degree curriculum at UWC?

## **1.10 Significance of the study**

The findings of this study will provide clarification on the core competencies related to HIV and AIDS in the South African context. This information is essential, especially since input will be obtained from educators, practitioners, governing bodies such as the South African Nursing Council (SANC), people living with HIV and recent nurse graduates to identify the core competencies. As noted by Relf et al. (2011a), this information is needed to adequately train nurses to provide holistic care related to HIV and AIDS.

As the model will provide guidance on how HIV and AIDS core competencies can be embedded into an existing curriculum, the findings will also enrich the process of integrating specific aspects into an existing curriculum. The integrated model will assist in understanding how the nursing undergraduate curriculum can ensure that core competencies related to HIV and AIDS are comprehensively covered and integrated. This model will also assist to ensure evidence-based practice with regard to the training of nurses who will be able to provide comprehensive care to people living with HIV.

## **1.11 Researcher's motivation for the study**

As a new nurse graduate in South Africa a decade ago, the researcher was confronted with the reality of HIV and AIDS when she started practising nursing. The time spent in clinical settings made the researcher realize that most of the patients that were being admitted to the

medical ward were living with HIV infection. This high number of people living with HIV in health care institution is consistent with the demographics of the country that has the highest number of people infected with HIV (UNAIDS, 2014a). Furthermore, the researcher noted that many colleagues and the researcher herself were not always sure how to provide care to those patients that would ensure continuity of HIV-related care. This weakness in providing care for HIV has also been noted by Uwakwe (2000), Zulu & Lehmann (2004) and Mulaudzi, Pengpid, and Peltzer (2011). At the same time, the researcher was involved in a research project on pregnant women living with HIV, and completed a course on HIV care and management. These three experiences aroused the researcher's interest in pursuing work that relates to HIV and AIDS. With the researcher's own research on self-care symptom management for women living with HIV, recommendations were made that emphasized the need for nurses to be trained to provide holistic care, and to assist the patients while exploring the various strategies that may be used to manage the HIV related symptoms. Similarly, in a study by Madumo and Peu (2006), student nurses at one university in South Africa indicated a number of needs related to the changes that could be done to enhance the curriculum that may allow them to be more prepared with regard to HIV and AIDS knowledge and quality care. In addition, personal experience with people infected with HIV in the researcher's own community included instances where people did not receive adequate care, and then died prematurely. Being a nurse educator this motivated the researcher to work on a project on how nurses can be better prepared to provide appropriate care and management to those living with HIV and AIDS.

### **1.12 Outline of the thesis**

This thesis is presented in seven chapters. The first chapter provides background information on the study problem statement and research objectives and purpose. The second chapter presents the literature that has been reviewed for the study, covering mainly aspects relating to HIV and AIDS, its impact and the role of nurses in the fight against the epidemic. Additionally, educational and curriculum philosophies and approaches as well as Lenburg's (1999) framework that guides the development of the competencies are presented, providing guidelines for the integration and curriculum approach adopted.

Chapter three of the thesis presents the methodology followed in conducting the study, while chapter four presents the findings of the study. Chapter five presents the integration of the



HIV and AIDS competencies into the four-year undergraduate nursing programme at UWC, highlighting the various year-level outcomes that will facilitate development of the competencies. The discussion is presented in chapter six, and the conclusion and recommendations are provided in the final chapter of the report.

### **1.13 Conclusion**

This first chapter of the report has provided background information about the study and has given information about the current status and effect of the HIV epidemic as well as the global response in the fight against HIV and AIDS. The problem addressed by the study was explained, with emphasis on the research questions and the significance of the study. The researcher's own motivation for the study was mentioned, allowing the reader to understand the researcher's motivation for the study and her place in society. It also provided the researcher with an opportunity to explore her own beliefs.

HIV is a major health problem, and nurses' participation in the fight is crucial – hence the importance of attending to nurses' education and training to ensure that nurses are able to provide effective health care to people living with HIV and AIDS upon graduation. An outline of the report was also provided. The next chapter presents the literature review, including theories related to education, curriculum and integration in a curriculum.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

HIV infection is a 30-year-old epidemic, and its impact is being felt globally in all spheres of life. Studies have been done on various aspects of the epidemic in an effort to halve the epidemic; however, HIV is still damaging various communities and remains a health crisis globally (Stempleman, Trezza, Santos, & Silberbogen, 2008). Nurses, who constitute the majority of health care workers that come into contact with people affected and infected with HIV, need to be properly and effectively trained to provide care and management for people living with HIV and AIDS.

This literature review highlights the extent of the HIV epidemic and the role of nurses in providing care and management for people living with HIV and AIDS. HIV and AIDS knowledge, skills and attitudes of nurses that have been documented in the literature will be highlighted. Because competency integration in the curriculum is an activity that affects the curriculum and how the teaching and learning process will take place, the educational philosophies and curriculum approaches will also be described. As Mellish, Brink and Paton (1998) note, the way we conduct our lives is affected by our attitudes, and the philosophy of those involved in teaching and learning as well as curriculum activities affect their practice. According to Ornstein (1990) one needs a good understanding of various educational philosophies and curriculum approaches that suit one's own educational philosophy, because without philosophy, educators would be directionless. This literature review includes major philosophies, educational philosophies and approaches that underpin the common curriculum approaches as well as integration models that are considered in the study.

For this literature review, a number of databases were consulted including EBSCO Host, CINAHL, Medline, Psych Articles, Medline, Scopus, Nursing academic edition and Cochrane library. Based on the topic of the review, the key words included HIV; AIDS; competen\*; philosoph\*; curriculum; nurs\* and integration.

### **2.2 The HIV epidemic**

In the early 1980s when HIV was discovered, many people had suffered and died before anyone could understand the new syndrome that affected so many people, causing severe

wasting and other rare infections such as *Pneumocystis carinii* pneumonia and Kaposi's sarcoma (Centre for Disease Control (CDC), 1981; Morison, 2001; AIDS.gov, 2011). At a global level the number of people with HIV infection continued to rise, while researchers started to develop medication that could help manage, if not cure the new disease, with the hope of discovering a vaccine (Ogunbodede, 2004).

It was in 1987 that the first ART, Zidovudine, was approved in the United States of America (USA) and combination therapy started with Combivir in 1997, while the early 2000s saw a move to provide discounted generic ART to developing countries, thus ensuring the availability of HAART (AIDS.gov., 2011). In 2002 it was already documented that HIV infection had become the leading cause of death in sub-Saharan Africa, while it ranked fourth at global level (CDC, 2001b; Ogunbodede, 2004; UNAIDS, 2011). To date HIV and AIDS treatment and management have progressed and there is still hope for a cure and a vaccine, but it is taking longer than everyone wishes.

The HIV epidemic has spread with about 78 million people reported to have been infected since its start (UNAIDS, 2014b). About 21.8 million people had died of HIV-related illnesses 20 years after the epidemic was first noticed, and by the end of 2013 the number of deaths due to HIV-related illnesses has risen to 39 million (Morison, 2001; UNAIDS, 2014b), as reflected in Figure 2-1. The 2014 UNAIDS gap report (UNAIDS, 2014a) highlights that the advent of treatment in 2005 has helped to reduce the number of people dying from HIV and AIDS-related illnesses, with about 7.6 million AIDS related deaths having been averted between 1995 and 2013 worldwide (UNAIDS, 2014a). The prevention strategies seem to have a positive impact as a 38% decrease in new infections was noted between 2001 and the end of 2013, despite the steady increase in the number of people living with HIV at a global level (UNAIDS, 2011; 2013a; 2014a; 2014b). It has been documented that sub-Saharan Africa carries the burden of the epidemic, and it has been reported that in 2002, of the people that were living with HIV/AIDS, 70% were from sub-Saharan Africa, and by the end of 2013, 24.7 million out of 35 million people living with HIV were reported to be living in sub-Saharan Africa (Ogunbodede, 2004; UNAIDS, 2014a).

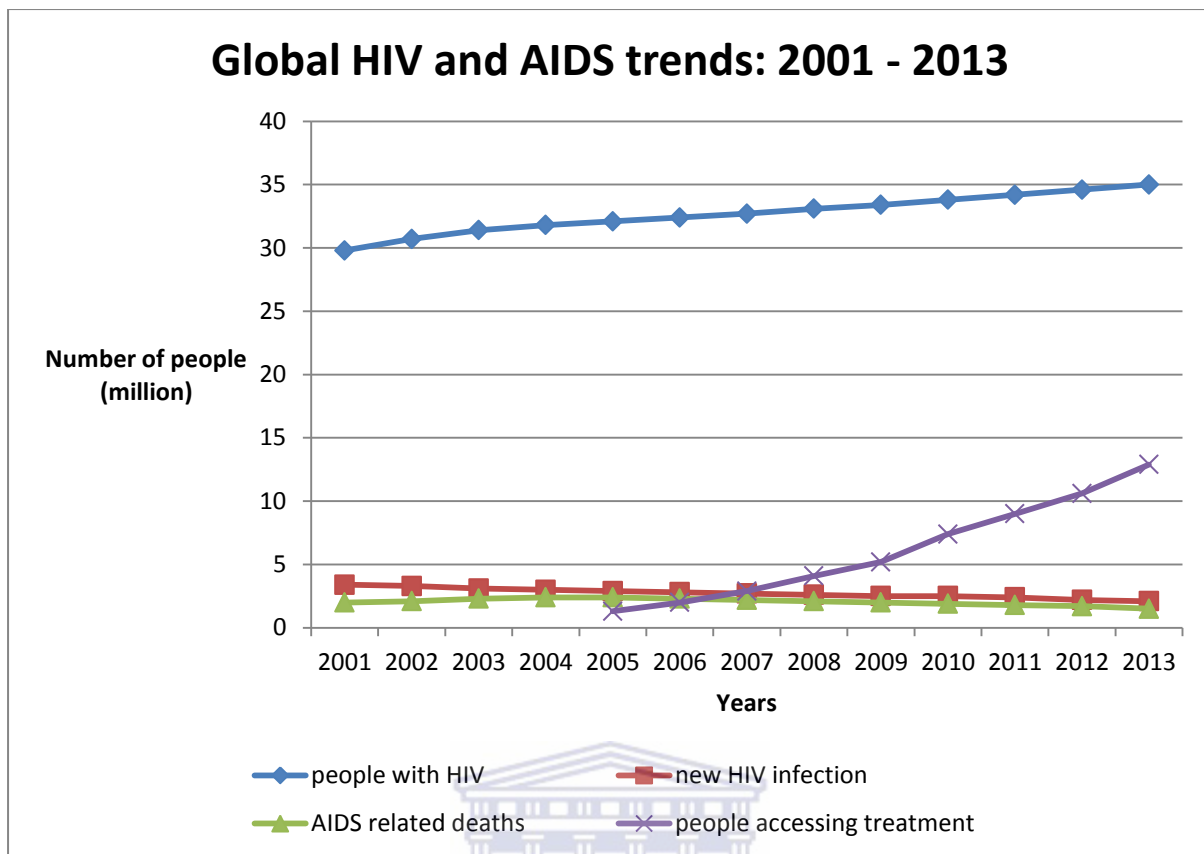


Figure 2-1: Global HIV and AIDS trends: 2001–2013. Data obtained from UNAIDS (2014a; 2014b).

Women have been documented to be more at risk of HIV infection, mainly due to their biological make-up; male-to-female transmission is reported to be more effective than female-to-male transmission (Ciambrone, 2001). In addition, younger women are having sex with older men, and women’s low social standing as well as unbalanced power in their heterosexual relationships increase their vulnerability (UNAIDS, 2011). In sub-Saharan Africa, where the epidemic is primarily heterosexual, women make up more than half of the people with HIV (UNAIDS, 2014a). It has been recorded that in sub-Saharan Africa at the end of 2000, 55% of adults with HIV were women, while only 22.6% of those living with HIV in the USA were women; by the end of 2002 the number had increased to 58% and to 59% in 2013, similar to what was noted in the Caribbean where it was 53% (CDC, 2001a; Ciambrone, 2001; Morison, 2001; Gupta, 2002; Susser, 2002; Ogunbodede, 2004; UNAIDS, 2011; 2014a).

In South Africa, Abdool Karim and Abdool Karim (2002) noted that the first HIV infection was reported in 1982, and it was mainly seen amongst patients with haemophilia, those who

had received a blood transfusion and the gay community. The national antenatal sentinel surveillances that are used to monitor HIV prevalence in South Africa, as they give a picture of the burden of HIV, showed a rapid increase in HIV prevalence after 1990. In 1990 it was documented at 0.76%; in 1995 at 10.44%; in 2000 at 24.5%; in 2005 and 2010 it was at 30.2%, with a slight decrease to 29.5 % in 2011 and 2012. It was estimated that by the year 2000 about 40% of adults' deaths were related to HIV and AIDS (Abdool Karim & Abdool Karim, 2002; Health Systems Trust (HST), 2011; DoH, 2013). As represented in Figure 2-2, there was a sharp increase in HIV prevalence from the antenatal surveys between 1990 and 1998, as noted by Abdool Karim and Abdool Karim (2002), with smaller increases between 1998 and 2005 when a plateau was reached with slight decreases in prevalence.

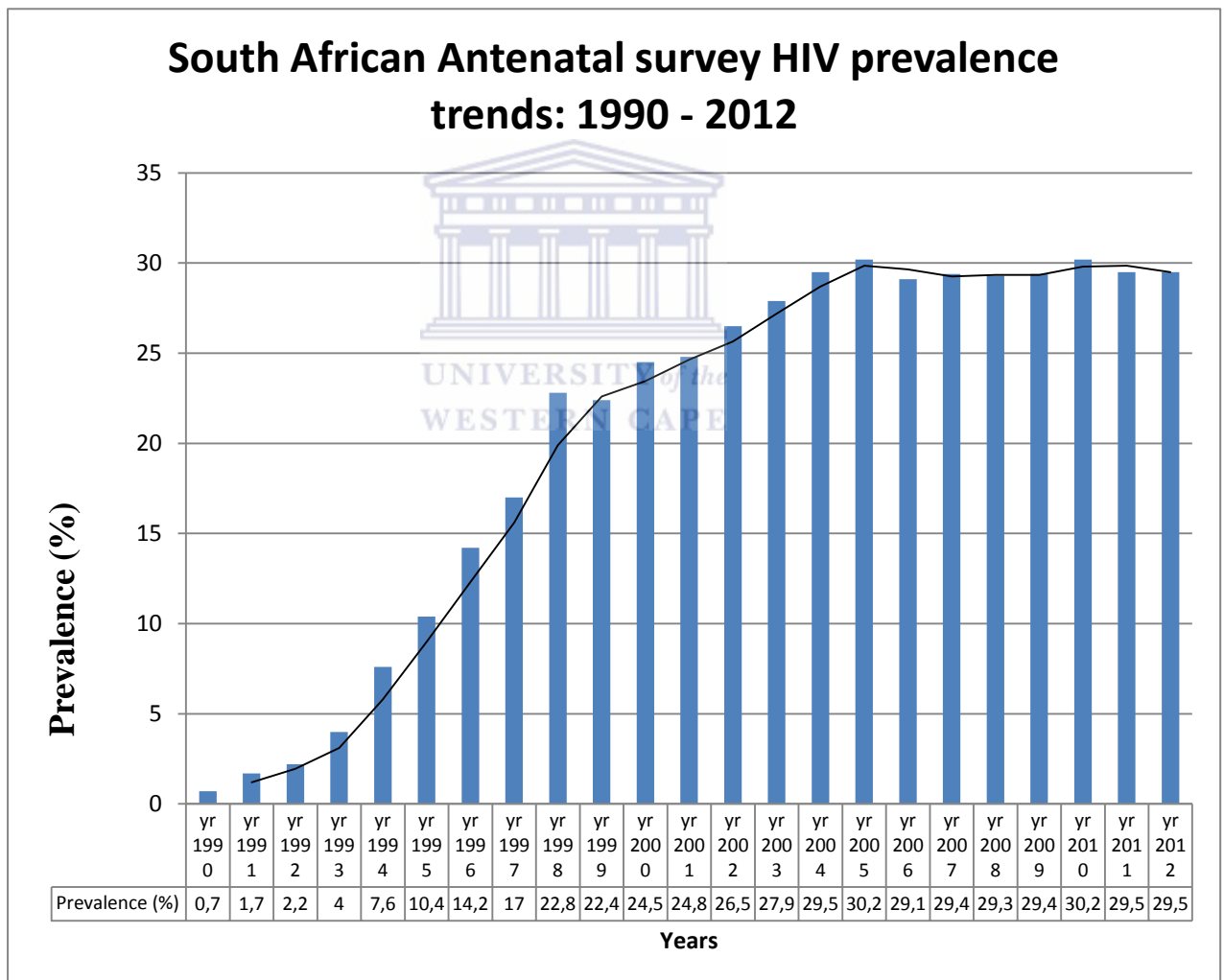


Figure 2-2: South African antenatal survey prevalence trends, 1990–2012 (HST, 2011; DoH, 2013).

### **2.3 Impact of the HIV epidemic**

The HIV epidemic has had a large negative impact on all aspects of life globally: the progression of HIV infection leads to decreased immunity, which predisposes the infected person to various illnesses (Bachman & Booyesen, 2003; Ogunbodede, 2004). This increase in morbidity increases medical expenses that reduce the family's disposable income and sometimes even tap into funds reserved for necessities of daily living. Days off work when sick or looking after a sick relative reduces productivity (Bachman & Booyesen, 2003; Ogunbodede, 2004). In addition, due to high mortality rates related to HIV and AIDS the household income is lost after the death of anyone that was contributing to the household finances (Bachman & Booyesen, 2003; Collins & Leibbrandt, 2007). This impact on finances and growth has received contradicting reports, because some authors reported that there was no evidence for or only insignificant impact on growth at a global level as a result of HIV (Bloom & Mahal, 1997; Ahuja, Wendell, & Werker, 2006), while others like Fartson (2011) noted the reduced longevity due to HIV that may in turn reduce schooling and obtaining an education, that will have some negative impact on economic growth. Furthermore, Dixon, McDonald and Roberts (2002) indicated some of the economic effects of the HIV and AIDS pandemic as a reduced economic growth of 2–4% annually across Africa, reduced labour supply, reduced labour productivity, and reduced exports and increased imports. Additionally, Piot, Bartos, Ghys, Walker and Schwartländer (2001) as well as Collins and Leibbrandt, (2007) have highlighted that the high unemployment in South Africa may make the economic impact benign, but such an impact is much greater at household level.

As people become more ill and die of HIV-related illnesses, the family's ability to remain stable is reduced. In some families the infected person has to move back to the rural area because the ability to work is lost and they need someone to take care of them. Such a move affects the whole family and when the parent dies, the orphans not only lose the parent/s, they often lose the stability they had as a family because they must move to live with other family members or remain in child-headed households (Piot et al., 2001). HIV has increased the burden on health care services, as noted by Abdool Karim and Abdool Karim (2002). In 1998, 54% of beds in medical wards were occupied by patients with HIV, while in 2001 it was recorded that 62% of the children admitted in one academic hospital were living with HIV (Colvin et al, 2001; Abdool Karim & Abdool Karim, 2002). Furthermore, the increase in fatal cases of patients with HIV infection highlights the negative effect of HIV. In 1998 the

case fatality rate was recorded at 22% compared to 9% for those who were not infected (Abdool Karim & Abdool Karim, 2002). The HIV epidemic is rife, and it requires effort to combat its negative effects. Furthermore, the increased number of people that access the health care services and are living with HIV necessitates nurses to provide holistic care and management, because nurses have the first contact and spend more time with the patients while providing the bulk of care required.

#### **2.4 Response to the HIV epidemic**

At a global level efforts have been made to combat the HIV epidemic. This can be seen in the USA's approved funding for treatment in 1983 and the emergence of new institutions committed to the fight against HIV and AIDS, such as UNAIDS in 1996 and the US President's Emergency Plan for AIDS Relief (PEPFAR) in 2002 (AIDS.gov, 2011; Ortblad, Lozano & Murray, 2013). As the epidemic spread in developing countries, developed countries and other organizations started negotiating access to treatment for the developed countries, as it had been unaffordable for those with limited resources. In the early 2000s there was a move to provide discounted generic ART to developing countries, and increase the availability of HAART to Africa (AIDS.gov, 2011). Research on treatment of HIV infection is ongoing, and one recent study shows evidence of the benefits of ART pre-exposure prophylaxis in 2011 (AIDS.gov, 2011).

The South African Government has made the fight against HIV one of its priorities, and developed strategies and policies targeting the HIV epidemic, with the aim of reducing infections and providing the best treatment as promptly as possible, all in line with global efforts to deal with the HIV epidemic (DoH, 2010a; Johnson, 2012; Motsoaledi, 2014). Some of the aspects of the Governmental strategies include increasing the number of patients with HIV who are initiated on ART and followed up and managed by a nurse, as documented in the National Strategic Plan (NSP) on HIV, sexually transmitted infections (STIs) and TB. The Minister of Health recently announced that from January 2015 people living with HIV will be started on ART when their CD4 count is below 500, as opposed to the current criterion of 350 which was implemented in 2010; before that a CD4 count below 200 was used (DoH, 2007; SANAC, 2011; Motsoaledi, 2014). In his 2014 budget speech, the Minister of Health Dr A. Motsoaledi (2014) noted that there are about 2.5 million people who are on ART, and that there is still about 37% who are lost to follow-up 36 months after starting

treatment. Full involvement of nurses in the care and management of HIV and AIDS provides the potential to reduce the loss to follow-up, because there will be more nurses involved in the provision of ART and better support to patients living with HIV and AIDS.

## **2.5 Role of nurses in providing care and management for HIV**

Since South Africa's health system has adopted a primary health care approach, people who are not well first present themselves at the clinics which are situated in their areas; they are then referred to a secondary or tertiary health care institution if there is a need. Most of the clinics in South Africa are managed by nurses. Considering the high number of people with HIV in South Africa, the nurses at the clinics will be directly involved in the care and management of HIV and AIDS and will be the first point of contact, and as noted by Delobelle et al. (2009), nurses in hospital also have a high frequency of contact with people with HIV and AIDS. As nurses form the bulk of health care providers in South Africa (as in many other countries), they are expected to provide care and management to the people living with HIV and AIDS. Such care needs to be holistic and effective to improve patients' outcomes, and the nurses' ability to do that depends on the training that has been received. Hence the importance to train nurses adequately so that they can implement the policies and guidelines set for the management and care of HIV and AIDS (Knebel et al., 2008; Rispel, 2008; Breier et al., 2009; Harrowing & Mill, 2010; Yiu et al., 2010).

Furthermore, Rackal et al. (2011) highlighted the importance of training those who provide care and management for HIV and AIDS, as it enhances the effectiveness of the care provided to patients with HIV and AIDS, effectiveness of services in terms of planning, as well as ensuring that the best treatment is provided, because the nurses will be trained to practice at a basic level of competency. With the advent of HIV, as an emergency measure, nurses' training on HIV care and management was mainly done as in-service training, and nurses in developing countries were reported not to be adequately prepared for the practice required for HIV and AIDS care and management (Knebel et al., 2008; Renggli et al., 2008).

Inadequacies in the pre-service training, nurses' lack of knowledge about HIV-related care, as well as decreased competency and experience were documented by a number of authors (Raisler & Cohn, 2005; Dohrn et al., 2006; Knebel et al., 2008; Rispel, 2008; Breier et al., 2009; Evans & Ndirangu, 2009). McCann and Sharkey (1998), Renggli et al. (2008); the report from JHPIEGO (2009), the WHO (2010), as well as some international HIV



associations such as the Canadian Association of Nurses in AIDS care (CANAC) (2013), , have recommended that HIV be integrated in the pre-service training of nurses, covering competencies related to HIV and AIDS care and management, including but not limited to nurse-initiated and managed ART (NIM-ART).

Madumo and Peu (2006) have reported that even student nurses themselves have indicated the need for innovation with regard to HIV care and management in their training. Additionally, Relf et al. (2011b) stress that it is important to prepare new nurse graduates in a holistic manner so that they can acquire the essential competencies that relate to HIV and AIDS. Relf et al. (2011b) again noted the need to identify such competencies related to HIV and AIDS care and management for nurses in South Africa, so that such competencies can be integrated in the nursing curriculum for the new nurse graduates. This would ensure that these nurses can provide effective and appropriate care and management to the population that they will be serving which, based on UNAIDS statistics, is more than six million people in South Africa alone (UNAIDS, 2013a; 2014a; 2014b).

The literature highlighted that the HIV care and management provided by nurses who received extra training in HIV and AIDS care and management is on par with the care given by doctors, as noted in the CIPRA-SA study (Sanne et al., 2010) and by Monyatsi et al. (2012). In addition, with the global agreement that task shifting is a viable approach with regard to the management and care of HIV and AIDS, nurses are becoming more and more involved in the care and management of HIV and AIDS (Callaghan, Ford & Schneider, 2010; Georgeu et al., 2012). Furthermore, there is a national policy in South Africa requiring nurses to initiate ART within a set timeframe, and this will increase access to care and management of those with HIV (DoH, 2010b; Georgeu et al., 2012).

If nurses are to provide appropriate and effective care to those living with HIV and AIDS, they need to be well prepared and competent (Callaghan et al., 2010). The 2004 WHO IMAI guidelines recommended that nurses are trained to provide primary care for HIV (WHO, 2004). Most of this training has been done with in-service training, and Renggli et al. (2008) stress the need for global systematic integration of HIV and AIDS care and management in pre-service training for the undergraduate programme.

As noted by Monyatsi et al. (2012), the nature of pre-service training influences how the health care workers other than doctors will practice in providing HIV care and management

as well as the patient's outcome. This has been documented in the training of Mozambican '*técnicos de medicina*' (medical technicians), as documented by Brentlinger et al. (2010), where the '*técnicos de medicina*' that had been exposed to HIV in their training performed better than the previous group that had not been exposed to HIV in their initial training.

Studies that have looked at the nurses' levels of HIV-related knowledge, skills, practices and attitudes have noted lack of knowledge about ART, HIV prevention, side-effects, counselling, symptom identification, HIV transmission, use of universal precautions, unwillingness to provide care, care and treatment as well as nutrition options (Uwakwe, 2000; Zulu & Lehmann, 2004; Dohrn et al., 2006; Delobelle et al., 2009; Mockiene et al., 2011; Mulaudzi, Pengpid, & Peltzer, 2011). In a Zimbabwean study patients with HIV reported that they need nurses to listen to them. Providing counselling and a supportive environment were identified as part of good clinical care for people with HIV on ART (Campbell et al., 2011). In a study done in Malawi, nurses' knowledge and skills in providing mental health care to people with HIV were also noted to be lacking. Because nursing practice requires a holistic approach and South Africa has adopted the integration of health care services, it is crucial for nurses who will be practising in the South African context to possess the required competency level with regard to HIV and AIDS care and management. It is because of this that the need was identified to establish HIV-related competencies for nurses and to integrate them into the undergraduate nursing programme.

## **2.6 HIV and AIDS core competencies**

The qualification of General Nursing Science registered at the South African Qualifications Authority (SAQA) for UWC provides qualifiers with graduate-level knowledge of health-related sciences and nursing skills and competence. This qualification provides credible, competent professional nurses who can provide care in the multifaceted South African environment and gives nurses the opportunity for personal and professional development as well as lifelong learning (SAQA, 2009). The first outcome for the programme states that the graduate should be able to apply relevant knowledge to meet the health needs. In the South African context, where HIV is one of the health priorities, this outcome is applied to providing care to those infected with and affected by HIV (SAQA, 2009), as well as the prevention of HIV. This is further supported by the WHO (2009), which emphasizes the need to train health care professionals such as nurses to provide care to their communities that are

relevant to their health needs. It is therefore important to consider HIV epidemiology in South Africa when training nurses.

A number of documents have been produced on HIV and AIDS core competencies, and these include the international consensus on HIV core competencies from a meeting on HIV service delivery training and certification from the WHO (WHO, 2005), the United Kingdom National HIV Nurse's Association (NHIVNA) document on National HIV nursing competencies (NHIVNA, 2007), as well as the essential nursing competencies related to HIV and AIDS (Relf et al., 2011b). In this study, documents were used when making decisions about the core competencies to be integrated in the curriculum, with the support of other South African policies and documents that provide information on what is expected of nurses with regard to providing comprehensive care and management to clients infected with HIV and AIDS in South Africa. Such documents include the Nursing Strategy for South Africa 2008, the 2007 and 2012 HIV/AIDS and STI strategic plan for South Africa, as well as the various guidelines on the care and management related to HIV and AIDS, such as counselling and ART guidelines (DoH, 2010a).

Garside and Nhemachena (2012) noted that the term 'competence' is used in reference to various professionals, and more so with regard to the nursing profession, and Cowan et al. (2007) as well as McMullan, Endacott, Gray, & Jasper (2003) noted that the terms 'competence' and 'competency' are often used interchangeably. McMullan et al.'s (2003) definition of competence focuses on a description of the action or outcome of performance, while Garside and Nhemachena (2012) define competence as a combination and integration of performance as well as knowledge and skills that enable performance. Many authors (Ashworth & Morrison, 1991; Carraccio, Wolfsthal, Englander, Ferentz, & Martin, 2002; Tilley, 2008; Dent & Harden, 2009; Garside & Nhemachena, 2012) define competence in nursing practice as a combination of attributes underlying aspects of successful professional performance in the provision of care, and further specify that competence is more than knowledge, skills and attitudes. It involves coordination of one's cognitive and affective resources as well as a willingness to utilize those resources and any other resources or qualities, such as receptivity and personal interest, as required for the performance of a professional task (Ashworth & Morrison, 1991; Carraccio, Wolfsthal, Englander, Ferentz, & Martin, 2002; Tilley, 2008; Dent & Harden, 2009; Garside & Nhemachena, 2012), and competency is understood by Benner, (1982); Cowan, et al., (2007) and Pijl-Zieber, Barton,

Konkin, Awosoga, and Caine, (2014) as the ability to perform. The International Council of Nurses (ICN), (2005) has defined competence as “Effective application of a combination of knowledge, skill and judgment demonstrated by an individual in daily practice or job performance” (p. 9).

Cowan et al. (2007) have pointed out that despite the lack of agreement on a definition of the term competence, in nursing practice competence involves an application of a combination of knowledge, skill, performance, values and attitudes. Cowan et al. (2007) further suggest an agreement on a holistic understanding that combines behavioural and psychological constructs, facilitating development of competencies that combines all aspects of holistic care to be provided by the nurse, and such competencies would then be properly measured and assessed. For the purpose of this project, a more holistic view will be adopted and competence will refer to a broad generic ability characteristic of the person that transfers across settings and situations and is not just a set of discrete skills. It is developmental and holistic, made up of several integrated components, and combines self-perception, skills, affect, personal interests, perceptiveness, confidence, critical thinking, motivation and knowledge, all outcomes of educational processes. This understanding of the concept is consistent with the outcome-based curriculum approach chosen for this project, as this approach is competency oriented (De Back & Mentkowski, 1986; Uys & Gwele, 2005).

### **2.6.1 Integration of HIV competencies into the undergraduate nursing curriculum**

The four-year undergraduate nursing programme in South Africa (R425) is a comprehensive programme and nurses that complete the programme qualify as nurse generalists, community health nurses, mental health nurses and midwives. Nurses who complete this programme are expected to practice competently in any setting and provide appropriate care. With South Africa having a high number of people with HIV and AIDS, the new graduates are exposed to patients with HIV and AIDS and need to provide appropriate care; hence the need to integrate such aspects into the curriculum. The literature provides examples where specific aspects such as substance abuse, patient decision support, international and transcultural content as well as HIV have been integrated into the undergraduate nursing curricula to strengthen and coordinate the integration of such aspects in the nursing curricula (Lindquist, 1990; Hayes, 2002; Knebel et al., 2008; Stacey et al., 2009; Kohi et al., 2010). In Haiti a competency-based curriculum in HIV for nursing schools was developed (Knebel et al., 2008). This approach is similar to the outcomes-based curriculum chosen for this project, as it

is an approach that relies on competency. In Tanzania a similar project was developed to strengthen nurse education in HIV care and management, by training nurse educators in nursing schools (Kohi et al., 2010).

## **2.7 The undergraduate nursing programme at UWC**

The undergraduate nursing programme at UWC is a registered qualification of SAQA with SAQA qualification ID 8079 (SAQA, 2009). The programme is offered over four years and nurses who complete the course qualify in general nursing, psychiatric nursing, community nursing and midwifery (Mekwa, 2000; SAQA, 2009). Three purposes of the qualification have been noted by SAQA (2009), namely provision of graduate level knowledge related to health sciences and more specifically nursing skills and competence; provision of credible professional nurses who are able to provide care within the boundaries of the health system; as well as provision of competent health care practitioners who can engage in collaboration with other disciplines and influence policies. The SAQA exit outcomes include application of knowledge and skills to meet the various health needs within a multidisciplinary context of various groups of people; application of scientific processes to address health problems within a professional and ethical framework; interpretation of policies and influencing policies as well as attending to personal and professional development (SAQA, 2009). The nursing undergraduate nursing programme at UWC is offered with the first year covering the fundamentals of nursing and the science modules of physics, chemistry and human biology, in addition to one interdisciplinary module of Primary Health Care and Development. The second year covers general nursing, with Pharmacology, Human Biology and Psychology. The third year covers modules related to midwifery and community nursing as well as a module on nursing management, while psychiatric nursing is done in the fourth year with a research and professional development module.

The undergraduate nursing programme at UWC has approximately 1000 students in the programme with about 70 nurse educators, of whom 32 are academic staff and 38 clinical facilitators. From 2016 a new curriculum will be implemented, as gazetted by SANC; however, accreditation processes for the new curriculum have not been finalised, and hence use of the current programme for the purposes of this study.

## **2.8 Educational philosophies and curriculum**

Ornstein and Hunkins (2004) have noted that decisions and actions obtain their meaning from philosophy, and without philosophy, the educator will be vulnerable in several respects. Educational philosophies are essential in education and curriculum development and choosing one provides meaning to the curriculum development activities, because those involved in curriculum development need to be cognizant of their own values and beliefs, since such beliefs and values influence decisions that are made in the process (Iwasiw, Goldenburg, & Andrusyszyn, 2009; Ogwora, Kuria, Nyamwaka, & Nyakan, 2011). Without an educational philosophy, the curriculum will be directionless, and as Ogwora et al. (2011) noted, a curriculum that does not have a philosophical foundation will include almost everything. The adoption of an educational philosophy will not only guide what is covered in the curriculum and the teaching and learning process and strategies, it will also inform the curriculum approach that will be adopted and, as Ornstein and Hunkins (2004) as well as Billings and Halstead (2012) note, most curricula are founded on many philosophies. The various curriculum approaches are highlighted in this literature review.

## **2.9 Main philosophies**

Philosophy can be understood as a system of beliefs and values that one ascribes to, giving direction to one's choices and decisions (Mellish et al., 1998). It has been noted by Ogwora et al. (2011) that philosophy is the basis of all other disciplines and education, like many other disciplines, borrows from philosophy and puts the acquired knowledge into practice. The main philosophies that have been documented and described in this literature review are idealism, realism, existentialism and pragmatism.

### **2.9.1 Idealism**

The term 'idealism' is a combination of two words, namely 'idea' and 'ism'. The term 'ism' indicates that there is some kind of absolutization or overemphasis on the concept of 'idea' (Kruger & White, 1982). This philosophy was introduced by Plato and it posits that moral and spiritual realities are the major explanations of the world. This philosophy stresses mind over matter, suggesting that nothing is real and only an idea in the mind. Truth and values are considered to be absolute and eternal, and the knowledge of the outside world comes in the form of sense of impression. These impressions will not exist if it was not for the perceiving

mind and the qualities perceived are called 'ideas' (Macdonald, 1965; Kruger & White, 1982; Iwasiw et al., 2009). Idealists consider man as a reasonable being, a reflection of the cosmic soul or absolute spirit. Some of the proponents of this philosophy include Socrates.

### **2.9.2 Realism**

Aristotle, who was mentored by Plato, is considered the father of realism philosophy, a philosophy that affirms that things and reality exist whether perceived or not, that knowledge is obtained through senses and reason, that values are delivered from nature and that the laws of nature are respected (Kruger & White, 1982). With this philosophy, education is designed to assist students to understand those laws that regulate the nature (Iwasiw et al., 2009; Billings & Halstead, 2012). Realism came in opposition to idealism and stresses the objective understanding of an object, because the ultimate form of the object does not change.

### **2.9.3 Pragmatism**

The word 'pragmatism' originates from the Greek word *pragma* meaning 'act' or deed'. Pragmatism stresses the importance of experiencing the reality. Psychologist William James was the first to introduce the philosophy of pragmatism, but it is only after John Dewey's statement on pragmatism that the theory gained broader use. Pragmatism is based on change, relativity and process and it denotes two theories, namely a theory about the nature of the truth and a theory on a method of ascertaining the truth (Billings & Halstead, 2012). Pragmatism posits that reality undergoes a process of change continuously and that perfection cannot be attained while man actively interacts with the environment as opposed to being bound by fixed physical laws. Man is considered to be changing through his own inner powers. As the world and everything in the world changes, values are also changing and there is no absolute truth or knowledge, and the truth of knowledge depends on its usefulness, and is relative to the individual's experience (Macdonald, 1965; Kruger & White, 1982; Billings & Halstead, 2012).

### **2.9.4 Existentialism**

This philosophy states that individual choices lead to self-definition. One defines oneself in relation to the existence of the choices that one makes, hence the importance of taking responsibility for deciding who one is (Billings & Halstead, 2012). Furthermore,

existentialism posits that the nature of reality is subjective and lies within the individual, as the physical world has no inherent meaning separate from human existence.

## **2.10 Educational philosophies**

Each of the philosophies summarised above has had an influence on education and educationalists have used them to guide their practice, as philosophy forms the basis of decision making about education (Ornstein & Hunkins, 2004; Ogowora et al., 2011). The main educational philosophies that are discussed here are perennialism, essentialism, progressivism and reconstructionism.

### **2.10.1 Perennialism**

Perennialism is a conservative education philosophy that is based on the philosophy of realism. It has an instructional objective of educating the rational person and cultivating the intellect, and it has no regard for the learners' interests, needs or opinions as learners are viewed as partly moulded human beings (Uys & Gwele, 2005; Ward, 2006; Moss & Lee, 2010; Billings & Halstead, 2012). Perennialism posits that one must teach the knowledge that is of eternal importance to all people everywhere, as knowledge is truth and truth is universal (Ornstein, 1990; Moss & Lee, 2010). Perennialist educational philosophy gives limited importance to vocational education. A perennialist curriculum is seen as a constant and focuses on basic classical subjects referred to as the three Rs (reading, writing and arithmetic), making it a content-based curriculum (Ornstein, 1990; Uys & Gwele, 2005). The teacher's role is to help students think rationally and the teacher remains the centre and authority of the education process, with lectures being the main teaching strategy (Ornstein, 1990; Uys & Gwele, 2005; Ward, 2006; Billings & Halstead, 2012).

### **2.10.2 Essentialism**

The educational philosophy of essentialism is partly based on both idealism and realism, stressing the importance of both body and mind in education (Uys & Gwele, 2005; Billings & Halstead, 2012). Similar to perennialism, essentialism is also a conservative educational philosophy where the teacher is considered an expert with authority in his own field and a duty to transmit essential knowledge to learners with the curriculum focusing on essential skills and subjects (Ornstein, 1990; Ward, 2006). Furthermore, the curriculum relies on those



in authority, because they are the ones that determine what is essential to learn, providing a similar curriculum across populations and allowing each student to follow his own pace (Uys & Gwele, 2005; Billings & Halstead, 2012).

The purpose of education is to transmit and uphold the cultural heritage, to educate a competent person who will be a productive member of society, and to promote intellectual growth while instilling and preserving in the learners that which is essential to learn (Uys & Gwele, 2005; Billings & Halstead, 2012). A learner in an essentialist environment is viewed as a passive recipient of knowledge given by the experts, one that does not need to think, but rather to do as told; learners' interests and needs are disregarded (Ornstein, 1990). With this perspective the teaching and learning strategies include lectures, drills and recitations, which have been noted to promote superficial learning. Like perennialism, the curriculum based on essentialism is also content-based.

### **2.10.3 Progressivism**

Pragmatism forms the base of progressivism, which aims at promoting democratic and social living while helping learners to relate their experiences to the world (Billings & Halstead, 2012). This educational philosophy rose from dissatisfaction with the conservative philosophies that focused on content only and emphasized the passive role of the learner (Uys & Gwele, 2005; Moss & Lee, 2010). A progressivist teacher is seen as being more participative, providing guidance for solving problems; scientific enquiry and the students' interest form the basis for the curriculum (Moss & Lee, 2010). The curriculum further includes the investigation of human problems and interdisciplinary activities. The learner is considered to be a psychological and social being who constantly seeks to find meaning in his environment. The learner is allowed to direct his own actions, because answers obtained in such a manner provide a better understanding of the world, and do not focus on content or being passive. The teaching and learning process involves active learning approaches, enhancing experiential learning and interaction with others (Uys & Gwele, 2005).

### **2.10.4 Reconstructionism**

Similar to progressivism, reconstructionism is also based on a pragmatic philosophy, but its aim is to improve and reconstruct society. Education is done for change and social reform, is society-centred and considers the needs of the whole society as opposed to an individualistic approach (Ornstein, 1990; Billings & Halstead, 2012). It has been documented by Ornstein

and Hunkins (2004) that reconstructionism was born out of the realization that progressivism that focused on individualism in education was serving the middle class and was not bringing reform fast enough to deal with the economic depression. A new approach was needed for education that would focus on the society and serve the whole population. Tyler (1949), as noted in Uys and Gwele (2005), listed four questions that should be answered when planning a curriculum based on reconstructionism:

- What are the educational purposes that the school is trying to achieve?
- What are the educational experiences that can be provided that will have the potential to achieve those purposes?
- What organization will be effective to offer the identified educational experiences?
- How will the attainment of the educational purposes be established?

This allows for identification of the learner's needs, characteristics and interests and allows the learner to participate in constructive social renewal. The learner will not do as they are told, but will ask for explanations and rebel against any force that attempts to maintain social inequalities, as education enhances attainment of the social ideal of a democratic life (Ward, 2006; Billings & Halstead, 2012). The teaching and learning process in this perspective involves cooperative and collaborative experiences, with connections being made between the community and the classroom (Ornstein, 1990; Uys & Gwele, 2005; Ward, 2006). With a reconstructionist perspective the teacher is an agent of change, assisting students to notice the problems in the community and encouraging them to tackle them in order to bring about social and constructive change with enhanced cultural sensitivity (Ornstein & Hunkins, 2004).

Having explored the educational philosophy, an exploration of the psychological basis of education and curriculum will further enable congruency. The learning process at a psychological level is explored and matched with the philosophy as well as the curriculum approach.

## **2.11 Psychological bases of curriculum**

Psychology offers the basis for teaching and learning as it provides insight into how people learn, and this informs how educators will teach and facilitate learning (Ogwo et al., 2011). The main psychological philosophies that influence education discussed here are

behaviourism, cognitivism, humanism and constructivism. As noted by Kruger and White (1982), the 'ism' indicates emphasis in each of the four approaches on behaviour, cognition, humanity and construction respectively.

### **2.11.1 Behaviourism**

Behaviourism emphasizes the development of mental discipline using memorization, drill and recitation techniques and predominance is given to the learner's behaviour to ensure the mastering of skills (Dunham, Wells, & White, 2002). The curriculum based on a behaviouristic perspective presents real facts and visible occurrences, using behavioural objectives. The teacher has the responsibility to organize knowledge and the student is expected to be passive and not given opportunity to analyse, question or be creative (Dunham et al., 2002; Jones & Brader-Araje, 2002; Iwasiw et al., 2009; Billings & Halstead, 2012 ). This philosophy is similar to the realism philosophy and the perennialism educational philosophy as they all make the student passive and focus on the reality that needs to be known, while the teacher is made the master of the teaching and learning process.

### **2.11.2 Cognitivism**

Cognitivism developed when psychologists started to wonder what goes on in the mind of the learner. This question was not answered by the behaviourists, as their focus was on behaviour. Cognitivism focuses on how information that is presented as a stimulus is received, assimilated, stored and recalled if need be. It gives greater importance to the process of learning, with the teacher using problem-solving and thinking skills in the teaching and learning process to apply and develop reflective thinking and discovery, among others (Ogwora et al., 2011).

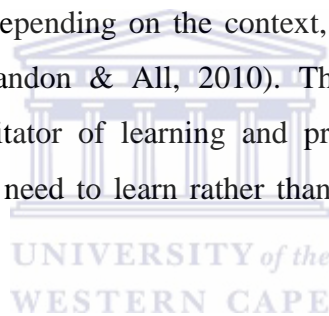
### **2.11.3 Humanism**

The humanist approach highlights that the student is a human being who has feelings and emotions such as self-efficacy and motivation that determine how the student will approach learning, and these need to be taken into consideration to facilitate learning. Education is supposed to enhance growth and development for self-actualization, allowing learners to be highly motivated and self-directed, while the teacher is seen as a motivator and facilitator supporting learning processes and encouraging experiential learning (Iwasiw et al., 2009). With a humanistic approach the strategies that are used in teaching and learning include

individual projects, independent study, discussions and experiential learning (Spurgeon & Moore, 1997).

#### **2.11.4 Constructivism**

This philosophical approach emphasises the active participation of the students who engage in meaning-making. Knowledge is perceived to increase over time and seen more as a process than a product (Dunham et al., 2002; Jones & Brader-Araje, 2002). Furthermore, prior knowledge of students is acknowledged, as Brandon and All (2010) as well as Jones and Brader-Araje (2002) note, allowing students to bring their previous experience into the learning process. Instruction design is able to go beyond rote learning to reach more meaningful learning that is more likely to result in deeper and sustainable understanding as well as critical thinking skills. The constructivist perspective emphasises the changing nature of knowledge as connections are continuously made between new and old experiences and learning. Meanings could vary depending on the context, fostering the lifelong learning of skills (Iwasiw et al., 2009; Brandon & All, 2010). The educator with a constructivist perspective functions as a facilitator of learning and provides coaching to the students, focusing more on what students need to learn rather than what the educator want to teach (Brandon & All, 2010).



#### **2.12 Philosophical view for the study**

The above educational philosophies have guided curriculum approaches over the years. Given the fact that nursing education is placed in the higher education system, there is a clear need to ensure that the philosophy applied is relevant to the type of students enrolled in the programme and the purpose of the programme. In addition to that, it is crucial to ensure that the chosen philosophy will respond to the needs of students and society as a whole, as the society will be the recipient of the services that will be rendered upon graduation. Furthermore, the chosen philosophy will provide a foundation for the preparation of students to participate in the rapidly changing environment, with the ability to constructively and critically make the required changes.

Perennialism and essentialism do not allow the students to do that, as students' needs and interests are not taken into account, and as Billings and Halstead (2012) note, both can be seen as being out of date in the current era, where the teacher and learner learn from each

other and the importance and benefit of learners' involvement is acknowledged. The progressive philosophy facilitates students' participation and experiential learning; however, it has been pointed out that education should do more than prepare responsible and critical citizens (Uys & Gwele, 2005). In comparison, the philosophy of reconstructionism fosters social reconstruction, facilitating the ability in students to reconstruct their world. This seems to be the most appropriate educational philosophy to apply in nursing education, in an effort to produce nurses who will not only provide care and remain content with the status quo, but also challenge themselves and society to make changes for the better. As noted by Ornstein and Hunkins (2004), no curriculum is based on a single philosophy. In this study, as much as the teacher will adopt the role of change agent as a constructivist, the role of teacher in the progressive perspective will also be incorporated, enhancing the development of problem solving and scientific enquiry. Furthermore, to fit into the national educational programme for qualification purposes, the more traditional approach will be included in terms of having fixed schedules and whole-group learning as opposed to an individualized programme that is characteristic of reconstructionism and constructivism. This will be visible in the way the whole curriculum is planned and subjects that are allocated to a specific semester.

To counteract one of the reproaches against constructivism with regard to knowledge being disregarded in the curriculum and learning process, radical constructivism will be avoided; ensuring consideration for the social realist perspective that recognises that knowledge is out there. The combination with constructivism will allow students the opportunity to discover the reality, question it and strive to make relevant changes. As noted by Wheelahan (2010), knowledge is used to think about the world and should be emphasized in the curriculum; however, the students' passivity noted in approaches that adhere fully to realism should be replaced by active participation and the opportunity to create and discover more knowledge as well as being able to be critical and ready to make changes when needed, in addition to facilitating translation of knowledge into practice.

Having explored the philosophies and educational philosophies, the next step is to choose the curriculum approach that is supported by the chosen philosophy, keeping in mind the psychological foundations of the curriculum that assist in understanding of the learning process.

## **2.13 Curriculum approaches**

‘Curriculum’ is one of those terms that have been understood differently by different people involved in the teaching and learning process, as noted by Mellish et al. (1998). As noted by Iwasiw et al. (2009), the more traditional definitions of curriculum refer to what is taught, and Uys and Gwele (2005) define curriculum as planned learning experiences intended to be given to students by the educational institutions, while acknowledging the existence of hidden and null curriculum. Fraser and Bosanquet (2006) provide a wider interpretation and include the interactive process of teaching and learning, while Dent and Harden (2009) state that curriculum is about what happens in a teaching programme, about the intentions of the teachers and how they make it happen, giving a wider vision of a curriculum that includes content, learning outcomes, educational environment, assessment, learning opportunities and educational strategies.

This section will outline the curriculum approaches applied to the philosophy that have been discussed above, with a comprehensive discussion of the curriculum approach that is underpinned by reconstructionism. The content-based, process-based and outcomes-based curriculum approaches are discussed.

### **2.13.1 Content-based curriculum approach**

With this approach, carefully predetermined educational objectives are selected to teach what the teacher views as important. It has the advantage of being easy to organize, a large amount of content can be covered in short period of time and it gives all the control to the teacher (Uys & Gwele, 2005). This approach is weakened by the passive nature of students, the mastering of competencies is minimal, it leaves little room for the development of clinical interventions, and the teaching may become irrelevant due to the fact that it is separated from practice and experience and the needs and interests of students are not recognized (Uys & Gwele, 2005; Sahlberg, 2006; Brandon & All, 2010). Looking at the philosophies that have been described, this curriculum approach fits with the conservative philosophies of perennialism and essentialism that focus on content rather than learners’ needs and interests.

### **2.13.2 Process-based curriculum approach**

This curriculum approach focuses on assisting learners how to learn, with the assumption that the process through which learning is achieved is more important than the content, and this is

in line with the progressive philosophy that focuses on the importance of process while enhancing active participation of learners (Uys & Gwele, 2005). This approach has the advantage of fostering the students' active participation and promotes the development of life skills and lifelong learning abilities; however, it is difficult to use as a basis for educational evaluation and learning assessment (Uys & Gwele, 2005; Sahlberg, 2006). Given the importance attached to the process of learning, this approach is based more on the pragmatist philosophy (Uys & Gwele, 2005).

### **2.13.3 Outcomes-based curriculum**

The outcomes-based curriculum approach is applied in outcomes-based education (OBE). It provides clear information on what is expected of the graduates at the end of the training period and holds the education system accountable to ensure that the education provided achieves the expected outcomes (Uys & Gwele, 2005; Sahlberg, 2006; Dent & Harden, 2009). This approach differs from the content-based approach, as it does not only provide what is essential to be learnt, it also guides the planning of the teaching process by providing a more defined description of intended learning outcomes or standards at various levels of training, aligning education with the demands of the workplace (Uys & Gwele, 2005; Sahlberg, 2006). In addition, this approach provides consensus on the evaluation of the educational plan and learning assessment. It encourages students' active involvement in the learning process and the creation of knowledge, and has the potential to equip learners with skills needed to be critical members of society. Education is seen as more than an acquisition of knowledge; through interactive approaches education also provides the development of critical thinking, problem solving, creative thinking and lifelong learning skills (Uys & Gwele, 2005; Chabeli, 2010). Looking at the questions that are considered when developing a curriculum with a reconstructionist perspective, OBE is able to provide answers to all of the questions that were listed, and since one of the main aims of OBE is social reconstruction it has the potential to produce critical learners (Uys & Gwele, 2005).

Some of the advantages of an outcomes-based curriculum are that it emphasizes the mastery of learning, making instruction purposeful for learners while empowering them, as they can see the results of their efforts. This approach also encourages learner-centeredness in teaching and learning activities, enhancing learners' active participation (Killen, 2001; Meyer & Van Niekerk, 2008). However, the outcomes-based curriculum approach also has its disadvantages. It has been criticized as putting emphasis on the minimum requirements. This

can easily be overcome by setting standards that create high expectations and provide appropriate learning opportunities for the learners to achieve their full potential (Killen, 2001).

Like many other nursing schools in South Africa, the current educational system in the School of Nursing at UWC adopts and encourages OBE, based on an outcomes-based curriculum approach (Geyer, Naude, & Sithole, 2002). The emphasis of OBE is aimed at ensuring that learners can use the new knowledge. OBE as an educational approach is competency-oriented and performance-based; it indicates what the learner will gain after completion of the course and is based on the following principles: clarity of focus, high expectations, design-down and expanded opportunity. In adopting OBE educators facilitate the learning process, ensuring active participation of learners and development of critical thinking skills as well as the integration of knowledge, aspects that are embedded in the radical educational philosophy (Killen, 2001; Uys & Gwele, 2005).

Looking at the three curriculum approaches, the outcomes-based curriculum seems to be better placed to be implemented in this project, as it enhances the development of critical thinkers that can bring about change in society. As stated by Dent and Harden (2009), OBE is not only a good education it is also a good public policy as it holds the educational institution accountable.

#### **2.14 Linking philosophies and curriculum approach**

In education theories and philosophies guide those that are involved in the teaching and learning process. A review of the philosophies and curriculum approaches that have been described provides a classification of the philosophies into three categories, namely conservative, progressive and radical philosophies (Table 2-1).

The conservative view has a purpose of transmitting information that ought to be conserved, and the neither needs nor interests of the students are considered, as students are seen as passive participants (Uys & Gwele, 2005). The progressive view allows the student to direct own actions in pursuit of experiences, and the teacher has the responsibility to assist the students negotiate the meaning from experiences while helping them to become responsible and critical citizens (Uys & Gwele, 2005; Sahlberg, 2006). On the other hand, the radical



view states that education should do more than prepare responsible and critical citizens; it should also prepare them for deliberative citizenship (Sahlberg, 2006; Brandon & All, 2010).

Table 2-1: Links between the various philosophies and curriculum

<b>Philosophical category</b>	<b>Philosophies</b>	<b>Educational philosophies</b>	<b>Educational psychologies</b>	<b>Curriculum approaches</b>
Conservative	Idealism Realism	Perennialism Essentialism	Behaviourism	Content-based
Progressive	Pragmatism Existentialism	Progressivism	Cognitivism Humanism	Process-based
Radical		Reconstructionism	Constructivism	Outcome-based

In education one needs to maintain congruence between the philosophical underpinning of the curriculum and the curriculum that is to be implemented. In the study a radical approach to education is adopted, setting the stage for increasing ability to bring about change in society for the improvement of the world we live in. This is the reason why pragmatism is adopted as the philosophy that guides the educational endeavour, with reconstructionism as the educational philosophy, while constructivism is the educational psychology that explains learning in an era where there is an ever-changing environment.

Having chosen the philosophical underpinning for this study, various models that can be adopted in conducting the study are reviewed. The study is about developing a model for integration of HIV and AIDS core competencies in the undergraduate nursing curriculum at UWC. For this model to be developed appropriately and succeed, the approach adopted considered the various ways in which a curriculum can be developed and/or revised such that the best approach was adopted. The various curriculum development models are presented in the next section.

### **2.15 Curriculum development models**

For effective designing, planning, implementation and evaluation of a curriculum there is a need to follow a well-documented and systematic plan. There are a number of models for curriculum development, namely linear, prescriptive curriculum development models such as Tyler's model of planning; cyclic curriculum development models, such as Nicholls and

Nicholls' model, and dynamic curriculum development models such as Walker's deliberative approach to planning that focus on how the curriculum planning is to be done (de Villiers, 2001).

### **2.15.1 Linear, prescriptive development model**

Tyler's model is an example of a linear, prescriptive development model. It describes how the curriculum should be built, focusing on four basic questions about the behavioural objectives, the selection of learning experiences, organization of learning experience and evaluation (Lunenburg, 2011). This model of curriculum development has been classified by Ornstein and Hunkins (2004) as one of the technical scientific models, viewing curriculum development as a plan for structured learning, using a rational and rigorous approach in completing tasks, to ensure achieving the desired goals. This model is used frequently in curriculum development and has the advantage of having the ability to be applied to any subject and any level, and provides easy, logical and rational steps for the development of curriculum. However, this model has its disadvantages, as it is primarily a behavioural model and those who are directly involved in the teaching of students are not involved in the curriculum development (Ornstein & Hunkins, 2004). Furthermore, research shows that teachers do not use such a series of steps, and this model does not give guidelines about which objectives should be selected. Additionally, this model only focuses on intended behavioural objectives and gives no regard to other aspects such as clinical reasoning. There is a need for more discussion, deliberation and consensus when working with a curriculum (Lunenburg, 2011; Lee, Steketee, Rogers & Moran, 2013).

### **2.15.2 Cyclic curriculum development model**

The proponents of the cyclic curriculum development model highlight the interaction and interrelations that are to be seen and experienced in the process of curriculum development (de Villiers, 2001). Nicholls and Nicholls' model is an example of a cyclic model and it provides five components in the process of developing a curriculum: situational analysis; selection of objectives and organisation of content; selection and organisation of methods and evaluation of learning, with situational analysis being the main difference from Tyler's model (de Villiers, 2001). With this model the actions are interrelated and interactive; it is not objectives-driven like the linear models and emphasizes the need for curriculum evaluation (Reading & Reid, 2004).

### **2.15.3 Dynamic curriculum development model**

Walker's deliberative approach is an example of a dynamic curriculum development model, which focuses on what is actually occurring in practice and includes a three-step sequence of platform, deliberation and design (Walker, 1971; de Villiers, 2001). The platform step unpacks the personal beliefs of those involved in the curriculum development process; deliberation involves having dialogue and debates about the platform and the design provides a set of abstract relationships between the components of the curriculum and is the end result of curriculum development (Walker, 1971; de Villiers, 2001). This approach is advantageous as it reflects the reality and stresses how important it is for the planners to spend time in dialogue (Walker, 1971; de Villiers, 2001).

The linear-prescriptive and cyclic models have the disadvantage of not acknowledging the influence of design and implementation; both models do not explicitly provide opportunity for discussion and dialogue about the foundations of a curriculum (de Villiers, 2001). The dynamic curriculum development models provide this advantage by allowing deliberative phases, and stakeholders can participate in providing their input for the platforms and philosophical foundation of the curriculum (Walker, 1971; de Villiers, 2001).

### **2.15.4 The model for curriculum development in nursing**

De Villiers (2001) proposes a process model of curriculum development in nursing that specifies the phases involved in curriculum development, as well as the steps to be followed to complete specified curriculum development tasks from planning to evaluation, with potential to provide fundamental curriculum changes.

This process curriculum development model seems like an extended dynamic curriculum development model, as it provides three similar phases, namely planning, design and implementation. In the first two phases a series of activities on deliberation and verification are carried out, before the implementation phase during which an evaluation is carried out (de Villiers, 2001). Table 2-2 highlights the three phases and the aspects of the curriculum that are focused on in each phase. The processes followed and the activities carried out are also given. The model allows a dynamic movement between the phases, and deliberation and verification are important before a new aspect is considered.

Table 2-2: The process model curriculum

Phase	Aspects	Process	Activities
Planning	Foundations of propositions	Deliberation and verification	Formulation of foundations
			Situational analysis
	Structure of curriculum		Identification of core competencies
			Draft integration
Design	Educational plan	Deliberation and verification	Design plan and implementation strategy
	Implementation strategy		
	Integration framework		Compile framework
Application	Implementation	Monitoring	Applied framework
	Evaluation	Comprehensive	Implemented framework

Considering that this process model of curriculum development in nursing has the potential to effect fundamentals changes, it was modified to fit the research project and applied as the model of choice for this project, with the focus on the first two phases, namely planning and design.

In this project this process model of curriculum development provided the advantage of allowing discussion about the HIV and AIDS-related core competencies and the outcomes and integration of core HIV and AIDS competencies to be applied through a process of deliberation and verification. This provides a further advantage of being able to review previous work during the process and make adjustments as required. For this study the Competency Outcomes and Performance Assessment (COPA) model was used as a conceptual and procedural framework to achieve this.

## 2.16 COPA framework

The COPA model is organized around four essential conceptual pillars, namely the description of essential core practice competencies; end-result competency outcomes; practice-driven, interactive learning approaches; and objective competency performance assessments (Lenburg, 1999; Lenburg, Klein, Abdur-Rahman, Spencer, & Boyer, 2009; Lenburg, Abdur-Rahman, Spencer, Boyer, & Klein, 2011).

The COPA model has been documented as providing a curriculum framework and it has the potential to promote competence for nurses' practice (Lenburg, et al., 2009). The integration of the four concepts of the COPA model assists comprehensive and cohesive curriculum revision and changes in the roles of the teaching staff and students (Lenburg et al., 2011).

Eight core COPA practice competencies were identified by Lenburg (1999), namely assessment and intervention; communication skills; critical thinking skills; human caring relationships skills; management skills; leadership skills, teaching skills; and knowledge integration skills. They can be integrated into all nursing courses. Each of the eight universal core competencies identified by Lenburg (1999) has a number of subskills performed by nurses. The conceptual pillars of the framework provide good direction for the process of curriculum revision and development, necessitating identification of the following four aspects, as noted by Lenburg (1999) and Lenburg et al. (2009) and reflected in Figure 2-3:

- The essential competencies required for practice.
- The most effective outcome statements that integrate those competencies.
- The most effective interactive learning strategies to promote achievement of the outcomes.
- The most effective performance assessment methods to validate achievement of outcomes and required practice competencies and subskills.

A close look at these four aspects documented by Lenburg et al. (2009) reveals that they match the four questions considered in the reconstructionist educational philosophy, providing coherence between the educational philosophy and the curriculum development framework and process. As noted by Ornstein (1990), each curriculum is based on an educational philosophy and failure to clarify the educational philosophy will leave the educator directionless. The COPA model has been documented as being successfully implemented as a framework in a number of nursing programmes (Lenburg et al., 2011). It shows reliability in clinical examination; hence its adoption for use in this study as it is a framework that can also be implemented beyond this study.

For this study the first three pillars of the COPA are used as a framework for the first two objectives of the study. The first pillar refers to the specification of essential core practice competencies and corresponds to the first objective of the study, namely 'To identify the required core competencies for a new nurse graduate to provide HIV and AIDS care and

management in South Africa'. The second and third pillars refer to the identification of end-result competency outcomes and practice-driven and interactive learning strategies, which correspond to the second objective of the study, 'To design and develop an integration model to guide the integration of the identified core competencies related to HIV and AIDS that will be embedded into the four-year nursing degree curriculum at UWC'.

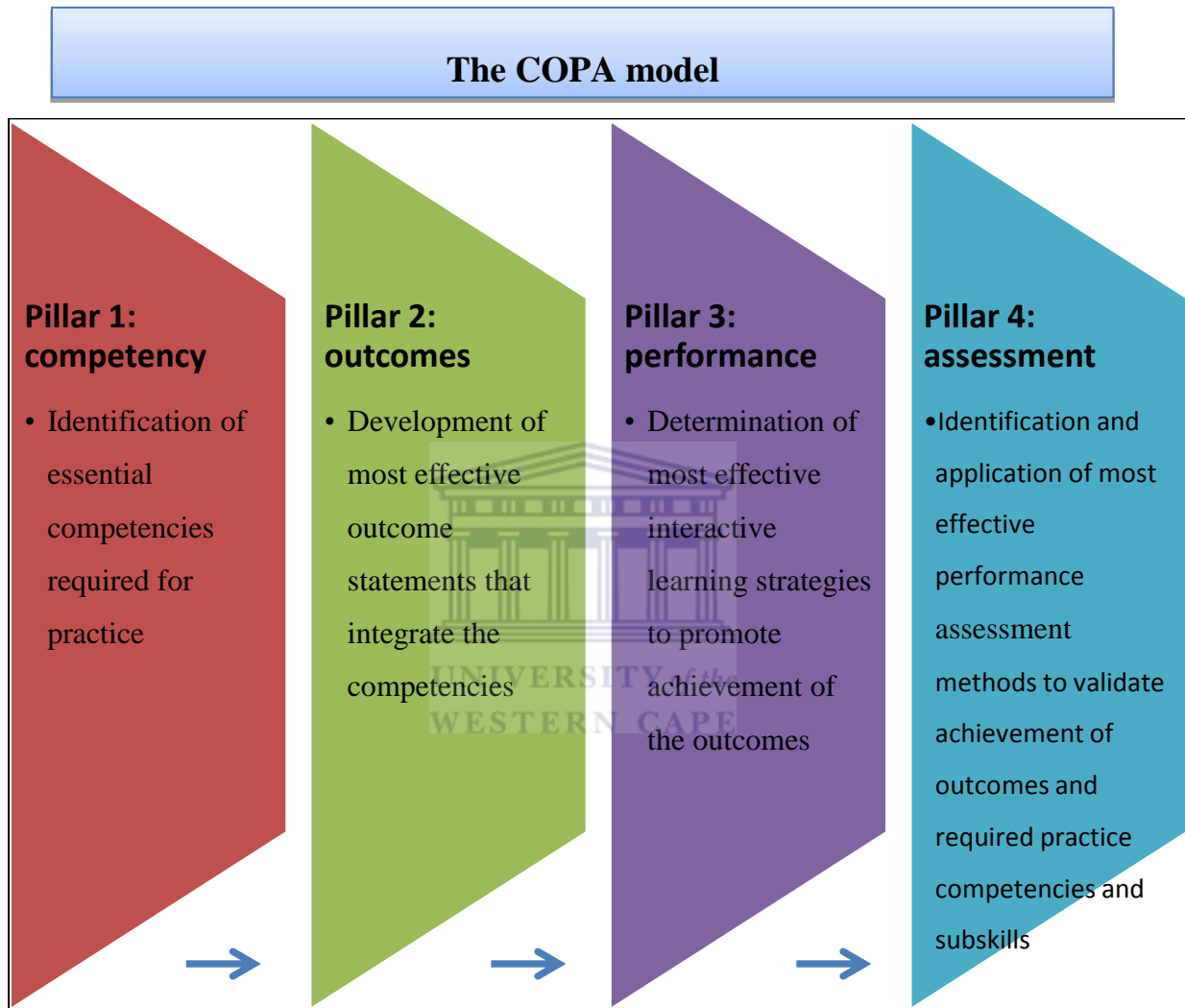


Figure 2-3: Representation of the COPA model as described by Lenburg et al. (2009).

The third objective of the study, 'To validate the developed model for the integration of HIV and AIDS core competencies that will be embedded into the four-year nursing degree curriculum at UWC', includes the three pillars. The validation includes a review of the HIV and AIDS nursing competencies, the outcomes related to the competencies, as well as mapping the outcomes in each year level, and provides an indication of how the teaching and learning process will be conducted.

The COPA framework is used to guide the study and fits into the process-based curriculum development model adopted for the study, as illustrated in Table 2-3, highlighting the three phases of the study that correspond to the three objectives of the study. Having applied the process model for curriculum development, the deliberative aspect of the model was applied and continuous reviews and discussions during the course of the study provided an opportunity to refine the competencies, outcomes and integration developed in the study.

Table 2-3: Linking the curriculum development approach, the COPA framework and phases of the study

Phase	Aspects	Process	Activities	COPA framework	Phases of the study
Planning	Foundations of propositions	Deliberation and verification	Formulation of foundations	Competencies	<b>Phase 1:</b> Identification of HIV and AIDS-related competencies for nurses
			Situational analysis		
	Structure of curriculum		Identification of core competencies	Outcomes	
			Draft integration		
Design	Educational plan	Deliberation and verification	Design plan and implementation strategy	Performance	<b>Phase 2:</b> Development of outcome statement and curriculum mapping for integration of the identified competencies
	Implementation strategy				
	Integration framework		Compile framework	Competencies Outcomes Performance	<b>Phase 3:</b> Validation of the integration model

### 2.17 Approaches to integration

In an effort to avoid compartmentalized education that is not relevant to real-life situations, educators have proposed a curriculum that presents a unified holistic view of life, hence the introduction of curriculum integration (Relan & Kimpston, 1991). In the literature Relan and

Kimpston (1991) as well as MacMath, Wallace and Chi (2009) indicate that the term integration is often used interchangeably with the terms multidisciplinary, transdisciplinary and interdisciplinary. All those concepts share an understanding that knowledge and skills across discipline and subject area are intermingled, with varied type, depth and purpose of the merger (MacMath et al., 2009). Placed on a continuum, multidisciplinary will be at one end focusing on how diverse disciplines can supplement one another, keeping each discipline content separate, while the interdisciplinary examines how the different disciplines complement each other, content being pulled around a common theme, making the connections between the disciplines explicit to the students (MacMath et al., 2009). With the transdisciplinary, students need to answer a question or complete a project using the various disciplines' input, as there is no focus on separating the disciplines (MacMath et al., 2009).

It has also been noted by Relan and Kimpston (1991) that the focus in all these approaches is on the various ways in which disciplines can be combined to achieve some integration. Integration has a more inclusive interpretation in curriculum practice, as noted by Relan and Kimpston (1991). Some authors (Bereiter, 1984; Lachman & Pawlina, 2006) refer to integration across domain skills, like thinking, problem solving, reasoning and reflective practice. Some other authors refer to integration in relation to teaching and learning strategies, as well as the addition of topics and subjects in the curriculum without being classified as a separate discipline, like nutrition (Touger-Decker, 2004); women's health issues (Levison, Weiss, Puglia, Nieman, & Donoghue, 1998); gerontology (Blais, Mikolaj, Jedlicka, Strayer, & Staned, 2006); HIV (Stepleman et al., 2008) and end-of-life care (Wallace et al., 2009).

### **2.17.1 Integration models**

Haslegrave (2006) documented three models that can be used when integrating specific aspects into an existing curriculum, namely the integrated model, the free-standing model and a delegated model. The delegated model involves outsourcing staff from other departments to come and teach a specific aspect in the curriculum. For example, in the current undergraduate nursing programme at many universities, the pharmacology aspect of training is delegated to the pharmacology departments. This delegation works well when it is a subject that is being taught by other department, but it can also work with one specific aspect of the curriculum such as domestic violence or human rights, where organizations focusing on such aspects can come and present lectures. Haslegrave (2006) notes that this model has the advantage of



being simple and rapidly adjusted; however, this can also result in unintended consequences where other teaching staff do not cover the aspects in the curriculum, leading to omission of important aspects and links in the curriculum.

The free-standing model, on the other hand, relates to development of a comprehensive module on the aspect in question; attached to a specific level and period of training, it can be planned as a compulsory or elective module in the curriculum (Haslegrave, 2006). This model is advantageous as it provides in-depth exposure to the specific issue; however, one runs the risk of losing the links with other subjects, and should the module be made elective only those interested may end up taking the course, while the other students lose out (Haslegrave, 2006). The free-standing model used to address HIV and AIDS has been documented as not being a good option in the report about the University of Namibia's stand-alone module, where approximately 20% of students in the department, by the time they reached their final (fourth) year, could not remember the course they had taken in the first year of the programme, suggesting that a once-off module may not be sufficient (HEAIDS, 2010).

The integrated model allows incorporation of specific aspects in the various modules and subjects being taught in the curriculum. This provides an advantage of maintaining continuity and allows the curriculum to relate the aspects to various areas of learning, enhancing relevance to real-life situations (Haslegrave, 2006). This model requires collaboration and consultation amongst the various teaching departments involved in the curriculum. Although the integrated model is taxing in terms of time needed to plan and to ensure that resources are in place, the long-term benefits in terms of increased opportunity for students to master the learning and gain competency outweighs the cost. As noted by Kerkering and Novick (2008) and Booth-Laforce et al. (2010), an integrated curriculum has been shown to increase competency levels of students and teaching staff as well as being relevant to real-life situations.

For this study, the integrated model was the more appropriate model to implement for integration of HIV and AIDS core competencies in the undergraduate nursing programme, as it provides the opportunity to explore the various aspects of HIV and AIDS throughout the nursing curriculum, facilitating the progressive and accumulative development of the competencies. This model is chosen because it offers more benefits, such as the potential to increase competency and being more related to real-life situations. HIV and AIDS affect the

person in all aspects of their life and the negative impact is also felt at family and community level. Because the impact of HIV is felt in all aspects of life, the integrated model will allow for incorporation of HIV and related aspects in the various modules that are used in the nursing programme. This will allow the students to appreciate the impact of HIV and to learn how to confront and reduce the impact, while providing care and management to those affected by and infected with HIV.

Having identified the integration model, one needs to determine how to develop the integration as well as the level that will be implemented during the process of integrating HIV and AIDS competencies into the four-year undergraduate nursing programme.

### **2.17.2 Vertical and horizontal integration**

Two main integration approaches have been documented, namely vertical and horizontal (Snyman & Kroon, 2005; AlSaggaf, Ali, Ayuob, Eldeek & El-haggagy, 2010). With horizontal integration disciplines are combined around concepts in each level of the course, and with vertical integration disciplines are organized into themes that run throughout all levels of the course (Uys & Gwele, 2005; Dent & Harden, 2009). For the integration of HIV and AIDS core competencies in the undergraduate nursing curriculum, both approaches need to be considered as they will allow inclusion of HIV and AIDS aspects in the various subjects in each year level, allowing the students to understand the links with the various aspects of life and improving their understanding of care and management of persons with HIV and AIDS. With that in mind, there has to be an exploration of the level of integration that can be adopted – one that will provide the most benefits and fit into the philosophical approach of the study.

### **2.18 Levels of integration**

Fogarty (1991) presents a continuum of 10 models for curriculum integration. The 10 models present an exploration of integration within single disciplines, such as fragmented, connected or nested; within and across several disciplines, such as sequential, shared, webbed, threaded and integrated; and within learners and across networks of learners, namely immersed and networked. The educators will make a decision based on the most appropriate method for each aspect of the curriculum.

### **2.18.1 Fragmented integration**

Fragmented integration is noted within a single discipline and this model gives no implicit indication of relationships between the various disciplines. Each discipline remains separated from the others and each subject is dealt with without making connections to other subjects. This creates fragments of knowledge in each subject area (Fogarty, 1991). This type of integration has been documented as the first of 11 steps of the integration ladder of Harden (2000), who indicates that fragmented integration pays no attention to other subjects that are being taught in the same curriculum.

### **2.18.2 Connected integration**

With this level of integration, each discipline remains separated from the others, but explicit connections are made within each subject area, providing reference to what has been learnt in that subject and what is still to be covered as well as connections to other subject areas (Fogarty, 1991; Kysilka, 1992). This is same as the harmonization step of the integration ladder presented by Harden (2000), who highlights the consultation that takes place between the teachers involved in the different subjects, following a formal or informal route.

### **2.18.3 Nested integration**

This integration level remains part of single discipline integration and targets various dimensions of a teaching session, looking at the skills and knowledge in one subject that relate to other subjects, providing the opportunity to strengthen the teaching of one subject by using content from other subjects in that discipline (Fogarty, 1991; Harden, 2000). This type of integration allows recognition of broader curriculum outcomes and the teaching of each subject relates to the programme outcomes, with emphasis on learning and organizational skills (Kysilka, 1992; Harden, 2000).

### **2.18.4 Sequenced integration**

This integration is done across disciplines and allows for the planning of related topics from different disciplines so that they can be presented during the same period in one curriculum (Fogarty, 1991; Kysilka, 1992). It is this level of integration that Harden (2000) refers to as temporal co-ordination or parallel teaching. It necessitates consultation with other disciplines to identify related aspects of each discipline in the curriculum and to arrange the teaching

sessions so that students learn similar aspects from different perspectives in the different disciplines but in the same period. This enables them to make their own connections and uncover relationships.

#### **2.18.5 Shared integration**

This type of integration involves two disciplines coming together, planning and implementing teaching plans that cover overlapping ideas. It involves the identification of teaching areas that are common to both disciplines and the realization that the two disciplines can teach the subject better if they do it together as opposed to presenting the subject in an isolated, discipline-specific approach (Fogarty, 1991; Kysilka, 1992; Harden, 2000).

#### **2.18.6 Webbed integration**

Webbed integration involves choosing a theme as the focus of teaching and learning activities and then the various disciplines and subjects that make up the curriculum build their programmes around the chosen theme. This allows the teacher to maintain the content of the discipline. The discipline remains intact, because the teacher uses the theme to identify concepts and relevant topics for his own course and covers the content and outcomes of the course by showing how that subject/discipline can enhance the students' understanding of the theme (Fogarty, 1991; Harden, 2000). This type of integration is documented as multidisciplinary by Harden (2000), noting that a theme would be the knowledge that goes beyond subject boundaries and needs to be mastered by the students.

#### **2.18.7 Threaded integration**

The curriculum is designed around skills such as thinking, study and social skills, and the content of the various disciplines is used for development of those skills. While the content of each discipline is maintained, there is less emphasis on the discipline and more on the learning process (Fogarty, 1991; Harden, 2000). The threaded model surpasses all content matter of each individual discipline Fogarty (1991).

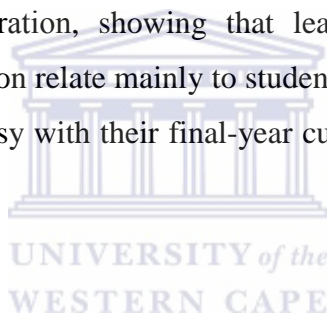
#### **2.18.8 Integrated model of integration**

With this approach many disciplines are involved and common teaching time is used to teach what has been identified as overlapping concepts and ideas, and discipline lines start to disappear (Fogarty, 1991). This type of integration can be referred to as interdisciplinary, as

noted by Harden (2000), suggesting that the content of all or most subjects is combined into a new course, with no reference to individual subject or discipline, and themes common to all the included disciplines become the focus for learning. This differs from shared integration in that it combines all or most of the disciplines involved in the curriculum as opposed to just two disciplines.

### **2.18.9 Immersed integration**

This integration is considered to be within students and students are seen as being immersed in their learning, taking responsibility for the integration of what they learn and how to integrate it with limited or no intervention from others (Fogarty, 1991). This integration is also referred to as transdisciplinary, where the focus of learning becomes the field of knowledge as reflected in the real world, and the discipline becomes part of the students' experiences (Harden, 2000). Literature highlights that this type of integration has also been referred to as 'authentic' integration, showing that learning occurs in the real world. Examples of this type of integration relate mainly to students at higher levels of learning such as doctoral students and those busy with their final-year curriculum (Fogarty, 1991; Kysilka, 1992; Harden, 2000).



### **2.18.10 Networked integration**

Networked integration is seen within and between students. It requires students to rearrange ideas within and across disciplines, to make their own connections while being pro-active in their own learning and choosing learning strategies that will enhance integration, including accessing and relating to colleagues and the experts in the field (Fogarty, 1991; Kysilka, 1992).

## **2.19 Integration of learning**

Curriculum integration not only includes incorporating the concepts or aspects in the curriculum, it also involves the integration of learning – hence the need to identify pedagogical strategies that will facilitate integrated learning. Three types of integration have been identified by Kachra and Schnietz (2007), namely theoretical, applied and practical integration. Theoretical integration involves the interdependencies between the various disciplines that form the curriculum, giving students the opportunity to see how those

disciplines relate to each other and how change in one will influence change in another. For example, with regard to HIV and AIDS the availability of ART has changed the care and management of HIV, because it has become an illness that can be managed. This in turn has influenced the epidemiology, where the number of people living with HIV continues to rise because of the decrease in deaths related to HIV, despite a decrease in new infections (UNAIDS, 2013a; 2014a; 2014b). Applied integration relates to the understanding of how the various disciplines influence the students' performance, and this can be seen when looking at the advances made in management of HIV and how that is applied in policy formulation. The practical integration refers to the ability to actually apply what was learnt in real, practical situations.

These three types of integration should take place during teaching and learning, and for it to happen in integrated manner one needs clarity on how to integrate the curriculum appropriately. Hamilton, McFarland and Mirchandi (2000) presented a framework to help with decision-making about the integrative approach based on experiential and classroom-based learning. Different approaches to integration were identified, which include guest speakers, case studies, live multidisciplinary projects and team teaching, while clinical cases and concept mapping were documented as tools that can be used in integration (Weiss & Levison, 2000). Some of these teaching approaches have been documented to be effective approaches to integrate specific aspects in various curriculums (Elam & Spotts, 2004; Bowe, Voss, & Thomas Aretz, 2009).

## **2.20 The 'how-to' of integration**

Some criteria for successful integration have been documented by Ackerman (1989); these allow the clarification of whether it makes intellectual and practical sense to integrate specific aspects in the curriculum. The decision for integration needs to be supported by intellectual criteria, and these include the validity of the aspects to be integrated within the discipline, for the discipline and beyond the discipline. They have the potential to contribute to broader outcomes (Ackerman, 1989). The practical criteria include the time, budget and schedule feasibility for the integration, as well as support and personal commitment (Ackerman, 1989).

The literature provides a number of examples of how specific aspects such as substance abuse, patient decision support, international and transcultural content as well as HIV were integrated into the undergraduate nursing curricula to strengthen and coordinate the nursing

curricula (Lindquist, 1990; Hayes, 2002; Knebel et al., 2008; Stacey et al., 2009; Kohi et al., 2010). In Tanzania a similar project was developed to strengthen nurse education for HIV and AIDS care and management (Kohi et al., 2010).

### **2.21 Benefits of integration**

Although curriculum integration is said to be time-consuming, its advantages have been documented. These include deeper, contextual and applied learning; application of theory into practice; development of clinical reasoning skills; better retention of knowledge; and promotion of relevant curriculum and stimulating cooperation among staff (Dahle, Brynhildsen, Fallsberg, Rundquist, & Hammar, 2002; Hinde, 2005; Muller, Jain, Loeser, & Irby, 2008; Howard, Steward, Woodall, Kingsley, & Ditmyer, 2009). It has been suggested that integration should be promoted in teaching and learning instead of assuming that the students will integrate the knowledge on their own, as information received in isolation is known to be unhelpful and inert (Hinde, 2005; Dent & Harden, 2009). Integration is crucial when training professional nurses to provide comprehensive care, because as noted by Dent and Harden (2009), concept specificity is important to promote the ability to retrieve what has been learnt from memory. Loepp (1999) indicates that an integrated curriculum is one way of realizing integration in teaching and learning.

Authors have presented some of the reasons for curriculum integration, which include the rapid growth of knowledge, increased performance levels, the need to prevent fragmentation in learning and the relevance of curriculum (Jacobs, 1989; Van der Verken, Valcke, De Maeseneer, Schuwirth & Derese, 2009). Additionally, Lim and Honey (2006) also noted benefits of integration where integration of pharmacology in the nursing curriculum assisted in obtaining congruency, and promoted the linking of theory and practice which reduced the risk of focusing on isolated aspects of knowledge.

### **2.22 Integration for this study**

At the School of Nursing at UWC various levels of integration can be noted in the various subjects and disciplines. Within the nursing discipline connected integration is applied and various skills and aspects taught in one discipline are connected to aspects in other subjects. For instance, in midwifery students learn about a normal pregnancy. That knowledge is then

related to the content of the module on complicated pregnancy. Similarly, in the first year students learn about wounds and wound healing in a theoretical module and later, in the clinical module, that knowledge is related to the practical module of wound care.

Sequenced integration is also noted across disciplines as, for example, the subjects taught in nursing are sequenced with the subjects in human biology and pharmacology, ensuring that (for instance) the session about homeostasis is covered in human biology at approximately the same time as homeostasis is presented in the fundamentals of nursing. Similarly, the reproductive system is covered toward the end of the second year of the nursing programme, preparing students for their third year when they learn midwifery, a discipline that relates to the female reproductive system.

With regard to core competencies related to HIV and AIDS as covered in this study, horizontal integration is applied, which means that HIV and AIDS-related core competencies are introduced in the various modules at each year level. Vertical integration is also applied, allowing for development of a thread throughout the undergraduate programme, whereby students are exposed to more complex material as they progress from one year level to the next. This integration in curriculum provides the opportunity to maintain continuity across the programme, allowing student nurses to start interacting with patients who are living with HIV and AIDS from the first year of the programme, when they develop lower levels of competency and basic skills such as communication skills and history taking, as noted by Haslegrave (2006) and as planned for in this study.

This study applies connected integration in the already existing courses, allowing for the inclusion of HIV and AIDS-related competencies, and sequencing will be maintained across disciplines. The sequencing integration, in addition to being practised in the current curriculum at the School of Nursing, provides accumulation of knowledge which in turn will facilitate the development of competencies which is incremental (Brown & Nelson, 2003).

### **2.23 Conclusion**

This second chapter of the study presented an overview of the HIV epidemic and how it has a global impact on all sectors of life. The role of nurses was explored, highlighting the various issues that have been noted in literature, including limitations as well as the findings that when trained nurses provide care it is not inferior to the care provided by doctors.



Philosophies and theories that relate to education were explored in detail to provide a good understanding of the philosophies that guide the practice of education and to ensure good direction in practice. With the application of the first three pillars of the COPA model, the curriculum approaches and integration models and levels were discussed. Constructivism and an outcome-based curriculum were adopted, together with experiential learning theory that can facilitate the development of HIV and AIDS competency. With vertical and horizontal integration and application of connected and sequenced integration levels, a fit to the current nursing programme at the School of Nursing at UWC can be ensured.



## **CHAPTER 3: METHODOLOGY**

### **3.1 Introduction**

The third chapter of the report discusses the methodology used in this study. The research paradigms are discussed and a constructivist research paradigm is adopted for the study. The Intervention Research: Design and Development (IR: D&D) approach is explained as providing the methodological framework for the study. This chapter illustrates how the first four steps of IR: D&D were applied in this study, highlighting links to the research questions and the conceptual framework. The methods followed in the three phases of the study are explained. In the first phase of the study, nominal group technique (NGT), individual interviews and systematic research synthesis (SRS) were used in collecting data that informed the HIV and AIDS nursing competencies. The data collection and analysis as well as data extraction and appraisal for the SRS are presented in this chapter. The curriculum mapping process used as part of the design step of the IR: D&D is presented as well as the activities conducted in phase 3 during validation. The validation was done through a workshop with experts and another two experts reviewed the list of HIV and AIDS nursing competencies and their mapping into the four-year undergraduate nursing programme, and provided electronic feedback. The activities and steps taken in the study to enhance the academic rigour of the study by ensuring trustworthiness are discussed, and the steps taken to ensure adherence to the ethical requirements of research are presented before moving on to the conclusion of this chapter.

### **3.2 Research paradigms**

In research, as in any practice, one's decisions and actions are guided by one's view and understanding of the world. Denzin and Lincoln (2003) note that this set of beliefs that guides actions is called a 'paradigm', which cannot be instituted as ultimate truth because it is a human construction. A good understanding of paradigms requires identification of three main concepts: ontology, epistemology and methodology. They provide an understanding of the differences noted in the process of research and inquiry within each paradigm and contribute to the body of knowledge (Denzin & Lincoln, 2003; Terre Blanche, Durrheim & Painter, 2006; Bunniss & Kelly, 2010). The concept of 'ontology' refers to the philosophy or nature of reality and the nature of human beings in the world. The concept of 'epistemology' relates

to the philosophy of knowledge, looking at how people come to know the world and reality, while the concept of ‘methodology’ refers to the methods used to gain knowledge about the world or reality (Denzin & Lincoln, 2003; Krauss, 2005; Bunniss & Kelly, 2010).

Paradigms are generally embedded in research and may be hidden. When one embarks on a research project, there is a need to clarify for oneself and the audience the understanding of knowledge and the reality that is being pursued, as this will guide decisions about how to attain that knowledge as well as the type of knowledge being pursued (Krauss, 2005; Creswell, 2014). While some researchers affirm the existence of one universal reality and truth independent of the knower, others view the world as having multiple realities or view reality as being constructed by the knower. This serves as basis for the major paradigms that have been documented and include positivism, post-positivism, and constructivism (Denzin & Lincoln, 2003; Bergman et al., 2012).

The positivist paradigm is documented to be the traditional scientific approach to research. Its fundamental assumption is that there is one fixed truth, a reality that can be objectively observed, and that realities as well as knowledge are independent of the person, asserting that the world is not simply a formation of the human mind. This paradigm makes use of objectives and strict and quantitative methods that keep values and biases in check, ensuring that the researcher remains independent from those that participate in the research and those that are being researched. It focuses on control and the ability to predict the phenomena to find the observable truth, aiming at producing generalizable data, hence the adoption of a quantitative approach to research (Polit & Hungler, 1997; Bunniss & Kelly, 2010). Positivism is useful for providing answers to certain questions that need prediction, control and generalization, and has been largely used in social studies and education. This paradigm lacks the ability to study the multifaceted, unstable, non-linear and changing real world (Bunniss & Kelly, 2010). In social sciences, as noted by Mack (2010), nothing can be simple and to the point, because people have multiple perspectives and interpretations, an idea that is refuted by the positivist paradigm that proclaims one stable generalizable truth.

With the realization that there are shortcomings in the positivist paradigm, post-positivism was developed by authors like Comte, Phillips and Burbules as noted by Creswell (2014). The notion of absolute reality and truth was challenged and they affirmed that studies about human behaviour and actions cannot claim absolute reality, hence the emphasis on observing and studying people (Creswell, 2014). Post-positivism agrees that there is one truth, but that

truth cannot be truly observed but rather approximated in an attempt to get closer to the truth, ascertaining that the evidence obtained from research is never infallible (Denzin & Lincoln, 2003; Bergman et al., 2012). The post-positivist paradigm follows the process of making claims and testing them, trying to develop statements that can help in explaining situations or describe the causal relationships in the areas being researched. Objectivity is still an important aspect of the process and this is what forms the basis of the mainly quantitative and some qualitative methods used in the post-positivist paradigm (Denzin & Lincoln, 2003; Mack, 2010; Creswell, 2014). The idea that the researcher should remain detached from the participants and that there is one truth was not accepted when the issues were debated; human beings are social beings and do not necessarily have the same perception of the experience when exposed to the same event. With this realization, a new paradigm in social research came to fore.

Constructivism, also referred to as a naturalistic paradigm, as noted by Polit and Hungler (1997), or interpretivist paradigm, as indicated by Mack (2010), posits that people develop subjective meanings of their experiences in the world they live in. These meanings differ and therefore the researcher searches for complexity in meaning and multiple truths that exist within a context and are constructed by and between people (Bergman, et al., 2012; Creswell, 2014). The constructivist paradigm, as Mack (2010) notes, was influenced by hermeneutics and phenomenological approaches that focus on interpretation and the need to contemplate human beings' subjective interpretation, hence the belief in multiple constructed realities or truths. Denzin and Lincoln (2003) indicate that in this paradigm knowledge is merged around consensus and with research that adopts this paradigm, the participants are actively involved, their voice is respected, and agreements about truth may result from negotiations among the members of the community. The interaction between the researcher and participants is important within this paradigm, with the assumption that the smaller the distance between the inquirer and the participants, the most likely it is to maximize knowledge (Polit & Hungler, 1997). Instead of making statements with a theory like post-positivism, a constructivist researcher inductively develops meanings from the data (Creswell, 2014). The constructivist paradigm uses qualitative approaches that emphasize processes and meanings, looking at socially constructed reality and enhancing close relationship between the researcher and participants (Denzin & Lincoln, 2003).

### **3.3 Choice of paradigm and research approach for the study**

For this study the constructivist paradigm was adopted as it was found to allow for consideration of the participants' voice, as well as acknowledging the multiple realities about the topic of the study. It also provides an opportunity for inductive development of the core competencies related to HIV and AIDS for nurses and the model for integration of HIV and AIDS core competencies into the undergraduate nursing curriculum at UWC. Denzin and Lincoln (2003) used a number of aspects to describe and explain the constructivist paradigm, and these were taken into account when the paradigm for the study was chosen. This is evident in the way the study was conducted, as these aspects were applied in the study, confirming the adherence to constructivism.

One of the issues that were described by Denzin and Lincoln (2003) is the nature of knowledge. In this study it was understood that knowledge is individually constructed and the viewpoint of each participant was considered when exploring the aspects being investigated. Consensus was sought with the use of NGT and workshop participation in the second and third phases of the study, allowing for construction of not only what is seen as real by the community, but also what is useful and meaningful when taking further action and steps. This corresponds to the constructivist paradigm as described by Denzin and Lincoln (2003).

Social phenomena are made up of the activities of groups and individuals involved or around the phenomena, which facilitate the making of meaning as noted by Denzin and Lincoln (2003). It is in this regard that this study included various stakeholders as participants, namely nurse educators, people living with HIV, nurses working in clinical settings, recent graduates, as well as representatives from the nursing governing body, because they were seen as being directly involved with the focus of the study, which is the integration of HIV core competencies into the undergraduate nursing programme. Furthermore, constructivism posits that control is shared between the inquirer and the participants, and in this study their active participation was enhanced throughout the three phases of the study. The researcher collected the data and conducted all of the workshops, which minimized the distance between the researcher and participants, making the researcher part of the research setting, a characteristic of constructivism (Holliday, 2002).

In addition, the choice of the paradigm is congruent with the educational philosophy and the curriculum development approach that was chosen for the study. The educational philosophy

and curriculum development model provide an opportunity for the construction of knowledge in addition to the involvement of participants in the construction of knowledge, through a process that allows for negotiations and consensus, aspects also noted in the constructivist paradigm (Ornstein, 1990; Holliday, 2002; Denzin & Lincoln, 2003; Ornstein & Hunkins, 2004).

As the study was about design and development, it was essential to find a research design that had potential to guide the study effectively within the constructivist paradigm that was adopted for the study, while at the same time facilitating adoption of the curriculum development model chosen for the study. The methodological framework of IR: D&D of Rothman and Thomas (1994) seemed to be the most structured process for integration of core competencies related to HIV and AIDS into the undergraduate nursing curriculum. IR: D&D provides a framework that guides and limits the research, allowing for clear connections between the various phases of the study, assisting in production of the final output from the study.



### **3.4 Intervention research – design and development**

As the study adopted the constructivism paradigm, there is an understanding that the construction of knowledge does not end in identifying the constructed knowledge, but also includes the meaning for action. This guided the choice of intervention research, which can be regarded as applied research because it provides the opportunity to develop a possible intervention that can be applied in practice to practical problems (Rothman & Thomas, 1994). It has been noted by Fraser and Galinsky (2010) that intervention research arose from the need to attend to doubts created by earlier evaluations of the effectiveness of social services, and redressing issues about studies being conducted on effective intervention. With limited description replication was not possible, an issue branded the ‘black box problem’. This supports documentation that intervention research has been developed as a result of the need to link knowledge and practice and the emphasis placed on conducting intervention research in practice settings (Rothman & Thomas, 1994).

The discussion of intervention research by Burns and Grove (2001) is based on the work of Rothman and Thomas and the work of Sidani and Braden, while Rothman and Thomas (1994) base their discussion on their previous work in the early 1980s on developmental research and social research and development, among others. As Fraser and Galinsky (2010)

indicate, Rothman and Thomas were the first to suggest intervention research, and this was first done in the field of social work. Many authors state that intervention research has great potential as an effective method to test intervention, because the focus is on causal explanation instead of causal connection, with a number of methodologies being used to evaluate intervention (Rothman & Thomas, 1994; Burns & Grove, 2001; Fraser & Galinsky, 2010). Various approaches, such as developmental research, development research and social research and development, seek to construct a logical methodology for intervention and can be part of IR: D&D (Rothman & Thomas, 1994).

Three main types of intervention research have been documented by Rothman and Thomas (1994), namely Intervention Research: Knowledge Development (IR-KD), Intervention Research: Knowledge Utilization (IR-KU) and Intervention Research: Design and Development (IR: D&D). IR-KD aims at adding to knowledge about human behaviour in relation to human services, and IR-KU looks at how the findings of IR-KD can be linked to and utilized in practice, while IR: D&D focuses on developing innovative interventions (Rothman & Thomas, 1994). This specific study focuses on designing an integration model of HIV and AIDS core competencies related to HIV and AIDS in the undergraduate nursing curriculum at UWC, and hence the choice of IR: D&D.

Rothman and Thomas (1994) as well as Fawcett, et al. (1994) provide six phases of the IR: D&D model, namely: (1) problem analysis and project planning; (2) information gathering and synthesis; (3) design; (4) early development and pilot testing; (5) evaluation and advanced development; and (6) dissemination (as reflected in Figure 3-1). The assumption is that these six phases follow each other, although due to the dynamic nature of IR: D&D some activities from one phase may still be going on when the next phase has started. The framework allows for adjustments to suit the research project that is being conducted, and each phase has research methods that can be applied (Fawcett et al., 1994).

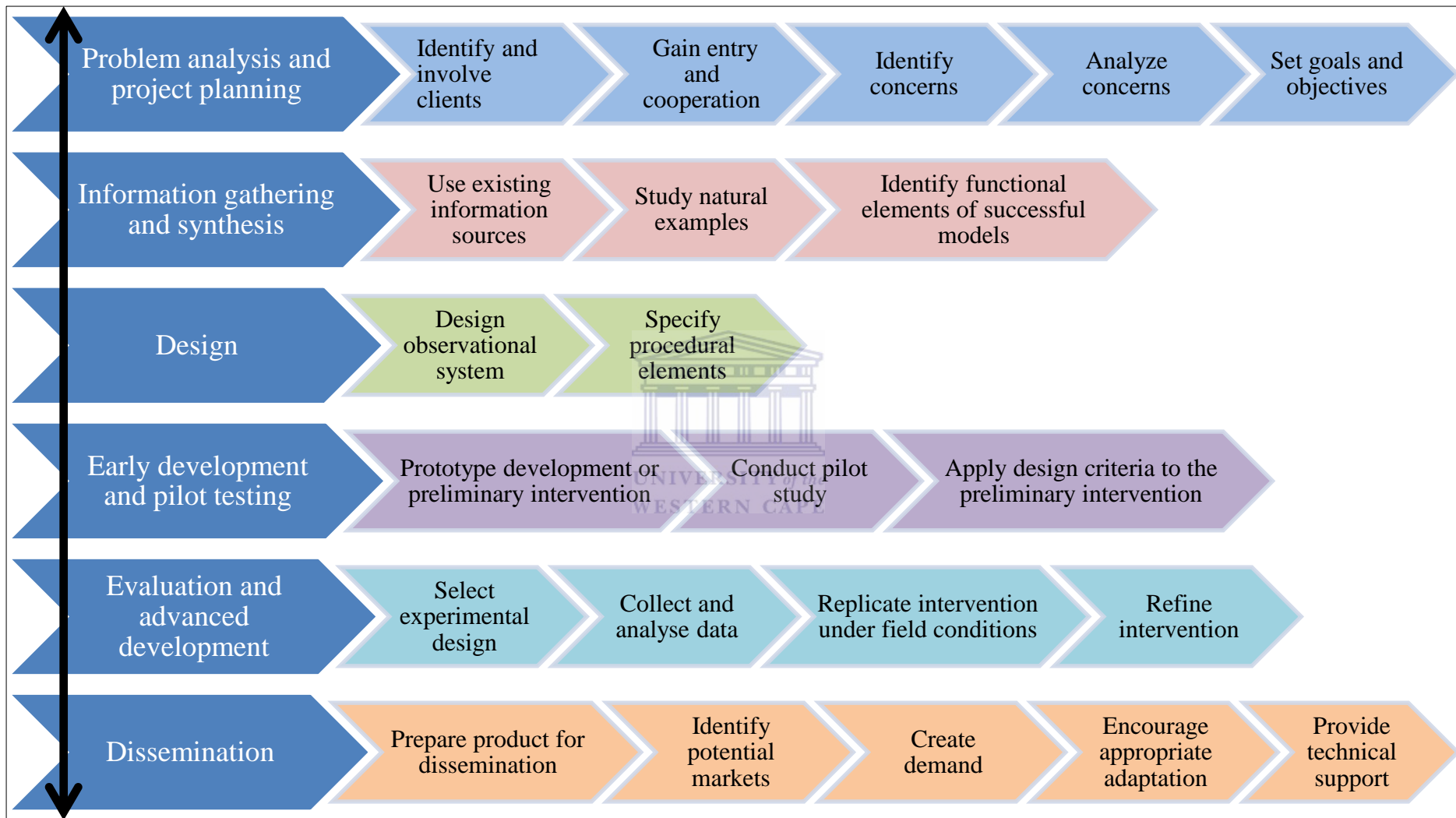


Figure 3-1: Phases and operations of IR: D&D (from Fawcett et al., 1994: 28).



As indicated by Abel and Wolf (2003), IR: D&D is a very dynamic process that, if applied in its entirety, can last up to 10 years. This is a challenge when being applied in a context that has a deadline, like this PhD study. It is because of this that modifications were made for the scope of this study, and the last phase of the D&D model applied in this study was an early development which was done through validation of the designed model of integration. Piloting, advanced development and dissemination were reserved for further research, and can be taken up by the researcher or other interested stakeholders at a later stage.

The research activities carried out in each phase will be outlined in the next section, and the link to the objectives of the study, the COPA model and the various steps of IR: D&D will be highlighted. According to Rothman and Thomas (1994) it is important to note that the phases will sometimes overlap, because the phases of IR: D&D are presented as a process and not a fixed structure of steps. The work of Fawcett et al. (1994) and Rothman and Thomas (1994) was used to select the activities conducted in each phase of the IR: D&D as applied in this study, and the various operations or activities as highlighted by both sets of authors were combined to fit the scope and financial and administrative requirements of the study. The phases that were adopted and the activities conducted in each phase are highlighted in Figure 3-2.

The first phase of the study was conducted in two steps and covered the first and second phases of the IR: D&D as outlined by Fawcett et al. (1994) and Rothman and Thomas (1994), namely problem analysis and project planning as well as information gathering and synthesis. The qualitative approach was applied in the first step and involved identifying and involving the participants, gaining entry and cooperation by identifying the types of the participants to be recruited, approaching the gatekeepers for support and approval as well as recruiting the participants. The other activity in the phase involved the identification of concerns and analysis, which was done during the data collection and analysis of the first phase. For the second step, SRS was conducted as part of data gathering. All these activities were conducted in the first phase, and they aimed at answering the first objective that corresponds to the 'competency' pillar of the COPA framework.

For the second phase of the study, the IR: D&D phase of design was conducted and curriculum mapping was the method chosen to complete the design and to specify the procedural elements of the intervention. In this study these were designed as structural

elements of the intervention. This process covered the second objective of the study, which is about developing the integration model and corresponds to the ‘outcomes’ and ‘performance’ pillars of the COPA framework. The third phase was conducted as early development of IR: R&D and this was done through workshops and expert reviews to validate and verify the developed map of competencies for the four-year nursing programme, covering the third objective.



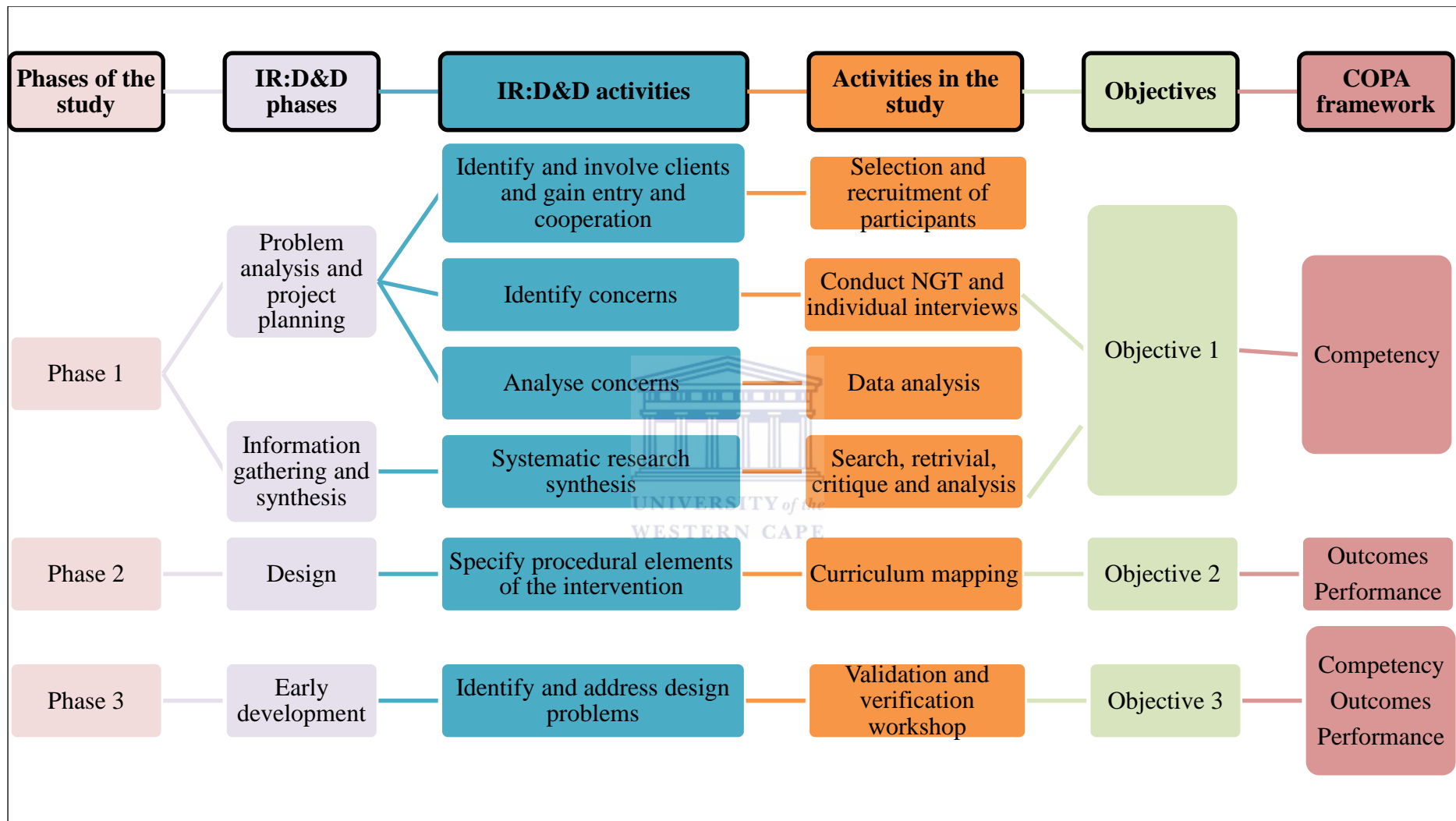


Figure 3-2: Phases of IR: D&D as applied in this study and in relation to the COPA framework.

### **3.5 Phase 1: Identification of core competencies**

The activities of this first phase were carried out to realize the first objective of the study: ‘To identify the required HIV and AIDS core competencies for a new nurse graduate to provide HIV and AIDS care and management’. The first phase activities are related to ‘competency’, the first pillar of the COPA model used as a framework, and are related to identification of the HIV and AIDS core competencies required for the undergraduate nursing curriculum.

As mentioned earlier, this phase was done in two steps. A qualitative research approach with an exploratory-descriptive design and SRS were the research designs used in this first phase, corresponding to the first and second phase of the IR: D&D, namely problem analysis and project planning, and information gathering and synthesis. These two approaches fit the constructivist research paradigm that was adopted for the study that allows for exploration of multiple realities from the many individuals that have an interest in the phenomena, constructing new knowledge and forming consensus.

#### **3.5.1 Qualitative approach**

According to the constructivist paradigm, a qualitative approach with an exploratory descriptive design provides the opportunity to study the selected issues in detail with openness and depth, while focusing on understanding the phenomenon from the participants’ perspective without making predictions; instead, meaning is produced, and knowledge is constructed (Burns & Grove, 1997; Polit & Hungler, 1999; Terre blanche et al., 2006; Nieuwenhuis, 2007; Creswell, 2014). This approach allows for holistic analysis of the issue in its natural environment.

The activities for the phase included identification and analysis of core competencies for management and care of HIV and AIDS, as well as identification of what needs to be included in the integration into the undergraduate nursing curriculum. The activities conducted in this step were related to the activities of the problem analysis and project planning of the IR: D&D and these will be outlined. The activity of setting goals and objectives as described in the ID: D&D by Fawcett et al. (1994) was not undertaken in this study. As this was a study for a qualification and the last phase of ID: D&D was in a stage of early development and there was no implementation, the third objective of the study remained as the final objective for the whole study, which was already set as part of the

proposal. Instead of setting objectives and goals as an activity, the subsequent activities and the final outcome plans were shared with all of the participants at the beginning and end of each data collection session.

### ***3.5.1.1 Identification of and involving clients, and gaining entry***

Fawcett et al. (1994) document a number of activities that must take place in the problem analysis and project planning phase of IR: D&D. These include the identification and involvement of those that will participate in the study, gaining entry through the gatekeepers and getting cooperation from the setting (the IR: D&D was conducted in the practice), identification and analysis of concerns and then setting goals and objectives. In this study the literature was used to identify the category of participants to be included in the study. The study was about the integration of HIV and AIDS-related core competencies into the undergraduate nursing curriculum, and this necessitated identification of HIV and related competencies. Uys and Gwele (2005) note the various groups of stakeholders that are able to provide information about graduate competencies, and this guided the decision about who the participants for the study would be. Recent graduates, nurse educators, people living with HIV, nurses in clinical practice as well as the governing body were included. The group of participants also fit the description of Fawcett et al. (1994) that states that participants should be those who can identify with the problem and have a vested interest in the phenomena. In this study the nurse educators, people living with HIV and AIDS, nurses and the governing body all have and showed interest in participating in the study.

Rothman and Thomas (1994) stated that gaining entry through key informants and gatekeepers is crucial in the first phase, as it helps to obtain the cooperation and support needed for the project. The population for this research was the nurse educators from schools of nursing at universities in South Africa, recent graduates from UWC, nurses in clinical settings, representatives from SANC as governing body and people living with HIV and AIDS. Gaining entry into the schools of nursing happened through the head of the schools and by obtaining ethical clearance from the universities. When the heads of the schools were contacted they showed interest in the study and gave permission to contact the nurse educators in their school, in addition to giving direction and support to obtain ethical clearance from the institutional ethical committee. With institutional and departmental approval, access to the nurse educators occurred without a problem. For the registered nurses in clinical practices the hospital matron was contacted, and after approval from the institution

access to the registered nurses was easier as the nurses were able to participate in the study. A similar procedure was followed with the persons living with HIV and AIDS. Access was obtained through an organization that provides support to people living with HIV and AIDS and after consultation with potential participants; the researcher was invited for data collection. Contacting the gatekeepers facilitated access to the participants, and because some participants were involved in more than one phase of the study this cooperation and collaboration would not have happened if the gatekeepers were not supportive of the research study.

#### *3.5.1.1.1 Setting*

For the qualitative part of the study the setting was South Africa and data were collected from various stakeholders in South Africa. South Africa has nine provinces and when data collection was conducted there were 23 public universities in seven provinces. Another two public universities were launched in late 2013, situated in the two provinces that did not have a university previously (Higher Education South Africa (HESA), 2012; SouthAfrica.info, 2013). Of the 23 public universities, 19 have an accredited nursing programme and two of the universities have two campuses with a School of Nursing each (SANC, 2014d). The data from nurse educators were collected from seven universities in seven provinces. Of the Schools of Nursing contacted, some were situated in rural areas while others were in urban areas. In addition, nurses from one hospital in the Western Cape and nurses that recently graduated from UWC were included in the study, as well as representatives from SANC.

As shown in Figure 3-3, participants in the first step of the first phase were from seven of the nine provinces in South Africa. Due to time and financial constraints that influenced the feasibility of the study, only nurse educators and representatives of the governing body were recruited from outside the Western Cape. It was more feasible to access them compared to nurses and recent graduates from other provinces where there was no prior contact with regard to identification of gatekeepers. In addition, travelling to various provinces more than once was deemed impossible when considering the financial constraints of the study. As Fawcett et al. (1994) note, a researcher should have information about the institution before approaching the gatekeepers, and this was only possible in the Western Cape where the researcher is based.

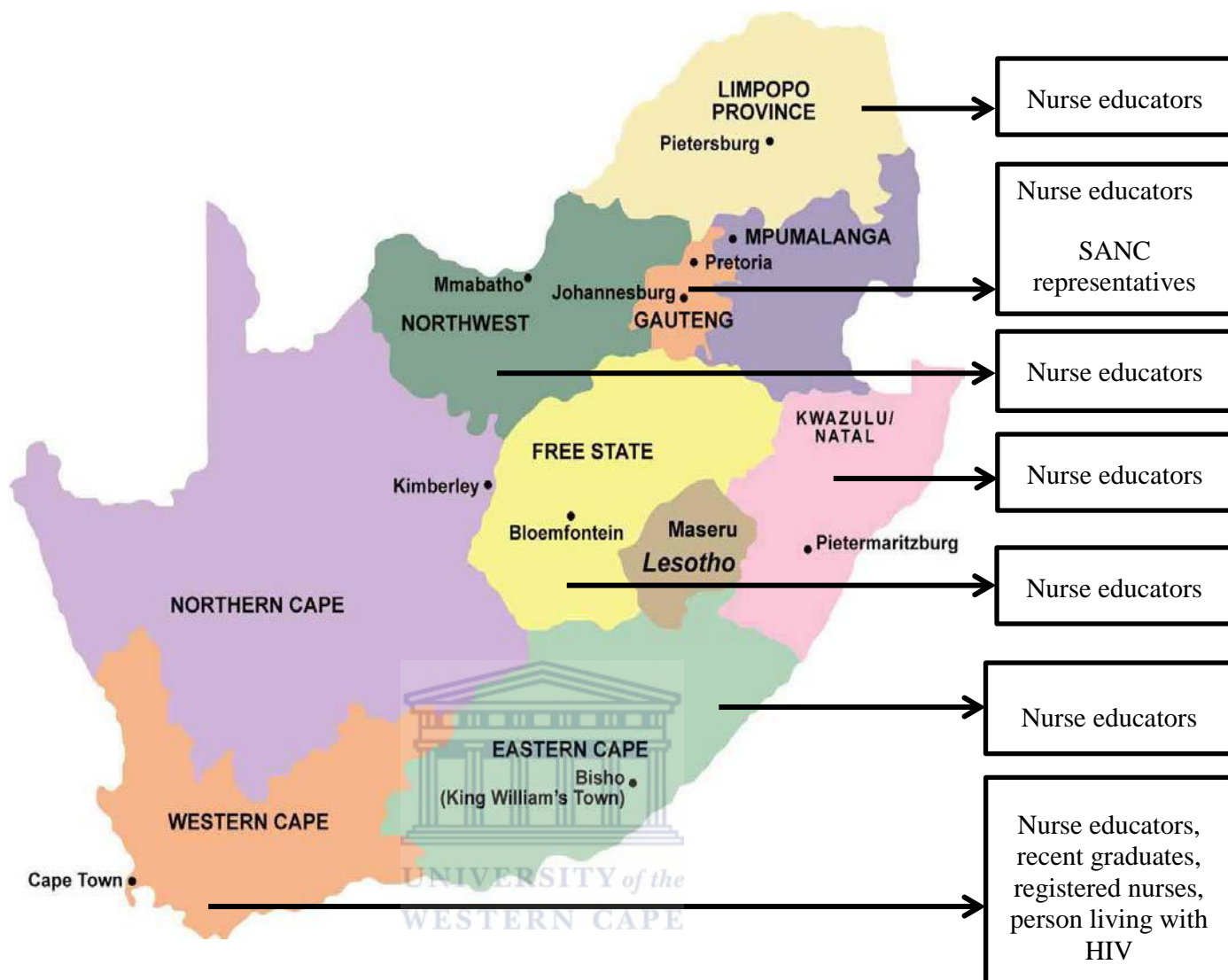


Figure 3-3: Geographical representation of where participants were contacted from (map accessed from Booking South Africa, 2012).

### 3.5.1.1.2 Population

In a research project population refers to the entire population that meets the designated criteria for inclusion in the study (Polit & Hungler, 1997). As noted by Uys and Gwele (2005), when one needs to determine the graduate competencies one will need to identify the graduates' tasks and roles upon graduation. This information can be obtained from graduates, the graduates' employers, experienced practitioners, community members and students by conducting interviews, observations or document reviews (Uys & Gwele, 2005). For this study, group discussions and individual interviews were conducted in this first phase and five categories of participants formed the population of the study, providing the opportunity to get information from these various stakeholders:

**Nurse educators:** Lecturers and clinical facilitators teaching at nursing schools of the various universities in South Africa that have Schools of Nursing which offer undergraduate nursing training;

**Nurses from nursing practices in the Western Cape:** Nurses that work in clinical practices in South Africa provide care and management for people living with HIV and AIDS, and for this study the population was nurses at one secondary hospital in the Western Cape;

**Recently graduated nurses from UWC:** UWC graduates from the past two years – about 200 nurses graduate from UWC annually;

**People living with HIV and AIDS/people living with HIV in the Western Cape:** The fourth category of participants comprised persons living with HIV and AIDS in the Western Cape, who were contacted through a centre that provides care and support to people living with HIV and AIDS in the Western Cape. This category was included in this phase because people living with HIV can provide valuable information about what they expect from the services they receive;

**Members of the professional body:** Representatives of SANC as the professional governing body were included in the study.

#### *3.5.1.1.3 Sampling process and sample size*

A number of sampling strategies were applied in the first phase of the study, namely volunteer, purposeful and snowball sampling methods, and these fit the qualitative approach used in this section of the study. As a qualitative approach was applied, the sampling technique chosen was not aimed at representativeness but rather at ensuring identification of the types of participants that would be able to provide rich information (Polit & Hungler, 1997).

Volunteer sampling refers to the use of participants who are readily available and who volunteer for participation. The criteria were set and invitations were prepared and given to possible participants, who then chose to participate in the study. Polit and Hungler (1997) note the risk of bias with convenient sampling, as used in this case. This means that those who accepted the invitation and volunteered to participate will be those that are more interested in the phenomena of the study. In this specific study it will not create a bias; instead it could increase the creation of knowledge, as IR: D&D emphasizes the inclusion of



participants who are able to relate to the problem. It also provides a better fit with the curriculum development model that was applied in the study, because the participants were willing and knowledgeable about identification of HIV and AIDS-related core competencies.

The second method of sampling applied was purposeful sampling, which assumes that the researcher knows people that are knowledgeable about the phenomena under study and picks them for participation (Polit & Hungler, 1997). In this study purposeful sampling was applied to select participants from the governing body as well as the heads of two portfolios in the School of Nursing at UWC, because they were seen as the gatekeepers of management in the two institutions. They had the ability to identify shortcomings and to give direction for the future in terms of nursing education at UWC, especially with regard to HIV and AIDS.

The last sampling strategy used was snowball sampling. This involves identification of participants who then help to identify other participants that fulfill the criteria for participation in the study (Polit & Hungler, 1997). In this study this sampling strategy was used to select recent graduates, because it was difficult to know where the participants were working and to obtain their contact details without infringing on their right to privacy. The researcher contacted one recent graduate who contacted other recent graduates and gave them some information about the study. Those that indicated their interest gave permission to be contacted.

In this study maximum variation was achieved by selecting different categories of participants. Homogeneity was obtained by ensuring that when group discussions were conducted the participants were homogeneous. Identification of the categories of participants was theory-based and guided by the literature. These are features of qualitative sampling strategies that have been implemented in this study to increase the possibility of identifying the core competencies for HIV and AIDS for nurses from various angles. The various categories that were included and the sampling size for each are highlighted in the following section.

**Nurse educators:** One university offering an undergraduate nursing degree in South Africa was selected from each province. South Africa has nine provinces and seven of these have universities. To that effect, up to a maximum of seven nursing schools that provide undergraduate nursing degrees were included and two campuses of one of the institutions were included. The criteria for inclusion of nurse educators stated that they must be involved

in theoretical or clinical teaching or facilitation at a School of Nursing based at a university in South Africa. For the nurse educators, after receiving permission from the head of the schools and following the institutional requirements, emails were sent to the staff at the various nursing schools. Volunteer sampling was applied and participants were invited, and those interested indicated their availability and ability to provide rich information.

As the model will be developed for the UWC curriculum, purposeful sampling was done to include the head of teaching, learning and assessment and the head of clinical teaching at the School of Nursing at UWC as participants for the individual interviews, because they were well placed as part of the management team of the School of Nursing and could provide information needed for the study regarding HIV core competencies. A total of 52 nurse educators participated in the first phase of the study. The number of participants in the group sessions ranged from five to seven, with another five nurse educators from two institutions participating in individual interviews.

**Nurses from nursing practice:** The specific criteria for inclusion of nurses from the clinical practice were that they must have had at least three years of clinical experience and did not complete their first degree at UWC. This was to ensure variety in the information that was obtained. The nurses working in the clinical practice also should have had experience working with clients living with HIV and AIDS, and should be practising in a clinical setting. This provided information on the important competencies that are required in practice. A total of five practicing nurses participated in the study and they were recruited using volunteer sampling. The hospital matron identified staffs that were working in different departments and then the researcher approached them and informed them about the study. Those interested in participating had the interview, while two of the nurses approached declined to participate in the study.

**Recently graduated nurses from UWC:** The specific criteria for inclusion for recent graduates included having graduated from the undergraduate nursing programme at UWC School of Nursing in the past two years and working in a clinical setting for no more than two years. These criteria increased the possibility of remembering what was included in their training and the difficulties encountered as a newly qualified nurse. The two years was set because the researcher wanted participants who had completed their community practice and assumed the role of fully registered nurses. In South Africa all of the nurses that complete the four-year nursing programme are required by law to practice for one year as a community

nurse. The year of community practice is done in various settings, with some students being placed in clinics, while others are placed in hospitals. The recent graduates were selected with snowball sampling. As most of the recent graduates were located in different places, the first participant was recruited from the postgraduate students at the School of Nursing at UWC and a total of four recent graduates participated in the study.

**People living with HIV:** An institution that provides care and support to people living with HIV and AIDS in the Western Cape was purposefully selected and was approached based on the organization's record in providing care and support to people living with HIV and AIDS. One person living with HIV and AIDS was invited to participate in the study through volunteer and purposive sampling. The criteria were to be living with HIV, being aware of HIV status and being involved with the selected organization. One person living with HIV participated in the study.

**Professional body:** SANC as the governing body for nursing training and practice was selected purposefully and was approached. Two representatives selected through purposeful and volunteer sampling participated in the study. The two participants are part of the management of SANC and are in charge of activities related to education and training at the governing body.

This sampling plan provided a diverse sample of academics, clinical facilitators, recent graduates as well as current nurse practitioners involved in the care of people living with HIV and AIDS, enhancing validity through data triangulation (Burns & Grove, 1997). In addition, the views of patients' representatives and the professional board enriched the information that was collected. Saturation was reached after a total of 64 participants had participated in the first phase of this study. As recorded in the literature, for a qualitative study the sample size depends on data saturation, and this was applied in the study (Polit & Hungler, 1997).

### ***3.5.1.2 Identification of HIV and AIDS-related core competencies for nurses***

The next activity was what Fawcett, et al. (1994) call 'identification of concerns'. In this study this was done with the identification of HIV and AIDS-related core competencies for nurses. As Fawcett et al. (1994) note, the researcher should not impose their own views, hence the extensive inclusion of various stakeholders in data collection so that it could be identified what participants view as the core competencies related to HIV and AIDS that nurses should have upon graduation. Fawcett et al. (1994) and Rothman and Thomas (1994)

indicate that qualitative approaches can be used in this phase of the IR: D&D and in the study a qualitative approach was adopted and the qualitative data collection methods of individual interviews and nominal group technique (NGT) were applied.

#### *3.5.1.2.1 Data collection process and methods*

Data for the first phase of the study were collected qualitatively through group discussions using the NGT and individual interviews with participants that had been selected to participate in the study as outlined in the sampling process and sample size section. Carraccio et al. (2002) noted that defining competencies assist in reaching a goal, and there are a number of methods that can be used to identify competencies such as the Delphi technique, NGT, task analysis, critical incident technique, interviews and surveys. The NGT and interviews were chosen for data collection in this study, because NGT provides group consensus, the interviews provide the opportunity to obtain information from practitioners about good or bad practice, and they both provide an opportunity for face-to-face interaction with the researcher (Carraccio et al., 2002).

The NGT group discussions were conducted with eight groups of nurse educators from six universities in South Africa. Group discussions were planned for all the nurse educators at the various institutions. At one of the institutions there were a few participants, but they had conflicting engagements that made it unfeasible to conduct a group discussion and individual interviews were conducted instead. The individual interviews were also conducted with recent graduates, nurses working in the clinical settings, representatives of the governing body, a person living with HIV, the clinical head and head of teaching and learning at the School of Nursing at UWC. For the nurse educators, the representative of the organization that provides care and support to people living with HIV and the registered nurses and representatives of the governing body, data collection was done at their place work. For all these participants plans were made to avoid any distraction and the office of the participant or a venue was secured for the registered nurses and the group discussions. The data collection was done from 2012 to 2013.

To maintain consistency the researcher collected all the data for the study, and the data collection sessions were recorded and transcribed verbatim. As transcription was done by another person, the researcher rechecked the transcription by listening to the recorded data and reading the transcription, making corrections and additions where needed. Data

collection from nurses in the clinical settings was conducted in the clinical settings where the hospital matron provided a quiet venue for the interviews. Data collection with recent graduates was conducted in the office of the researcher. The recent graduates were invited to the interview and the office of the researcher was the most convenient and accessible place for the participants. The next section will outline the process followed and questions used in the data collection.

- *Nominal group technique (NGT)*

Nominal group technique is a research technique that allows participants to reach consensus, providing space for individual contributions as well as group discussion and prioritization (Gallagher, Hares, Spenser, Bradshaw, & Webb, 1993).

Nominal group technique is documented as an organized group activity that collects the views of a group of people and generates ideas while enhancing participation and contribution of the group members who have understanding of the area being researched, while providing opportunity for obtaining consensus and establishing priority without the researcher influencing the participants (Gallagher et al., 1993; Lloyd-Jones, Fowell, & Bligh, 1999; Duggan & Thachenkary, 2003). The literature documents that NGT was first introduced as a technique in 1958 by Taylor, Berry and Block, as noted by Lloyd (2011). NGT has the potential to enable effective group decision-making and has been used in many fields such as education (O'Neil & Jackson, 1983; Lloyd-Jones et al., 1999); nursing education (Gibson & Soanes, 2000); physiotherapy (Potter, Gordon, & Hamer, 2004); health (Harvey & Holmes, 2012); market research and industry and social services, among others, since the late 1960s (Gallagher et al., 1993; de Ruyter, 1996; Potter et al., 2004; Harvey & Holmes, 2012). In research NGT has been used for problem identification, establishment of priorities, evaluation (Lloyd-Jones, et al., 1999), and development of solutions, as reported by Potter et al. (2004). NGT has been widely used in the literature and Potter et al. (2004) identified up to 200 articles on NGT that had been published from 1966 to 2004 across the health care professions alone; these focused on policy or guideline development, problem identification, education, outcome measures, needs assessment, quality assurance and discussion papers.

Like the Delphi technique, NGT is used for development of consensus, but it is a face-to-face meeting unlike the Delphi technique (Harvey & Holmes, 2012). The NGT provides more

advantages compared to the Delphi technique in that the face-to-face contact and discussion allows for social interaction and clarification, an aspect that is rooted in the constructivist paradigm adopted in the study. This further maximises the creation of meanings (Gallagher et al., 1993). Furthermore, the Delphi technique requires highly structured communication between the researcher and the participants who are considered to be experts, while the NGT allows flexibility by allowing the participants to provide as many ideas as they have in a more semi-structured context (Gallagher et al., 1993).

Compared to the focus group, NGT and the focus group discussions both facilitate the collection of data from a group. However, for this study the NGT was seen to be more advantageous in that it provided the opportunity for maximizing all participants' contributions, generating a large number of ideas as well as creating a priority list from each group (de Ruyter, 1996). As noted by Gallagher et al. (1993) and de Ruyter (1996), in a focus group discussion there is a risk of a participants succumbing to the pressure to conform to the group. This is eliminated in the NGT by the silent generation of ideas as well as the individual ranking, which allows each participant to decide on their own.

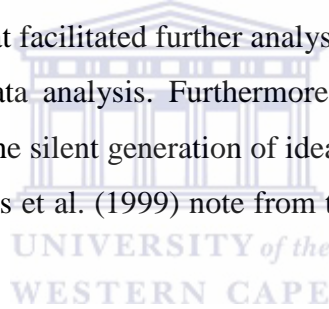
Various authors such as Gallagher et al. (1993), Lloyd-Jones et al. (1999), Potter et al. (2004) and Pan, Norris, Liang, Li, and Ho (2013) have used NGT in their research, and although the number of steps followed differs, a closer look at the steps followed shows that the activities done in each study are the same, namely introduction of the topic and technique, silent generation of ideas, reporting without discussion, and discussion or clarification of ideas, with some authors specifying the merging of similar ideas as a separate step. After the discussion, the participants rank and vote on the items to create consensus and priority. Re-voting and re-ranking can be seen as optional, depending on whether the participants decide to do so after tallying of the votes, and then the session is concluded.

As noted in the literature, the NGT is conducted as a group activity. Individual contribution in the compiling of the list and discussion can be stimulated by other participants' contributions, because participants are encouraged to add an idea if someone else's idea brings something else to mind. A lot of emphasis is placed on individual contribution (de Ruyter, 1996). Table 3-1 shows the various steps used by the various authors and the steps that were applied in this study.

Table 3-1: Steps of NGT as used by various authors and in this study

<b>O'Neil &amp; Jackson, 1983</b>	<b>Gallagher et al., 1993</b>	<b>Lloyd-Jones et al., 1999</b>	<b>Potter et al., 2004</b>	<b>Pan et al., 2013</b>	<b>This study</b>
1. Outline of NGT rationale, assumptions and methods	1. Introduction	1. Introduction and presentation of the question	1. Introduction and explanation		1. Introduction
2. Presentation of the task, question or issue					
3. Silent generation of ideas	2. Silent generation of ideas	2. The silent phase	2. Silent generation of ideas	1. Silent listing of items	2. Silent generation of ideas
4. Round-robin listing	3. Listing of ideas on flip chart	3. Round-robin phase	3. Sharing ideas	2. Round-robin stating and recording of items	3. Reporting
5. Item clarification	4. Discussion of ideas on flip chart	4. Item clarification	4. Group discussion	3. Discussing and compiling of related items	4. Discussion
6. Merger of overlapping or congruent items					
7. Evaluation of items	5. Ranking to select 'top 10' ideas	5. Voting phase	5. Voting and ranking	4. Voting	5. Voting and ranking
	6. Voting on top 10				
	7. Discussion of vote	6. Reassembly of the group		5. Summating of votes	6. Reporting on the votes (re-voting and re-ranking done with one group)
	8. Re-ranking and rating revised top 10				
8. Discussion/subsequent action	9. Conclusion				7. Conclusion

The advantage of NGT is that it allows group participation of all the members of the group as each member has time and opportunity to contribute equally, preventing the dominant participants from taking over the discussion and the passive participants from disappearing in the group (de Ruyter, 1996; Lloyd-Jones et al., 1999; Lloyd, 2011; Pan et al., 2013). NGT is documented to have originally been designed to achieve this balance, so that the problems of dominant personalities in groups can be avoided, as well as avoidance of focusing on one idea for a long period in a group discussion (Gallagher et al., 1993). This balance is facilitated by the individual silent generation of ideas, the reporting of what has been written during the silent generation of ideas phase as well as an individual prioritization of the combined ideas. Gallagher et al. (1993) and Van Breda (2005) also noted that NGT is quick to use and analyse, as NGT ends with the ranking and discussion of priorities that have been done quantitatively. This provides a starting point for further qualitative analysis, and as seen in this study this is beneficial because the discussion of the ideas provided by participants included generation of themes that facilitated further analysis and provided an opportunity for participants to be part of the data analysis. Furthermore, the NGT provides a drastically increased number of ideas from the silent generation of ideas and a more structured output, as de Ruyter (1996) and Lloyd-Jones et al. (1999) note from their studies, where this advantage was experienced.



One problem encountered in NGT is to get enough people together for the group session (Lloyd, 2011). In this study the participants for each NGT group were all from the same institution, facilitating getting them together. It was not possible to do the same with non-nurse educators, hence the decision to conduct individual interviews with other categories of participants. In this study the NGT sessions lasted between one and a half and two hours, and were conducted following the process as documented in literature by various authors and adapted for the purpose of the study as reflected in Figure 3-4 (Gallagher et al., 1993; Gibson & Soanes, 2000; Potter et al., 2004).

1. **Introduction:** The researcher introduced the topic, explained the process of NGT and then gave the participants papers upon which to write the answers to the question ‘What do you view as important competencies (knowledge, skills and attitude) related to HIV and AIDS required by a new nurse graduate?’
2. **Silent generation of ideas:** Participants wrote their individual answers to the question on the paper provided and each one wrote as many as he or she could identify.



3. **Reporting:** A round-robin was done and each participant gave the item that they had written down. These were written on butcher paper by the researcher for everyone to see, until no more items were being given. At this stage there was no discussion or explanation of the ideas.
4. **Discussion:** The recorded items were discussed one at a time and clarifications were given by the person that had given the item, or other participants could explain what each item meant, ensuring that the whole group understand it in the same way. In addition to discussing and clarifying items, participants also created themes out of the listed items, and the individual items were grouped into themes and activities, that O'Neil and Jackson (1983) refer to as merging of overlapping or congruent items. It is important to note that the themes were created by the participants and not the researcher. The researcher was the facilitator in the session and did not contribute to the list or the creation of themes, as recommended by O'Neil and Jackson (1983).
5. **Voting and ranking:** Individuals first chose the first five or 10 themes, then voted on the themes according to a scale of one to five or one to 10, depending on the number of themes that were created. If the number of themes was less than 10, the votes were limited to five, and if the themes were more than 10, participants' votes varied from one to 10. In all instances the vote of one meant the least important and a vote of five or 10 meant the most important.
6. **Reporting on votes:** After individual voting, each participant reported on how the votes were allocated to the themes, ensuring that for each participant only one vote was allocated to one theme. The votes were then added up for each theme and ranking was done by identifying the themes in order of priority, with the theme with the highest votes being the most important and that with the lowest or no vote being the least important.
7. **Conclusion:** The research again highlighted the ranking that shows the order of importance of the themes, while the attention of participants was focused on the specific items that were part of the created themes.

With one of the groups, when the participants saw the results of the votes they were not completely satisfied with the ranking, and after discussions it was concluded that they do another vote. As de Ruyter (1996) notes, after compilation of results participants have the opportunity to adjust their scores and conduct a second round of ranking and scoring, as done and described by Gallagher et al. (1993). This decision is based on the participants'

discussion during the session. Due to limited time it was agreed that the items and the groupings will be collated and given to each individual person, who then did another voting. A new ranking was done and again reported to the participants. The ranking after the second voting produced the same top four items, and changes were noted in the fifth and sixth ranking, which swapped places.

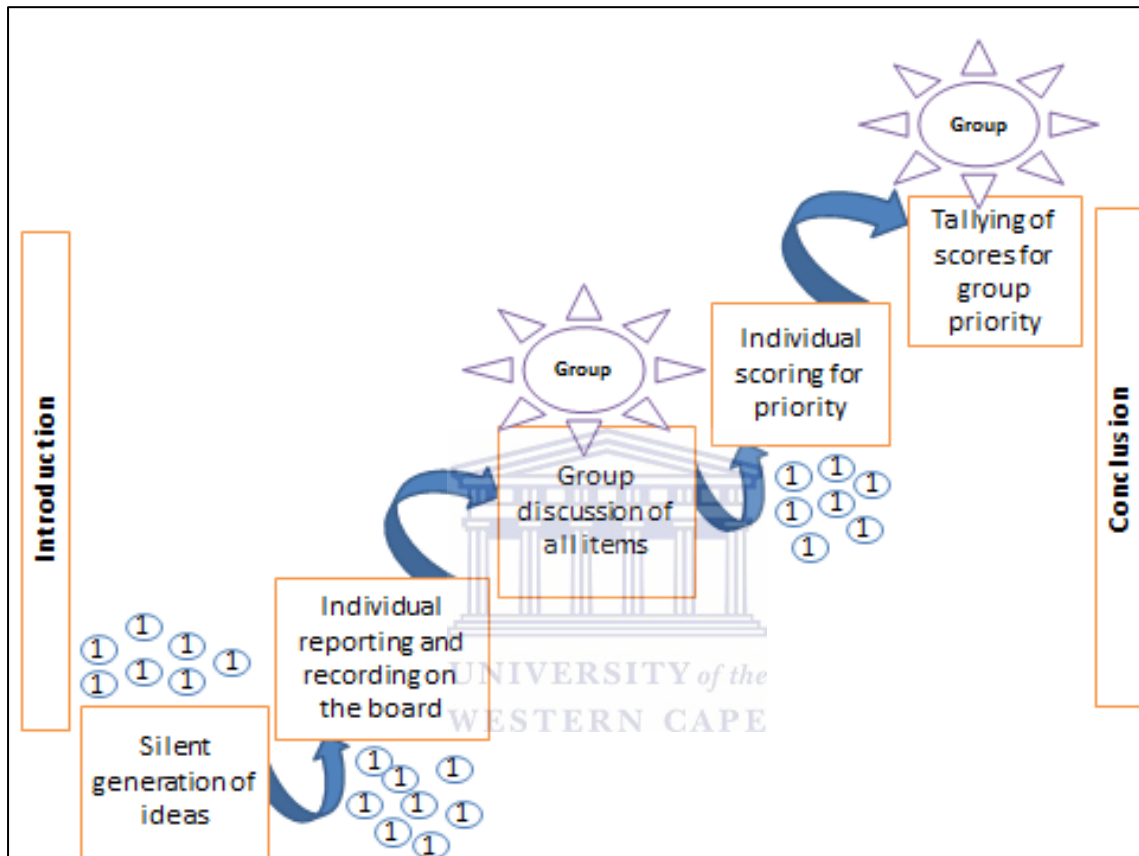


Figure 3-4: The process of NGT as followed in the study.

- *Individual interviews*

The literature documents that in human sciences a lot of information can be obtained by asking people questions directly in interviews, which are basically conversations between the researcher and the participant, whereby the researcher asks questions related to the topic of the study and the participants give answers by providing their own beliefs, ideas, opinions and views (Polit & Hungler, 1997; Nieuwenhuis, 2007). There are basically three types of interviews used in qualitative research, namely unstructured, semi-structured and structured interviews. The unstructured interviews are very conversational in nature and take a long time to conduct, with some researchers doing a series of interviews (Nieuwenhuis, 2007). The semi-

structured interviews are used to provide some guidance to the interviewer and are often used to support data that comes from other sources, also providing the opportunity to guide the participant back to the topic of the research if the participant gets side-tracked, while structured interviews have a detailed set of questions that are predetermined by the researcher (Nieuenhuis, 2007).

In this study a semi-structured interview guide was developed for the individual interviews to ensure that the problems and concerns were identified. During the interview probes were used to include a comprehensive view of competency covering knowledge, skills and attitudes needed by a new nurse graduate to be able to provide care and management to people living with HIV and AIDS. As noted by Polit and Hungler (1997), a semi-structured interview allows the researcher to have some flexibility in the process of collecting data, with the researcher starting with one broad question and using probes to gain a deeper understanding and meaning, an important aspect of the constructivist paradigm that emphasizes the creation of meanings. The use of semi-structured interviews allowed the researcher to explore the important competencies related to HIV and AIDS for nurses, without imposing her own ideas of what is important. This approach also fits the constructivist paradigm that stresses the importance of giving a voice to and respecting the voices of the participants (Denzin & Lincoln, 2003).

In this study, one-on-one semi-structured interviews lasting approximately 30 to 50 minutes were conducted with each participant, which included the recent graduates and nurses practicing in the clinical settings, the person living with HIV and AIDS, three nurse educators at one university, a representative from SANC as well as the two heads of undergraduate committees at the School of Nursing at UWC. Due to the working place and schedule of the participants in these categories, it was not possible to access them all in the same place and at the same time for a group discussion, hence the choice of individual in-depth interviews. As the data collection focused on identification of HIV and AIDS-related core competencies for nurses, the participants were able to provide their views on the topic in an individual interview as they could refer to their own experiences and own views about care and management for HIV and AIDS.

When collecting information from the heads of committees at the School of Nursing at UWC, interviews were chosen as a better option because their inclusion in the group discussion could have had an effect on the interpersonal dynamics, because they could be seen as

authority figures, an issue that the facilitator needs to attend to (Gallagher et al., 1993; Somekh & Lewin, 2005; Terre Blanche et al, 2006). Furthermore, this allowed homogeneity in the two group discussions that were conducted at UWC, with one group consisting of lecturers and the other of clinical facilitators.

All the data collection was conducted in English because it is the only South African language that the researcher was able to use in communication, and all the participants reported that they were able to communicate efficiently in English. This was an important aspect to consider in the data collection, as Polit and Hungler (1997) note that the researcher should overcome the communication barrier and share the vocabulary with participants in order to be able to interact with them for the construction of meaning. As the records of interviews should be meticulous (Nieuwenhuis, 2007), audio recordings were used during data collection after gaining permission from the participants, and data were transcribed verbatim by an experienced transcriber. After the transcription the researcher checked all of the transcriptions by listening to the audio recordings and reading the transcription, and this allowed the researcher to make corrections where the transcriber had made a mistake. Mistakes were mainly medical or nursing terms or abbreviations that were used by participants. As the transcriber is not in the health science field, such words were often written incorrectly and the researcher could make appropriate corrections.

### ***3.5.1.3 Analysing identified competencies***

As with all qualitative research, the data analysis in this phase of the research started while data collection was going on. After a few individual interviews were conducted, preliminary analysis was conducted following an inductive process. The NGT sessions were conducted in between the interviews, which were analyzed on their own first, and then the findings from the NGT guided further analysis of the individual interviews following a deductive process based on the themes and subthemes developed inductively from the NGT discussions. As Creswell (2014) notes, with a qualitative data analysis process the researcher starts with an inductive process. Once the themes are developed a deductive process is followed for subsequent analysis. The next section highlights the data analysis done for the NGT sessions and individual interviews.

### 3.5.1.3.1 Data analysis of NGT discussions

The data analysis of the NGT was done using two processes. The technique of multiple group NGT data analysis documented by Van Breda (2005) and modified for the study was used. The first process was done in four steps to identify the top five themes and the second process was done as the fifth step. The researcher identified other themes that were not part of the top five themes in order to identify all the competency areas that could be deduced from the data, and lastly the specific items were analyzed using content analysis to identify the competencies and outcomes that will be used in the curriculum mapping. Gallagher et al. (1993) has indicated that NGT data can be analyzed quantitatively or qualitatively, with the quantitative analysis facilitating the ranking and the qualitative analysis providing a better understanding of the issue discussed. In this study, because the statements from the different groups included a grouping that differed from others, and the findings of the NGT were to be integrated with those from the individual interviews and the research synthesis, for the researcher to be able to identify all the competencies and outcomes there was a need to re-visit the complete list of items and analyze them separately to identify those that were important to be integrated into the curriculum.

Using the steps of multiple group data analysis of NGT as modified from Van Breda (2005), modifications were made and the data from the eight groups were collected and analyzed, allowing identification of the top five competency areas from all of the groups. Table 3-2 provides the Excel view of the process of capturing and analyzing multiple group NGT data as used in the study.

#### **Step 1: Data capturing**

Using Excel, data from the different groups were captured as follows:

Column A: Group allocation: Each NGT group was allocated a number for identification purposes.

Column B: Group score: in each group, each theme was given a letter from the alphabet, and the individual scores and the sum were entered in this column as collected during the NGT discussion.

Column C: Group theme: The themes as developed by each group were entered in this column.

Columns D–J: The single scores as given during the discussion were entered in these columns. The number of participants for each group varied from four to seven. For each group, items that were not given a score were scored as zero to facilitate Excel's calculation of the average in the next step. The range at this stage depended on the number of participants in each group and it will be limited to the highest number of participants in one specific group.

Column K: Sum of the single scores for each item. The single scores for each item were added up and this helped as a control to make sure that the previous calculations during the group discussions were correct, also to ensure that when averages were calculated the ranking remained the same for each group.

Column L: Calculation of averages for each group theme: Using the Excel function of average calculation, averages were calculated for each of the group items.

Column M: Identification of the top five for each group: Using column L, each group's themes were ranked in descending order to identify the top five themes for each group and they were identified by marking 'X' in column M. The theme with the highest average was considered to be more important by the group. Checks were done to compare this ranking with the previous ranking done during the group discussion, based on the sum of the scores given by the group members. The ranking was identical.

Column N: Group theme percentage average: As four of the eight groups ranked the items out of five and other four ranked their themes out of 10 during the NGT sessions, it was necessary to convert the average on a similar denominator for comparison and further ranking of all eight groups' ranks. To achieve that all averages were converted into percentages, as Gallagher et al. (1993) note, if scores are not standardized the difference in scores can be exaggerated and the ranking of multiple groups can be distorted.

Column O: Thematic analysis: Content analysis was done on the top five themes for all the eight groups' themes and the core competencies that were identified were entered here.

Column P: Ranking based on the new identified core competencies was done and an average was calculated for each identified core competency to provide a ranking for priority. The new calculated average was entered in this column and the core competencies were placed in order of priority, based on the scores from the eight groups.



Table 3-2: Process of analyzing multiple group NGT data

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
<b>Institution</b>	<b>Score (for each theme – each theme was allocated a letter )</b>	<b>Theme (for each group)</b>	<b>Individual score</b>									<b>Average for each item</b>	<b>Top five for each group</b>	<b>% average score</b>	<b>Theme</b>	<b>% score for each theme</b>
NGT - 5	D: $5+5+5+5+5+5=30$	HIV basic knowledge	5	5	5	5	5	5	5	30	5	x	100	Knowledge	74,5	
NGT - 6	B: $5+5+5+5+5+1=26$	Knowledge: signs and symptoms, treatment, ...	5	5	5	5	5	1	5	26	4,3	x	86,7	Knowledge		
NGT 1	$10+9+4+10+10=43$	Knowledge	10	9	4	10	10			43	8,6	x	86	Knowledge		
NGT 3	G: $3+5+5+3 = 16$	Psychological empowerment of the nurse	3	5	5	3	0			16	3,2	x	64	Personal development	47	
NGT 2	C: $5+8+8+3+3+9+8=44$	Transmission	5	8	8	3	3	9	8	44	6,3	x	62,9	Knowledge		



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
<b>Institution</b>	<b>Score (for each theme – each theme was allocated a letter )</b>	<b>Theme (for each group)</b>	<b>Individual score</b>									<b>Average for each item</b>	<b>Top five for each group</b>	<b>% average score</b>	<b>Theme</b>	<b>% score for each theme</b>
NGT –8	J: 5+6+7+5=23	Nutrition	5	6	7	5				23	5,8	x	57,5	Health education		
NGT 4	B: 2+2+3+4+5 = 16	Holistic approach	2	2	3	4	5	0		16	2,7	x	53,3	Holistic safe practice		
NGT 7	M: 1+3+8+6+4 = 22	Ethical behaviour	1	3	8	6	4			22	4,4		44	Ethics		
NGT 4	D: 4+3+2+3+1= 13	Ethical dilemmas	4	3	2	3	1	0		13	2,2	x	43,3	Ethics		

## **Step 2: Identification of the top five**

Themes developed and ranked from each group were arranged in order of importance based on the average statement value in column L. The order based on the sum of values was the same as the order based on the average.

To do this, the researcher first ordered all the statements by group (column A) in ascending order and then ordered the group average scored in descending order (column L). This allowed her to mark with an 'X' the top five items that had the highest average group score. In one group, there were two items sharing the fifth value and in that case both items were included, as recommended by Van Breda (2005), resulting in six items that were part of the top five for that group.

From the eight group discussions conducted using the NGT, 41 items were identified, and these items were used in the next step to identify the themes emerging from the top five items.

## **Step 3: Content analysis of the top five**

Using content analysis the top five statements for each group were analyzed and six themes of competency areas were created: Holistic safe practice; Knowledge; Ethics; Health education; Policies; and Personal development. These newly developed themes for the core competencies were placed in column O.

## **Step 4: Calculating combined ranks**

The top five competency areas were combined and a theme average was calculated from the 41 statements obtained from the top five of each of the eight groups. This average was calculated in column P, allowing the ranking of the newly synthesised competencies.

## **Step 5: Identification of additional competency area**

In this step all the statements that were not part of the top five items from all the eight groups were analyzed qualitatively with the application of thematic content analysis to identify further competency areas that may not have been obtained in the previous analysis, as the statements were not part of the top five statements for the groups. The process of content analysis applied with the NGT is similar to the process applied for the individual interviews

as described in this chapter under heading 3.5.1.3.2. Following the process of content analysis again, one further competency area of interdisciplinary approach was obtained.

The third process of analyzing the NGT data involved using content analysis to analyze the various individual items that were identified by the various groups' individual participants. As during the NGT process, the various groups had done some thematic groupings, which differed for each group. A further analysis was done to ensure identification of any other competency area that may have been lost due to earlier grouping by the various groups. Also, it allowed for specific items to be reviewed and reclassified in a more appropriate competency area based on the definitions developed in this study. Furthermore, this further analysis was necessary as it preceded the second phase of the study where the curriculum mapping was done. There was a need to identify specific competencies in each competency area, as well as specific outcomes that were to be mapped out in the curriculum. This analysis also assisted in combining the NGT data with the individual interview data.

The process involved looking at the individual statements and reading the transcripts of the NGT sessions for more details about the group discussion. Following an inductive thematic content analysis, similar items were combined to form outcomes as identified and discussed in the group discussion, then grouped into categories reflecting the specific competencies required for the management and care of HIV and AIDS. Then those categories were further grouped into competency areas, referring to the competency areas developed from the previous NGT analysis. The new ranking provided a final list of competencies and competency areas used to combine with the findings from the individual interviews. Table 4-5 in chapter four shows the identified competency areas, the specific competency in each competency area, the outcomes that form each competency, as well as some examples of the obtained reports from the three data sources used in this study.

#### *3.5.1.3.2 Data analysis from the individual interviews*

The researcher analyzed the interviews qualitatively using qualitative content analysis. Elo and Kyngäs (2007) noted three phases of qualitative content analysis and further noted that even though qualitative content analysis does not have a systematic way to analyze data, the researcher must provide clear details of how the analysis was done to ensure trustworthiness. When using qualitative content analysis, the researcher can use inductive content analysis if the phenomenon under study has limited or fragmented knowledge, allowing the categories to emerge from the data. A deductive analysis can be used when the researcher is attempting to

test or validate a theory, hence the use of already set concepts (Hseih & Shanon, 2005; Elo & Kyngäs, 2007). A third type of qualitative content analysis has been noted by Hseih and Shanon (2005), namely summative content analysis. This approach identifies and quantifies the words in an attempt to obtain an understanding of how the words are used in the contexts studied. In this study, the analysis started as inductive and later the findings were combined with the findings of the NGT content analysis (Hseih & Shanon, 2005; Elo & Kyngäs, 2007). The inductive content analysis used in the study provides the advantage of obtaining information directly from the participants. The researcher avoided having preconceived ideas that could be imposed on the process of analysis with the use of already set concepts guiding analysis, as noted by Hseih and Shanon (2005). To ensure clarity, data were analyzed by combining the process of qualitative content analysis as described by Elo and Kyngäs (2007) and the modified steps in interpretive data analysis as outlined by Terre Blanche et al. (2006). The analysis was conducted in three phases, namely preparation, organization and interpretation, as reflected in Figure 3-5.

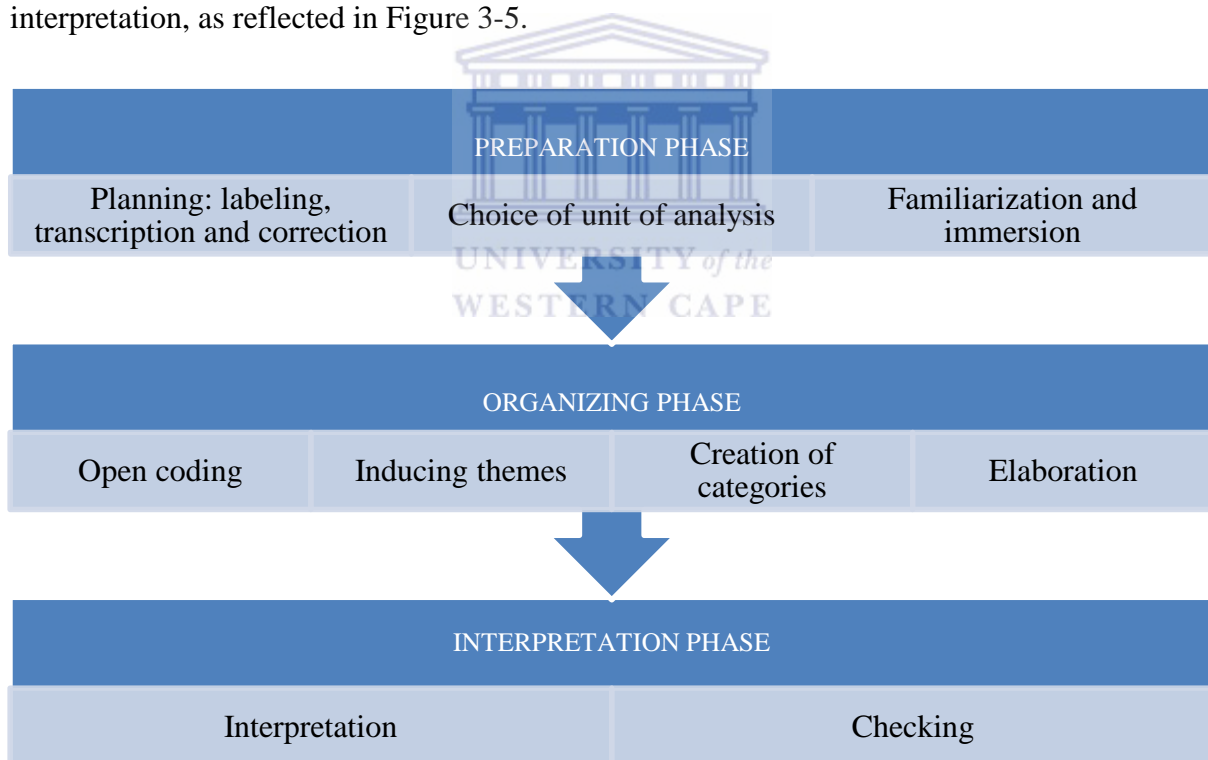


Figure 3-5: Process of content analysis that was followed.

- *Preparation phase*

This phase included three main activities, namely planning, choosing a unit of analysis and familiarization and immersion, activities that have been noted as important to be completed

before one can start the actual analysis of data. The planning activities included creating some order in the data in terms of storing and labelling data from each category of participants, listening to recorded interviews, then reading the transcribed interviews while making corrections as they were being recorded and transcribed. In addition to being part of data analysis, this process also allowed the researcher to reflect and identify aspects that could be included in subsequent interviews to ensure in-depth collection of data, as data analysis and data collection usually run concurrently in a qualitative approach.

The other activity completed was making a choice about the unit of analysis. In qualitative content analysis, a unit of analysis has also been named a meaning unit by Graneheim and Lundman (2004), and can be a word, a sentence, a paragraph, a whole interview or a theme (Terre Blanche et al., 2006; Elo & Kyngäs, 2007). This identification of unit of analysis guided the researcher to make a decision about the size of written text that will be considered big enough to provide a meaning, and small enough to provide specificity in terms of content and context relating to what the participant is talking about in the one specific interview. For this study, the unit of analysis was the full paragraph, allowing the researcher to capture the meaning of the section being read, and this facilitated the identification of codes and themes.

The other activity in this phase of analysis was related to engaging and gaining an understanding of the data through reading, taking notes, observation and brainstorming, as these have been noted to be the important first steps of data analysis in qualitative research (Terre Blanche et al., 2006; Bazeley, 2013; Creswell, 2014). For this study, after all the corrections were done for each interview the researcher reread it again numerous times to become familiar with the content of the interview, writing notes and reflections in term of the meanings that were obtained from the data and how they relate to the first research question of the study, that is about the identification of HIV and AIDS-related competencies for a nurse in South Africa.

- *Organizing phase*

This phase includes activities that are the core of the analysis, namely coding, inducing themes, creating categories and elaboration. Coding was done by breaking down a body of data into meaningful units and meaning, rather than words that were considered. As the researcher read the interviews, the aspects that related to competencies related to HIV and AIDS were identified and coded. These aspects were identified by looking at what is reported

as the role of a nurse, what nurses struggle with, and what nurses do or are expected to do with regard to HIV and AIDS care. The codes that were obtained from the data were grouped together based on meaning, allowing for synthesis that provided sub-themes, themes and categories, and these were later combined with the results of the qualitative content analysis done for the NGT discussion. The elaboration of process involved the description and defining of the themes, and these themes are what Creswell (2014) specifies as being the main findings of the study. The first phase of the study related to the identification of HIV and AIDS-related competencies for HIV and AIDS, the themes related to the core competencies and the sub-themes related to the specific competencies in each core competency.

- *Interpretation and checking*

Interpretation as the final step in data analysis provides the opportunity to make sense of all the data, while the researcher revisits the analysis carefully to identify any weakness in the analysis that needs to be corrected, as well as ensuring that the data are not merely summarized (Terre Blanche et al., 2006). Interpretation was compiled when the analysis was completed, allowing for the creation of links between the competencies and sub-competencies, as well as the development of a model for a framework for HIV and AIDS-related competencies, as reflected in Chapter 4. Checking was done through various presentations of the findings to various audiences that included some of the participants, and this provided the opportunity to obtain feedback and clarification about any misinterpretation that the researcher could have made.

### **3.5.2 Systematic research synthesis (SRS)**

The second step of the first phase for this study involved gathering data from literature to identify existing information on core competencies related to HIV and AIDS for nurses, studying natural examples and identifying functional elements of successful models as documented for IR: D&D (Rothman & Thomas, 1994; de Vos, Strydom, Fouche & Delpont, 2005). This second step of the study did not include one of the IR: D&D data gathering activities of studying natural examples. This was due to financial constraints as the researcher did not have funds to visit institutions that have reported on how they have systematically included HIV into the nursing curriculum, such as the Haiti study by Knebel et al., (2008). The researcher used the publications from such places instead and included them in the

systematic research synthesis (SRS), which facilitated the identification of functional elements of other models.

The SRS was done as part of gathering and synthesising information, as various authors stated that there should be no reinventing the wheel. The researcher should review work that has been done previously in the same area, as the information obtained will form the basis for creating new intervention methods (Rothman & Thomas, 1994; Burns & Grove, 2001; de Vos et al., 2005). During this step, using an SRS approach, literature about nursing HIV and AIDS competencies for management and care were systematically reviewed and synthesized as functional elements of other models that have focused on HIV and AIDS core competencies for nurses. This helped to strengthen and support the competencies developed from the first step of the first phase of the study.

Rothman, Damron-Rodriguez and Shenassa (1994) indicate that SRS applies a rigorous process without seeking statistical summative means of providing a conclusion, because SRS uses structured protocols as reflected in meta-analysis in addition to flexible integrative qualities of traditional reviews. SRS has four basic features, namely a well-planned structure; provision of conceptual data integration; covering a broad range of evidence; and aiding in practice and policy development (Rothman et al., 1994; Rousseau, Manning & Denyer, 2008). To identify HIV and AIDS-related competencies for nurses to be integrated into the curriculum, the researcher followed the six steps of SRS as outlined by Rothman et al. (1994), namely defining the problem/goal; identification of general knowledge areas relevant to the problem/goal; identification of specific data sources; determining appropriate descriptors for the search; establishing criteria for codifying, assessing and managing information; and establishing procedures for developing consensus findings and intervention guidelines.

### ***3.5.2.1 Using existing information sources***

#### ***3.5.2.1.1 Goal of the review***

For this study, the purpose of the review was to identify nursing competencies related to HIV and AIDS care and management that would be appropriate for an undergraduate nursing programme. This review helped to identify work that has been published about nursing HIV and AIDS competencies for pre-service nursing training. The literature indicates the need to select specifically a question for inquiry, as this helps to distinguish between relevant and

irrelevant work (Rothman et al., 1994). In this line, a search was conducted in an attempt to answer the following question: ‘What are the competencies related to HIV and AIDS appropriate for the undergraduate nursing curriculum?’

#### *3.5.2.1.2 Knowledge area relevant to the problem*

For this study the search to identify HIV and AIDS nursing competencies was limited to the area of nursing, and more specifically to the field of HIV and AIDS. This allowed a focused search, eliminating other searches that are related to the field of HIV and AIDS, but in a different knowledge area such as education, where competencies for teaching HIV and AIDS in schools are explored. Furthermore, it allowed the researcher to focus on HIV and AIDS competencies as opposed to general nursing competencies, or more specific competencies such as those required for mental health care. As noted by Rothman et al. (1994), one needs to consider the scope and relevance when planning the search.

#### *3.5.2.1.3 Search engines*

In order to search a wide area of data sources, the search for the review was done on various databases: EBSCO host; Academic search complete; Africa wide information; CINAHL plus with full text; ERIC; Health sources: Nursing Academic edition, MEDLINE, Psych Articles, Cochrane Library, Health Source and Scopus. The limitations for the search were English, publications from 2000 to 2013 and full text availability. Where full texts were not available at UWC, a librarian at the University of Cape Town was contacted and the articles were obtained. The year of retrieved publications was set to start from 2000 because the early 2000s brought increased access to combination therapy for HIV, hence changing the practice of HIV and AIDS care and management.

#### *3.5.2.1.4 Descriptors for the search*

Guided by studies of Satu, Leena, Mikko, Riitta and Helena (2013) and Yanhua and Watson (2011), who have conducted reviews on competency, a total of nine searches were done, using various combinations of terms and searching various databases, as reflected in Table 3-3. A total of 89 publications was obtained, and after removal of duplicates 44 publications were reviewed (Figure 3-6). Ten articles were removed after checking the titles and eliminating those whose title did not give an indication that HIV is covered. Those articles included aspects such as end-of-life nursing education, transcultural nursing courses and



tackling drug and alcohol abuse, to name a few. From the 35 articles remaining, titles were examined to establish if they covered aspects set as exclusion criteria. Of the 27 articles excluded, two were related to an article that was included in the selection, one as a commentary and the other one as executive summary. A further commentary was excluded. Three of the excluded articles were related to the evaluation of an intervention; another three articles were excluded as they were focusing on nurse specialists, while two other articles were excluded as they targeted high school students and college students respectively.

A further 16 articles were excluded as they focused on one specific aspect that will form part of HIV and AIDS care and management nurse competencies, and these included aspects such as nursing accounting competencies, cultural competency, universal precautions, mental health care for patients living with HIV and AIDS, giving hope, nurses' perception of HIV transmission and HIV knowledge.

After reading the abstracts, a further two articles were excluded as one focused on student nurses' views on HIV and AIDS care, while the other looked at student nurses' knowledge, attitudes and behaviour, with no clear establishment of HIV and AIDS-related competencies for nurses. Three more articles were excluded after reading the full article as they did not provide answers to the question of the review. The Kaleidoscope study by Pratt et al. (2001) provided a discussion on the progress of implementation of intervention, while the ARCAN cascading study by Ndirangu, Arudo and Amarsi (2009) provided a report on the project, without giving an indication of the HIV and AIDS-related competencies for new graduate nurses. The THANE study by Kohi et al. (2010) provided content of the modules that were developed for nurse educators, and this was evaluated as being beyond the undergraduate nursing programme.

Nevertheless, even though these studies were excluded from the SRS that compiled the HIV and AIDS competencies related to HIV and AIDS for nurses to be integrated into the undergraduate nursing programme, they were still considered for the discussion, literature review, and confirmation of the results. Two articles were included for the review and the reading of the full text provided information that the HIV and AIDS nurses' competencies were developed from consultation and consensus meetings with experts – hence the decision to use the appraisal instrument that evaluates the quality of text, and position papers from the Joanna Briggs Institute (JBI).

In addition to the database search, documents were identified from reference lists of included publications and a number of international AIDS organizations' websites, such as CANAC, NHIVNA, SANAC, WHO, International Training & Education Center for Health and PEPFAR were visited to check for any document such as a report, working document or position paper that may have identified HIV competencies for nurses. That search provided three more documents, and after reading the full text one was excluded as it was not focused on nurses only. Of the two documents included, one was an opinion paper, while the other was a result from consultation with experts and a consensus meeting. These documents were developed by experts in the field of HIV and AIDS nursing care in the United Kingdom and Canada respectively.



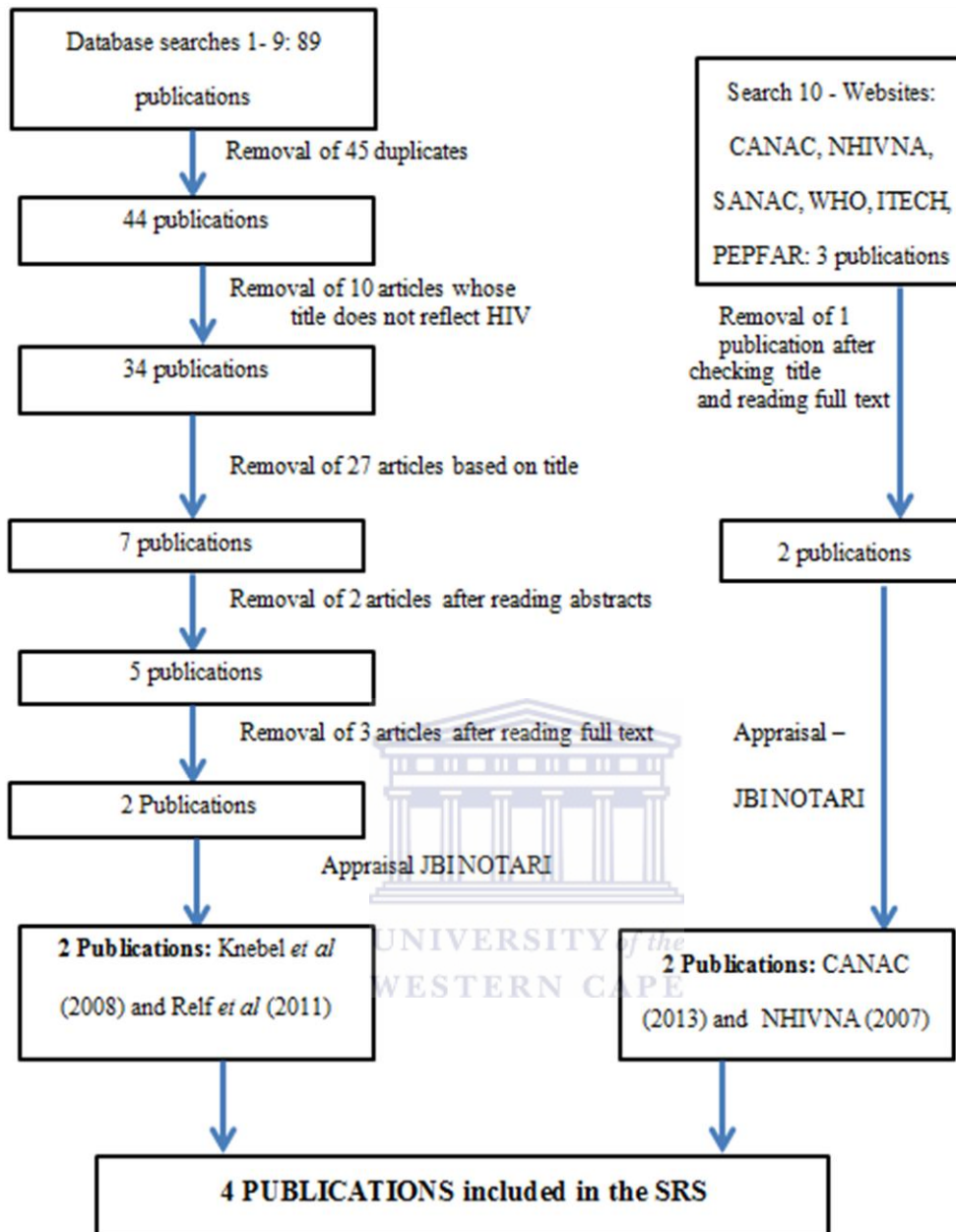


Figure 3-6: SRS process in this study.

Table 3-3: List of databases and search combinations

Database	Combination of search terms	Databases included or excluded in the search	No.
1. CINAHL	HIV + competenc* + nurs* in title	Exclude Medline	2
2. CINAHL	HIV + competenc* + nurs* in abstract	Exclude Medline	5
3. PubMed	HIV + competenc* + nurs* in title		7
4. CINAHL	HIV + competenc* + nurs* in abstract	Include Medline	22
5. EBSCO host	HIV+ competenc*+ nurs* in title	Academic search complete (2), Africa wide information (1), CINAHL, (9) Eric, Health source: Nursing academic (4), Medline (8), psycharticles	9
6. Scopus	HIV+ competenc* + nurs* in title	Scopus	6
7. EBSCO host	HIV (TITLE) + competenc* (ABSTRACT) + nurs* in title	Academic search complete (5), Africa wide information , CINAHL, (10) Eric, Health source: Nursing academic (6), Medline (10), psycharticles	14
8. EBSCO host	HIV (TITLE) + curricul* (ABSTRACT) + nurs* in title	Academic search complete (6), Africa wide information (7), CINAHL, (20) Eric (2), Health source: Nursing academic (5), Medline (15), psycharticles	18
9. EBSCO host	HIV (abstract) + curricul* (ABSTRACT) + nurs* (abstract) + competenc* abstract	Academic search complete (6), Africa wide information (7), CINAHL, (20) Eric (2), Health source: Nursing academic (5), Medline (15), psych articles	6
Total			89

### 3.5.2.1.5 Procedure for codifying, assessing and managing information

For this SRS, a number of criteria were set for the inclusion and exclusion of the sources for the study.

Inclusion criteria were:

- Publications that have provided a list of HIV competencies for nurses.

The exclusion criteria included:

- Studies that focused on a speciality nursing area or focused on HIV nursing as a nursing speciality after the undergraduate training;
- Studies that focused on one specific competency alone, such as cultural competency or accounting competency;
- Studies that focused on the effectiveness of a teaching programme; and
- Studies where the participants/focus were not nursing alone, such as the study on Mozambican medical technicians, or studies that looked at health care professionals or workers grouped together.

The JBI provides guidelines on how to conduct a systematic review and provide a number of tools that assist in appraising publications that are included in a systematic review such as the SRS conducted in this study. An assessment of the publications obtained revealed that for three of the publications, consensus was obtained, with only one publication indicating the use of participatory action research to reach the consensus, while one publication was a position paper developed by a working group for the specific association. JBI provides the Narrative, Opinion and Text Assessment Review Instrument (NOTARI) as a tool to appraise publications that are position papers or products of consensus or reports (JBI, 2009). The types of publications obtained from the SRS are products of consensus, a consultation meeting and a position paper; hence they were appraised using the JBI-NOTARI tool. The one publication that used participatory action research reported the use of a panel of experts to get consensus, and it was also appraised using the same tool. The JBI-NOTARI tool has seven aspects (see Table 3-4) that are evaluated, and publications that score more than five or six points out of seven can be accepted. For the purpose of this study, text/expert opinion papers which scored five and above were accepted for data extraction and synthesis.

Table 3-4: Criteria for critical appraisal of the text/expert opinion papers – the JBI/NOTARI tool

<b>Criteria</b>	<b>Yes</b>	<b>No</b>	<b>Unclear</b>
1. Is the source of opinion clearly identified?			
2. Does the source of the opinion have standing in the field of expertise?			
3. Is the interest of the patients/clients the central focus of the opinion?			
4. Is the opinion's basis in logic/experience clearly argued?			
5. Is the argument developed analytically?			
6. Is there reference to the extant literature/evidence and any incongruency with it logically defended?			
7. Is the opinion supported by peers?			

For the included sources a variety of participants contributed to compilation of the nursing competencies related to HIV and AIDS care, such as experts in the HIV field, nurses in the clinical field and nurse educators. For each publication the listed competencies were reviewed and only the competencies that were appropriate for an undergraduate nursing programme were maintained.

#### *3.5.2.1.6 Procedure for analysis*

Rothman et al. (1994) note that the next step in SRS involves analysis, and techniques that are used in qualitative data analysis are usually to be applied. In this SRS this involved analyzing the publications accessed following the thematic content analysis process, similar to the process followed when analyzing the individual interviews. With the results of the analysis, the competencies were merged with the competencies identified from group discussions and individual interviews, allowing for the development of a list of core competencies related to HIV and AIDS for an undergraduate nursing curriculum (Booth, 2001; Grant & Booth, 2009).

#### *3.5.2.2 Identifying functional elements of other models*

This activity is part of data gathering, and Fawcett et al. (1994) note that once the information is put together, the researcher looks at how the issue has been addressed previously. This phase of the study included the identification of HIV and related core competencies that others have identified and included in the nursing programme. Fawcett et al. (1994) also state that the researcher should be looking at other aspects that may contribute to success or failure, and these were also explored in terms of identifying how the integration of core competencies related to HIV and AIDS into the four-year nursing programme could be done. From the published literature, 21 specific competencies related to HIV and AIDS for nurses were identified, and these were further analyzed and grouped into seven HIV and AIDS nursing core competencies, similar to what was identified from individual interviews and group discussions.

#### **3.5.3 Product of phase 1 of the study**

The purpose of phase 1 of this study was to identify HIV and AIDS competencies for nurses, and these competencies were obtained from NGT sessions, individual interviews and SRS. The developed competencies and core competencies related to HIV and AIDS for nurses that will enable them to provide care and management for HIV and AIDS obtained from the three sources of data in the study were combined. These identified aspects that were obtained in each of the data sources, which contributed to each of the competencies, is reflected in Chapter 4, Table 4-4. At the end of phase 1 a list of core competencies related to HIV and AIDS for nurses completing the four-year nursing programme at UWC was developed, with

sub-competencies for each as well as a draft of related outcomes. This provided a starting point for the second phase of the study, and is presented in chapter four, heading 4.3.3.

### **3.6 Phase 2: Curriculum mapping**

Curriculum guides what is to be covered in any educational programme. Curriculum mapping is used to provide a clear picture of what is covered for the teachers, students and community as a whole. This phase covered the second objective: ‘To design and develop an integration model to guide the integration of the identified core competencies related to HIV and AIDS that will be embedded into the four-year nursing degree curriculum at UWC’.

The activities of this phase corresponded to the second and third pillars of the COPA model that look at integrating the identified competencies and the learning strategies that will be appropriate. This corresponds to the third phase of the IR: D&D research methodology applied in this study. It is known to have two main activities, namely designing an observational system and the specification of procedural elements of the intervention (Fawcett et al., 1994). However, Mullen (1994) shows a more detailed list of activities, namely identification of the design problem and intervention requirements; specifying the boundaries of the domain of D&D; determining participants for the design and selecting a site for the D&D; use of disciplined problem solving and creativity; generation, selection and assembling solution alternatives; formulation of initial intervention and initiation of proceduralization.

Mullen (1994) noted that this phase of IR: D&D is not as developed as the other phases of IR: D&D, and this guided the researcher to identify a way of completing the phase systematically to enhance the quality of the research study and to comply with the main characteristic of this phase, which is to plan change purposefully. For this study only the design of the model for integration will be done as the planned change, because its implementation will be more systematic and verified than the current ad hoc integration of HIV into the nursing curriculum. An integrated curriculum is one way to realize integration in teaching and learning, and this involves incorporating the core competencies related to HIV and AIDS into the undergraduate nursing curriculum, as well as establishing an approach that will allow integrative learning. For this study a curriculum mapping approach was the process applied in this phase.



### **3.6.1 Workshop planning**

#### **3.6.1.1 Setting**

This study was conducted in the Western Cape Province of South Africa. The model for integration was developed for the School of Nursing at UWC, an institution situated in the Western Cape. The Western Cape has three universities, but only UWC offers undergraduate education and training for nurses. Other nurses in the province are trained at the Western Cape College of Nursing (WCCN) and a number of private colleges which offer diploma courses. This makes UWC the only university offering a nursing undergraduate course. The other two universities offer postgraduate nursing courses such as postgraduate diplomas, master's degrees and a PhD programme. The School of Nursing at UWC is the largest nursing school in the country and has about 1000 undergraduate students with a staff complement of about 32 academic staff and 38 clinical facilitators. In addition to the undergraduate programme, the school offers a Master's degree in Mental Health, Advanced Midwifery and Nursing Education as well as PhD programme.

#### **3.6.1.2 Population**

Uchiyama and Radin (2009) noted that the curriculum mapping process provides a structure to engage in dialogue and to promote respect for the professional knowledge of instructors. Based on this and the curriculum development approach that has been adopted for this study, there needed to be participation from those involved in the teaching of a nursing programme to enhance discussion and deliberation about the design and plan for the integration strategy, as documented by De Villiers (2001). For this study the population for the design phase was lecturers and clinical facilitators at the School of Nursing at UWC, and they were invited to participate in the design process. The integration model for HIV and AIDS core competencies was developed for the nursing curriculum at UWC.

#### **3.6.1.3 Sampling and sample size**

Through volunteer sampling, a representative of each year level was asked to participate in this phase. As two specialties are covered in the third year, namely Midwifery and Community Nursing, two representatives were invited, one for each specialty. A total of five lecturers were present in the first workshop, and in the subsequent four workshops, lecturers

and clinical facilitators from each year's levels were invited to participate. For the year level workshops, the number of participants ranged from three to eight participants.

### **3.6.2 Design process**

In this study the model for integration of HIV and AIDS core competencies was developed in the curriculum mapping workshops that were conducted with the participants, and the core competencies were mapped in the curriculum with a combination of vertical and horizontal integration approaches. Based on the findings of the first phase, the identified extent of integration was outlined with the identified HIV and AIDS-related core competencies appropriate for the South African setting, and mapped into the existing curriculum at UWC. Mullen (1994) noted a number of activities that can be performed to ensure systematic planning and development of the design, noting that the design methods differ according to the model being applied. The activities referred to by Mullen (1994) included framing the objective of the design, establishing design domain, requirements and problems, gathering information and intervention design. The next section highlights how these were applied in this study.

#### **3.6.2.1 Framing objective**

Mullen (1994) advises that the researcher should set a design objective to specify the task to be achieved in the design work, and as curriculum mapping was adopted as the design framework and was to be conducted in a number of steps, each step had an objective so that the participants were able to understand what contribution was needed from them. A short presentation at the beginning of each session provided such information. For this study, the objective was to develop a curriculum map that integrates the HIV and AIDS-related core competencies into the four-year nursing programme.

#### **3.6.2.2 Design requirements**

Mullen (1994) states that design requirements must be clarified, referring to the conditions to be satisfied. In this study, this refers to the integration of HIV and AIDS core competencies into the undergraduate nursing curriculum at UWC. This implies that the student nurses are trained to develop those core competencies. In order to do that, one not only needs to ensure that the competencies are covered and developed, but also to identify the outcomes that must

be achieved in the teaching and learning process, as well as the resources needed, such as teaching staff and a clinical setting and equipment.

### ***3.6.2.3 Design problems***

With this activity, the researcher identified unresolved issues that needed to be resolved for the design to be effective. In this study, this involved the identification of the challenges and shortfalls in phase 1 of the study and ensuring that these were covered, as well as other structural elements that were needed for implementation of the integrated model, namely the teaching and learning strategies and opportunities, staff development and setting readiness.

### ***3.6.2.4 Information retrieval***

This activity involved review of the literature to get information about integration models and curriculum mapping, aspects crucial to design the integration of HIV and AIDS core competencies. At this point the researcher referred to the information obtained from earlier literature reviews about integration models and levels of integration to facilitate the application of those that had already been identified as corresponding to the study's paradigm.

### ***3.6.2.5 Intervention design: Curriculum mapping***

Using a modified version of the process of curriculum mapping by Uchiyama and Radin (2009), the mapping process of the core competencies followed four stages, as outlined below.

**Step 1: Developing a map for the programme:** This phase involved activities conducted in the first workshop of the second phase, where lecturers who were representatives of each year level at the School of Nursing at UWC developed a map for the programme, identifying from the list the HIV and AIDS core competencies to be included in each year level. This provided a good idea of the vertical integration as the map covered all the year levels for the programme, allowing a view of the whole programme with input from different year levels, while identifying gaps to be filled and strengths to be relied on in each. This approach fits the use of heterogeneous groups of teaching staff of the different year levels, as suggested by Jacobs (1997), noted in Uchiyama and Radin (2009).

**Step 2: Reviewing the map for the year level:** The second stage involved four workshops where lecturers and clinical facilitators of the same year level worked together to review the map for the whole programme, and this gave the participants an opportunity to identify any aspect that may have been excluded. The next step was to focus on the map for that year level, in order to identify any aspects that needed to be moved to a different level, any duplications, the level of complexity that is appropriate for that specific year level, and a discussion on how the teaching will be done to develop the identified competencies for that year level. In addition, the participants in the workshops identified the teaching strategies and learning opportunities that may be adopted for implementation of integration of the HIV and AIDS-related core competencies.

**Step 3: Refining of the curriculum map:** In this step the researcher made the recommended changes from the previous workshops conducted in the previous second step, showed a representative of each year level these changes and asked for comment. This provided an added opportunity for the participants to review the developed map. At this stage the representatives approached agreed with the recommendations from the workshops. The refined map of the HIV and AIDS core competencies presented the horizontal and vertical integration. At the end of the curriculum mapping process the outcome was sent to a representative from SANC, and two lecturers that teach two of the science subjects to nursing students at UWC were asked for input. The input received was integrated into the final product of the workshops conducted in the second phase of the study.

### **3.6.3 Product of phase 2 of the study**

At the end of the activities conducted in the second phase of the study, a final draft of the list of HIV and AIDS nursing core competencies, sub-competencies and related outcomes was developed, as well as the mapping of each core competency in the four-year undergraduate nursing curriculum, maintaining a vertical and horizontal integration. This provided formulation of the outcomes for each year level, with an increase in complexity level for the development of the HIV and AIDS competencies so that nurse graduates will be able to function effectively upon graduation in providing care and management for patients living with HIV and AIDS, and those at risk of HIV infection. Furthermore, the year-level workshop participants identified possible teaching strategies and learning opportunities.

### **3.7 Phase 3: Validation and verification**

Phase 3 of the study corresponds to the early development phase of IR: D&D, although the IR: D&D combines this with pilot testing. In this study the early development was limited to verification and validation of the work done in the first two phases, activities that correspond to what Fawcett et al. (1994) call developing prototype or preliminary intervention. In this study the preliminary intervention is presented as the final curriculum map of the HIV and AIDS-related competencies for the four-year undergraduate nursing programme at UWC. The work done in this phase allowed for the development of a final document with the list of core competencies related to HIV and AIDS for nurses, the sub-competencies and related outcomes, as well as their integration into the four-year undergraduate nursing programme at UWC. In addition to that, other structural aspects were covered in the workshop, facilitating the early development of the final integration model. As noted by Fawcett et al. (1994), consumers and implementers should provide feedback on the developed intervention, and in this study this was done by involving the various categories of stakeholders and other interested parties to provide their input and feedback on the product of the second phase of designing the integration model. The developed model of competencies and the model for integration were concluded, setting the stage for further work in the field by the researcher or another stakeholder to pilot test the developed intervention for advanced development.

#### **3.7.1 Planning of phase 3**

##### ***3.7.1.1 Setting***

As the integration model was being developed for the nursing programme at UWC, the workshop was planned to be held at UWC, the same setting used for the second phase of the study.

##### ***3.7.1.2 Population***

For this study the population was lecturers and clinical facilitators at the School of Nursing at UWC, nurse educators from the various universities that were involved in the first phase of the study, nurses working in clinical settings in the Western Cape, recent graduates from UWC, the representative from the organization that provides care and support to people living with HIV and AIDS, and nurses with expertise in HIV and AIDS.

### **3.7.1.3 Sampling**

Using volunteer and purposive sampling, one recent graduate, one registered nurse, nurse educators at the various universities involved in the first phase of the study and lecturers and clinical facilitators from the School of Nursing at UWC that had participated in the first two phases of the study were invited to participate in the workshops. In addition, one registered nurse and two people from the community that were not part of the first study were invited to participate. This was done to expose the work to people that have expertise with regard to HIV and AIDS, but had not participated in the first two phases, so that they could bring a fresh perspective with the potential to increase the quality of the work. A nurse educator and manager with expertise in HIV and AIDS were identified purposefully; due to various work commitments she was invited to review the product of phase 2 of the study and provide feedback electronically.

Due to work commitments and limited financial means, only one nurse educator from outside the Western Cape Province attended the workshop, while another provided electronic feedback. Furthermore, the recent graduate could not attend the workshop, and instead another registered nurse from the same workplace attended. In total, eight of the participants in the third phase had participated in one or two of the first phases, while the other seven participants were not part of the first two phases of the study. This was done to expose the work to people that have expertise with regard to HIV and AIDS, but had not participated in the first two phases and could bring a fresh perspective with the potential to increase the quality of the work.

### **3.7.2 Workshop process**

The workshop was planned for the whole day, and two main activities were conducted. The researcher facilitated the workshop, and after introducing the study and requesting consent forms and biographical details to be completed, a presentation on the study and the outcomes of the first two phases was given. The participants were informed about the objectives of the workshop and the documents to be used were explained. Having applied the process model for curriculum development, discussions and deliberations about the work done in the previous phases took place in this workshop, as curriculum work is not a linear but a process that requires regular checks on what has been done previously as part of continued evaluation of the process (de Villiers, 2001). Furthermore, the workshop provided the opportunity for

discussions that fit the constructivist philosophical approach applied in the study as a basis for the work on the curriculum as well as the research process (Denzin & Lincoln, 2003; Wheelahan, 2010).

Three documents<sup>1</sup> were provided and used for the review, namely ‘List of HIV and AIDS core competencies and related outcomes for the four-year nursing programme 19 May 2014’ (document 1); ‘Specific competencies for each year level – 19 May 2014’ (document 2), and ‘Are the competency statements allocated to each year level appropriate? – Questions for the workshop on 22 May 2014’ (document 3). The first session of the workshop involved a review of the list of competencies, sub-competencies and related exit outcomes for the four-year undergraduate nursing programme, as presented in document 1 provided in the workshop and the participants were requested to check for completeness, accuracy and appropriateness. In addition to that, participants looked at the flow of outcomes within each competency. After feedback and reaching agreement on suggestions, the second session was used by participants to look at the outcomes that have been mapped over the four-year undergraduate nursing programme, as presented in documents 2 and 3 provided in the workshop. Again the participants checked for completeness, accuracy, flow, appropriateness for each year level and whether the vertical integration is maintained for each competency. After discussion in small groups, the participants gave feedback and the whole group gave comments to reach agreement.

### **3.7.3 Workshop evaluation**

An evaluation of the workshop<sup>2</sup> was done by the participants, and comments were requested on the feasibility and appropriateness of the developed integration model of core competencies related to HIV and AIDS into the four-year undergraduate nursing programme. For comfort participants were provided with refreshments, and appropriate breaks were given. The workshop was conducted in English, as all the participants were fluent in that language.

### **3.7.4 Expert reviews**

Due to logistic and financial limitations, none of the invited participants for the last phase of the study were able to participate in the workshop. In this regard, two participants were asked

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<sup>1</sup> Questions for validation workshop attached in Appendix 5.

<sup>2</sup> Workshop evaluation form attached in Appendix 6.

to review the mapped competencies and provide feedback electronically. They were given the same documents and questions for consideration as what was used in the workshop, and the comments they gave were incorporated with the comments obtained in the workshop to develop the final list of competencies and map them into the curriculum.

### **3.7.5 Product of phase 3 of the study**

The outcome of the last phase of the study was a complete revised list of HIV and AIDS core competencies for graduate nurses, with specific competencies being clarified. Furthermore, outcomes relevant for each specific competency were finalized and mapped into the four-year nursing programme at UWC, providing appropriate outcomes for each year level.

## **3.8 Research rigour**

The value of research is highly dependent on the rigour that has been applied during the process of the research project, as this provides an idea of the quality of the findings from the research project. To ensure the quality of results of a research project, one must first ensure the quality and accuracy of data as well as the research process (Polit & Hungler, 1997; Creswell, 2014). In qualitative research, this is done by establishing trustworthiness of data and analysis. Trustworthiness in qualitative research is achieved by establishing adherence to a number of criteria during data collection and analysis to ensure truth value, applicability, consistency and neutrality of the findings, and the concepts assessed are credibility, transferability, dependability and confirmability (Klopper & Knobloch, 2010).

### **3.8.1 Credibility**

Credibility refers to the level at which the data in the study can be accepted as true. To achieve a high level of credibility, the researcher needs to include some activities that will strengthen confidence in the truth of the data (Polit & Hungler, 1997; Klopper & Knobloch, 2010). The literature indicates a number of strategies that can be used to ensure credibility, such as prolonged engagement, triangulation, debriefing and member checking (Polit & Hungler, 1997; Klopper & Knobloch, 2010). In this study, this was done by ensuring prolonged engagement as the data was collected over a period of time between 2012 and 2014, and the participants were invited to take part in more than one phase of the study. This ensured that the participants were able to correct any misrepresentations that the researcher



could have applied in analyzing the data. The other activity to ensure credibility was to triangulate the sources of information and the method of data collection. During the study different categories of participants were included in the study and the different phases of the study, and different data collection methods were used, with the application of SRS, NGT and individual interviews, as well as participation in workshops.

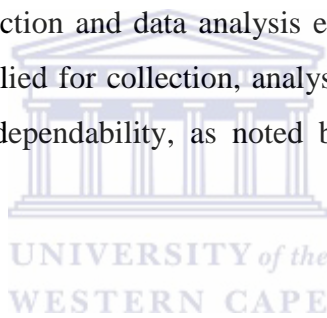
Member checks were included in the beginning by providing the transcribed recordings of the data collection sessions to the participants, which gave them the opportunity to review what was discussed in the data collection session and make comments or clarify anything that they wanted to. The second level of member checking was achieved by the ongoing participation in the other phases of the study, which gave the participants an opportunity to see how the data had been analyzed and taken forward into the next phase of the study, and to indicate any misinterpretation or omissions. The researcher presented the findings of phase 1 of the study at two conferences, which provided external checks for the quality of the data and the process. Where the presentation was done, most people had not participated in the study, but they were either interested in HIV (at the 2013 6<sup>th</sup> National AIDS Conference) or in nursing education (at the 2012 international nursing conference in Cape Town). Furthermore, the researcher presented the findings in two other meetings, one being a research day at the Community and Health Science Faculty at UWC, the other being a convention at the Medical Research Council. In both of these meetings the participants were knowledgeable with regard to research, education and HIV, and hence the value of their feedback.

As Polit and Hungler (1997) note, the credibility can be enhanced by the researcher exposing the data to others who have experience the work that is being done. The researcher's credibility is another aspect that can be explored to establish the credibility of the data of the research project (Polit & Hungler, 1997). In this study, the researcher's credibility can be seen from the qualification and practice in nursing education, which provided the foundations to tackle a research project about nursing education. The researcher has done some work on HIV and attended courses on HIV, which provided confidence in the researcher's understanding of the issues related to HIV and nursing practice. With regard to methodological approaches used in collecting the data, the researcher has also conducted sessions in the workplace using the NGT, and feedback from the organizers and participants in those sessions was that the researcher was able to conduct a successful session.

### **3.8.2 Dependability**

The stability of data over time and conditions is referred to as dependability, which talks to the consistency of the data. Klopper and Knobloch (2010) stated that the measures that are used to ensure credibility have an indirect impact on the dependability of the research findings. In this study the prolonged engagement, debriefing, member checks and triangulation that were applied also enhanced the dependability of the research findings.

Furthermore, an enquiry audit was done where the process of data collection was checked by first submitting the first two transcribed interviews to the supervisor and another independent reviewer to check whether the data collection process was correct. In addition, conducting the NGT session in the school where more senior staff members were part of the participants allowed the researcher to expose the method used for data collection and to get feedback if anything needed to be changed in terms of process. Various discussions with the supervisor about the processes of data collection and data analysis ensured continuous scrutiny of the data as well as the processes applied for collection, analysis and presentation. This auditing process is important to ensure dependability, as noted by Polit and Hungler (1997) and Klopper and Knobloch (2010).



### **3.8.3 Confirmability**

Confirmability refers to how neutral the data are, with a focus on the characteristics of the data and whether another person would come to the same conclusion (Polit & Hungler, 1997; Klopper & Knobloch, 2010). Inquiry audit and triangulation are some of the strategies used to ensure confirmability, and in this study the development of protocols for data collection and analysis helped to ensure confirmability. In addition, the supervisor who acted as an auditor and an external auditor was given a sample of the data analysis to assess if consistency was present in the analysis. Furthermore, the involvement of participants in phase 2 and 3 of the study allowed the researcher to show how the data were analyzed, the themes and subthemes in terms of competencies and sub-competencies, and the participants served as another group of auditors as they were able to suggest changes that made better sense for the curriculum.

### **3.8.4 Transferability**

In the literature transferability in qualitative research is related to the degree to which the findings can be used in another setting (Polit & Hungler, 1997). In this study, one will be

looking at how the integration of HIV and AIDS-related core competencies for the undergraduate nursing programme at UWC can be applied in another institution. The inclusion of participants from various universities in phases 1 and 3 allowed input from other settings, and this facilitates the ability to transfer the work to another setting. Furthermore, the researcher has presented the mapping of the competencies according to the nursing specialties, and this detailed map may make it easier for others to adopt. Even though the programme is structured differently, the main aspects are the same, hence the ease and possibility to apply it to a different setting.

The researcher also attempted to provide a thick description of the process followed in this study, and this has the potential of facilitating duplication, and hence transferability. Klopper and Knobloch (2010) include data saturation as one of the strategies that enhance transferability, and this was applied in the study, as the data were collected until saturation was reached and no new information was being obtained from the participants. The use of purposive sampling also allowed the collection of data from varied groups of participants, namely recent graduates, nurse educators, nurses in the clinical setting, a person living with HIV and AIDS, as well as representatives from the governing body.

### **3.9 Ethical considerations**

Brink (1996) noted that the researcher has the responsibility of conducting the research in an ethical manner and to protect the rights of the participants. Before the start of the study ethical clearance was requested and obtained from UWC<sup>3</sup> and the institutions where the participants were recruited. In this study the participants were given information<sup>4</sup> about the study, and a signed written consent form<sup>5</sup> was obtained from all of the participants. Those that participated in the group discussions for NGT and workshop had a confidentiality statement<sup>6</sup> added to the consent. In addition, participants were informed and requested to give permission for audio-recording.

Ethical principles of confidentiality and anonymity were adhered to, and no coercion was exerted as participation was voluntary and names will not be used, to protect institutions and participants' identities when the results are published. Participants were informed that there

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<sup>3</sup> Ethical clearance from the University of the Western Cape attached as Appendix 1.

<sup>4</sup> Information document attached as Appendix 2.

<sup>5</sup> Consent form attached as Appendix 3.

<sup>6</sup> Consent form for focus group participants attached as Appendix 4.

were no personal benefits to participation, and no negative consequences to those who refused to participate or withdrew from participation. The researcher ensured that no harm was done to participants by ensuring a conducive and respectful environment for data collection, and no one reported any discomfort during data collection. It was communicated to the participants that should one experience any discomfort; the person would be referred for counselling provided by the institution. Two potential participants were approached and refused to participate in the study, and further discussions with the participants were not included in the data for analysis.

As the workshop sessions were longer, refreshments were provided to participants in all the workshops. To eliminate participants' risk of spending money unnecessarily and to ensure that data collection was done in a natural environment, data collection was done at the participants' workplace. The researcher had to travel to the participants' workplace, with the exception of the recent graduates, who came to the researcher's office in the first phase of the study, and the phase 3 participants, who came to the researcher's place of work. Accommodation and travel were paid for by the researcher to the participants that attended the workshop for phase 3 who were from outside the Western Cape Province.

The researcher has already started to share the findings of the study with participants, the School of Nursing, the university as a whole as well as SANC and others interested in HIV and AIDS care and management, through conference presentations at local and international levels. The results will be published, making them available to other health sciences schools that may benefit from successful integration of core competencies related to HIV and AIDS. The participants' anonymity will be maintained.

The researcher obtained funding from two institutions to conduct the study; however, the institutions have no other interest invested in the study and have not influenced the outcome of the study in any way. The researcher will be fulfilling the obligation to the funders by completing the study and submitting the final report to the funders, in addition to acknowledging their support in all publications on the study.

### **3.10 Conclusion**

This chapter presented constructivism as the research paradigm adopted in the study with the implementation of IR: D&D. The study was conducted in three phases, and each phase

corresponds to one research question as presented in the first chapter of the report. The first phase of the study included qualitative data collected by using NGT and individual interviews, in addition to SRS, providing a list of HIV and AIDS nursing competencies, and answering the first research question. The second research question was covered in the second phase, where a curriculum mapping process was presented, highlighting the design process of IR: D&D. The early development step of IR: D&D was conducted as the third phase of the study, and details of the process were presented. This relates to the third research question. Links to the application of the first three pillars of the COPA model were also presented; the ‘Assessment’ pillar was not included, as it was beyond the scope of the study. Ethical considerations as well as academic rigour as applied in this study were also outlined.



## **CHAPTER 4: FINDINGS**

### **4.1 Introduction**

This study was conducted in three phases, and the results will be presented per phase, as presented in the methodology section. For each phase participants will be described to provide insight into the variety of participants that contributed to the study. The HIV and AIDS nursing core competencies that were developed from the study will be presented, highlighting the categories of competencies, the core competencies and sub-competencies that are related to HIV and AIDS care and management for nurses, with an indication of the aspects covered in each competency. Structural requirements such as teaching strategies and learning opportunities needed for the development of the competencies will also be indicated as analyzed from the data, as well as the current shortfalls related to HIV and AIDS care and management in nurses as mentioned by the participants.

The curriculum development and verification done in phases 2 and 3 will also be presented, providing the list of outcomes for each competency, and the outcomes developed for each year level for the development of the HIV and AIDS core competencies for a new nurse graduate. The feasibility and practicability of integrating the HIV and AIDS competencies into the four-year undergraduate nursing programme as viewed by the participants in the verification workshop will also be presented. Consideration of the new nursing curriculum will also be presented, highlighting the importance of developing outcomes that are flexible enough to be transferred to a different nursing programme.

### **4.2 Description of participants**

A total of 112 people participated in all three phases of the study, with 12.8% (14) of them participating in more than one phase of the study. This continued participation in the different phases of the study provided an opportunity for the participants to provide feedback to the researcher, while confirming the interpretation of the researcher. A closer look at the age of the participants indicates that approximately 65% of those who are still working have at least 10 years left to practice, if they retire at age 65. This provides a considerable number of participants that would be available in practice to facilitate implementation of the developed

integration model of HIV and AIDS core competencies into the undergraduate nursing programme in South Africa.

The nurse participants had a variety of specialties, providing an opportunity to get input relevant to and inclusive of the various nursing specialties, such as general nursing, mental health nursing, midwifery and community nursing. This was important as it relates to the specialties covered in the undergraduate nursing programme. The variety of expertise of the participants in phase 3 enriched the final development of the integration of HIV and AIDS competencies for a new nurse graduate, as input received was from nurse educators and nurses in clinical practice, as well as an expert at national level who has worked extensively on HIV policies and advocacy. Furthermore, as participants were recruited from the different provinces it provided an opportunity to increase representativeness and transferability of the findings. The participants in each phase are described in the next section.

#### 4.2.1 Phase 1 participants

Various stakeholders participated in the first phase of the study, namely nurse educators, nurses working in clinical practice, recent graduates from UWC, representatives of SANC as the governing body and a person living with HIV and AIDS (Table 4-1). The data were collected by the researcher, using group discussions structured as NGT and in-depth individual interviews, and a systematic research synthesis was done.

Table 4-1: Representation of participants for phase 1

	<b>Nurse educators</b>	<b>Governing body</b>	<b>Registered nurses</b>	<b>People living with HIV</b>	<b>Recent graduates</b>	<b>Total</b>
Individual interviews	5	2	5	1	4	17
NGT discussion	47					47
<b>Total</b>	<b>52</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>64</b>

Only one participant in the first phase was not a nurse, and most of the other participants (90%, N = 63) were female, a representation that fits the gender distribution of the nursing

profession in South Africa and many other countries, as nursing is often considered to be a profession for females. The majority of the participants (37%) were between the ages of 41 and 50 years, 28% were aged 51–60 years, with 20% being between the ages of 31 and 40 years. Of the participants in this first phase, 42% were African, while Coloured and White participants had similar representation of 27% and 28% respectively; only 3% of participants were Indian. Most of the participants had a university degree, and the majority (41%) reported having a master's degree, 17% had a PhD, while equal numbers (14%) had an Honours or a Bachelor's degree, and 12% had a diploma in nursing, as reflected in Figure 4-1.

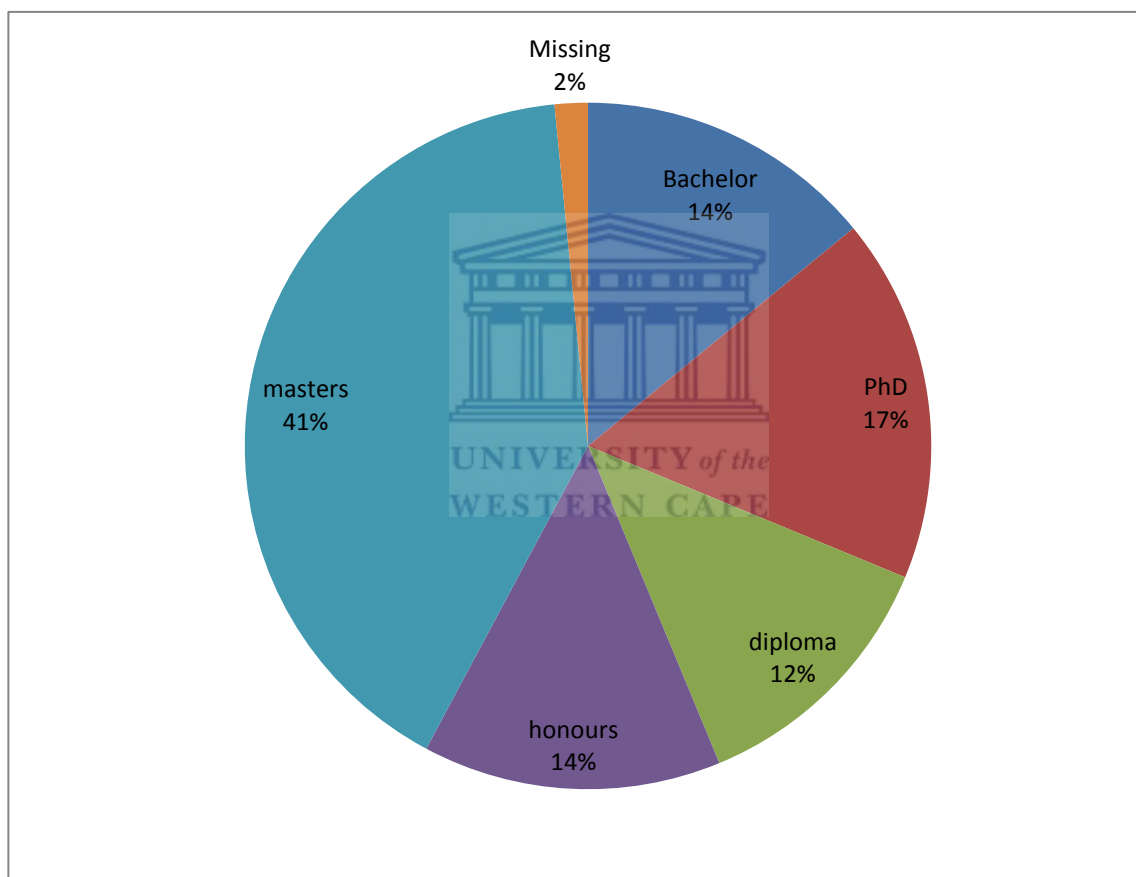


Figure 4-1: Qualifications of phase 1 participants.

The participants in the study had a similar distribution to the national population of nurses: as of the end of 2013 there were approximately 92% female registered nurses and 8% males, with approximately 60% being registered nurses/midwives between the ages of 40 and 59 years. In this study the 41–60 age group included 67% of participants (Figure 4-2) (SANC, 2014a; 2014b).



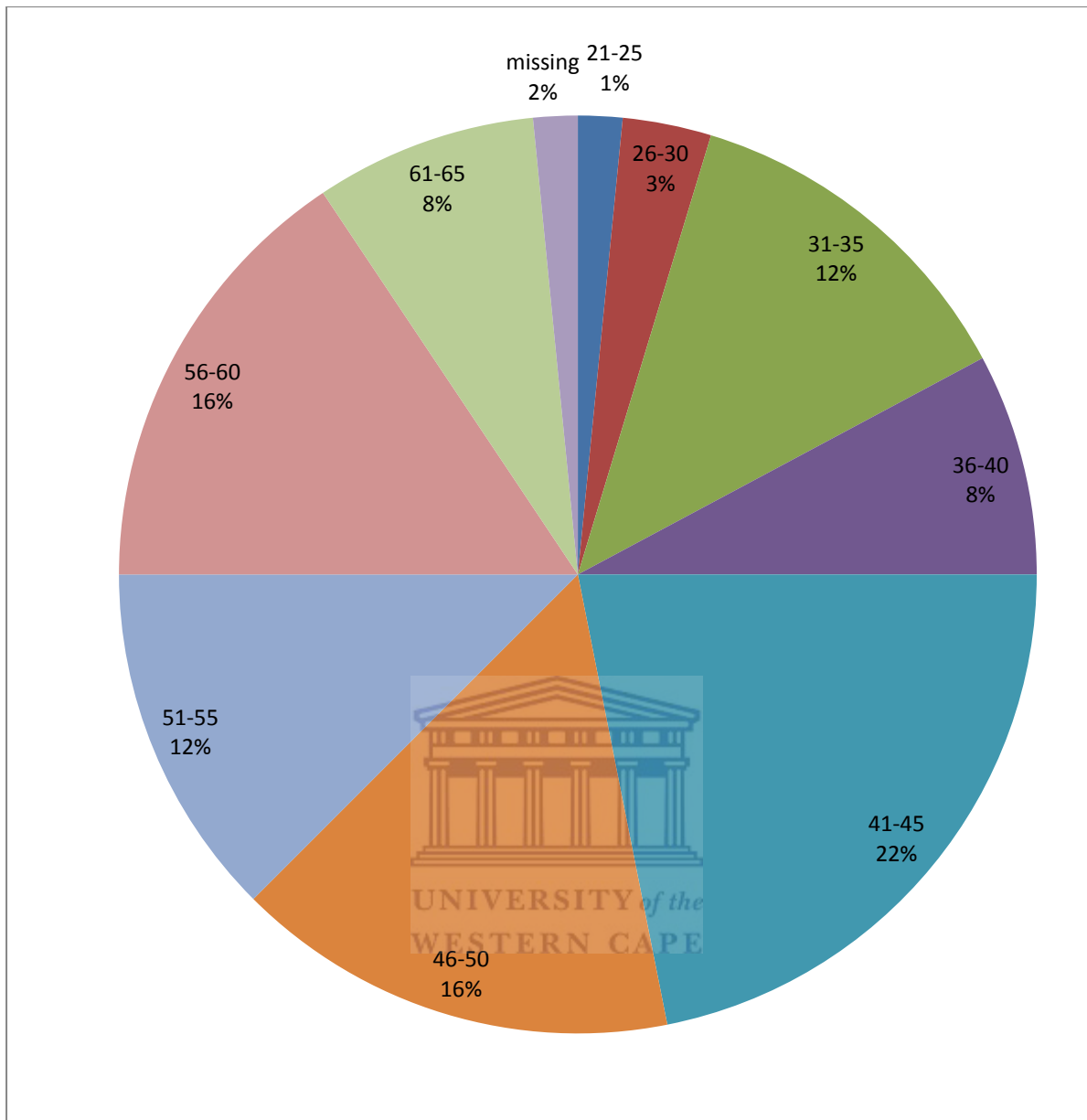


Figure 4-2: Phase 1 participants' age distribution.

Participants were recruited from seven of the nine provinces in South Africa. This was done to increase representativeness of the participants throughout South Africa. Figure 4-3 highlights the representation per province. The majority of participants were recruited from the Western Cape Province, as it was the area where the researcher is based, and it was more feasible to access participants from that province, especially those in the clinical settings and the recent graduates of UWC. For two provinces, namely Western Cape and North West, two NGT sessions were conducted due to the availability of the participants, and for each session the number of participants per group was no more than seven.

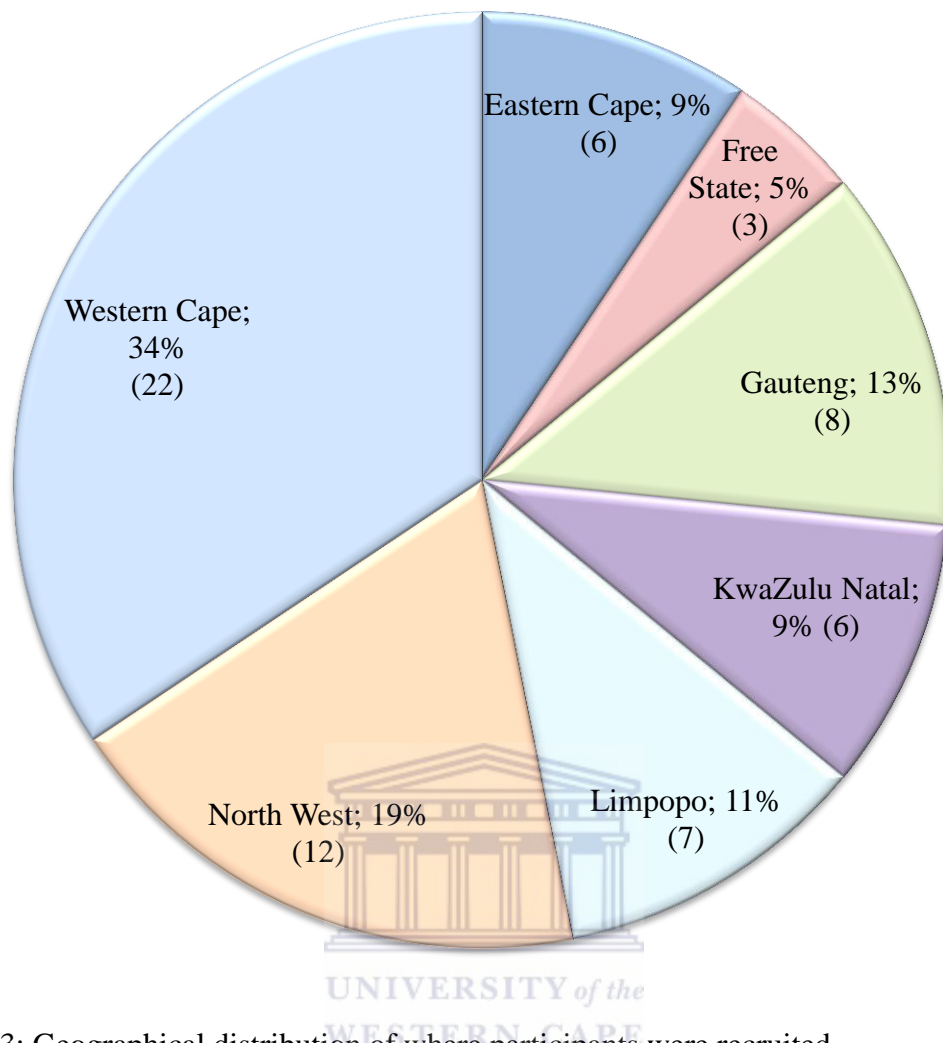


Figure 4-3: Geographical distribution of where participants were recruited.

#### 4.2.2 Phase 2 participants

A total of 30 people participated in the five workshops that were conducted, with the average number of participants per group being six, while the groups ranged from three to eight participants. The first workshop mapped the developed competencies from phase 1 over the four-year nursing programme, and the subsequent four workshops were done with nurse educators at each year level. It is to be noted that of the five participants that were part of the first workshop when the competencies and outcomes were being mapped for the whole programme, all of them also participated in the subsequent workshops when the year levels they are involved in were reviewed the suggested mapping of the competencies, establishing fit and relevance to each specific year level. Of the 30 participants in the five workshops, 57% were lecturers, 36% were clinical facilitators, while 7% (2) were in research posts at the School of Nursing and involved in research that relates to HIV and AIDS. Of the phase 2 workshop participants, 87% were female and 13% were male. It is to be noted that of these

30 participants, only 64% reported being involved with teaching HIV and AIDS, while only 60% reported having attended an in-service course for HIV and AIDS. Figure 4-4 highlights the age distribution of participants, showing that approximately 30% were over the age of 50. Figure 4-5 shows the qualifications of the participants, indicating that approximately 70% of the participants have a master's degree or higher.

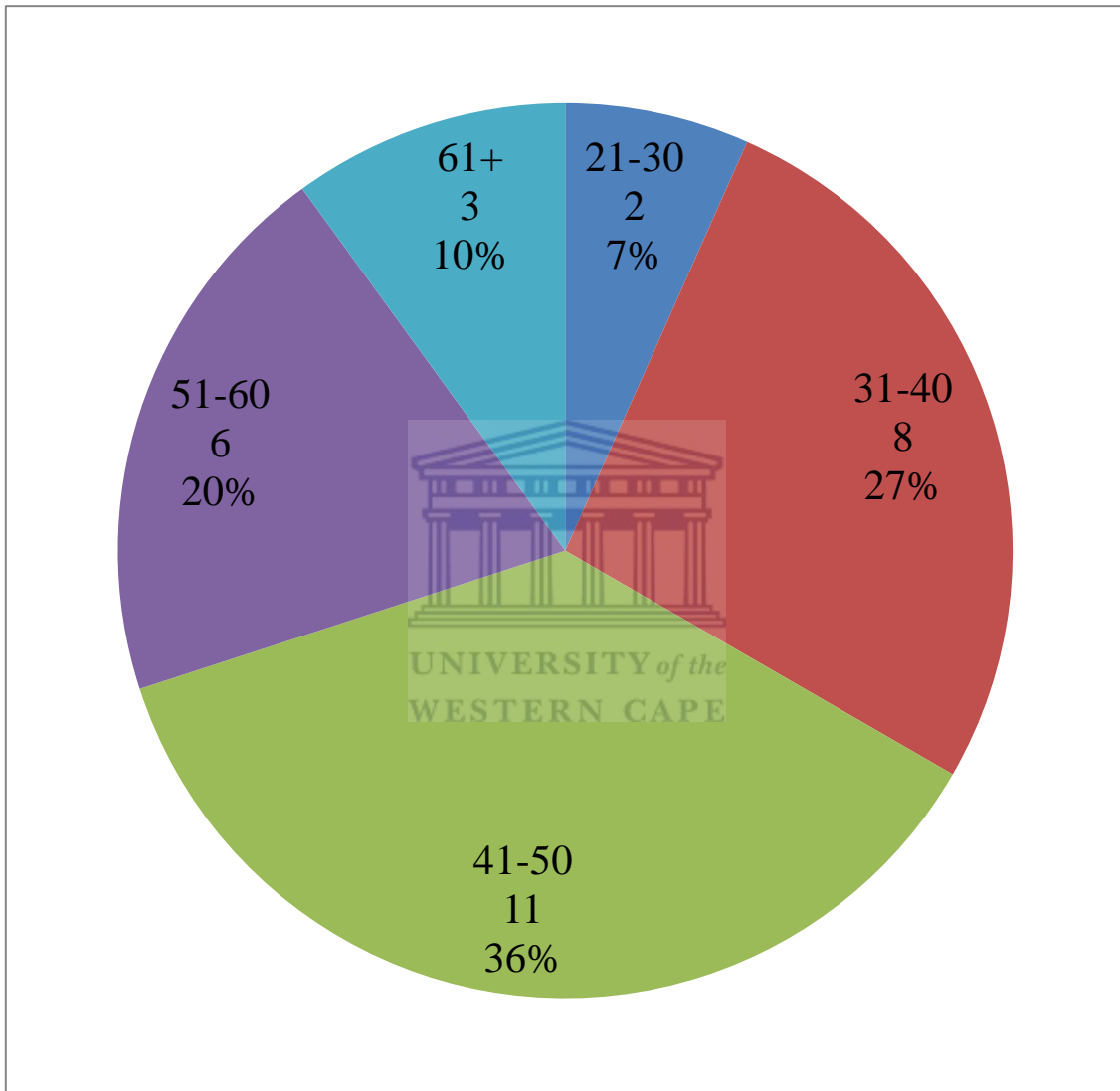


Figure 4-4: Age distribution of the phase 2 workshop participants for competency mapping.

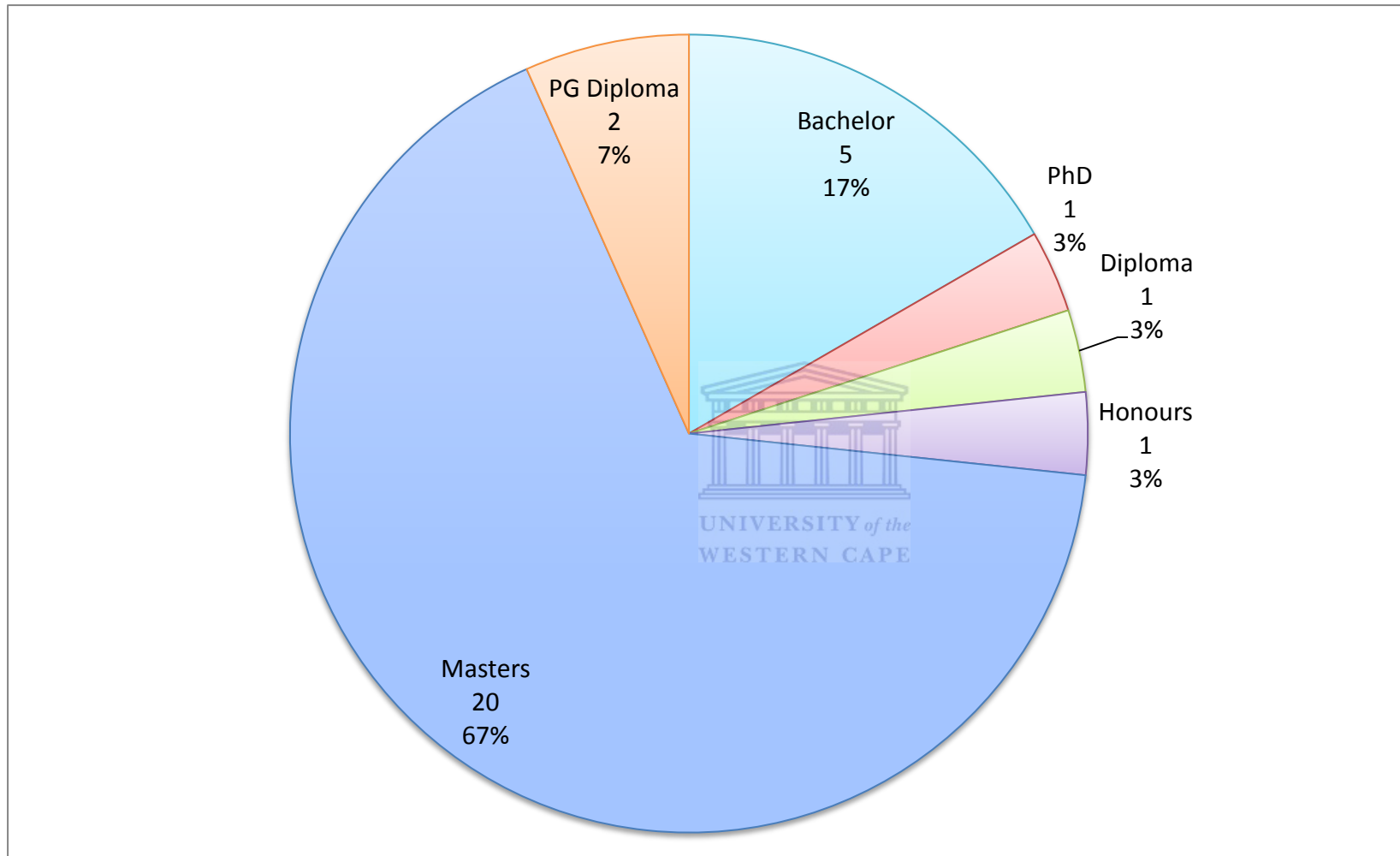


Figure 4-5: Qualifications of participants in the phase 2 workshops for competency mapping.

In addition to the people that participated in the workshops, three other people participated in the second phase of the study and provided input on the outcome of the workshops. One of the three participants is a senior manager at the governing body, while the other two teach science modules in the nursing programme at UWC. The lecturers involved in the nursing programme were included in the second phase to provide input and assess the list of competencies and how they were mapped into the curriculum, ensuring comprehensive integration of the competencies and to gain support from the service departments. Furthermore, their participation has the potential to enhance the horizontal integration that is required for the programme. Of these three additional participants, two have a PhD, while the other holds a master's degree.

### **4.2.3 Phase 3 participants**

A total of 15 people contributed to validation of the developed mapping of the competencies, of whom 13 participated in the validation workshop and two gave electronic feedback. The electronic feedback and the outcome of the workshop were combined to obtain the final mapping of the HIV and AIDS-related competencies for an undergraduate nursing programme at UWC. Most of the participants (12) were from the Western Cape, with one participant each from KwaZulu-Natal, the Free State and Gauteng. Of the participants, nine were aged 50 and below, with the other six being over the age of 50. Of the participants for the validation phase, 12 are involved with education and training of student nurses, six being academics and four clinical supervisors based at three universities in South Africa. One was from an association of nurses that is involved in nursing education. Two participants were nurses in clinical practice, and one was a member of the community as a health promoter in an HIV unit.

#### ***4.2.3.1 Phase 3 participants' expertise***

The participants in the validation phase of the study brought their expertise in terms of HIV and AIDS, and nursing education. The purpose of this phase was to review the identified HIV and AIDS core competencies to establish accuracy and completeness, and then assess how they have been mapped in the four-year undergraduate nursing programme at UWC. This necessitated a group of participants who have expertise in HIV and AIDS as well as nursing education.

The participants' expertise was related to their experiences in practice where they provided care and management for HIV and AIDS to persons living with HIV and AIDS, including but not limited to HIV counselling and testing, health education, screening and testing adults and babies, as well as working in rural areas.

The other area of expertise was related to courses that the participants have attended on HIV and AIDS, with one participant indicating that she has a Master's degree in HIV nursing. Two participants reported taking part in developing protocols and policies related to HIV and AIDS at local and national level. One of the participants has managed an HIV and AIDS project in the Southern Africa region, in addition to initiating a nursing magazine that focuses on HIV in South Africa. One participant had personal experience as she reported living with HIV, and another has participated in about three research projects on HIV. Furthermore, participants reported experience in teaching HIV to nurses at undergraduate and postgraduate level, as well as in-service training covering various aspects related to HIV and AIDS, such as PMTCT.

Furthermore, the participants reported many years of practice as nurse educators, teaching at diploma, undergraduate and postgraduate levels, ranging from two to 27 years. One person had 22 years of experience as a trainer for in-service training on HIV and AIDS, TB and STIs for nurses in clinical practice. The teaching experience related to HIV and AIDS was reported in various areas of nursing practice such as midwifery and community health nursing. There were participants who also reported experience in teaching methods such as case-based education (CBE) and the skills-lab method (SLM), while another reported coordination responsibility in the programme. Furthermore, there was a participant that reported being an external examiner for nursing education institutions. With this combination of experience, participants were able to review the mapping that was done for the HIV and AIDS-related core competencies and establish relevance and adherence to educational principles. The variety of expertise from the participants provides a rich source of information and an opportunity to view the study from various angles. Each participant brought their own perspectives, and the combination of these views enhances the outcome of the review done for the integration of HIV and AIDS related competencies into the undergraduate nursing programme.

### **4.3 Phase 1: Identification of HIV and AIDS-related competencies**


The findings presented in this section are the findings from the first phase that covered the first objective of the study about identification of core competencies. Data were collected for this phase in two steps, with the first step following a qualitative approach (data collected using NGT discussions and individual interviews), and the second step was conducted as an SRS. After presentation of the characteristics of participants, the various themes and subthemes developed as competencies and sub-competencies are presented.

#### **4.3.1 Description of publications used for the SRS**

Four publications were appraised with the JBI-NOTARI instrument used to assess the quality of text, narrative and opinion papers. Compilation of the HIV and AIDS competencies from the four publications was done via consultation and consensus with experts, while only one indicated using participatory action research then using consensus for the finalisation of the competencies, as indicated in Table 4-2. For two of the publications the competencies were developed for an undergraduate nursing programme; one had competencies developed for both basic nursing and for nurses who are HIV specialists. For this publication, only competencies related to basic nursing were considered. The other publication did not indicate the level for the developed HIV and AIDS competencies.

The four publications were appraised using the JBI-NOTARI critical appraisal instrument for documents as illustrated in Table 4-3. This was guided by the fact that no empirical study was found in the SRS, consensus and consultation were used in the development of the competencies of the publication obtained, and as noted by Rothman et al. (1994), with SRS documents can be critically appraised and included in the synthesis. For the appraisal, question three relates to patients/clients. In this review the clients were considered to be the graduate nurses. The competencies that were being developed were to be integrated into the undergraduate nursing programme to facilitate the development of competencies required for a new nurse graduate so that upon graduation the nurse will be able to provide care and management to patients living with HIV and AIDS.

Table 4-2: Characteristics of included publications

Author	Publication type	Context and setting	Participants	Methods	Categories of competencies
Knebel et al. (2008)	Methodology article	Competency-based HIV/AIDS curriculum developed for nursing schools in Haiti	Deans of four nursing schools, officials from health and education departments, educators and HIV experts  	In-depth discussion and consensus	<ol style="list-style-type: none"> <li>1. Prevent HIV infection among individuals and community</li> <li>2. Promote the health of people living with HIV</li> <li>3. Evaluate the health status of people living with HIV</li> <li>4. Ensure the care of adults and children infected with HIV and AIDS</li> <li>5. Ensure the management of various aspects of the HIV/AIDS control programme</li> </ol>
Relf et al. (2011b)	Outcome of a summit	Regional leadership summit on HIV and AIDS nursing education, practice and policy addressing the critical priority related to identification of essential nursing competencies	Members of the Regional Lead team from Botswana, Lesotho, Malawi, South Africa, Swaziland and Zimbabwe, Director Nurses SOAR (Strengthening our	Participatory action research and consensus panel	<ol style="list-style-type: none"> <li>1. Core cognitive competencies for nursing related to HIV and AIDS</li> <li>2. Core effective competencies for nursing related to HIV and AIDS</li> <li>3. Core psychomotor competencies for</li> </ol>




Author	Publication type	Context and setting	Participants	Methods	Categories of competencies
		to address HIV and AIDS epidemic in the sub-Saharan Africa region	AIDS response) from the USA and regional programme director of Nurses SOAR		nursing related to HIV and AIDS 4.Core professional competencies for nursing related to HIV and AIDS
NHIVNA (2013)	Report	HIV nursing competencies developed to assist nurses working in the area of HIV in the United Kingdom	Nurses working in the HIV field 	Consultation over a period of three years	1.Assessment of health and well-being 2.Management of ART 3.Health promotion 4.Working in partnership including clinical networks and multidisciplinary work
CANAC (2013)	Position paper	HIV/AIDS core competencies developed for HIV/AIDS nursing education at the undergraduate baccalaureate level of education	Members of the Association of Nurses in AIDS Care in Canada	Consultation	1.HIV prevention, testing, treatment and care 2.Psychosocial, spiritual, ethical, and legal issues related to HIV/AIDS 3.Psychomotor skills necessary to provide HIV/AIDS nursing care 4.Professional expectations in the delivery of HIV/AIDS nursing care

Table 4-3: Critical appraisal of the text/expert opinion papers

<b>Criteria</b>	<b>NHIVNA (2007)</b>	<b>Knebel et al. (2008)</b>	<b>Relf et al. (2011b)</b>	<b>CANAC (2013)</b>
1. Is the source of opinion clearly identified?	Yes	Yes	Yes	Yes
2. Does the source of the opinion have standing in the field of expertise?	Yes	Yes	Yes	Yes
3. Is the interest of the patients/clients the central focus of the opinion?	Yes	Yes	Yes	Yes
4. Is the opinion's basis in logic/experience clearly argued?	Yes	Yes	Yes	Yes
5. Is the argument developed analytically?	Yes	Yes	Yes	Yes
6. Is there reference to the extant literature/evidence and any incongruency with it logically defended?	Unknown	Yes	Yes	Yes
7. Is the opinion supported by peers?	Yes	Yes	Yes	Yes
<b>Total</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>

#### 4.3.2 Publications excluded from the SRS

During the SRS process a number of studies were excluded because they did not meet the inclusion criteria. Some of the excluded studies focused on just one aspect of competencies related to HIV and AIDS for nurses, such as Chorwe-Sungani (2013), who published about the knowledge and skills that relate to provision of mental health care to people living with HIV and AIDS, while Manchester (2003) published about giving of hope and care to people living with HIV and AIDS. The provision of HIV and AIDS care and management involves more than the aspects discussed in these publications, hence the exclusion. Additionally, Mbombo and Bimerew (2012) also published on integrating PMTCT into the undergraduate nursing curriculum; however, the publication was not included in the review as it only provided information about PMTCT competencies, and it was understood that PMTCT is just one aspect of HIV and AIDS care and management.

Other publications that were excluded included Madumo and Peu (2006), who investigated the views of undergraduate nurses on caring for patients with HIV and AIDS, with student nurses expressing their needs with regard to acquisition of knowledge and reduction of the stigma around HIV. The report by Mahat and Eller (2009) was also excluded as they focused on universal precautions. The WHO (2005) publication on core competencies as a result of international consensus was also not included, as the competencies presented were related to the provision of ART only.

Despite excluding publications such as those mentioned, to avoid bias and ensure comprehensiveness the researcher revisited the excluded publications that focused on just one or two aspects of HIV and AIDS care and management, to establish whether those aspects had been included in the competencies developed from the NGT session, individual interviews and SRS. With the exception of accounting competencies, the other aspects covered by the excluded articles were included in the HIV and AIDS nursing competencies developed in the study, such as the PMTCT aspects in Mbombo and Bimerew (2012); HIV knowledge in Adepoju (2006); universal precautions in Aga and Mekonnon (2004) and Mahat and Eller (2009); mental health care for people living with HIV and AIDS as published by Chorwe-Sungani (2013); the ARV-related competencies of the WHO (2005), and willingness to care and positive attitude when providing care and management to patients living with HIV and AIDS in Välimäki et al. (2010) and Sehume, Zungu and Hoque (2012) .

The next section will present the identified HIV and AIDS-related competency categories, core competencies and specific competencies identified from the NGT sessions, individual interviews and SRS. Seven competencies were obtained from the analysis, namely: knowledge; holistic safe practice; health education; policies; ethics; personal and professional development; as well as an interdisciplinary approach. Further analysis provided three categories of competencies, namely foundation; supporting pillars; and performance.

#### **4.3.3 Presentation of the HIV and AIDS core competencies and specific competencies for nurse graduates**

From the analysis and further synthesis of the three phases of the study, 21 specific competencies emerged, providing a clear understanding of the expectations of a new nurse graduate that provides care and management to people living with HIV and AIDS. These were further synthesized into seven core competencies and three categories, as reflected in Table 4-4.

Table 4-4: Competency categories, core competencies and specific competencies

Category	Foundation	Supporting pillars				Performance	
Core competencies	Knowledge	Ethics	Policies	Personal and professional development	Interdisciplinary approach	Health education	Holistic safe practice
<b>Specific competencies</b>	<ul style="list-style-type: none"> <li>• Basic scientific facts</li> <li>• Assessment</li> <li>• Management</li> <li>• Prevention</li> <li>• Issues related to HIV and AIDS</li> </ul>	<ul style="list-style-type: none"> <li>• Ethical issues</li> <li>• Professionalism</li> </ul>	<ul style="list-style-type: none"> <li>• Legislation</li> <li>• Implementation and analysis of policies</li> </ul>	<ul style="list-style-type: none"> <li>• Personal development</li> <li>• Professional development</li> <li>• Care of the carer</li> </ul>	<ul style="list-style-type: none"> <li>• Community involvement</li> <li>• Referral system</li> <li>• Support systems</li> </ul>	<ul style="list-style-type: none"> <li>• Information transfer</li> <li>• Provision of appropriate content for health education</li> </ul>	<ul style="list-style-type: none"> <li>• Interpersonal skills</li> <li>• Assessment</li> <li>• Management</li> <li>• Safe practice</li> </ul>

#### **4.3.4 Identified HIV and AIDS competency categories**

The three categories of competencies identified – foundation, supporting pillars and performance – each has core competencies, and each core competency has two to five specific HIV and AIDS nursing competencies.

##### ***4.3.4.1 Foundation category of competencies***

The foundation category covers the knowledge competency, which relates to the essential knowledge and aspects needed for the development of other competencies that are required for the care and management of HIV and AIDS. Looking at the aspects included in this category, it forms the basis of other competencies that were identified. In an attempt to ensure clear integration of theory and knowledge, this knowledge competency was developed to provide clear guidance and information on what nurses need to know in order to provide care and management for HIV and AIDS. All of the NGT sessions identified knowledge as an important competency, and it was ranked higher than any other competency that was identified in all eight NGT sessions.

**Knowledge:** This core competency refers to aspects that cover basic information about HIV and AIDS, such as definitions, cause of HIV, its transmission, how to prevent HIV infection and spread, HIV epidemiology, medication used for HIV and AIDS, pathophysiology and clinical picture as well as assessments to be done. Items included in this theme were those where the discussion referred to knowledge that the nurse should have.

##### ***4.3.4.2 Performance category of competencies***

The second category of competency that was identified was the performance category, which relates to provision of holistic care and health education competencies. This is what nurses are expected to do, based on the foundation category and supporting pillars that allow for provision of care and management for HIV and AIDS.

Outlined below are the themes developed as core competencies from the data in this study.

**Holistic safe practice:** This core competency covers aspects related to what the nurse should do in order to provide safe and holistic care and management related to HIV and AIDS, such as doing assessments, having good interpersonal and communication skills, providing counselling to different groups, applying universal control measures and monitoring.

**Health education:** This core competency refers to the ability to transfer information related to HIV and AIDS, such as a healthy lifestyle and prevention, to different groups with an understanding and application of cultural and social issues that relate to HIV and AIDS.

#### ***4.3.4.3 Supporting pillars category of competencies***

The third category of competencies was named supporting pillars, and covers the ethics, policies, personal and professional development, and interdisciplinary approach competencies. These competencies were identified as being important to ensure that the care and management provided by nurses for HIV and AIDS is carried out correctly and appropriately. In order to provide care for HIV and AIDS, the nurse must be able to adhere to and promote ethical principles; follow policies and regulations as prepared at institutional and national level, while understanding how these are influenced by the global climate. In addition, the nurse does not work in isolation, and it is therefore important for her to apply an interdisciplinary approach in the provision of care. Furthermore, as the nurse learns how to prevent and provide care for HIV and AIDS, it is important that the nurse also learns how the new information applies to his or her own life for the prevention of HIV for himself or herself, or care and management if the nurse is already infected with HIV. Nurses are part of the community, and live in South Africa where there are so many people living with HIV; hence the need for and importance of ensuring that nurses are well equipped to avoid HIV infection for themselves and their families. It is to be noted that most of the nurses are women who, compared to men, have an increased risk of being infected. This makes it even more urgent to equip nurses with knowledge on how to keep themselves free of HIV, and if infected, to ensure they have timeous access to care and treatment.

**Ethics:** This core competency refers to the discussion and understanding of the ethical issues related to HIV and AIDS, such as disclosure, confidentiality, preventing and managing the HIV stigma as well as professionalism when providing HIV and AIDS-related care and management while adhering to, respecting and enhancing ethical principles.

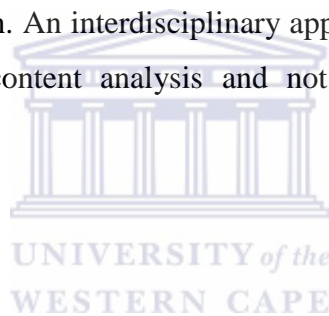
**Policies:** This core competency refers to the identification, understanding and critical analysis of various local and global legal issues, policies and guidelines that are related to HIV and AIDS such as PMTCT, ART, feeding options and the NSP.

**Personal and professional development:** This core competency refers to the nurse's ability to apply the learned skills and competencies in her own life, being able to handle the pressure

and requirements of being a health care professional involved in the care and management of people living with HIV and AIDS, as well as enriching her own knowledge by continuous development through research.

**Interdisciplinary approach:** This core competency refers to the identification of and involvement with resources and services that can be used in the support, care and management of HIV and AIDS, as well as understanding the referral system.

These seven core competencies, which will be presented in more detail in the next section, were identified from all three data sources used in this study, namely NGT sessions, individual interviews and SRS. In the NGT sessions participants ranked the top five competencies per group, and the analysis of multiple NGT data was done to establish the top five competencies, which are reflected in Figure 4-6. From that analysis it transpired that knowledge was the competency considered to be the most important, followed by holistic safe practice and health education. An interdisciplinary approach is the only competency that emerged from the qualitative content analysis and not ranked as one of the top five competencies.



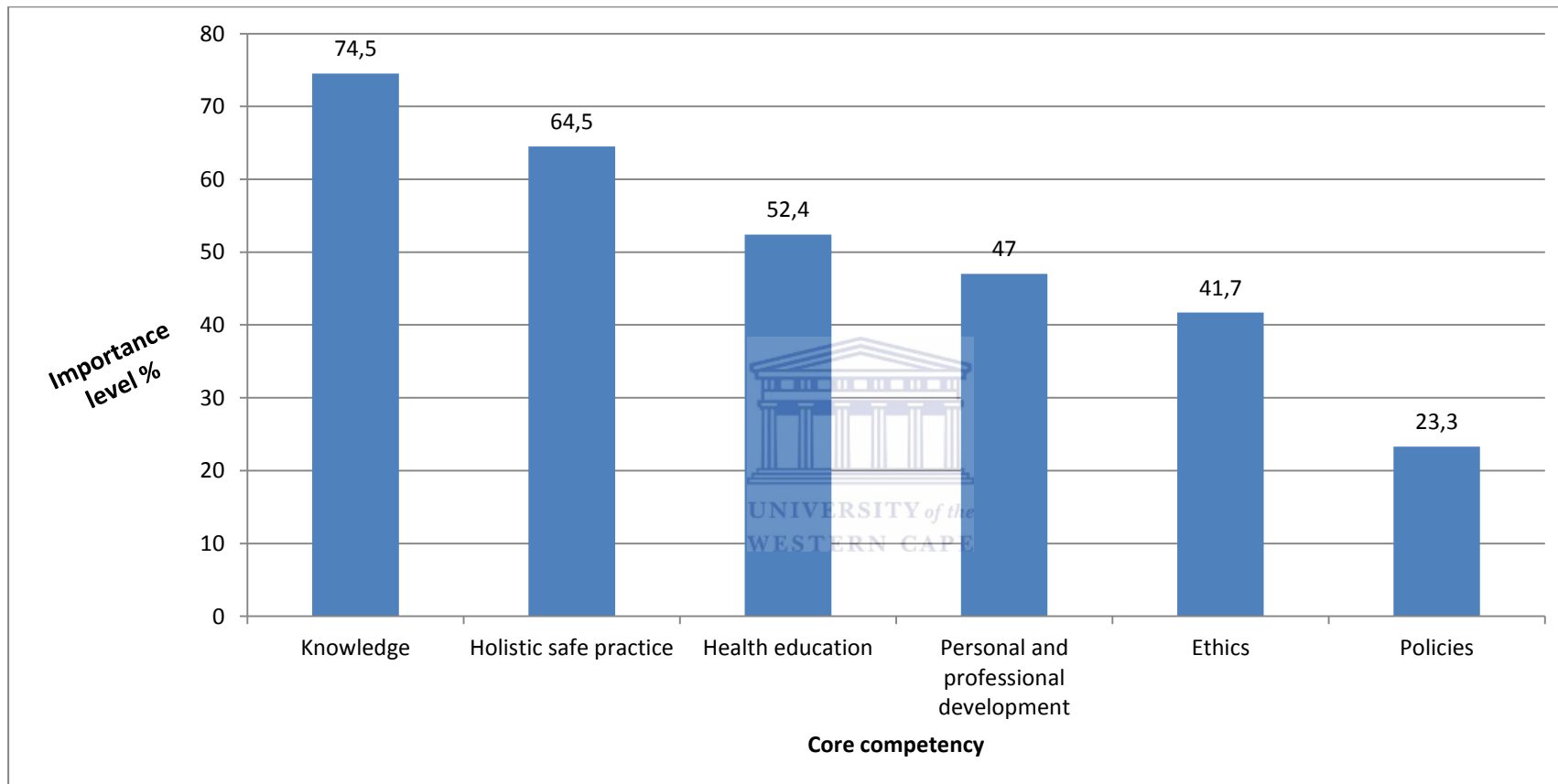


Figure 4-6: Ranking of the core competencies from NGT sessions.




From the literature a set of competencies was obtained, similar to the set obtained from the NGT and individual interview sessions, with new additions being noted in the sub-competency of safe practice. The literature highlighted that management of drugs and other inputs that are needed for care is one of the important aspects. This was regarded as another aspect of safe practice, because failure to properly manage the inputs into nursing care results with a diminished quality of care provided to people living with HIV, and would have a negative effect on the well-being of the patients. This was found to be very relevant in South Africa, where it has happened more than once in more than one province that ARVs were out of stock (Bateman, 2013). Nurses, especially those in the rural areas, are the ones who manage the clinics and who need to ensure that all the necessary inputs for care are available. Nurses need to make stock requisitions and try to prevent shortages of equipment required for effective provision of care required for HIV and AIDS.

Another aspect that was added from the literature was about access to advice, especially for ART. This was an important addition, which is also supported by the study of Swart et al. (2013) that investigated how nurses used the helpline for ART. Their findings indicated that nurses that had attended the NIM-ART courses were using the helpline more, compared to those nurses who did not, and the assumption was that those nurses who did not attend a course did not know about the service. This finding is important because inclusion of such an aspect in the undergraduate nursing curriculum will facilitate nurse graduates when they are in practice.

The various sources included in the study identified aspects that were synthesized into the seven core competencies, and the aspects obtained from each source are illustrated in Table 4-5. In addition to the identification of HIV and AIDS core competencies, the participants in the study discussed some aspects required for the development of the HIV and AIDS competencies for nurses. These were identified as structural requirements for the identified competencies and are illustrated in the HIV and AIDS competency framework developed in the study, as illustrated in Figure 4-7 on page 194.

Table 4-5: HIV and AIDS-related competencies for nurses and outcomes and related content from the three sources of data


<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
<b>Knowledge</b>	Demonstrate an understanding of basic scientific facts about HIV and AIDS including prevention, assessment, management and psychosocial and cultural issues	<b>Assessment</b>	Evaluate the assessment that is required for patients living with HIV and AIDS relating to history taking and physical examination. Assess the different types of diagnostic tests done for HIV diagnosis and screening related to HIV and AIDS. Provide holistic explanation of how HIV can affect a person.	Clinical picture; Symptoms, opportunistic infections (OI); staging systems; co-morbidities, impact of HIV, tests, investigations	Clinical manifestation; staging; symptoms; immune system; causes of symptoms; OI; co-morbidities, effect person, family, community	Clinical picture, investigations and results, staging, signs and symptoms, sexual reproductive needs, laboratory values
		<b>Basic scientific facts</b>	Evaluate the basic scientific facts about HIV and how its applied in the care and management of HIV	What is HIV and AIDS, history, myths, epidemiology,	Epidemiology; microbiology; history of HIV; transmission,	Transmission, immune system, history, progress of

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
				replication, pathophysiology, transmission, immune system; risk, causes, concepts and their difference; microbiology	progression, definitions, what is HIV, pathophysiology, immune system, HIV lifecycle, how it works	HIV, microbiology, epidemiology, nature of virus, myths
		<b>Issues related to HIV and AIDS</b>	Critically analyse the various issues that can influence HIV transmission and control	Sexuality, culture, intergenerational aspects, gender, social class and other issues that have an impact on HIV transmission, psychosocial, cultural and economic aspects related to HIV,	Influence of environment on HIV transmission	Impact of HIV, social determinants, HIV social issues, patients' background

<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
				mental effect		
		<b>Management</b>	Evaluate nursing management and medication used in the management of people with HIV and AIDS Assess the principles of chronic and palliative care to be applied in HIV care and management	Skills, ARV, PMTCT, palliative and chronic care principles	Types of ART, how they work, side-effects, resistance, adherence, eligibility criteria, interaction, prescribing, palliative and chronic care principles	Medication, ART, prophylaxis, palliative and chronic care, side-effects
		<b>Prevention</b>	Analyse HIV preventative measures in various settings and for different groups of clients and health care workers	Prevention, risks, prevention measures and strategies, risky practices	Universal precautions, risk factors, how to prevent risk, at-risk population, how to prevent problems	Risks, resources for prevention, universal precautions, types of prevention


<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
<b>Ethics</b>	Demonstrate an understanding and apply key ethical principles related to HIV and AIDS in the care and management of clients living with HIV and AIDS for the reduction of stigma and increase in patients' positive experience	<b>Ethical issues</b>	Correctly and appropriately deal with ethical dilemmas related to HIV and AIDS and adhere to and monitor the correct application of ethics to HIV related research	Ethical issues related to HIV and dilemmas, confidentiality, disclosure and assisting patients to disclose, patients' rights	Confidentiality, awareness of ethical issues related to HIV, facilitating disclosure	Disclosure, confidentiality, patients' rights, ethics, ethical behaviour
			Participate in the reduction of stigma ensuring the rights of people living with HIV are protected and respected	Stigma, understanding; management	Manage stigma, stigma awareness	Assess stigma and its impact, manage stigma
		<b>Professionalism</b>	Apply ethical behaviour and maintain professional relationships in the care and management of clients infected and affected with HIV and AIDS	Maintain professional relationship and behaviour		Application of nursing values and ethics, professional behaviour/conduct, maintaining professional

<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
						boundaries, obligation to care
<b>Policies</b>	Implement and critically analyse local, regional and global policies and regulations related to HIV and AIDS in the care of various types of clients living with HIV and AIDS in different settings while adhering to the legal requirement of the country	<b>Legislation</b>	Describe and follow the legal requirements as regulated in the care of patients living with HIV and AIDS	Laws related to HIV	Acts and legislation	Review client's decision-making ability based on the legislation, criminalization of HIV, duty to warn
		<b>Policies and protocol analysis and implementation</b>	Evaluate the role of institutions that are involved in the development of HIV and AIDS-related policies and discuss own role in participating in developing HIV-related policies. Explain and analyse the various local and global policies and protocols related to HIV and AIDS.	Implementation of policies: Isoniazid (INH) ; STIs; TB; ARV; Post exposure prophylaxis (PEP) , monitoring; local and global policies and guidelines: NSP, Millennium development goals	Know local and global policies and guidelines – HAART, ART, PALSAs Plus, counselling, where to find policies, critical analysis, implementation, understand changes to	How to access policies, national programme, immunization for people with HIV, PEP, ART, data management, advocate for policies

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
			Implement the various local policies and protocols related to HIV and AIDS. 	(MDG) , ART; PMTCT, Practical Approach to Lung Health and HIV/AIDS in South Africa (PALSA Plus) feeding options, women's health issues	policies; stay updated on policies, needle-stick injury, feeding options, PMTCT, IMCI, TB prophylaxis, PEP, direction of the country	
<b>Interdisciplinary approach</b>	Correctly and appropriately implement and participate in the interdisciplinary approach in the care and management of clients affected or infected with HIV	<b>Community involvement</b>	Participate in community engagement, programme and interventions within a collaborative framework enhancing involvement with non-governmental organizations (NGO), faith-based organizations (FBO) and Community-based organizations (CBO)	Community involvement and insight on NGOs, collaboration	Participate in community work; assist in training other health care workers	Know and participate in community, support community health care workers, role of multidisciplinary team, collaboration, networking, seek advice

<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
	and AIDS		in the care and management of HIV and AIDS			
		<b>Referral systems</b>	Describe and follow proper referral pathways in providing care and management to patients infected and affected with HIV and AIDS within a multidisciplinary team	Know referral systems, referral pathways, assessment for need for referral	Awareness of referral pathway, refer clients appropriately, provide quick referral	Work with multidisciplinary team, refer, follow proper referral pathways, secure access to care
		<b>Support systems</b>	Provide support and facilitate access to support systems to those infected with and affected by HIV and AIDS	Know available support systems, participate and link patients	Identify and understand available support resources, link patients to relevant resources, assist in support structures	Facilitate link to support in community, mobilize support, how to access help, support services
<b>Personal and</b>	Implement own personal and	<b>Personal development</b>	Develop a continuous personal development plan	Self-awareness, clarifying own	Self-discovery; use information in own	Personal responsibility, value



<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
<b>professional development</b>	professional development plan for continuous development and care of the carer as a health care provider of clients affected and infected with HIV and AIDS		and take personal responsibility in applying the learned information and skills in own life for the prevention and management of HIV 	beliefs and values, emotional readiness	life, identify own risk for HIV infection including family planning, overcome own cultural barriers, emotional development, life skills, coping skills, aware of own response to patient's response	clarification, emotional well-being
		<b>Professional development</b>	Develop a continuous professional development plan and take personal responsibility in obtaining information and remaining updated with regard to HIV care and management	Personal responsibility in lifelong learning, develop and use research skills	Find own information to keep updated, share information with others, assess own limitations, independent	Evidence-based practice, access advice, research, self-assessment of own limitations, own role in facilitating learning for

<b>Competency</b>	<b>Main outcomes</b>	<b>Sub-competency</b>	<b>Specific outcomes</b>	<b>Related content/concepts: NGT</b>	<b>Related content: Individual interviews</b>	<b>Related concepts/content: Literature</b>
					lifelong learning, use research to find new information	colleagues, professional networking
		<b>Care of carer</b>	Discuss the importance of care of the carer, develop and implement plans for own care to maintain own well-being as a health care provider for HIV and AIDS	Coping skills, debriefing	Debriefing, learn how to disengage, have a buddy system	Prevent and manage burnout, disengage, support and stress management
<b>Health education</b>	Provide appropriate health education related to HIV and AIDS to different groups of clients that are at risk of getting infected, infected with HIV and those affected by HIV and	<b>Provision of appropriate content for health education to various groups of clients</b>	Provide appropriate and correct content of health education and promotion on various aspects related to HIV and AIDS, such as nutrition and adherence, and to various groups of clients, such as pregnant women and school-going children.	Nutrition, prevention, safe sex, healthy lifestyle, lifestyle change, medication and follow-up, cultural appropriate, different settings: school, community,	Life after diagnosis, lifestyle change, nutrition, healthy lifestyle, adherence, information and importance of treatment, safe sex, prevention,	Context specific, healthy lifestyle, nutrition, positive living, risk reduction, harm reduction, safe sex, way forward

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
	AIDS			different groups: individual, family, community	condom use, HIV and symptoms, culturally relevant, discharge preparation	
		<b>Information transfer</b>	Appropriately transfer information related to HIV and AIDS to others and facilitate learning, taking into consideration various relevant aspects such as culture and context	Behaviour modification and theories, facilitate learning, able to teach, speak in front of people, transfer information in a simple way	Able to facilitate transfer of information for health education and health promotion, behaviour change, how to impart information to younger generation, how to give information, ensure patient's understanding,	Behaviour programme, enabling learning, understandable, own role in facilitating learning

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
					give advice not orders, teaching client	
<b>Holistic safe practice</b>	Provide comprehensive, safe and holistic care and management to clients infected with or affected by HIV and AIDS in various settings through a continuum of health and illness	<b>Assessment</b>	Apply critical thinking in the provision of holistic care and management for HIV through a continuum of illness and health in various settings	Holistic assessment: signs and symptoms, mental state, health needs	Clinical picture, early symptom identification, OI identification, need for treatment, effect of management, background, emotional status, social and cultural background, effect of management, comparison of tests and self-reported behaviour	Holistic, assess needs: psychological, social, support, reproductive, sexual, treatment of side-effects, treatment failure, symptoms, TB assessment, assessment skills, treatment failure, adherence problems
			Correctly stage patient with	Staging using WHO	Staging systems,	Staging: WHO and

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
			HIV	and CDC	OI, CD4	CDC
			Conduct holistic assessment and investigations that are related to HIV and AIDS care and management for diagnosis and management, and share findings of investigations with patients	Testing using different tests and their indication for diagnosis, interpretation of tests, different investigations, pre- and post-counselling, Voluntary counselling and testing (VCT), Advise, counsel, test, Support (ACTS), Provider initiated counselling and testing (PICT)	Testing, blood for CD4, viral load (VL), liver function test (LFT), sputum, OI & STI screening, interpretation of results, treatment monitoring Counselling skills, process of counselling, prepare client to receive results	Conducting investigations, and interpret results, investigate TB diagnosis  Pre- and post-counselling
		<b>Interpersonal</b>	Display positive attitude	Caring, empathy,	Empathy, respect,	Positive attitude,

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
		skills	towards patients living with HIV and AIDS	non-judgemental, congruence, non-discriminatory, understanding, compassionate	no fear, no discrimination, cultural sensitivity, caring; non-judgemental, sensitive to client's background, acceptance	advocacy, cultural sensitivity
	Demonstrate effective communication, interviewing and motivational skills in the care and management of HIV		Communication skills, trust	Listening, engage client, motivate; observation, giving hope, provide feedback	Communication, encourage willingness, record keeping	
	Form trustworthy and supportive relationships with patients affected or infected with HIV		Support family	Form trust and therapeutic relations, comfort client, make patient and family	Support, advocacy	

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
					comfortable, advocacy	
		<b>Management</b>	Apply critical thinking in the provision of holistic care and management for HIV through a continuum of illness and health in various settings	Care in various settings, holistic, palliative, home-based, community-based	Rehabilitative care, palliative care, death and dying, symptom management, management of HIV co-morbidities (TB, STIs); nursing skills (drawing blood, intravenous therapy, setting up a drip, give medication), ensure continuity of care, different settings (health	Continuity of care, adult and children management, palliative care, pain management, TB, OI and STIs

Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
					care institution, home-based care, school)	
			Provide HIV-related medication and follow up people living with HIV and AIDS and integrate treatment of TB and STIs with HIV	Comprehensive management including ART: initiation, adherence; other treatment options, chronic care, PMTCT, OI, adult and children, signs and symptoms, side-effects, spiritual care, loss and grieving, skills	HAART; ART; PMTCT; IMCI; PEP; PALS Plus; Essential Medicine List (EML)	Medication-related management, PMTCT, OI, PEP, ART, correct skills: intravenous (IV), intramuscular (IM) and subcutaneous (SQ) injections, trauma management



Competency	Main outcomes	Sub-competency	Specific outcomes	Related content/concepts: NGT	Related content: Individual interviews	Related concepts/content: Literature
		<b>Safe practice</b>	<p>Appropriately apply infection control measures in the care of patients to eliminate risk of infection in various settings</p> <p>Ensure availability of input resources as required for the care and management of HIV and AIDS</p>	Universal precautions, avoid cross-infection, protection in the ward, aware of risk	<p>Universal precautions, preventing complications, avoid unnecessary procedures</p> <p>Availability of protective gear</p>	<p>Universal precautions, proper skill performance, use and disposal of sharps</p> <p>Management of input for necessary care</p> <p>Availability of ART</p>

#### 4.3.4.4 Knowledge

The knowledge core competency was identified as the most important from the NGT sessions, and this competency was understood as the basis of all that the nurse does when providing care and management for HIV and AIDS. The participants reported a variety of knowledge that is required of a nurse in order to provide care and management for HIV and AIDS. This knowledge was perceived to be essential for the nurse to be able to perform, as noted by one participant in the interview:

*“They need to know, they need to have knowledge about the disease, firstly because you cannot practice unless you have accurate information about the disease. So they need knowledge.”* (Participant 10)

Five specific competencies for the knowledge core competency can be classified as: (1) basic scientific facts, (2) assessment, (3) management, (4) issues related to HIV and AIDS, and (5) prevention.

##### 4.3.4.4.1 Basic scientific facts

Some of the aspects that are part of knowledge related to HIV and AIDS include basic scientific facts, and these were recorded from the three data sources. Aspects that were deemed important include basic information about HIV and AIDS relating to microbiology, so that the nurse knows what HIV is, the lifecycle of the virus as well as its history, and knowledge about transmission and progression. In addition to that, the various concepts related to HIV and AIDS need to be defined and well clarified to ensure full knowledge and understanding. This was noted from the various sources: *“In the first place they must know what is HIV in a patient with AIDS?”* (Participant 4), *“Difference between CD4 count and viral load”* (Participant 5), and a participant in group 8:

*“Under knowledge also, I would like to include the history. They must understand the history ... where the virus comes from. The physiology and then the actual structure of the virus itself.”*

This reflected some of the aspects that were classified as being part of the basic knowledge that needs to be obtained and mastered by a nurse so that he or she is able to provide care and management for HIV and AIDS.

In addition, another participant also mentioned the need to master the basics and how it will assist further reasoning required for practice in providing care and management for HIV and AIDS:

*“So I do feel strongly that you need the basics and then you can start the presentations, and the clinical and the manner in which it presents. Then you start integrating it. But if they don’t understand that essentially it attacks your immune system, they wouldn’t know why it is linked to TB. They wouldn’t be able to sort of reason it out.”* (Participant 15)

Other aspects that were reported as part of basic scientific facts include epidemiology, microbiology, the immune system, HIV progression and the various myths that need to be demystified, as also noted by CANAC (2013), emphasizing the understanding of the HIV epidemic and epidemiology.

#### 4.3.4.4.2 Assessment

One of the aspects of knowledge was related to assessments that are carried out in the care and management for HIV and AIDS. This relates to knowledge about testing modalities and the various investigations that are conducted for diagnosis and follow-up. With regard to this one participant mentioned that the nurse should know about the different types of tests done and the indications for these tests:

*“... the different tests that are available, and where do you apply, to whom do you apply those tests, example when do you make use of the PCR [polymerase chain reaction] instead of a rapid antibody test, [...], eh, you know, I think they must be knowledgeable because they will work in different community settings, eh, where they have to distinguish, do I use this type of test for this patient or that one, especially when they work with children, the babies, because they have a different test to those of adults...”* (Group 1)

Similarly, CANAC (2013) identified a competency related to the understanding of HIV testing, including the different types of HIV testing and the testing schedule for infants exposed to HIV.

Knowledge about the investigations was deemed insufficient on its own. The nurse should be able interpret the results, hence the importance of knowing the normal ranges for the various biological makers, as reported by Relf et al. (2011b) and CANAC (2013), as well as the NGT sessions, with reports about the interpretation of results, as explained by one participant in group 7:

*“Okay, the other thing that they must also know about the HIV is the interpretation of the blood tests. Blood test and interpretation of the blood tests, like what is the CD4 count, what does it mean, what is the viral load, what is the other test that they do?”*

This understanding of investigations and results of blood taken is important for the nurse, and one of the practising nurses noted a weakness in the practice when she stated:

*“Yes, I think also it depends on the results. Sometimes doctor takes bloods for the liver function and then they change it or the treatment is being stopped, but you don't know for what reason actually that it has been stopped.”* (Participant4).

This highlights the need for the nurse to understand the meaning of the blood results, because the results influence the management decisions, and the nurses must be able to not only do as told, but also understand why decisions are made. The knowledge related to assessment also includes knowledge about the various clinical manifestations, opportunistic infections that are related to HIV and AIDS, and how the two connect by understanding the holistic effect of HIV, as this will form the basis of practice. This was noted by Participant 14 as follows:

*“I think that they really need to understand how it is contracted, how HIV is contracted. What are the clinical manifestations of HIV, which links again to the physical examination skills? If you know that this is what I'm supposed to be looking for when I have a patient, I can see okay, but you do have a weakness in your muscles. Maybe it's because of this or that or something. Clinical manifestations, the medication, they must absolutely know about that.”*

The understanding of how HIV affects the person holistically with regard to the effect on the family and community will inform the nurse's practice, because the assessment will not only be based on physical information, but also include family and community background. This

holistic assessment was also noted from the literature with the competency documented by the NHIVNA (2007).

#### 4.3.4.4.3 Management

The issue relating to knowledge about the management of HIV and AIDS appeared in the data, with reports about the knowledge of the different types of ART, how they work, the side-effects, resistance, and an understanding of eligibility criteria also documented in literature (Relf et al., 2011b; CANAC, 2013). Knowledge and understanding of medication used in the management of HIV was also mentioned numerous times in the NGT and individual interviews, and this related to good understanding of the various ART and the various combinations, with specific focus on what is provided for in the country's normal practice. This was evident from one participant in group 8 who mentioned *"They need to know about interaction with ARVs and other medication"*, with another completing the statement, saying: *"Side-effects also"*.

The link to practice was again made by another participant in group 7 who said:

*"She would know that if I don't give this medication regularly, this patient is going to be affected, because this is how this virus multiplies."*

This highlighted the importance of the nurse's knowledge about the medical management of HIV and AIDS and was also noted in the literature, such as by the NHIVNA (2007), where the understanding of the different classes of ARV and side-effects was identified in the list of competencies for level two, which is defined as entry level, similar to a new graduate nurse. This knowledge was reported to be limited in new graduates, as Participant 9 mentioned: *"... one part of when it came to theory that I didn't really understand [was] why people would take certain medications."*

One would understand that such limited knowledge and competency will prompt the employers to first send the new graduate for training related to HIV and AIDS care and management in order to ensure a competent nurse. Understanding and knowledge for holistic care emerged from all three sources of data, with specific mention of palliative care by NHIVNA (2007); this was also mentioned by one participant:

*“How to do palliative care. I think that’s also something because sometimes we deal with patients at the end of life. And how to manage them properly. What is needed.” (Participant 14)*

There were reports of limited preparation to provide palliative care for patients dying of AIDS-related illness, as noted by Participant 5:

*“Sometimes they don’t see the patient maybe in their last stage. And I think, you know, some of them at the last stage, I think they are not well prepared. Stage four when the person is dying now, you know. I don’t think they’re well prepared.”*

This was repeated by one participant in group 1:

*“Taking care of this patient with HIV/AIDS that you need to, because at that stage of AIDS and palliative care, there would be other forms of co-treatment which will also be in place. So that they are knowledgeable about, you know, the interaction and what can be taken with ARVs and what not.”*

Another one said:

*“Can I just add another thing? Something that often comes up in our classes when we deal with a topic, is that I don’t think the students are prepared to render palliative care. They don’t know how to. I’m thinking of the stages. I’m thinking of the terminal stage now, because that is then when our second years, when they nurse these patients. And they don’t know how to render care to the dying patient. So I think that is quite a gap in our curriculum which we don’t address anywhere. I know they address it somewhere in the first year, but really the practical aspect of it.”*

#### 4.3.4.4.4 Issues related to HIV and AIDS

To be a competent practitioner with regard to HIV and AIDS care and management the nurse needs to have knowledge about the various issues that are related to HIV and AIDS, taking into consideration the cultural and environmental aspects. It is in this regard that aspects related to sexuality were deemed necessary to be covered in the curriculum. This includes gender and social class as well as relationship issues that have the potential to influence

transmission and impact the person at any level, as noted by one of the participants in group 4:

*“I think that an important aspect that we’re always missing, especially remember, these young graduates are always embarrassed to speak to individuals around sexuality and all those types of things. And I think that is important because they are going to need to approach those subjects with HIV-positive people. .... I mean, sexuality doesn’t mean if I’m HIV positive, I can’t have sex anymore. So I think sexuality issues, they need to be knowledgeable about it.”*

Cultural aspects need to be taken into account in terms of what is being accepted as part of a conversation with a client, the cultural practices that may be supportive or not supportive of prevention programmes, gender relations in the various cultures, economic and social status in their role, and the increase in intergenerational relationships, as noted by one participant in group 6:

*“And they should be able to recognize the social, cultural, economic aspects that go hand in hand with HIV and AIDS.”*

For the nurse to recognize such aspects the nurse needs to have a good understanding and appreciation of those issues and how that relates to HIV and AIDS. This aspect was also noted in literature, with competencies relating to social determinants, HIV social issues and patient background being documented by NHIVNA (2007) and CANAC (2013). In the South African context, a country with the highest number on people living with HIV, it has been documented that there are more women infected compared to males, and as noted by (UNAIDS, 2011) more younger women are infected compared to men in the same age group. Nurses need to have a good understanding of contextual issues such as culture, poverty and power relations that contribute to a situation where more women are infected.

#### *4.3.4.4.5 Prevention*

Good knowledge and understanding of various prevention measures in different settings for different groups was also reported in the study, with the participants relating to the understanding of universal precautions, infection risk, risky practices, as well as the various strategies used for prevention and their resources. This was indicated in the discussions, as noted by one of the participants in group 7: *“And I think the prevention is also incorporated*

*in the knowledge.*” Participant 10 said in the interview: *“So some sort of preventable information about prevention of disease....”* The same was indicated by participants in group 6: *“They should also know about preventative measures”*. Similarly, in group 8 the same idea emerged, focusing on ensuring that the nurses know the various strategies used for prevention: *“And the different types of preventative measures that are involved....”*

Furthermore, the nurse needs to be able to link the prevention measures to the risk factors for the population, and this relates to analysis and creativity in the development of knowledge with regard to prevention of HIV and AIDS as expected of nurses. This was noted by Participant 15 as follows:

*“Looking at the risk factors for transmission and then how you can propose applicable intervention measures for that.”*

It was noted that nurses need to know the risk behaviour, which will later assist them in their practice, as noted by another participant in group 6 who said:

*“That is now what we say, practices and what is risk practices. That includes safe sex or behaviour that will increase the risk of HIV.”*

A good understanding of this will not only enhance safe practice, it will also support the health education as this will form the basis for the content of health education sessions. This was indicated in one group discussion (6) when preventative measures were being discussed:

*“... It [preventative measures] is something that the students should be able to give. Health education to patients and it goes with the knowledge of risk practices.”*

Furthermore, the knowledge about prevention measures in practice is important, as lack of such knowledge results in limited ability to practice safely, and in turn it raises the possibility of increasing the nurses’ fears with regard to providing care and management to patients living with HIV and AIDS. This is illustrated from the discussion with one participant:

*“And I also think, from my perspective, point of view, is that some of them are scared because why they are, how can you say, what’s the word now, they are not fully aware of the do’s and the don’ts, you see. How to wear protective gloves.”*



*Can I touch the person? Can I touch his urine? You know, stuff like that.”*

(Participant 5)

Competencies obtained from the literature, in Knebel et al. (2008), include issues related to national programmes, while Relf et al. (2011b) include understanding of the various levels of prevention.

#### **4.3.4.5 Holistic safe practice**

Holistic safe practice was the competency ranked as the second most important competency from the NGT ranking. This competency forms part of the performance category, and relates to what the nurses do in practice in terms of providing care and management for patients living with HIV and AIDS, ensuring provision of safe and holistic care. The specific competencies included in holistic safe practice are interpersonal skills, assessment, management and safe practice.

##### **4.3.4.5.1 Interpersonal skills**

When providing care to patients living with HIV and AIDS, nurses interact with patients and should be able to display a positive attitude and appropriate, effective communication skills. This will necessitate the ability to build trust and to establish therapeutic relationships, while providing support to the patient in their care. This emerged from discussions in group 4, where one participant stated: *“The nurse should have empathy. Demonstrate congruence, display unconditional positive regard.”*

The non-judgemental aspects were spelt out by a registered nurse, (Participant 2) who stated:

*“They must have a positive attitude. Treat everybody, irrespective what disease the patient’s got, treat that person like a person, like a human being and have respect for that person. It is that attitude that I would love them to have.”*

Nurses are expected to display a positive attitude, and the senior nurses sometimes need to reinforce the development of such a competency in the new graduate, as noted by Participant 5:

*“And sometimes some of them are still ignorant about some stuff and you actually have to take them gradually, as I said, this person must be treated with respect,*

*with dignity and we are now here for that person to let him feel that he's a sick person now, we must look after him. So what you're judgemental... the thing is you can't judge now. So you must leave your personal feelings aside and you must now see that person in the role of he needs you now."*

In addition to displaying positive attitude, nurses need to be competent in terms of their communication skills such as listening, observation, answering the patients' questions and giving feedback. This was noted as sometimes lacking and such a lack can be stressful for the patient, as noted by the person living with HIV who reported the following from her own experience:

*"Sometimes you feel like this is not right. The other lady just told me, no, this is no, you don't have a skin problem. And I said, I needed something to ... because I never had like pimples in my face until I started treatment. I said, I think these are side-effects. And she said, no. In your treatment don't have those side-effects. I said, so what exactly is it? She never really answered me. So I was like, what is it? Is it a new infection? Is it a new disease that I'm developing? So you end up going home frustrated when you're not supposed to."*

Effective communication skills, gaining trust as well as critical thinking appeared to be some of the requirements for a competent nurse to provide care and management to patients living with HIV and AIDS, as noted by Participant 2:

*"You need to have that observation skill. You need to have the listening skill. You need to be able to discern am I getting the truth here or not. And that is a skill you personally have to develop, because of certain areas, certain people still see this as a stigmatised disease or illness. People tend then not to be honest with you, the counsellor. So you need to ascertain all these things. And ... those are the skills that you have. And you need to have, I don't know if it's a skill but for people to trust you. That openness, that body language, I'm here, I'm not condemning you. I'm here to assist, to help and to guide. They must trust you. If they don't trust you, if you do anything that they don't trust you or if you say anything that will break that trust, then it's hopeless and useless."*

De Wet, du Plessis and Klopper (2013) also mentioned building trust and communication skills as some of the requirements for a nurse who needs to provide care and management to patients living with HIV and AIDS.

The benefit of effective communication skills and building trust, in addition to the correct knowledge, was further explained by Participant 15, who said:

*“Patients felt understood if they see you’re interested. If they see you really know what you’re talking about. If they see you care. Then they’re also willing to comply with their treatment. I’ve seen it many times. Because they trust you they’re willing to comply. They will walk the extra mile because of you. I think we can teach that to students.”*

Giving hope and motivating the patients living with HIV was also mentioned in the discussions, as noted by Participant 8:

*“My expectation is that there is hope for people living with HIV and I want to give them that hope really. And that is what I tell most of my patients is that this is not your death sentence. We are supposed to live a healthy life from the beginning of our life. So if you didn’t start it then, then do it now. And with the right support and the right ... I know we all have different attitudes, but sometimes we just have to do that but I have to change. I have to change. I have to do something better if I want to live and live a healthy life and that I have to make positive changes in my life. That is what I expect is to give hope for a patient living with HIV, for the HIV positive.”*

Similarly, motivation and giving hope appeared in group discussions, such as in group 8 where it was noted: *“Counselling and the ability to motivate, and to be hopeful”*.

Similarly, the competencies obtained from literature included HIV and competencies relating to respect, providing spiritual support, advocacy, record-keeping and a positive attitude (NHIVNA, 2007; Knebel et al., 2008; Relf et al., 2011b; CANAC, 2013).

#### 4.3.4.5.2 Assessment

The other specific competency included in the holistic safe practice is assessment, which is closely linked to the specific competency of assessment in the knowledge core competency.

This specific assessment refers to conducting comprehensive assessments, investigations, counselling, applying clinical judgment in the analysis of findings, and sharing the results with the patients living with HIV and AIDS.

This assessment should be regular and thorough, as mentioned by the person living with HIV and AIDS, as this may facilitate identification of problems that the patient may not be aware of yet:

*“Another thing is when you go for your dates, when you go for your dates, they just like ask how are you now? Are you feeling well? And you’ll say, yes. And they’ll say, okay, fine. And they will write your pills. Go to the pharmacy and take your pills without touching you or like they ... you have to go to the doctor in order to get that. I think you should also do that ... hospitals, because we have a few doctors in a hospital. So they have to like touch you. Because sometimes something is not that painful, but maybe the pain just come and go and maybe they’ll be able to recognise early.”*

The assessment is to be thorough including history taking and physical assessment, as noted by Participant 16: *“So throughout physical assessment and history taking of the patient”*, and one Participant in group 1:

*“I combined it naming it a competency of assessment. They need to be able to do assessment, which include assessment of signs and symptoms, vital signs, tests, all kinds of assessments.”*

The nurse must also be able to capture the subjective data from the assessment, as reported by Participant 12:

*“A nurse should be able to take a proper history and to do the correct investigation so that the nurse will be able to say that this is my treatment plan, which will be able to deal with the patient in totality. As you heard in my earlier discussion, their approach is very crucial. Because sometimes we think of assessment and say, you’re going to assess the patient and you use a checklist. There can be gaps, because the checklist can be very subjective. You won’t be having that objective kind of a thing rather than allowing the client to speak, you*

*know. To allow the client to tell their story, because if they tell their story you would be able to even pick up certain things.”*

With the assessment, the nurse will be able to stage the client, as noted by one nurse:

*“And when you do your assessments, you have to assess and see ... we have to do the staging of the patient if she stages like there’s diseases involved like TB and pneumonia.”* (Participant 1).

This was reiterated by one of the groups (7): *“With WHO staging you have to have a skill of assessment.”* Furthermore, Participant 9 also reported on the various activities done by a registered nurse as part of assessment:

*“... when you see your patient, you can change the stage, because you must screen them for TB and STIs. So if they had that then obviously, their stage has changed or their CD4 count or ... And the patients that are on HAART medication, the HAART programme, they have their viral load and all of that checked.”*

Participant 1 reported the assessment of signs and symptoms, as well as some of the investigations, when she stated the following:

*“And when you do your assessments, you have to assess and see ... we have to do the staging of the patient if she stages like there’s diseases involved like TB and pneumonia and then you refer to doctor and you inform the doctor, this is the stage that you have determined the patient is having signs and symptoms of this, this and that, which you have already tested by taking samples of sputum, doing the blood tests, things like that.”*

Similar reports were identified from the list of HIV and AIDS competencies reported from literature such as Knebel et al. (2008), indicating competencies of identifying clinical signs of HIV infection, conducting biological tests and staging a patient living with HIV and AIDS using both the WHO and CDC staging systems.

The competency in assessment is expected to be more than just physical assessment and includes an assessment of the patients’ background. This is deemed important as the patients’ background can affect the management as well as the patients’ compliance to treatment in

addition to the ability to maintain their own health optimally. This was illustrated by Participant 1 as follows:

*“You need to know the services, you need to know... you need to know a lot of things about your client. You need to know the client’s ... hmmm.... What’s the word now? The culture of the client. You need to know where the client lives. You need to know the social background of the client. Because all these things play a part in the management of the HIV. So it is a broad field where the client is concerned.”*

The holistic assessment was also noted in literature on the HIV and AIDS competencies documented by Relf et al. (2011b) and CANAC (2013).

#### 4.3.4.5.3 Management

The management competency of the holistic safe practice core competency is closely linked to the specific competency of management, in knowledge competency which informs practice.

The nurse is expected to complete training and be able to provide care to patients living with HIV and AIDS in various settings, such agreement is from what was noted by one of the participants in group 1 who said:

*“I think I agree also with everybody else’s comments on the caring of the HIV patient or the person who living with HIV and AIDS. I would just like to add that the new graduate must be competent enough to be able to care for that person in all health care settings, regardless of where the person finds him or her; not just in the hospital. That is important.”*

With management, nurses are expected to be competent not only in terms of medical management, but also nursing management especially with management of symptoms related to HIV and AIDS. This was noted in group 6, where participants provided the following example with regard to management of symptoms:

*“Simple things for oral thrush that you can use at home. There’s a booklet on that, I remember, where you can use simple household things to treat the symptoms.”*

As part of management, follow-up and ensuring continuity of care is another important aspect, as patients living with HIV and AIDS need to maintain a healthy lifestyle and remain in care, as failure to do so results in more complications and creates a ‘revolving door’ phenomenon, with patients having more frequent visits and admissions. This was noted by Knebel et al. (2008) and Relf et al. (2011b) and is illustrated by this excerpt where Participant 3 who indicated the need to ensure care continues, even when the patient leaves one setting to move to another:

*“And ask patients if he’s on treatment and ask if the patient took it. And if the patient forgot the treatment at home, try to get the doctor to prescribe it so that the patient can get his treatment. From our side, we don’t lack in the treatment of the patient.”*

This was commented on as sometimes being challenging. Participant 1 noted an example of challenges encountered, and commented on how she would handle the issue, by giving this example on follow-up of an infant on the PMTCT programme:

*“Now some of them [mothers] have to go and work and a family member needs to take the baby to the clinic and she’s [family member] going to read that my baby is HIV positive. So they [mothers] tear that out. ... So the clinic will not know to follow up on that baby, on the HIV regiment, the Nevirapine, and check on the feeding and all that. So then I fax it through to the baby clinic. Then they know there’s so many clients that I must look out for within six weeks should be attending this clinic. And if not, then it’s their responsibility to find out where to follow-up where is this baby.”*

With regard to initiation of ARV by nurses, there were mixed reactions, with most of the participants indicating that a nurse that completes the four-year programme will need more training to be able to initiate ARV as noted by Participant 2:

*“A little bit of extra training won’t hurt. Basic, not so efficient, a little bit of extra training, like the in-depth of the bloods and those things.”*

However, although the participants indicated the need for extra training, the expectation is that nurses should have the basics related to initiation and follow-up for ARV and be competent, as noted by one participant, who indicated:

*“... I think she must know about the medicine. She can get an extra short course afterwards for specific prescription and dispensing medicine. But she must already have background about the medication. But I think what we can include afterwards is like a short course on dispensing and prescribing. There are many courses like that. .... the basic knowledge about it [prescribing, dispensing and initiating] should be there, yes. Then they can do an intensive course on just dispensing. The basic stuff must be there, otherwise how will they counsel the patient?”* (Participant 15).

Another participant referred to that, highlighting that it is provided for in the Nursing Act 33 of 2005. It is often seen as an advanced competency, but a new graduate should be able to gain that competency:

*“Well, you know, there’s a ... all our primary health care nurses should be able to prescribe. And ARV should be one of the drugs that they should be able to prescribe because they are seen as a kind of advance specialist who has that ability to diagnose, prescribe and dispense. And so, the Act, the Nursing Act caters for that, you know, section 56 caters for nurses being able to prescribe and dispense medication. And I think that any student studying towards being a professional nurse should learn that prescribing and dispensing should be part of their competencies that they learn, that they develop.”* (Participant 13).

The same participant reiterated that:

*“There shouldn’t be an additional programme just for that. I think graduate nurses are capable of doing that.”*

The management is expected to be comprehensive and to continue through a continuum of health and illness. The nurse should be able to manage the co-morbidities as well as the opportunistic infections such as TB and STIs, as well as other common illnesses that patients living with HIV and AIDS may present with. This was also identified as an HIV and AIDS nursing competency by NHIVNA (2007), Knebel et al. (2008) and CANAC (2013).



#### 4.3.4.5.4 Safe practice

The provision of care and management for HIV and AIDS must be done safely to maintain the well-being of both the patients living with HIV and the care providers. In the study participants stressed the importance of practising in a safe way. This required application of universal precautions in order to reduce the risk of transmission in various settings where care is provided by the nurse. This is well reflected in what was discussed in group 8, when they stated: *“I think it’s under skills, they need to know about universal precautions generally of treating anyone as potentially HIV, generally wherever you find a person,”* and group 1: *“Practice universal precautions.”* Group 2 also reported: *“Avoidance of cross-infection.”*

Another participant said:

*“I think most of the time you are there you, you must be aware that you can prick yourself and you should always be on alert to, you know, to protect yourself by wearing gloves when there’s blood involved when you’re going to take some bloods.”* (Participant 4)

As part of being a competent, safe practitioner, one needs to implement the necessary universal precautions without overdoing it, and apply them where and when required, as this could easily be interpreted as a negative attitude and discrimination against the patients living with HIV and AIDS, as indicated by Participant 3:

*“Most of our clients, most of them are positive. So we usually tell them, every fluid you must do the basic, like you must have protective wear, but you don’t need to have goggles, apron or everything. Just if you work with the blood or any fluids of the patients, you can wear gloves. But you don’t have to come like a moon... some of them come like them walk on the moon, dressed like that to the patient.”*

However, it was noted that not all nurses practice safely or apply the universal precautions, and this can be seen from Participant 9’s comment:

*“And then you get people who are very nonchalant – it’s just one of those things. They actually just go out and don’t protect themselves, don’t use gloves, like for certain things, drips and stuff like that.”*

She continued to give an example of what she has observed:

*“We’ve got safety needles now. Those are the one that ... it’s nice. But the backflow, that comes back to infection control, because I work with although she is agency, She graduated from [a university], she never wears gloves, but with those particular needles the new ones the cannulas, you can’t pinch it so that you don’t get that backflow. Once you’re in it just runs. So you just have to work very quickly. She doesn’t put gloves on. And I mean, you never know if you have cuts. I mean, I’ve got I had a paper cut now there the other day. .... You know I often say, oh, you’re taking a big risk. Okay, you know, and like she would have blood all over her hands and stuff like that”*

The practice of universal precautions has been noted to be an issue with nurses in rural South Africa, with recapping of a needle being noted as a frequent behaviour. This will endanger the nurse as well as the patients (Delobelle et al., 2009). This highlights the importance of developing a competency in safe practice.

Competency in safe practice is not only achieved by performing the skills correctly, but also by avoiding unnecessary procedures when caring for patients living with HIV and AIDS. This is illustrated by Participant 1, who stated:

*“And then we also need to know the person’s status during labour, so there is no unnecessary interferences, like we don’t do an episiotomy because you’ve been trained to do an episiotomy. If there is no need to do it, you don’t do it. Those kind of things.”*

The same idea was mentioned with regard to rupturing membranes, as explained in group 7:

*“As we speak there’s specific procedures that increase the risk of HIV transmission. So they must know which procedures, they must have the knowledge and the skills to form the right decision at the right time and place.”*

In this study it was also noted from Knebel et al. (2008) that ensuring the availability of equipment and other necessary input such as drugs is part of the holistic safe practice for care and management for HIV and AIDS. In South Africa nurses are usually in charge of the various departments where patients living with HIV and AIDS receive care and management,

as noted by Participant 13: “*The professional nurse is responsible for the coordination of patient care.*” Hence the need for such competency related to HIV and AIDS care and management.

#### **4.3.4.6 Health education**

The core competency of health education was ranked as the third most important competency from the combined ranks of the eight groups that participated in the NGT sessions, with only group four not ranking health education as part of the top five themes.

Buseh, Glass, McElmurry, Mkhabela and Sukati (2002) reported that about 42% of adolescents in a Swaziland study indicated that their preferred sources of HIV/AIDS information were health care workers or clinics. This is important, as only 10.3% identified health care workers or clinics as their primary source of information on HIV/AIDS. This highlights the low frequency at which health care workers or clinics provide information, despite the adolescents’ preference, and it emphasizes the need for nurses to be well equipped in terms of their ability to provide health education as well as covering the various aspects related to HIV and AIDS to different groups of people. As Buseh et al. (2002) note, it is essential that nurses should be at the forefront to present information on HIV and AIDS and risk reduction in addition to developing a comprehensive approach that will target adolescents, to ensure that they get accurate information. This core competency includes the second part of the performance category of competencies as synthesized in this study, and is made up of two interrelated specific competencies, namely information transfer and the provision of appropriate content for health education.

##### **4.3.4.6.1 Information transfer**

When providing health education about HIV and AIDS, the nurse needs to transfer information to the patients living with HIV and AIDS and clients who are at risk of infection. For this to be successful and effective, it depends partly on the nurse’s ability to transfer the information and knowledge. The process of how it is done is crucial as it is supposed to be done in a way that enhances the patient’s or the client’s willingness to listen, to understand and to accept information (de Wet et al., 2013). Being competent in transferring information is essential, as noted by the person living with HIV. When instructions are given in a way that makes the patient feel judged or uncomfortable, there may be some adverse results, as she noted:

*“Because sometimes when they gives us an instruction they were like, it’s not like they’re advising you, they are not telling you, you need to do what, why aren’t you doing this? So those kinds of questions, they make you feel uncomfortable. Some people default, they refuse to go and take treatment.”*

This competency requires that the nurse not only gives the information, but ensures that the patient or client understands, a competency noted by NHIVNA (2007). Other factors such as emotions and background should also be taken into consideration. This was further illustrated by Participant 16, who stated:

*“And that is the thing that it is important that you must know that to be able to transfer knowledge you must take emotions into account and you must sort of see the patients over and over and over. And you must repeat the information, repeat the information. .... How do you transfer knowledge? Emotional stuff, cultural stuff ...”*

The discussion of group 8 also noted the same, highlighting the importance of applying communication skills, as indicated in this extract:

*“Involving health education ... maybe just listening. Say for example, you’ve got somebody who is constantly coming late to pick up their ARV, instead of sitting them down and telling them off which I think is done, is to sit down saying, what is happening to you? And try to establish... and so to more try and tap into, use the counselling skills to tap into the person’s experience rather than to instruct.”*

When providing health education the nurse should be able to give information that is understandable by the patients, as noted by one member in group 6: *“I think the knowledge must be given in ... way but also in a way that the patient can understand.”* Another participant concurred, saying: *“Scientific way, as well as in a simple way for the patient to understand.”*

The same was also mentioned by the person living with HIV, who linked the giving of information to communication skills, saying:

*“So I think the communication exchange, sometimes they’ll talk as if they’re ... when they’re speaking to me I can understand, but an old person won’t*

*understand exactly. Most especially when they talk about CD4 count. Explain to me what is CD4 count.”*

This specific competency includes some general aspects, such as being able to address various people individually or in groups. This is illustrated by one report from group 4:

*“They should also be able to speak in front of people, especially of the family of the patient, to get to the family and to the greater community.”*

Furthermore, with the health education sessions, nurses need to take into consideration the culture of the audience, as this will enhance the effectiveness of communication and cooperation. This was well illustrated by group 5, noting:

*“If you don’t know the social, and cultural and economic aspects of the community that you are giving promotion to, you won’t be able to do it.”*

Within the constructivist perspective, the nurse needs to be involved and should question the current situation as part of a critical analysis. With the development of this competency, nurses are not just required to give health education on topics that they think should be part of the health education, but to look at the situation in their practice environment and provide health education that the patients can relate to. It should include issues noted and experienced by the patients, and nurses should assess the effect of the health education that they have provided. This was illustrated in the example from group 8:

*“We’ve been doing Health Education for ages and ages and ages. What’s happened to the statistics? Where’s it moving to? That’s why I’m saying look at the current trends.”*

Within this competency the literature includes aspects related to the nurse establishing her own role to facilitate learning for the patients and to ensure the information is relevant (NHIVNA, 2007).

#### *4.3.4.6.2 Provision of appropriate content for health education*

In addition to being competent in terms of transferring information related to HIV and AIDS, nurses should be able to provide health education to different groups, individuals, families

and schools, as illustrated from this extract from group 2: *“Health education to all the people, it can be individuals, to the patient and the family.”*

From the various discussions, a number of aspects to be included in health education sessions were mentioned. Nurses must be able to identify aspects that are relevant to the various groups so that they can provide the correct health information in these sessions. Health promotion and prevention of illness are part of the fundamental responsibilities of nurses, as indicated in the ICN code of ethics. This can be used as a basis for the content of health education (ICN, 2012), and includes nutrition, prevention, healthy lifestyle, adherence, and ensuring cultural relevance.

This was illustrated by Participant 5, who stated: *“We provide them with nutritional information to grow their own garden and those kinds of things just to lift them.”* Another participant stated: *“So we have to help them with their information on how best they can improve their nutritional status?”* (Participant 11). A participant in group 5 said: *“I think nutrition should also fall under health education.”*

With regard to information about sexuality and how to prevent transmission, it was mentioned that it is important for nurses to gain such competency. Most of the students and new graduates are still young and feel uncomfortable addressing such issues, as illustrated by the discussion in group 4:

*“I think that an important aspect that we’re always missing, especially remember, these young graduates are always embarrassed to speak to individuals around sexuality and all those types of things. And I think that is important because they are going to need to approach those subjects with HIV-positive people. You know, speak on pregnancy, prevention of transmission, I mean, sexuality doesn’t mean if I’m HIV positive, I can’t have sex anymore.”*

In addition to safe sex, how to live healthily is an important aspect to include in health education, as noted by Participant 3:

*“So that they can educate the people to have safe or protected sex. And also how to live a healthy life. Give the patient health advice regarding how to live longer with the virus.”*

Similar aspects were noted from the competency developed by Relf et al. (2011b) and CANAC (2013), who referred to health education about safe sex and condom use. Various types of audience need to be catered for, as documented in the competency reported by Knebel et al. (2008) and as discussed in group 2: “*Health education to all the people, it can be individuals, to the patient and the family.*” It can be done in different formats, such as health education days where there is access to many people.

#### ***4.3.4.7 Personal and professional development***

Competent nurses who are able to provide care and management for HIV and AIDS should be able to apply it in their own lives for prevention and maintenance of well-being. In addition, continued professional improvement will ensure optimal ability to be part of the health care professionals that fight against HIV and AIDS (Tilley, 2008). As noted by Relf, Laverriere, Devlin, and Salerno (2009), nursing education should prepare nurses to assess their own beliefs and attitudes, and to analyze and evaluate their practice environment so that they will be able to practice ethically.

As noted by Zulu and Lehmann (2004), to support and strengthen human resources in the fight against the HIV epidemic, internal coping skills should be included in the curriculum, as this will equip the nurses to cope with the psychological stress. Because nurses need to be trained to practice as safe, competent and intuitive clinicians in an environment where new information emerges constantly (Simpson & Courtney, 2002), the professional aspect of the nurse’s practice will be developed. It is covered in this competency, with focus on evidence-based practice, and self-study to stay updated, as noted from the literature synthesis and the group discussions. This ability to find information is important, as nurses use such information and apply it in their practice (Simpson & Courtney, 2002), hence the importance of developing such competency in an effort to develop a competent nurse who will be well equipped to provide care and management for HIV. In this study three specific competencies were identified, namely personal development, professional development and care of the carer.

##### ***4.3.4.7.1 Personal development***

The training nurses receive to become competent to provide care and management for HIV and AIDS also has the potential to be implemented in their own lives, as noted by Participant 13:

*“... I think we should give as much information because it will benefit, you know, that undergraduate nurse, both on a personal level and in terms of her becoming a professional nurse.”*

Receiving the information alone will not be enough. Nurses need to be competent in terms of their own personal development and growth and acquire some emotional stability to be able to attend to the patients who are living with HIV and AIDS. This was illustrated by the discussions with Participant 12:

*“to empower the undergraduate in terms of dealing with the day-to-day issues, because it is not only communicating with the patient, but it’s also the com[munication] skills within the person, how that person can grow in order to make sure to deal with ... because one of the critical factors with their managing HIV patients, is that one way or the other it affects the person.”*

One nurse educator (Participant 16) stated as follows:

*“And in the end, another thing apart from this is the student’s own emotional development and competencies. If you yourself are not ... feeling okay with your emotions, how on earth do you see to the HIV-positive patient?”*

In order to apply the new knowledge in their own lives, nurses need to be trained to reflect on and assess their own situations with regard to the prevention of HIV and AIDS for themselves, while planning for their own lives, as illustrated by Participant 11:

*“How do you think you would, as a third-year student, how would you prepare yourself if you want to plan a family? So it is all life skills and making choices with regard to safe sex ...”*

Clarifying their own values and beliefs was viewed as important, because it has the potential to positively impact nurses’ attitudes and practice. This was noted from the competency list by Relf et al. (2011b), who documented clarification of own values and beliefs. This was also illustrated by a discussion in group 7:

*“The graduate needs to undergo values clarification during the training so that by the time they are graduates they have a clear understanding of what their values are regarding HIV infection, and I think that will ... that affects their*



*attitude. But I think once they know where they stand, then they are better able to counsel.”*

As part of personal assessment, nurses should know and understand themselves, as this in turn will enhance their ability to keep themselves healthy and to access support, as illustrated by one nurse educator:

*“I think they are burdened also. I think nurses see what they see, but they don’t want to acknowledge that. So it’s also a skill, it’s a personal skill also, of knowing myself. Recognising when I’m emotionally drained.”* (Participant 15).

#### 4.3.4.7.2 Professional development

In addition to being competent in providing care and management for HIV and AIDS, nurses need to be competent in keeping themselves competent and up to date, especially in this era when new knowledge is created all the time. This is illustrated by Participant 3:

*“You must keep up to date with the new information, with the new development, with the new research and so... so you must also equip yourself and stay up to date with the changes.”*

This was also stated in group 1:

*“What I basically meant with that [lifelong learning] is that so that they [nurses] will be able to keep themselves up to date with the current policies and even to research topics ....”*

The person living with HIV also noted that this would in a way improve the care that the people living with HIV and AIDS receive, as they will be getting questions to their answers. This was illustrated when she said:

*“Somebody will come and say, I have this [side effect]... Maybe something with which they [nurses] are not familiar with and they will say, no, it’s not so. If they [nurses] can say no, I’ll do research, when you come back I’ll tell you if it’s related to your treatment, yes. They [nurses] just say no, the side-effects ... that is if they like, when they tell us ... no, that is not a side-effect. They won’t tell us what exactly it is. So it is kind of leaves a question mark on what it is. Maybe it is*

*a new disease. Maybe it's a new infection. May they [nurses] need to extend their own ... and do research and come back to us."*

The professional development does not only end with the nurses themselves, but also with their colleagues, and this links to the leadership skills that are expected of a nurse within their professional environment, as illustrated by Participant 4:

*"They must be able to, how can I say it now? They must share their knowledge also with the other staff like programmes, in-service training to the other persons who are also in the ward."*

NHIVNA (2007) documents competency relating to the nurses' understanding of their own role in facilitating learning for colleagues. As part of professional development, the literature also document aspects related to the nurses having awareness, accessing and using evidence-based knowledge, as well as accessing help and advice, especially related to ART (NHIVNA, 2007; Knebel et al., 2008).

#### 4.3.4.7.3 *Care of the carer*

The literature notes that nurses experience emotional exhaustion and an increased workload from HIV and AIDS care, and they need support (Dieleman, Biemba, Mphuka, Sichinga-Sichali, Sissolak, van der Kwaak et al., 2007; Hall, 2004). In this study nurses providing care to patients living with HIV and AIDS have been noted also to experience stress and burnout, so they must be able to access the support system, as noted by one participant in group 1:

*The other thing is also, because they will be dealing with the patient for quite long periods of time, it would also become important that there is support in place, not just for the patient, but also for the graduate or the nurse, to help and assist them with the difficult times and help them to cope with dealing with patients living with HIV and AIDS, because it can become very depressing."*

From the literature competencies related to preventing burnout, managing stress and self-management were also noted by Knebel et al. (2008) and Relf et al. (2011b).

Nurses that provide care and management for HIV and AIDS not only provide physical care, but also emotional support, and this can be found to be intense, as noted by one participant in

group 4: *“You become so ... sometimes we even get more emotionally involved than the family itself.”*

Debriefing and having a buddy system were some of the strategies that were identified as having the potential to assist the student nurses to care for themselves and maintain well-being, when trying to deal with the stress she encounters while providing care and management to people with HIV and AIDS. This is illustrated by Participant 12, who said:

*“What does happen when they develop a rapport with their client? How do they disengage themselves? So that is what I would say, it’s one of the things that would be part of the competencies, the core things that this undergraduate is able to master.”*

What needs to be stressed as important is the development of coping skills, and being able to identify need for support and relief for self and colleagues. The inability to achieve that has the potential to result in burnout for the nurses, which in turn will have a negative impact on the care provided to the patients living with HIV and AIDS, as the nurses will not be able to function at their optimal levels. This identification of needs for self and others is illustrated by group 5, where one participant noted: *“You as a caregiver, you should be in a position to recognize when you need debriefing as an individual.”* Another participant added: *“And then another thing, that one of identifying the colleagues who need debriefing.”*

#### **4.3.4.8 Ethics**

Competency in ethics is one of the identified supporting pillars in the study. It is an important competency because the nurse who provides care and management for HIV needs to be able to practice ethically, identify and manage ethical issues and dilemmas that are encountered as this may improve the patients’ experience of health care. This competency was ranked fifth in the NGT sessions and among the top five important aspects in six of the eight NGT sessions. This competency was also noted from and two of the groups of participants that were interviewed. It comprises two specific competencies, namely ethical issues and professionalism.

#### 4.3.4.8.1 Ethical issues

Nurses providing care and management for HIV and AIDS encounter a number of ethical issues and dilemmas that they need to manage effectively. These include issues mainly related to confidentiality, disclosure and stigma. This was indicated in this study, as illustrated by the discussion in group 7, when the one participant provided an example:

*“... but you get the patients, this one has been tested. And she’s been on ARVs for 10 years and she comes with her partner as if she knows nothing. And then she tests and she knows that she’s positive. And then you, as a nurse, you find yourself in a dilemma, because you know already that this person has been taking ARVs here and you need to remain neutral, and don’t take sides, that’s where the ethical issue comes in.”*

The nurse who is competent in ethics is not only expected to identify and understand the ethical issues, but also to identify and critically analyze the ethical implications that result from own practice and policies that are being implemented.

This is well illustrated by the discussion in group 8, when the participants mentioned:

*“There needs to be a moral ethical issues debate. Because I think some of our nurses don’t think about the fact that when they say to someone, you’re not eligible for ARV, there are ethical implications.”*

Another participant continued:

*“... I think we need to be careful. I still think that we’re meant to be producing thinking people. So there needs to be some sort of discussion about what do they think about eligibility criteria ... How they’re going to deal with it if a client is not eligible. So what are the moral and ethical issues, because it is that kind of thinking that produces people like the Treatment Action Campaign.”*

Stigma was another aspect that strongly featured in the discussions, with the participants indicating the need for the nurse to be able to identify and understand stigma, and to participate in the reduction and management of stigma, while ensuring adherence and respect of people living with HIV and AIDS. This is illustrated by the discussion with group 4, where

one participant said: *“I want the person to have an understanding of the stigma that’s connected with HIV and AIDS.”*

In two of the groups (1 and 4) there was a feeling from some of the participants that focusing on HIV and AIDS in itself fosters the stigma related to it. However, it should be noted that stigma exists in the communities, and HIV is still a stigmatized illness. Patients living with HIV and AIDS may perceive it that way and that has a negative consequence, because it may result in patients not providing all the information about their status, even when it is needed, as indicated by Participant 1: *“Certain people still see this as a stigmatised disease or illness. People tend then not to be honest with you, the counsellor.”*

One of the aims and responsibilities of a nurse educator is to be able to acknowledge the HIV-related stigma and to find ways of ensuring that nurses who are being trained are competent to address and reduce HIV related stigma, as indicated by group 4: *“I think that ... for you then it [HIV-related stigma] should be part of prevention when you go through the ... module as such to prevent it from getting worse.”*

Another participant confirmed this as follows:

*“I think it’s more dealing with it [HIV-related stigma] in a positive way. Not wanting to foster the stigmatization and things like that, but dealing with it positively, finding solutions for problems out there.”*

Furthermore, it has been noted that the HIV-related stigma still exists, and sometimes it is not only directed at the people living with HIV and AIDS, but also, as noted by Puplampu et al. (2014), experienced by those who provide care to people living with HIV and AIDS. This aspect is documented as important, and one finds that the literature also provides competencies related to identification, prevention and management of HIV stigma (NHIVNA, 2007; Relf et al., 2011b).

#### 4.3.4.8.2 Professionalism

As part of ethics competency, nurses are expected to maintain professionalism in the provision of care and management of HIV and AIDS. Relf et al. (2011b) and CANAC (2013) documented competencies that relate to professionalism, noting professional behaviour and professional conduct in terms of maintaining professional boundaries and adhering to the

obligation to care. As HIV becomes increasingly a chronic illness, nurses form long-term relations with the patients living with HIV. Furthermore, with the fear of stigmatization, some patients are not able to disclose their status to other people and this creates the situation where the nurse is the only person that the patient goes to for support. With this kind of relationship nurses need not only to remain ethical, but also to ensure that the relationship remains professional. This is illustrated by group 4, when a participant noted: “..... *About a long-term relationship, they [nurses] must still maintain a professional relationship, and not cross the line into a social relationship.*”

Another participant clarified this as follows:

*“They need to know the mechanisms in order to maintain their professional relationships because it is so easy. And when are they going to detect it when they’re moving into a grey area? So they need a bit of background knowledge regarding maybe ethical, theoretical, professional practice, think of the role of the nurse, those kind of things.”*

#### **4.3.4.9 Policies**

The core competency of policies was the least important competency identified from the NGT sessions, and was identified by four of the groups that were interviewed in the study. It is comprised of two specific competencies, namely legislation and policy analysis and implementation.

##### **4.3.4.9.1 Legislation**

In the study it was mentioned that there are laws that need to be adhered to and applied in the provision of care and management of HIV and AIDS. An example will be taken from the issue of consent for HIV testing and the mental ability of a patient. The Mental Health Act requires the nurse to establish the person’s ability to consent, and Jonsson et al. (2013) stress that health care providers need to recognize that the presence of a mental health illness does not equal inability to consent for HIV testing. This competency related to nurses’ ability to know, understand and apply the legislation needs to be applied when performing HIV testing, and is also included in the list of competencies by NHIVNA (2007). The other aspects that should be considered are provisions from the Nursing Act with regard to prescribing and

dispensing ARV, and section 56 needs to be understood and adhered to when providing HIV and AIDS-related care and management.

This is illustrated from the one discussion with a nurse educator (Participant 15), who stated:

*“You know, the Nursing Council, as far as my knowledge is at the moment, it’s [nurses’ prescribing] never been updated so that we can actually prescribe, which we are doing for many, many years they haven’t updated this one, as far as I know. So this is just another add-on. That’s why I say the scope of the nurses have just been stretched and stretched. In the public health sector they do all of this that is how they get it legally done. Even the ART study is the same for all. They do it under the auspices of a medical officer and therefore if you are a private professional nurse in private practice you may not initiate.”*

The legislation competency was differentiated from policies after clarifications were made stating that the legal aspects relating to HIV and AIDS are related to laws and Acts which weigh more than policies and guidelines, which are developed from the laws and Acts. This was illustrated by group 5, when one participant stated:

*“It is true that when we talk about policies we sometimes talk about the guidelines, but when we talk about legal things, we are specifically sometimes looking at the ethics itself, the Acts themselves, the rules themselves, the what what what. It’s when we try and put it in three. Policies, they are guidelines; they tell you what to do. But a policy, if you have contravened the policy is not heavier than the rule.”*

The legislation competency goes beyond identifying and understanding, but also critically analyzing the legislation as noted by a participant in group 8: *“My priority is ability to be critical of legislation.”*

Another participant provided an example highlighting the need to be critical of legislation based on the patients’ situation, and how such legislation can impact the patient’s outcome:

*“... A child under the age of such cannot access treatment. So critical reflection of legislation and local policy that may be a barrier to ... accessing and*

*maintaining treatment. Because there's also going to the clinic and then maybe they don't have any pills."*

Legislation and policies are closely linked, as illustrated by the statement from Participant 16:

*"Policies must be part and parcel of the curriculum, because if a student does not understand where guidelines are coming from, that it is directly coming out of legal stuff, out of our policies, where it's coming from – then they'll never use it."*

The literature highlighted another aspect, the criminalization of deliberate HIV transmission, which requires that nurses participate in discussions and analyze the duty to warn with regard to deliberate unsafe behaviour (Relf et al., 2011b; CANAC, 2013).

#### *4.3.4.9.2 Policy analysis and implementation*

Policy analysis and implementation-specific competency includes the various guidelines and protocols as applicable on global, regional, national, provincial and institutional levels. The various policies and guidelines that were included in the discussions are those relating to PMTCT, IMCI, INH, STIs, ARV, PEP and many more. These are the various guidelines and policies that are to be implemented in the care and management of HIV and AIDS, and nurses need to be able to implement them correctly and effectively, in addition to being able to analyze them critically in order to identify how they enable or inhibit effective care as well as access to care. The competency related to policies includes critical analysis, and was noted by group 8: *"Yes, but it's reflecting on ... so you will use critical skills to see whether these policies are effective."*

Furthermore, graduate nurses need to be able to understand the direction that is followed and adopted at country level, and this cannot be done after the basic training, as noted by Participant 15:

*"Well, if you just think of HIV/AIDS as a disease and, you know, as a, you know, the infection that we have, and it's existence in South Africa, well, I think a graduate nurse should know about what are the policies that govern HIV/AIDS. So where is the country going? What is the Minister of Health's strategy around managing HIV/AIDS in this country? What are some of the goals that we wish to achieve? Are any of those goals linked to the Millennium Development Goals?"*



*So I think it's important, because I always believe that the training part is, you know, if you don't capture the attention of the nurse while she is in training, it's almost like afterwards when she qualifies, it's almost like okay, now I need to tell you."*

Similar to other competencies, this specific competency is also interrelated with other competencies that have been discussed in the study, and this is illustrated by the discussion in group 7:

*"They should have a knowledge about woman health issues that is affected by HIV, like your family planning, Pap smears and those kinds of things. They should have knowledge about the policies that are in place to address those issues .... Like your family planning, Pap smear policies and those kind of things that's got to do with women's health which is affected by HIV."*

Because nurses form the bulk of health care providers, they are the first-line implementers of the various policies and they need to know where to find the policies and guidelines that are to be implemented in the care and management of HIV and AIDS. This is important in addition to the availability of policies in the various institutions so that nurses can access and analyze them.

However, participants noted that nurses are ignorant with regard to HIV and AIDS care and management, as noted by Participant 13: *"Policies. I don't think nurses are always familiar what's the policies coming from the Department of Health around the management of HIV/AIDS."*

There were reports of implementing policies just as they are, with limited critical appraisal, as noted by Participant 9:

*"Okay, I don't think anybody has really questioned how the policy is implemented. I haven't heard of anyone actually questioning, to be honest. So it is there and we just adhere to it [laughter] - as we're told. It sounds bad!"*

Participant 8 indicated that there was no need to access the policies because the practice was already in line with policies. This begs the question of how that was established if the policies

were not accessed despite being available. It also shows that the policies were not analyzed by the nurses. This is illustrated by Participant 8:

*“I did have access to them all the time, but most of the time it was like, it wasn’t really necessary because they were in that scope of how it should be done. It was in that.”*

The literature also included competencies that related to the analysis of policies, with reports of aspects related to knowing and accessing the policies as well as advocating for policies that will improve the care and management of HIV and AIDS (NHIVNA, 2007; CANAC, 2013).

#### ***4.3.4.10 Interdisciplinary approach***

The last core competency identified from the study is the interdisciplinary approach. Although this competency was not part of the top five core competencies from the eight NGT sessions, it was obtained from the content analysis of three of the NGT sessions, and five of the groups of individual interviews that were conducted. With this core competency, there is an expectation to participate and implement the interdisciplinary approach correctly and appropriately. Collaboration with other health care providers enhances the provision of effective and quality care and provides the opportunity to render holistic care. Although nurses form the bulk of health care providers, they are not the only ones, hence the need and necessity to work with the other disciplines. This core competency comprises three specific competencies, namely community engagement, referral systems and support systems.

##### ***4.3.4.10.1 Community engagement***

The community engagement-specific competency is required to provide not only the insight, but also the opportunity to participate in community activities that are directed towards the fight against HIV and AIDS in terms of prevention and management. This necessitates collaboration with various CBOs, FBOs, NGOs and non-profit organizations (NPOs). The aspects that are essential in the development of this competency include the understanding of community engagement and community participation, ensuring collaboration as opposed to a one-sided intervention where the implementers have little communication and agreement with the group that is being served.

Collaboration in this competency involves the nurses' role and the opportunity to support the various organizations that are involved in the provision of care and management of HIV and AIDS in the community, such as assisting in training of health care workers and home-based carers. This aspect was also indicated in the competencies mentioned in the literature relating to community involvement, collaboration with other members of the multidisciplinary team and understanding the role of the multidisciplinary team (NHIVNA, 2007; Knebel et al., 2008; Relf et al., 2011b). Aspects relating to this competency were illustrated in the discussions with group 7: *“community involvement and insight on NGO approach. How they go about it.”*

Another participant clarified as follows:

*“They must have a sense of community. When they're done they must have a ... even if they don't work in the community, they might not end up working at a community health centre or a well-baby clinic or in the community. They might be in an urban hospital or somewhere. But they must still have a sense of community. And they must still be willing to participate in that sense, maybe to an NGO or a support group ...”*

Participating in campaigns in the community was another activity that was mentioned, which has potential to develop this competency, as indicated by Participant 11:

*“And the campaigns, the important thing is that our students need to be involved in campaigns of awareness. So when the ... or maybe the clinics have got those campaigns, like now, maybe we can say HIV stays or whatever – we need to be able to have our students actively involved in those.”*

In addition, nurses need to be able to create and maintain links with the various resources, as noted by Participant 15:

*“I just wanted to emphasise and really also in your undergraduate not only gets the information per se but also apart from strengthening the fact that they need to link up with their local resources wherever it is”*

This involvement in community was also mentioned by the recent graduate (Participant 8), who viewed it as something that needs to be done: *“Maybe we should just ... or get involved in the communities that are already existing and just try and get a programme.”*

Involvement in supporting caregivers was also reported in literature by Relf et al. (2011b) and in the discussions of group 6:

*“You know, the importance there is not for the nurse to know the transmission for herself, but she must educate ... like the caregivers as well, which is caring for those people at home. Because I also find that from my last ... that is a problem. The caregivers don’t have the knowledge and they are not caring properly for the children, for instance, due to the fear of transmission.”*

Participant 13 mentioned a similar issue:

*“You have a whole bunch of community health workers that we’ve got there. How would you train them to be able to support these individuals in the community?”*

#### 4.3.4.10.2 Referral systems

Part of the interdisciplinary approach include referral systems-specific competency, which refers to knowledge about the referral pathways and to refer the patients living with HIV and AIDS that are in the nurse’s care appropriately, correctly and timeously. To be timeous, one must be able to assess when the referral is needed, recognize how long the management can continue in one’s own practice and know and appreciate which service will be able to provide the best care to the patient living with HIV and AIDS in order to prevent complications and ensure a positive outcome. This is illustrated by Participant 1:

*“That’s where you need to know where to refer to, because if I can’t I need to refer them to like a social worker, a psychologist, sometimes.”*

In group 4 it was noted: *“I think that they should have a good knowledge of the referral base”*; as well as in group 5: *“Identify the need for referral system”*.

Similar aspects were noted in literature, as documented by NHIVNA (2007), Relf et al. (2011b) and CANAC (2013) with regard to knowing where to refer to, to link with services and to make appropriate referrals by following the proper referral pathways.

The aspect of referral systems requires nurses to be comprehensive and to give patients living with HIV and AIDS enough information so that they are able to access the services they are being referred to. One needs to follow up and establish if the patient has been able to access the services they have been referred to, as well as the outcome of that visit, an aspect that was also indicated by Knebel et al. (2008). Failure to do the follow-up may result in the patient not obtaining the required services, and the nurse will not be able to establish the effectiveness of the intervention that has been implemented in the care and management of the person living with HIV and AIDS. This is illustrated by group 8:

*“Can I say something about referral as well? The referral needs to be something that the client can literally follow those instructions and it will work out. So to say, like, you need to go see the social worker. So the referral part is critical. She says you must go and see the social worker and that’s it. You know, you’ve got to say, that they need to have a clear referral, on the first floor, this is so and so ... don’t forget to take your ID and this and that. Because otherwise they go there and they can’t access it. So the referral part is almost like there needs to be respect for the patient’s time and resources.”*

As important as the referral competency is, it was noted that it is not always well applied, as nurses have limited knowledge about the referral pathways, as noted by Participant 13:

*“I think our referral is limited, because, you know, we don’t seem to, many of the nurses, they don’t know where to refer their patients.”*

The timeous referral is closely linked to the ability to assess and to recognize the presenting problem. This is important because late referral may hinder the patients’ outcome. This is illustrated by the interview with the person living with HIV and AIDS, who said:

*“... they [nurses] have to identify [skin problems] you so that they can send you, you know? What you need to take or wherever ... to find someone to help you. Or someone to identify or run some tests. Because sometimes you say I have a chest and then or maybe you’re coughing and then you say no, the coughing helps. For how many days? I think for me, they need to be more careful about that. If you’re coughing then send you straight to test for TB so that you won’t get sick.”*

#### 4.3.4.10.3 Support systems

Those who provide care for HIV and AIDS are not always health care professionals; there are many organizations in the community that provide support to patients living with HIV and AIDS, and nurses need to be able to identify such organizations, the services that they offer, and link and assist patients to access such support systems. This is illustrated from group 3's discussion: *"I put that she needs to have a knowledge of support and home care and that's for the family and the patient"*, while in group 6 it was stated: *"So I think if you write community and you say resources and support systems so that they are able to know where to refer patients to and family."* Participant 13 said: *"Knowing what are the resources available to the community"*.

The literature also indicates aspects that relate to support systems in the care and management of HIV and AIDS. Knebel et al. (2008) indicate a competency related to linking patients to support services and support of vulnerable groups of people affected or infected with HIV, while CANAC (2013) includes linking patients to support, with Relf et al. (2011b) indicating a competency that relates to mobilizing support for patients living with HIV and AIDS.

The support system competency differs from the referral system competency in that the referral system is reserved for links required for provision of care, while with the support system, patients living with HIV and AIDS will be linked with services in the communities that are involved with providing any other aspect of support required by the patients living with HIV and AIDS. An example mentioned in the interview with Participant 9 indicates the benefit of such support services; however, as the participant continued and indicated that such support services were discontinued, negative outcomes were noted:

*"You know, we still have mothers-to-mothers which is a good thing. It is people living with HIV and they could relate to it. So they've taken that away because of lack of funds, which is quite sad, it is very sad. ..., because there's a lot of people who actually default because I feel that they don't have that extra support, because they used to see this at every visit, they would see one of the ladies of mothers-to-mothers. And like you know, they just felt like somebody was there for them, because it is not easy for everybody."*

A competency reflects the application of knowledge, skills and attitude that the competent person must display, as noted by Carraccio et al. (2002) and Cowan et al. (2007). In this study, for identified HIV and AIDS nursing core competencies, the knowledge, skills and attitude components related to HIV and AIDS care and management were also identified, as reflected in Table 4-6. It is to be noted that, since the study endorsed the constructivist perspective, the skills will also include the critical thinking and analysis in the performance of the skills.



Table 4-6: Identification of knowledge, skills and attitude for each core competency

<b>Core competency</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Attitude</b>
Knowledge	Understand basic facts about HIV and AIDS, normal values in assessment related to HIV and AIDS, ART information, prevention measures and HIV-related issues	Differentiate normal and abnormal immune system and response, describe issues related to HIV and AIDS, analyze the prevention measures, assessment and management strategies	Appreciate impact of HIV, relate to HIV-related issues, value patients' factors that may interfere with prevention and management
Ethics	Understand ethical principles, ethical issues related to HIV and AIDS, understanding of stigma	Implementation of ethical principles, managing ethical dilemmas, stigma assessment, management and prevention	Appreciate impact of stigma, importance of ethical principles, non-stigmatization, value professionalism, acknowledge unethical and unprofessional behaviour
Policies	Knowledge of policies, laws, guidelines, sources of policies, how policies are developed	Implementation and analysis of policies and regulations	Critically analyze policies, appreciate the benefits of policies and how they can become a barrier to care, analyze own role in policy development
Interdisciplinary approach	Know the resources, principles of community engagement, referral pathways, support systems	Participate in community, refer patients, link patients to support systems, identify support systems	Positive collaboration, value place of others in care, appreciate need for continuity of care
Personal and professional	Knowledge of strategies and resources for personal and	Care for oneself, obtain information and support	Value the need and importance of development and self-care, prioritizing



<b>Core competency</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Attitude</b>
development	professional development		own development
Health education	Knowledge of behaviour modification theories, accurate info on HIV and AIDS	Provide health education, facilitate learning	Be sensitive to clients' context/background, appreciate importance of health education
Holistic safe practice	Knowledge of effect of HIV on person, what to look for in assessment, management options and strategies	Complete assessment, manage HIV holistically, practice safely	Interpersonal skills, value the need and importance of care, relate to patients positively



### 4.3.5 Structural requirements

In the discussion the participants did not only mention the HIV and AIDS-related competencies required for new nurse graduates, but also mentioned other structural aspects and requirements that are important for the integration of HIV and AIDS-related competencies into the undergraduate programme as well as the development of such competencies for nurses. These include teaching strategies, learning opportunities, setting readiness and teaching staff development, which were all taken into consideration when mapping the identified competencies.

#### 4.3.5.1 Teaching strategies

It was noted that the teaching strategies to be implemented must be appropriate for the development of the competencies. For the development of the HIV and AIDS-related competencies for nurses, the education and training of nurses needs to include both theoretical and practical teaching and learning opportunities, as this will facilitate the transfer of information. This is illustrated by Participant 16:

*“It must be in a theoretical sense and then you must take them out and you must teach them in practice about it. Most of our students are young and whatever skills you have taught somebody throughout their lives they will be able to reflect back on that and be able to use it. But not teaching alone. They must be able to practice it.”*

This practical experience while still in training is essential and there needs to be more practical exposure, as noted by some nurses in clinical practice and recent graduates. This is illustrated by Participant 1:

*“... They need that ... what can I call it? The practical experience, because it's like the HIV virus is sometimes very confusing. You can know this is how it's supposed to be. This is how it should run and then it doesn't do that....”*

The practical experience should not to be limited to hospital settings, as exposure to home visits has the potential of facilitating the nurses' understanding of HIV and AIDS, its impact and how to plan care for the patients living with HIV and AIDS while considering the context of the patients. This is illustrated by Participant 16, who said:

*“I know that we do go do home visits and we have to understand a little bit more about the situation in the home of a person living with HIV. So I think students must also be exposed to that. They must go into there where the people live and not only see them in the hospitals. We must not only train them to be able to look after them when they are in a secure and a safe hospital space. I think they must go out and see and experience what those people deal with because it will give them a little bit better understanding and open up, I think, their view of what this disease does.”*

As noted by the WHO (2009), in the fight against HIV and AIDS the educational strategies to be applied to enhance relevant and appropriate teaching and learning processes should be progressive. In this study various teaching strategies emerged from the discussions, including CBE and SLM. As illustrated by Participant 11: *“Then if we in case-based we will have a case that will hone in on those infections [opportunistic infections]. So that we know that we will have those discussions.”*

The same participant indicated that one needs to contextualise learning, and the use of cases facilitates that:

*“Because now once you understand they have the pathophysiology of it, the understanding, then we have to contextualise it. And also, it comes in again with the cases.”*

In addition to CBE, SLM is another valued method currently being used in nursing education at UWC. It provides the opportunity for self-directed learning, as illustrated by Participant 1:

*“The lab for me, should be key to the development of the nurse. If you’re willing to learn and if you’re willing to want to understand, let there be videos you can go and watch to improve yourself.”*

However, its effectiveness can be improved by ensuring that equipment found in real clinical settings are also used in the skills laboratory, and by expanding it to improve access for all the students.

These are some of the methods that emerged from the first phase of the study. Further discussions about teaching strategies were conducted in the second phase of the study, during the curriculum mapping.

#### ***4.3.5.2 Learning opportunities***

The HIV and AIDS-related competencies are developed while the nurse is still in training, and these are developed from the other generic competencies of a nurse. It is crucial that while in training, the nurse is given opportunity to develop such competencies as identified in this study. This requires the people in charge of education and training to plan the learning opportunities for student nurses and to ensure that student nurses have enough time to develop the competencies, not as robots, but within a constructive approach to learning, which allows the students to explore their own interests, to question the situation and to strive to make a difference. To achieve this, the opportunity to provide care and management to people living with HIV and AIDS must be facilitated, and as the teacher is considered a facilitator within the constructivist perspective, this will link strongly with the teaching strategies to be applied such as clinical placement, case studies, role-play, and so on.

In addition to the nurse educator facilitating the learning opportunities, the clinical settings where students are placed for the clinical aspect of the training should be ready to provide and allow student nurses the opportunity to develop the competencies. This was an issue, as noted by group 1 when they indicated that students are not given the opportunity to provide HIV counselling and testing in practice. This issue was also highlighted with reference to the role models that are available in the clinical settings while nurses are still in training. For adequate and effective development of competence, nurses need to be able to witness role models who are executing the correct practices, and this has been reported to be lacking sometimes, as noted by one recent graduate (Participant 6) when she said:

*“ ... now that you are doing HIV and AIDS things, you should be taught how. They expect us to learn from the people on the ground. The people on the ground are doing wrong things ...”*

This participant specified that not many nurses know much about HIV medications. The exposure to clinical practice and learning opportunities has the ability to enhance nurses' competency in terms of confidence and positive attitude. It emerged that not having enough

practical experience created fear. This is illustrated by Participant 9, who when asked about her fears, stated the following:

*“Because you need to live a situation before you know what it is about. So you can have all this theory but when you actually go through it practically, your body is there in the ward with this patient. You’ve become so because of unknown ... you know exactly how HIV is spread and how you can be exposed to it by blood or splatter or things like that. And then because it’s just, how do I explain, it’s just not knowing until you’re actually in the situation ...”*

This highlights the notion that exposure while in training may facilitate nurses’ ability to function upon graduation, as also indicated by Farrand, McMullan, Jowett, and Humphrey (2006), who reported that there was an increase in confidence that could have been a result of increased clinical placement within a competency-based curriculum.

#### **4.3.5.3 Teaching staff development**

Nurses develop the required competencies during their training. Nurse educators are the facilitators of learning and their competencies should not only include teaching, but also HIV and AIDS care and management. It is therefore important to ensure that the teaching staff, whether it is a lecturer or a clinical supervisor, is all up to date with the information that relates to the care and management of HIV and AIDS. Participant 12 noted that the preparation of lecturers is important:

*“... are the lecturers themselves well being prepared to take this to the undergrad? Maybe one of the things is the preparation of the lecturers themselves. I spoke about the communication skills. Do they have? Do they understand or do they just take it as any other subject that they can just go and talk about because they read it on the paper? Does it get into them to understand ... because they say, in order for you to transmit something the change must be within you. So for me, I would also say that there should be a dual approach, preparation of the giver to prepare them.”*

The participant further concluded as follows:

*“So in other words, the whole issue of empowerment, it goes to the undergrad, but also to the people who are teaching it.”*

The development of teaching staff has been noted to be an integral part in the process of the integration of the HIV and AIDS curriculum, also noted by HEAIDS (2010). Furthermore, according to Hayes (2002), success of integration into the curriculum also requires attending to the development of staff.

In the era of rapidly changing information in general and also with regard to HIV and AIDS, teaching staff should be able to stay ahead and master new knowledge to facilitate their ability to enhance competency development of the student nurses with regard to HIV and AIDS. This is well indicated by Participant 6:

*“For me, the whole ... even your lecturers, maybe give them a refresher course, they also forget. There are new medications coming out, new resources are coming out, the way forward perhaps I think more integrate these two things.”*

#### **4.3.5.4 Setting readiness**

In the discussion it was noted that some equipment was not available, which will have a negative effect in the provision of care and management for HIV and AIDS. Equipment shortages can have a negative impact on the nurses' practice and weaken the competency level.

Participants mentioned the issue with regard to infection control, when the students and the nurses in the clinical settings experienced a shortage of protective gear. Participant 9 said:

*“And we don't ... I feel that, how do I say? We don't have enough protection, especially when it comes to midwifery. They give you a red apron and they give you gloves that barely fit.”*

In addition to reducing the nurses' ability to practice safely, it increases their fear, as one recent graduate (Participant 9) mentioned:

*“And I felt that because of the lack of protection, I’m lucky I wear specs, although I do have goggles, I am lucky that I wear specs, the lack of protection, I felt very unprepared.”*

Setting readiness is also mentioned in terms of student nurses being given the opportunity to practice the required skills while still in training. It will be unfair to deny nurses the opportunity to learn and practice their skills during training and then expect them to be able to perform after graduation. This was indicated by one of the recent graduates (Participant 9) when she spoke about the ability to put up a drip:

*“Where I was not really, okay, when it came to drips, and drawing blood, we had very, very limited exposure. Everything, I can put up a drip beautifully now, but it was ... you know, those first few months, and it’s not that we were not willing, hungry to learn when we were students, it was just that when you’re a student in a ward or in a clinic, the registered nurse tends to just take that away from you.”*

#### **4.3.6 Competency categories, core competencies and structural requirements**

With the identification of the HIV and AIDS related competencies for a new nurse graduates and structural requirements, an HIV and AIDS nursing core competency framework was developed (Figure 4-7). The framework highlights the relationships between the various competencies.

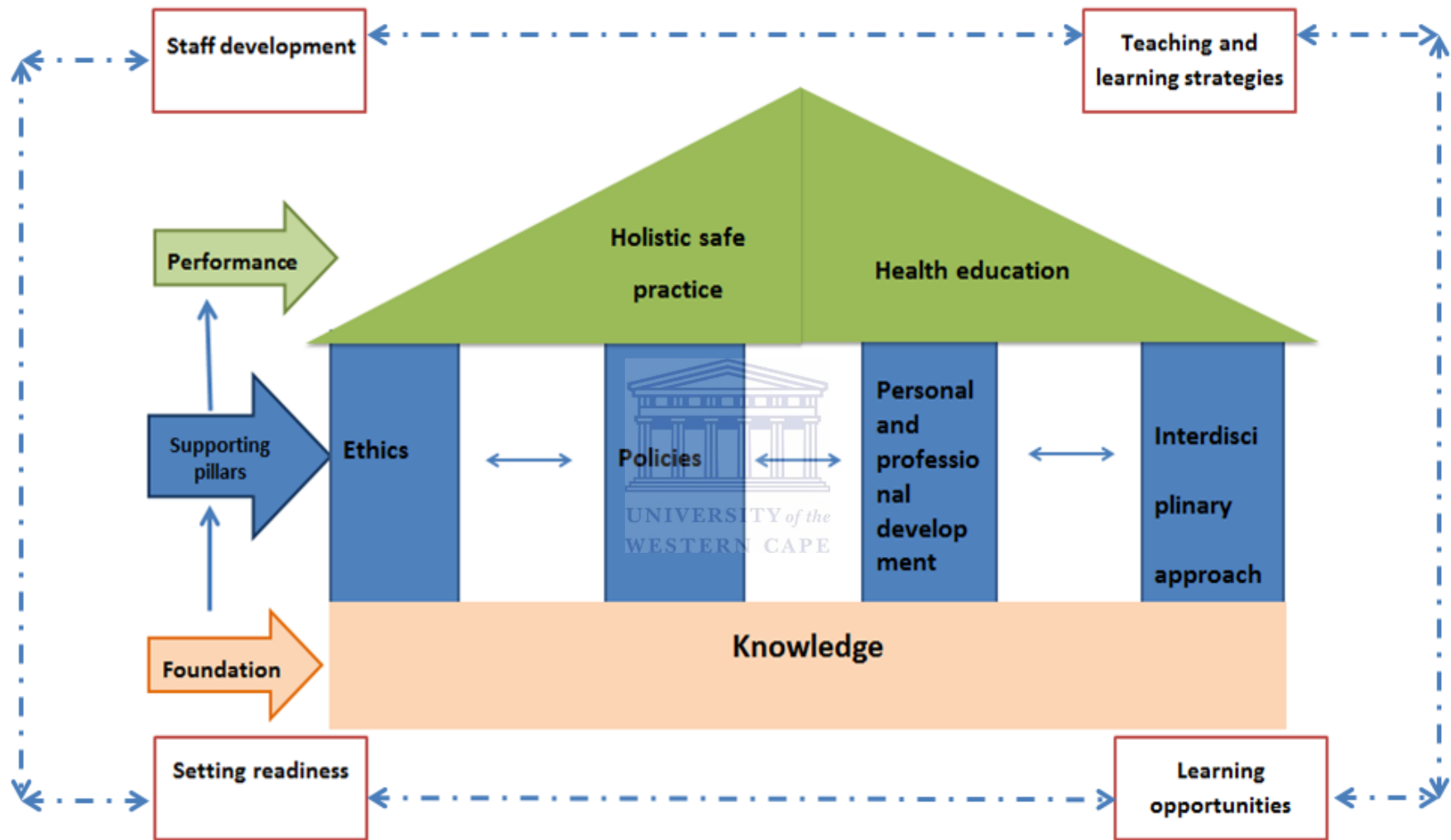


Figure 4-7: HIV and AIDS nursing core competency framework.



### 4.3.7 New graduate nurses' shortfalls in HIV and AIDS care and management

From the discussions during data collection, participants reported issues that new nurse graduates struggle with in relation to care and management of HIV and AIDS. These were important to keep in mind, as they indicate what is expected of a new nurse graduate and will form part of the core competencies to acquire during training. They provide an idea of the current status, informing the way forward for integration of the new developed competencies into the nursing programme.

The aspects identified as weaknesses or shortfalls were related to knowledge, holistic safe practice, health education, policies and interdisciplinary approach core competencies that have been developed in the study.

#### 4.3.7.1 Knowledge

Participants indicated a lack of knowledge with regard to the pharmacological aspects of HIV and AIDS management, and this related mainly to knowledge of medication, its side-effects and interaction with other medication. This is illustrated by the following quotations; Participant 3: *"They know how to treat a patient, but the medication, they ... like the side-effects, you don't hear ..."*; and Participant 8: *"I'm not too well on the interaction with other medication"*.

In addition, interpretation of blood results and their implication with regard to management decisions was noted to be problematic. This is illustrated by Participant 4:

*"I think also it depends on the results. Sometimes doctor takes bloods for the liver function and then they change it or the treatment is being stopped, but you don't know for what reason actually that it has been stopped."*

With the decision to have nurses initiate and monitor patients on ARV, nurses should not only know the medication, but also how the different types of medication work, how they interact with other medication the patients are taking, and the side-effects. Furthermore, nurses need to understand the various investigations carried out and how the results will influence the management decisions to optimize patients' outcomes.

The other shortcomings that were reported related to the knowledge and understanding of HIV information and pathophysiology, limited awareness of universal precautions and

prevention, and this in turn limits the nurses' ability to link HIV with other infections the patient living with HIV and AIDS may present with. Failure to link the two may result in the patient not receiving optimal care. This following excerpt illustrates how the limited knowledge in universal precautions causes fear in the nurse:

*"... And I also think, from my perspective, point of view, is that some of them are scared because why they are, how can you say, what's the word now, they are not fully aware of the do's and the don'ts, you see. How to wear protective gloves. Can I touch the person? Can I touch his urine? You know, stuff like that."*

(Participant 5)

#### **4.3.7.2 Holistic safe practice**

Any weakness in knowledge is bound to be translated into practice, and this was mentioned when participants identified the weakness in identifying side-effects of medication when doing assessment, or when providing management based on the stage the client is placed in, for example. Furthermore, the recent graduates that participated reported problems with setting up drips and drawing blood, and how they were expected to perform such activities in practice. The following passages illustrate such reports:

*"Oh, with the drip, with the drip. That's the only thing that I feel that I should've had more training in. ...."* (Participant 8)

*"And then you get people who are very nonchalant – it's just one of those things. They actually just go out and don't protect themselves, don't use gloves, like for certain things, drips and stuff like that."* (Participant 4)

This weakness has implications, as the incorrect practice of skills increases the risk of needle-stick injuries. Avoiding performing the skill can put a client at risk, because the care that needs to be given can be delayed, and trying to see if they can manage can create discomfort for the client, as stated by the person living with HIV.

Issues related to interpersonal skills were also reported as being problematic for the nurses. They reported uncertainty about how to support a patient living with HIV; some nurses still displayed a judgmental attitude, as well as being uncomfortable when talking about HIV to patients and providing support to the family. Stereotypes can still be noted from the

interviews, such as in the case of Participant 8 who noted being shocked when noticing a person with HIV, and wondering how that happened as she was ‘well-kept and educated’:

*“To be honest, I think when people’s social background ... that was, I don’t know, social background that someone was, you know, came in with that good qualification, knowledge, well presented and then when they do the test, the test came back positive. And then I wonder what happened. But then she was walking with this thing in her that she never told that anyone.”*

#### **4.3.7.3 Health education**

From the data the aspect that was noted as a shortfall with regard to health education related to the ability to transfer information. There is a need to use effective communication skills and work with patients instead of giving them instructions. Giving feedback and reinforcing the information are some of the aspects mentioned that student nurses need to develop. This is illustrated by the interview with the person living with HIV and AIDS:

*“... sometimes when they give us an instruction they were like, it’s not like they’re advising you, they are not telling you, you need to do what, why aren’t you doing this? So those kind of questions, they make you feel uncomfortable... They just tell you it’s going to disappear. It’s not like it is explained. I think they need to explain to us about the symptoms.”*

Effective health education includes giving patients living with HIV and AIDS the correct information and advice, but nurses should also enhance the patients’ understanding and compliance by ensuring the information is well explained.

#### **4.3.7.4 Interdisciplinary approach**

With regard to an interdisciplinary approach, despite the fact that the South African health system has adopted a primary health care approach, it emerged that there are limitations related to referral systems and knowledge about the various resources that can be accessed by patients living with HIV and AIDS. This is illustrated by the comments of Participant 13: *“I think our referral is limited, because, you know, we don’t seem to, many of the nurses, they don’t [know] where to refer their patients.”* This limitation will affect the care and management of patients living with HIV and AIDS, as it inhibits continuity of care.

#### 4.3.7.5 Policies

Competency in policies related to HIV and AIDS care and management were another shortcoming noted, and this is illustrated by Participant 13, who said:

*“I don’t think nurses are always familiar what’s the policies coming from the Department of Health around the management of HIV/AIDS.”*

Nurses are the ground-level implementers of most policies, guidelines and regulations that relate to the care and management of HIV and AIDS. They are required to not only know the policies, but also to understand them and analyze them critically to ensure that the policies that are in place contribute to the well-being of the patients living with HIV and AIDS. However, it was noted that sometimes the HIV and AIDS-related policies are not available, as noted and illustrated in the following excerpt from one recent graduate:

*“That’s [policies related to HIV and AIDS] part of what you’re supposed to learn. How can you learn about HIV and AIDS and you don’t even know what the policy or protocol is? Even when you visit some of these hospitals, some of the wards, they don’t even know HIV and AIDS protocol and policy. So yes, policies need to be put in place, need to be taught anyway and learnt. And then when you go to a facility to say, this is not happening, do you have a policy on HIV and AIDS? And if you don’t, you know that they’ve changed this thing, then you go and get ... maybe it’s there in the hospital but not particularly in the ward.”*

(Participant 6)

Participant 7 also said: *“Oh, I’m not familiar with that [policies related to HIV and AIDS], not even in the hospital in the ward where I’m working. I never saw policy on HIV.”*

The outcome of the first phase of the study was a comprehensive list of HIV and AIDS nursing competencies that will be integrated into the four-year nursing programme at UWC. The integration of the HIV and AIDS nursing competencies is envisaged to facilitate the development of those competencies for a nurse graduate to be able to provide care and management for HIV and AIDS upon graduation. This would reduce the need to first send the nurses for training related to HIV and AIDS when they are first appointed in the clinical

setting. The first phase also identified the shortfalls that were noted in the interviews, ensuring that they are incorporated in the competencies that were developed. Furthermore, the findings of the first phase provided structural requirements that will be put in place to enhance the integration and development of the HIV and AIDS competencies for nurses.

#### **4.4 Phase 2: Curriculum development**

In this phase, based on the identified HIV and AIDS nursing core competencies and specific competencies, outcomes were developed for the programme as a whole, and for each year level. These were mapped in the four-year undergraduate nursing curriculum following the modified curriculum mapping process. This was done to provide an answer to the second objective of the study. In addition to the mapping of the competencies, teaching strategies and learning opportunities were discussed. The activities of the second phase of the study also correspond with the second and third pillars of the COPA model, related to outcomes and performance, and relate to the design step of the IR: D&D.

##### **4.4.1 Educational considerations for competency mapping**

Following the process curriculum development model and with involvement of nurse educators, the identified core competencies were mapped over the four-year nursing programme at UWC, through a process of deliberation and verification, providing the opportunity to plan how the identified HIV and AIDS competencies for nurses can be integrated. Mapping of the competencies took into consideration the three pillars of the COPA framework, with clarification of HIV and AIDS nursing competencies being identified and described. The mapping included development of competency outcomes and discussions on the practice-driven and interactive learning approaches (Lenburg et al., 2009).

Furthermore, OBE was considered the most appropriate curriculum approach due to its benefits, but also as it is the approach that is applied in the School of Nursing at UWC. The other consideration was on the reconstructionist educational philosophy applied in the study, with the understanding that students are active participants in the creation of knowledge, and that the education process serves developing graduates who are critical of the current status and aim to make changes (Ornnstein & Hunkins, 2004).

Teaching and learning is a process, and in mapping the core competencies and specific competencies and outcomes, it was emphasized that the level of competency must increase as the programme progresses and students move from one year level to another. It has been noted by Tilley (2008) that it is important to ensure that the level of competency increases from one year level to the next. This was also illustrated in one workshop with nurse educators in the fourth year when one participant said:

*“The interdisciplinary approach, the support system, I think a way of support system at fourth-year level is not the right pitch. I would rather say like identify and mobilise. You know, they need to be able to identify the support systems and to be able to mobilise them as well. Because it is one thing to have a list of resources and you identify which one will be appropriate for the client, but you also need to put it into action for the client like mobilising it.”*

Furthermore, duplications were avoided, as illustrated in this excerpt from one participant at third-year level when discussing the addition of a primary health care approach to the third year, when students are placed in the community as part of their clinical training:

*“Because we don’t want a duplication. Here we’re focusing on HIV and AIDS and how to integrate it. So if it’s covered in first year or whatever module, why would we want to repeat it specifically?”*

Participants also looked at the various competencies to establish whether they are being planned for the appropriate level or if they should be addressed earlier. As one participant indicated:

*“I see the counselling comes in at year level four under holistic safe practice, but ... they will be ready for community ... so we can’t wait for level four.”*

Having established the considerations for mapping of the HIV and AIDS nursing competencies in the four-year undergraduate nursing curriculum, the participants mapped the competencies and outcomes for each year level. In addition they established the teaching and learning processes that will be applied for students to learn and develop the identified HIV and AIDS competencies for nurses.

#### **4.4.2 The teaching and learning process**

In the second phase of the study the participants in the year-level discussions also considered the teaching and learning processes, with reference to the various teaching strategies and learning opportunities that can be part of integrating HIV and AIDS-related core competencies into the four-year undergraduate nursing programme at UWC. The teaching strategies were synthesized as conducted in class, in clinical settings or both classroom and clinical settings. The learning opportunities were classified as classroom opportunities or practical placement opportunities.

##### ***4.4.2.1 Teaching strategies***

The teaching strategies discussed in the workshops were either related to classroom, practical settings or both. Strategies that can be used in both situations are the case-based approach, audiovisuals, role-play and using HIV and AIDS as a theme that can be presented throughout the year.

The case-based approach is the main teaching approach currently adhered to in the School of Nursing at UWC, and participants indicated that it is possible to develop longitudinal cases that cover the various aspects of HIV and AIDS. These cases can be followed and developed from year one to year four, or HIV can be integrated in the various cases that are used in each year level to explore the various aspects required for the development of the HIV and AIDS core competencies. It is also possible to have HIV and AIDS as a theme that can be followed throughout the year, and various other aspects covered in the nursing programme can be developed from the theme. The possibility of including audiovisuals and role-play in the class sessions to explore and cover the various aspects of HIV and AIDS-related core competencies was also discussed.

Teaching strategies applicable to the classroom, like class discussions, lecture input and expert lectures, could also be used as possible teaching strategies for development of the HIV and AIDS core competencies developed in the study. In the clinical settings the strategies identified for the development of core competencies related to HIV and AIDS include reflections, the SLM, individual case studies and participation in projects. The SLM is currently used in the school, where students develop the various competencies in a simulated environment, providing opportunity to practice, with guidance and independently, before they are assessed. Reflections were also mentioned as a possible and feasible strategy, where

students will reflect on their own lives and on what they have experienced in the clinical settings. Individual case studies can also be used as a teaching strategy, where each student can follow a patient living with HIV and AIDS in their placement for a period of time. This will provide an opportunity to develop a range of competencies, while enhancing reflection on and consideration of the patient's context and background, and the student nurses will be able to see the patient in various clinical settings and in patient's own home and community. Furthermore, student nurses can be involved in community projects, which will provide practical exposure that can be used to develop the identified HIV and AIDS core competencies.

It is to be noted that as most of the nursing modules at the School of Nursing at UWC have the theoretical and clinical components of training incorporated into one module, these strategies can be applied in any of the modules. These teaching strategies, as noted by Simpson and Courtney (2002), are found to be appropriate and useful in the development of HIV and AIDS competencies and are also acknowledged as being effective teaching strategies in developing critical thinking skills. Simpson and Courtney (2002) have listed a number of authors that have supported these teaching strategies as instruments for development of critical thinking, such as Elliott (1996); Free (1997); Lenburg (1997); Oermann (1997); Whiteside (1997); Fowler (1998); Schell (1998) and Sellappah, Hussey and McMurray, (1998), who with Popil (2011) highlighted questioning, small-group activities, role-play, case studies and journals as some of the teaching strategies supported by majority of authors.

#### ***4.4.2.2 Learning opportunities***

The two settings that were identified as providing learning opportunities are the classroom and clinical setting. The classroom provides the opportunity for development of identified and developed core competencies related to HIV and AIDS, and the opportunities will be enhanced by use of the various teaching strategies identified in the previous section. In class, students will engage in discussions, solve the various issues presented in case studies and role-play how they will relate and attend to the patients, which will all provide the opportunity to develop the HIV and AIDS core competencies. The information obtained during the lectures, presented by either the lecturer or the expert, also provides the opportunity to learn and develop the HIV and AIDS core competencies. The experts can be practitioners that have developed expertise in HIV and AIDS care and management, or even



patients living with HIV and AIDS; people living with HIV and AIDS are able to give a personal account of their own experiences, making it more realistic for the students.

Students have indicated that they value other teaching and learning experiences, such as group work and discussions, as Solomon, Guenter and Stinson (2005) noted. Furthermore, as indicated by Maina, Sutankayo, Chorney and Caine (2014), exposure to people living with HIV and AIDS during nursing training provides an opportunity for student nurses to encounter and discuss HIV and AIDS-related issues before they have to practice. As nursing is a practical course, the clinical setting will also present opportunities for the development of HIV and AIDS core competencies, as students will come into contact with patients who are infected, affected or at risk of being infected with HIV, and they will be able to practice and develop these competencies.

Clinical settings were identified as institutions that provide health care services, such as hospitals or clinics, but also as the setting where patients live in their homes and communities. Participation in a community project is an example of the community as a setting that provides learning opportunities for the students where they can develop the HIV and AIDS core competencies needed upon graduation to ensure that they are well prepared for practice and can function effectively. As noted by Lenburg (1999) and Lenburg et al. (2009), the third pillar of the framework focuses on practice-driven interactive learning approaches and in this study the learning opportunities in the clinical settings were included, providing an opportunity for student nurses to practice the competencies related to HIV and AIDS instead of acquiring theoretical knowledge only.

With the adoption of constructivism that emphasizes the students' active participation and collaboration, the teacher as facilitator and creator of knowledge based on previous knowledge (Brandon & All, 2010) applies experiential learning that enhances the application of theory and practice, connects new and old knowledge, and the student nurses' active participation and collaboration in the creation of new knowledge (Lisko, 2010). Kolb's experiential learning theory is based on the philosophy of constructivism, and focuses on how students merge their personal and environmental experiences in the creation of knowledge that allows them to plan actions that are based on their interpretation and understanding of the knowledge gained (Meggs, Greer, & Collins, 2012; Yardley, Teunissen, & Dornan, 2012). Kolb's experiential learning theory posits that learning is a process, and provides a cyclical model of knowledge development consisting of four learning modes, namely concrete

experience, reflective observation, abstract conceptualization and active experimentation (Svinicki & Dixon, 1987; Kolb & Kolb, 2012; Yardley et al., 2012). However, as noted by Schlesinger (1996), the understanding in the study is that the four modes can be further interconnected, as reflected in Figure 4-8. In this study the various teaching strategies and learning opportunities identified can be applied using the four modes of Kolb’s experiential learning theory within the philosophy of constructivism to develop the HIV and AIDS nursing competencies.

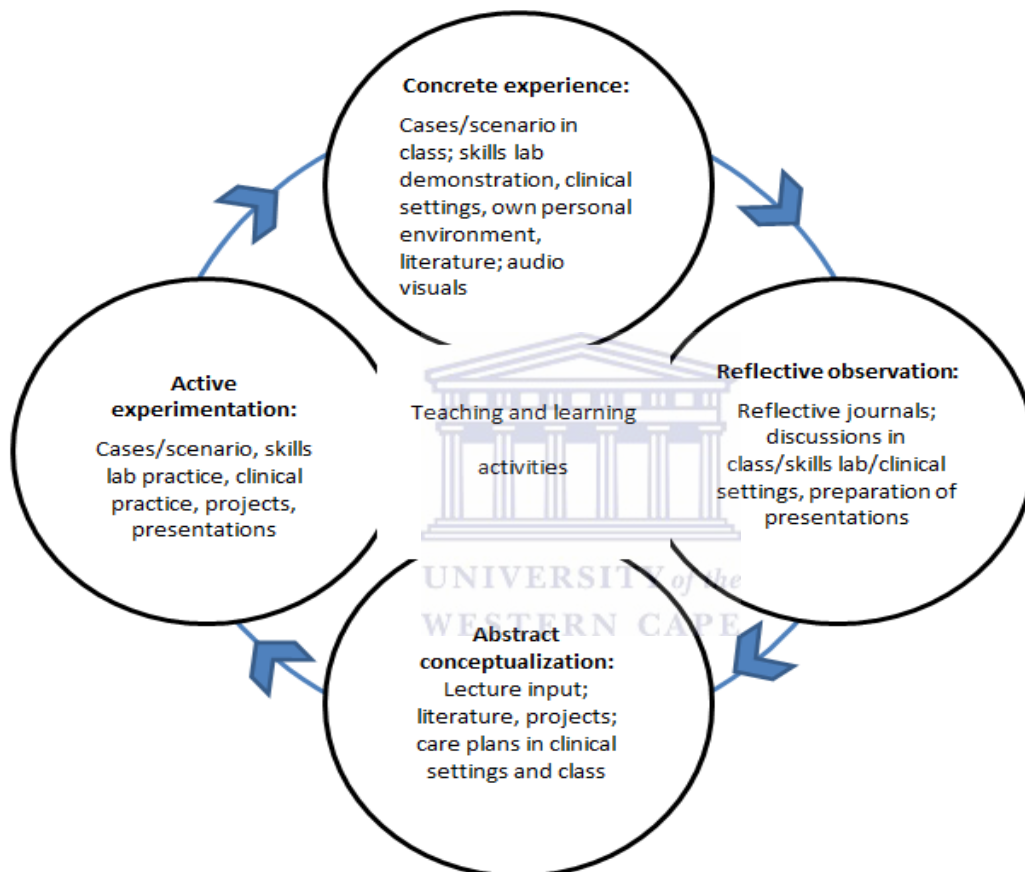


Figure 4-8: Linking the teaching strategies and learning opportunities to Kolb’s experiential learning theory.

#### 4.4.3 Outcome of the HIV and AIDS nursing competency mapping

In the first of the five workshops with various nurse educators at the School of Nursing the competencies were mapped into the four-year programme, and then outcomes were developed. In the subsequent four workshops the whole map of competencies, specific competencies and related outcomes were presented to the different year-level nurse educators. In the workshop the participants discussed, reviewed, modified, added, removed

and rearranged the competencies and outcomes, based on what will fit into the current undergraduate nursing programme. During the discussion the following issues were identified and modifications were made.

The participants indicated that some of the competencies listed were not part of the current programme, and an example here was suturing and setting up an intravenous line. As the programme is structured now, the student nurses learn suturing in the third year when they do midwifery, and this is practiced if a client has an episiotomy or a tear. It was discussed as one of the skills that needs to be mastered before reaching the midwifery part of the programme, because suturing an episiotomy is more complex than suturing a part of the body that is easily accessible and visible. The other aspect was related to setting up a drip, and moving this to the third year was discussed, because second-year students are trained to master injection skills, where they should master accessing muscles before they can start accessing a vein.

These two aspects were viewed as important in the development of HIV and AIDS core competencies. Nurses need to master these skills, because failure to master these two skills has a negative effect on the application of universal precautions, which is part of safe practice competency developed in this study. Nurses who are not able to perform these two skills risk injuring themselves, hence increasing their exposure to patients' blood, and if the patient is living with HIV any exposure to body fluid increases the risk of HIV infection to the nurse. The opposite may also hold true, that the nurse may be the one who is living with HIV and AIDS, and if any of these two skills are not mastered, the nurse may end up injured, hence exposing the patient to the nurse's blood.

With the discussion on counselling it was indicated that the counselling of a child should be removed from the undergraduate nursing course, because attending to mental health issues of children is a specialty within the mental health discipline, which is beyond what is expected from a new graduate. During the workshops with each year level some aspects were also moved to different levels based on the structure of the programme and the available learning opportunities. For example, although the participants felt that HIV counselling needs to start in the first year of the programme, a closer look at the programme revealed that it will not be feasible nor practical, because students in the first year are still developing communication skills and mastering therapeutic communication. The clinical placement and learning opportunities are also limited for first-year students as they are placed only once a week, and

only in the hospital, which may become a problem as all of the students may not get an opportunity to practice the skill of counselling in the hospital setting.

Furthermore, the participants stressed the importance of using action verbs that highlight a higher level of learning and practice for the final year of the programme. These student nurses will be expected to function at a higher National Qualifications Framework (NQF) level, and that level is closer to the expected level of a new graduate, who will be able to transition into practice with ease.

For each specific competency an outcome was reviewed and distributed over the four years to ensure steady development of the competency. The assumptions to consider include the notion that knowledge builds on previous knowledge; hence the indication of an increase in complexity when looking at the outcomes from one year level to the next. The other assumption is that a competency is comprised of knowledge, skills and attributes, and Bloom's taxonomy was used as a guide to indicate the knowledge (cognitive), skills (psychomotor) and attributes (affective) of each specific competency.

Figure 4-9 in chapter four and Table 5-2 in chapter five show how the competencies were mapped into the four-year curriculum, highlighting the various outcomes developed for each year level to contribute to the final development of the HIV and AIDS nursing competencies by the end of the programme.

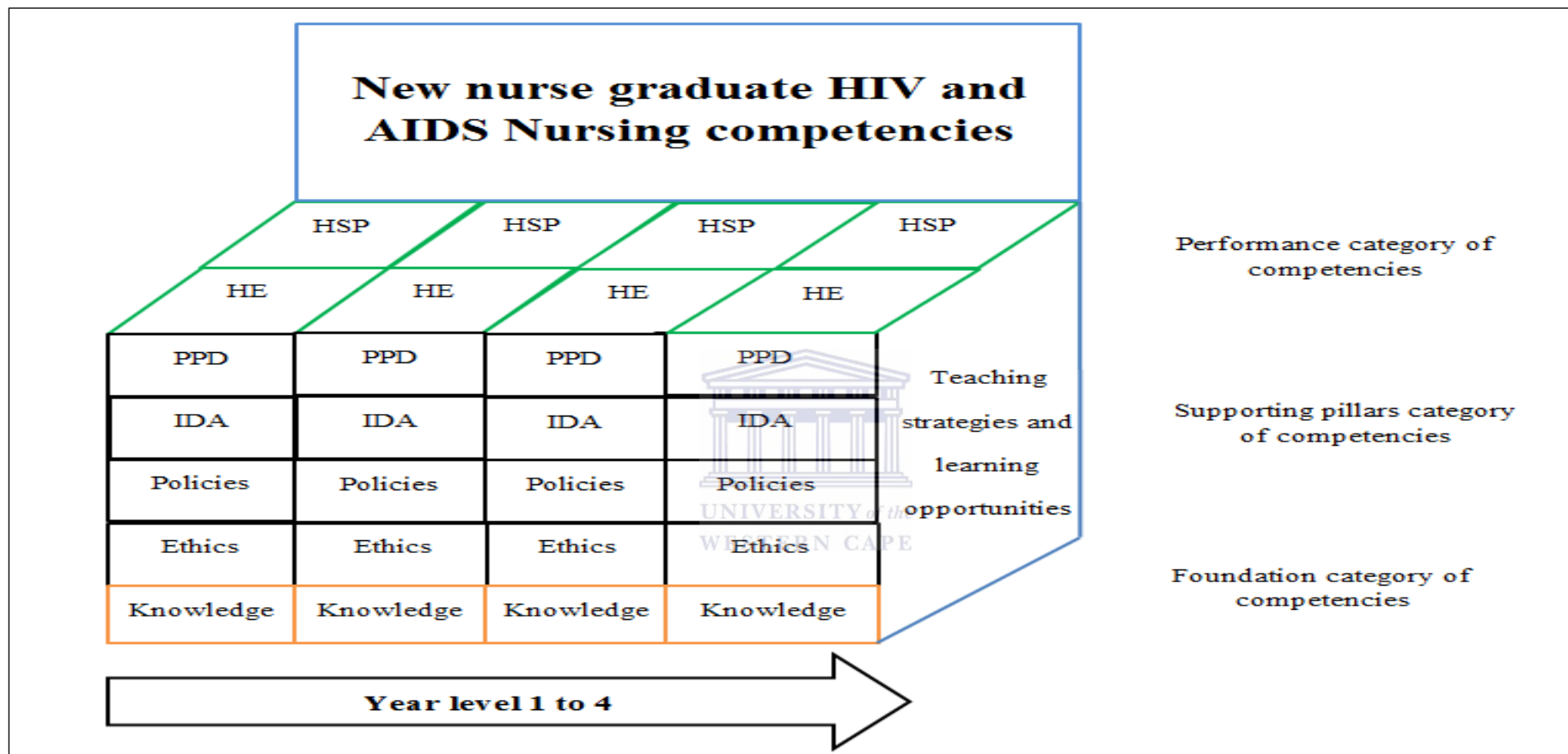


Figure 4-9: Framework for HIV and AIDS nursing core competencies integration into the four-year nursing curriculum at UWC.

IDA = Interdisciplinary approach; PPD = Personal and professional development; HE = Health education; HSP = Holistic safe practice.

## **4.5 Phase 3: Verification**

For the outcome of the second phase of the study, the developed HIV and AIDS competencies for nurses and related outcomes, as well as the mapping done throughout the four-year nursing programme, was presented to experts that provided critical analysis for the purpose of verification and validation required for the study, in order to answer the third research question of the study. Furthermore, this phase related to the second and third pillars of the COPA model, and to the early development step of the IR: D&D.

### **4.5.1 Feedback from the verification and validation phase**

Participants in the workshop were divided into five groups to answer the first three questions of the validation process, and two electronic feedbacks were received, making a total of seven answer sheets. For the last question participants were divided into four groups. In addition to the two electronic feedbacks, the fourth question had six answer sheets that were included as part of the verification and validation phase. Questions one to three reviewed the list of core competencies, specific competencies and their outcomes, while the fourth question reviewed how the outcomes were spread over the four-year nursing programme and assessed the various outcomes set for each year level.

#### ***4.5.1.1 Reviewing the HIV and AIDS-related core competencies and related outcomes***

Participants were asked to review the document that presented the list of HIV and AIDS-related core competencies and related outcomes for the four-year nursing programme. They were asked to answer three questions before looking at how the competencies have been mapped into the programme. At first they looked at the list of the developed core competencies and specific competencies related to HIV and AIDS for nurses. For the first question: 'Do the HIV and AIDS-related competencies listed reflect all the required competencies for a new nurse graduate to be able to provide care and management for HIV and AIDS upon graduation?', all of the participants responded positively, indicating that the core competencies related to HIV and AIDS that have been developed meet the requirements of what is expected of a new nurse graduate to be able to provide care and management for HIV and AIDS.

The second question asked the participant to identify competencies that can be added or removed, and six (86%) of the answers reported that there were modifications that should be made to the competencies.

Once the list of core competencies and specific competencies had been reviewed, the participants reviewed the outcomes developed for each specific competency and answered the third question: ‘Are the HIV and AIDS-related competency statements written to most effectively communicate performance expectations?’ Of the seven answer sheets obtained, six (86%) evaluated it to be moderate, while one indicated it to be complete. The participants provided feedback that was considered and integrated in the finalization of the HIV and AIDS core competencies.

From the second question that asked to identify the modification that should be made to the list, six (86%) of the responses indicated modifications that could be made. The suggested modifications were related to re-ordering the specific competencies in the knowledge and holistic safe practice core competencies related to assessment to ensure a logical flow as it is done in practice.

To ensure comprehensiveness, it was also suggested that the explanation of the knowledge core competency be expanded to include all aspects that are part of the competency. Furthermore, participants suggested removing ‘South Africa’ as knowledge is global, and also because the issues covered in the knowledge core competencies will be highly informed by aspects that are relevant globally.

It was also suggested for the policies core competency that the explanation be modified to: ‘Legislation and policies’ instead of ‘policies and regulation’. This was done as it was understood that legislation guides policies, and not the other way around, and also to include protocol as part of the second specific competency under policies. Furthermore, it was suggested to add leadership, as indicated by this excerpt:

*“I would like to suggest that an element of leadership be added to the competencies, and this is specifically that new graduates should not only analyze and implement policies, but they should also analyze and influence policies. South African nurses do not sufficiently participate in opportunities to influence policies – as practitioners implementing policies, they are in an ideal position to influence policies.”* (Electronic feedback - Participant’s emphasis)

This aspect of participating in policy development was previously mentioned from the individual interviews, and from this review the aspect was added in the outcome related to policies, taking into consideration that from an undergraduate level the nurse may not be able to develop the competency to influence policy. In that regard, the outcome was limited to the identification of institutions that are involved in the development of policies related to HIV and AIDS.

Under holistic safe practice it was suggested and accepted that counselling be combined with assessment, and this was motivated from a practice point of view, where the ACTS framework for counselling and testing for HIV is currently used, something that nurses are encouraged to make part of assessment. The understanding was that separating the two in the programme may make the student believe that it is done separately, while the aim is to ensure that counselling for testing is offered to all patients, in the hope of increasing the number of people that get tested for HIV.

It was also suggested that in the knowledge core competency the specific competencies of management and issues related to HIV and AIDS be combined. However, the researcher did not do that as it was understood as two different aspects, although they are interrelated. They are separate in the sense that the management aspect relates to knowledge about how HIV and AIDS are managed holistically with regard to medical and nursing management, whereas the issues related to HIV and AIDS competency relate to the understanding and analysis of the various aspects that are related to HIV, such as cultural and environmental aspects that can influence HIV transmission, control and prevention.

In the workshop there was also a debate about combining continuous personal development and continuous professional development. After discussion and voting on the issue, out of the 10 people that voted, six voted on keeping them separate. The explanation remained that the personal aspects relate to the nurses' ability to prevent infection in their own lives and to manage the HIV infection appropriately, if infected, while professional development aspects relate to keeping themselves updated for the practice required for HIV and AIDS care and management. The two aspects are important, considering that the literature reports that about 15.7% of health care workers in public and private health care institutions in South Africa were living with HIV in 2004 (Shisana, Hall, Maluleke, Chauveau, & Schwabe, 2004); 13.7% of nurses in two hospitals in South Africa were living with HIV in 2005, with 12% of females tested being HIV positive compared to 7.9% of males (Connelly et al., 2007).



Additionally, Shisana et al. (2004) also noted that health care workers in the 18–35-year age group had a higher HIV prevalence of 20% compared to 13.7% for the 36–45-year age group, while the study by Connelly et al. (2007) noted that HIV prevalence was 15.9% for health care workers who were between 25 and 34 years of age, compared to 13.0% for those in the 35–44-year age group. Also, as most of the nurses in South Africa are female (SANC, 2014a), and as in many other sub-Saharan countries females have increased risk of infection (UNAIDS, 2014a), the personal development aspect is important to develop during training. Connelly et al. (2007) also noted that 13.8% of student nurses in the two hospitals where they conducted the study were living with HIV, hence the importance of equipping the nurses while they are still in training on how to avoid the infection and how to manage themselves if infected with HIV. Furthermore, considering the fast pace of new information related to HIV and AIDS, the professional development is also important to ensure nurses are well equipped to enhance their competency levels even after graduation, without relying on the in-service training.

Furthermore, the participants suggested that the presentation of the list of core competencies, specific competencies and related outcomes includes the examples of content and context that will be covered in each specific competency related to HIV and AIDS for nurses, as this will facilitate the reader's understanding of the details that will be considered in the teaching, learning and development of those competencies. An example was given related to local policies; the participants expressed the need to indicate that there are institutional, provincial and national policies and guidelines that are implemented in practice. Also, with regard to assessment the participants in the workshop indicated the need to clarify that comprehensive assessment includes history taking and physical assessment. The recommendations were integrated in the finalization of the document, and further integrated in making modifications to the various year levels' outcomes related to the HIV and AIDS competencies that have been developed in the study.

However, there was one participant who indicated that the core competency of personal and professional development is not suitable for the undergraduate programme. Considering that the other 12 participants had included this core competency in the undergraduate nursing programme, the core competency was maintained in the list of identified core competencies. Furthermore, nurse graduates need to be able to maintain their personal development and keep themselves healthy in terms of preventing HIV infection, and managing themselves with

regard to accessing and remaining in care if infected with HIV, as well as keeping up to date with all the new information and changes in policies that are related to HIV and AIDS. For nurses to be competent in this area the nursing education and training that they receive should enhance the development of the competency.

From the third question, most of the participants indicated that the outcomes were structured moderately, and they provided suggestions on how to improve the outcome statements. The suggestions were made with regard to the outcomes related to the specific assessment in the holistic safe practice core competency and knowledge, suggesting adding an outcome that covers history taking and physical assessment as part of assessment to ensure comprehensiveness.

Although the counseling-specific competency that was previously developed was merged into the assessment-specific competency, the participant recommended keeping the outcomes related to counselling, dividing them into pre-counselling and post-counselling outcomes, and integrating them into the flow of the outcomes related to assessment in the holistic safe practice core competency to fit the current practice. With regard to the prevention-specific competency, it was also suggested to add health care workers, as nurses also need to know how the preventative measures can be applied in prevention of HIV infection for health care workers.

An outcome relating to nurses' role in the development of HIV and AIDS policies was developed to complete the gap that was pointed out by one of the participants who provided electronic feedback. More information was added in the formulation of outcomes to provide more clarity where participants indicated that the outcomes were not clear. This was the case in clarifying the outcomes related to the specific competencies of HIV-related issues, support systems, and the two outcomes in the health education core competencies.

#### ***4.5.1.2 Reviewing the mapping of HIV-related competencies into the four-year nursing programme***

In the workshop the participants were divided into four groups, and this produced four answer sheets for the review of how the competencies were mapped into the curriculum, and an additional two answer sheets were obtained from two participants who provided electronic feedback, making a total of six answer sheets for the fourth question of the review. Of the six answer sheets for the review of how the developed core competencies, specific competencies

and outcomes were mapped in the four year levels, five (83%) indicated that it was done completely, as indicated by one participant: *“In my view the competencies have been suitably divided over the four-year programme”* (Electronic feedback).

The participants provided suggestions on how some competencies can be ordered and written using a verb that reflects the NQF level using Bloom’s taxonomy. Furthermore, suggestions were made on adjustments that will correspond to those that were made in questions two and three of the review.

For one of the reviewers, comments made on year levels three and four were based on the way the undergraduate nursing programme is structured in the institution where the participant is based, and some of the suggestions were not implemented. An example is where suggestions were made to move some outcomes from the third to the second year, because students do not have access to the community as community health is done in the second year at that specific institution. Suggestions like this were not implemented as the mapping was done for the UWC nursing programme, where students have exposure to the community in their third year of training.

For all the other comments, where the specific competency was ranked as ‘somewhat’ or ‘not at all’, suggestions were made and incorporated in the formulation of the outcomes for each year level. There were no other suggestions to move any of the outcomes from one year level to another, except for the one mentioned earlier which did not fit the UWC nursing programme. As the feedback received from the first round provided more than 80% agreement, the researcher did not send the list of core competencies, specific competencies and outcomes for another round of feedback. Furthermore, since the suggestions made in the workshop were discussed and agreement was reached in the workshop, there was no need to resend the document to the participants. The final list of core competencies, specific competencies and outcomes and how these were mapped into the four-year nursing programme is presented in detail in chapter five.

#### **4.6 To integrate or not to integrate HIV and AIDS core competencies into the undergraduate nursing curriculum?**

Ackerman (1989) documented criteria for successful integration, stating that the aspect to be integrated in the curriculum must have potential to contribute to broader outcomes of the

programme, and that it must be feasible and possible within the financial and time limits of the programme, in addition to the commitment and support of the teaching staff that will be implementing the integration.

It was with that in mind that the researcher included questions to establish the feasibility, practicability and support of the integration of HIV and AIDS into the undergraduate nursing programme at UWC.

#### **4.6.1 Feasibility and practicability**

All of the nine participants that responded to the workshop evaluation questionnaires indicated that it is feasible and practical to implement the developed integration model of HIV and AIDS core competencies into the undergraduate nursing programme at UWC. The participants commented that the developed HIV and AIDS competencies for nurses are appropriate and needed, as nurses need to be trained at all levels for the care and management of HIV and AIDS. Furthermore, participants indicated that the outcomes can be integrated into the cases part of each course in the OBE approach applied in the school, and this was viewed as possible because the outcomes were relevant to the undergraduate programme and they were viewed as being clear, hence the increased potential to integrate them into the curriculum.

It was also noted that repetitions were avoided, and that there is a need for integration of HIV and AIDS core competencies into the nursing programme at undergraduate level, as the HIV and AIDS epidemic is a big problem in the country as illustrated from these excerpts from the verification phase workshop:

*“Definitely needed as epidemic is big and nurses at all levels need to be educated about HIV/AIDS” and “All levels are considered, competencies for each level leads to the next excluding repetitions”.*

#### **4.6.2 Resources to be put in place**

For successful implementation of the integration of HIV and AIDS into the undergraduate nursing programme at UWC, the respondents indicated that there must be human resources available. This referred not only to enough teaching staff for theory and practical, but also to attending to the teaching staff’s development with courses, workshops and in-service

training, as they have the potential to enhance the teaching staff's ability to perform. This is illustrated by the following excerpts from respondents in the verification phase: "*more human power well versed with the integration of competencies in the programme*", "*in-service training*", and another indicating that competent teaching staff are part of the resources that are need for successful integration: "*competent and well informed lecturers*".

Equipment was also mentioned as being required, such as the necessary equipment in the clinical settings for student nurses' training and practice, as well as audio-visuals and use of media as illustrated by this respondent: "*models of HIV, those that can be taken apart and reconstructed again*", and the other who noted; "*efficient equipment in ward and clinical setting*".

As nursing education and training is changing in South Africa, it was pointed out that the developed model of integration should be adaptable to the new curriculum that will be implemented from July 2016.

#### **4.6.3 Eliminating barriers to integration of HIV and AIDS core competencies**

During the third phase of the study, participants were also asked to identify barriers for implementation and how these can be eliminated. The responses indicated that staff development and provision of teaching staff will eliminate barriers related to lack of staff and lack of knowledge of the teaching staff, with some respondents indicating the following: "*upgrade courses for lecturers once or twice for all levels*", "*all lecturers to be trained in HIV/AIDS and its implication in society*", and "*workshops to be conducted at least once or twice a year for all year levels*". Furthermore, provision of learning opportunities to practice and sufficient resources will facilitate the success of the integration.

#### **4.7 New Nursing curriculum**

Throughout the three phases of the study it was mentioned that the study should take into consideration the changes that are imminent in the education and training of nurses in South Africa. A new curriculum is set to start in July 2016. With participants mostly being nurse educators, they are aware of the changes, and this was brought up in the discussion to ensure that the study does not only consider the current curriculum, but also takes into account the changes that are coming very soon after completion of the study. As research is done to

ensure change, it was important to keep that in mind when conducting the study. As indicated by participants in group 6 when discussing aspects related to symptom management, with consideration on how the symptoms can be managed at home, one participant commented:

*“That should be part of the community involvement part. Yes, they are not just caring for patients in a hospital, there’s also the community as well”,*

to which another added:

*“And for the new curriculum it is a very large part of it”.*

During the individual interviews the new curriculum was discussed with specific reference to the primary health care approach that forms the basis of the new curriculum, stressing the plan on training nurses who upon graduation will be able to practice effectively in any health care setting, as they would have developed the required and identified competencies such as the HIV and AIDS competencies that form the focus of this study. This is indicated in the following passage:

*“Because the new approach in terms of developing the curriculum would be the primary health care approach. So it would be less curative because we said that we want to train for our South African context. So it will be more about training young graduates who can go and work in any setting. So we should be able to take all settings and say, what are the key competencies required in all in order to serve people from these kinds of groups or these kinds of communities? So whether it’s communities, rural communities, urban communities, communities with certain chronic diseases, communities who have more HIV/AIDS patients, we should be looking for those competencies.” (Participant 13)*

Furthermore, during the curriculum mapping references to the new curriculum were made, and links were made to identify the aspects and outcomes and how they can be integrated into the new curriculum. This was illustrated in these excerpts from the first workshop:

*“Plus with the new curriculum this [epidemiology] will fit in nicely with the second year because they will be introduced to research in second year.”*

and another participant commented :

*“Listen, we must understand that community is going to be integrated into general in the new curriculum which makes it now ... which at the second year level already.”*

However, as the new curriculum for the school was not completed by the time the study was conducted, the researcher used the submitted draft of the new curriculum and used the proposed modules to identify similarities and differences with the current curriculum. During the discussions with the participants, it was agreed that those involved in the teaching of the new curriculum will be able to identify the various outcomes and integrate them in the new developed module. As the new curriculum structure is different to that of the current curriculum, it was noted that some of the outcomes will be moved to a different year level. The nurse educators will only have to adjust the level of each outcome to ensure that it will fit into the NQF level as well as the increased complexity level, while the overall competency remains the same for the programme.

For example, in the new curriculum there is an increased emphasis on primary health care that will be covered in the final year of the programme, and this may require moving some of the outcomes from the current third year to the fourth year level of the programme. Similarly, as mental health nursing will no longer be an additional registration for nurses who complete the new curriculum, the nurse educators who will teach the programme will look at the outcomes that relate to the mental health aspects of the current curriculum, identify those that can be kept and revisit the complexity level based on the level at which each of the outcomes will be covered.

#### **4.8 Conclusion**

This chapter presented the developed seven HIV and AIDS nursing core competencies and the 21 specific competencies, and how they can be integrated into the nursing undergraduate curriculum at UWC. The HIV and AIDS nursing competency framework as well as the integration model were presented. Furthermore, the variety of participants was presented, highlighting the biographical details including their qualifications as well as the geographical representation.

The views of the participants in the validation workshops were presented, highlighting the feasibility and practicability of the developed integration model. Furthermore, the possible barriers and related solutions were presented, providing groundwork with regard to further implementation. As nursing education and training is undergoing transformation in South Africa, reference to the new curriculum that is set to start in 2016 was made and taken into consideration when finalising the model integrating HIV and AIDS nursing competencies into the undergraduate nursing curriculum at UWC.





## **CHAPTER 5: INTEGRATION OF HIV AND AIDS COMPETENCIES INTO THE FOUR YEAR NURSING PROGRAMME**

### **5.1 Introduction**

This chapter presents the theoretical assumptions that underlie the integration model of HIV and AIDS core competencies developed in this study. Integration and competency as applied in the study are also indicated, as well as the COPA model, the curriculum mapping and teaching strategies and learning opportunities.

The HIV and AIDS core competencies, their specific competencies and outcomes as well as the related content and concept are presented. Furthermore, the mapping of the competencies in the four-year nursing programme is presented, and a final table provides the various outcomes developed in the study for each year level for the current curriculum.

### **5.2 Theoretical assumptions**

The integration of the identified HIV and AIDS competencies required by new nurse graduates to be able to provide HIV and AIDS care and management upon graduation was based on the reconstructionism philosophy of education and constructivism. An emphasis was placed on the active role of the student, facilitating the application of Kolb's experiential learning, while fostering critical thinking and analyzing skills to enhance the nurses' ability to become agents of change in their own lives, and the patients' lives while providing care and management for HIV and AIDS.

As Ornstein and Hunkins (2004) indicated, curricula are usually based on more than one philosophy, and as the integration of the HIV and AIDS competencies done in this study was to be integrated in an already existing programme, consideration was given to other philosophies. For instance, in an effort to avoid a radical approach to constructivism, knowledge was given visible consideration with the inclusion of the knowledge competency, bringing in some aspects of social realism that highlight the importance of knowledge, because knowledge is a necessary tool to think about the world, and needs to have a place in the curriculum (Wheelahan, 2010). Furthermore, as nursing is a practical profession, the development of outcomes included some behavioural verbs, but the teaching and learning

process is expected to be implemented within a reconstructionism perspective, avoiding the passivity of students that is seen in behaviourism.

### **5.2.1 Concept of competency**

The term competency is related to the term competence used in this study. It reflects the application of knowledge, attitudes and skills that are required for practice related to HIV and AIDS care and management for a nurse in any situation that requires provision of health-related care, and include critical analysis and thinking, and decision making (Benner, 1982; Carraccio et al., 2002). As noted by Tilley (2008), competency level is incremental, and in education one needs to master one level of competency before moving on to the next year level, which requires higher levels of competency and performance. In this study the vertical progress from year one to year four illustrates the increments in competency levels corresponding to the NQF levels as well as complexity levels, facilitating students' development.

### **5.2.2 Integration**

With regard to the HIV and AIDS nursing competencies, an integrated model was adopted instead of a stand-alone or delegated model. The integrated model fits with the integrated practice related to the care and management of HIV and AIDS, in addition to the noted benefits of an integrated curriculum. The integration developed in this study for the HIV and AIDS core competencies included horizontal and vertical integration, allowing development of a thread across the different modules of one year level as well as a vertical thread from year one to year four, similar to what has been documented in the study by Haslegrave (2006). The connected integration will facilitate the addition of HIV and AIDS-related competencies in each year level in the various modules, and the use of CBE and SLM were noted as some of the strategies that are currently applied in the school and can be used in the integration of HIV and AIDS competencies in the nursing programme. Furthermore, the competencies can be sequenced across disciplines, ensuring that what is covered in one module, like human biology for example is sequenced with what is done in the nursing module. The COPA framework was used as a framework for the development of the competences and outcomes related to HIV and AIDS for nurses and the teaching and learning strategies to be adopted in the curriculum.

### **5.2.3 COPA framework**

The first three pillars of the COPA framework on competency, outcomes, and performance were used, and this allowed for the identification of the HIV and AIDS core competencies, related outcomes as well as the teaching strategies and learning opportunities that can be implemented in the teaching and learning process for the development of the competencies. Three categories of competencies related to HIV and AIDS for nurses were identified, and they are composed of seven core competencies, which in turn have 21 specific competencies that were developed and validated in the study. Outcomes for each specific competency were also developed, and specific knowledge, skills and attitudes for each core competency were indicated.

### **5.2.4 Curriculum mapping**

Curriculum allows for the identification of what is taught, and where and when it is taught, ensuring transparency for both the teacher and the learner. In the study, from the outcomes developed for each specific competency for the whole programme, year-level outcomes were developed and validated in the study, highlighting the increase in complexity from one year level to the next, and supporting the use of prior knowledge to avoid repetitions in the various year levels.

### **5.2.5 Teaching methods and opportunities**

Within the constructivist philosophy, Kolb's experiential learning theory was adopted for the learning process. It enhances the development of new knowledge as well as the development of the HIV and AIDS nursing competencies for the nurses completing the nursing programme. This will enable them to provide appropriate and effective care for HIV and AIDS, while being responsible and critical citizens and professionals in this era when the world is combining efforts to deal with the HIV and AIDS epidemic. The various teaching strategies that can be applied in integrating the HIV and AIDS nursing competencies into the four-year undergraduate nursing programme include the use of a case-based teaching approach, SLM, class discussions and lecturer input, while learning opportunities can be planned in the classroom and clinical settings. Table 5-1 shows the seven core competencies related to HIV and AIDS for nurses, and the specific competencies for each core competency. Outcomes as well as examples of concepts/content that are relevant for each specific competency are included, providing some clarification on the outcomes.

Table 5-1: List of HIV and AIDS core competencies, related outcomes and examples of related content/concepts for the four-year nursing programme

**1. Foundation category**

<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS.		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Examples of related concepts/content</b>
<b>A.1.</b> Basic scientific knowledge about HIV and AIDS	A.1.1. Evaluate the basic scientific facts about HIV and how it is applied in the care and management of HIV	HIV-related terms and concepts, history, microbiology and pathophysiology, epidemiology, myths
<b>A.2.</b> HIV related issues	A.2.1. Critically analyze the various issues that can influence HIV transmission and control	Issues that increase the risk of transmission, role of culture in spread and transmission, influence of environment, HIV and poverty, gender relations
<b>A.3.</b> HIV Prevention	A.3.1. Analyze HIV preventative measures in various settings and for different groups of clients and health care workers	Prevention measures, universal precautions, risk factors, vulnerable groups
<b>A.4.</b> Assessment	A.4.1. Evaluate the assessment that is required for patients living with HIV and AIDS relating to history taking and physical examination	History taking, physical assessment, patient's context, mental health illnesses related to HIV and AIDS
	A.4.2. Assess the different types of diagnostic tests done for HIV diagnosis and screening related to HIV and AIDS	Types of test (antibody and antigen test), indication, TB and STI screening

**A. Competency area - Knowledge:** Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS.

<b>Specific competency</b>	<b>Outcomes</b>	<b>Examples of related concepts/content</b>
	A.4.3. Provide holistic explanation of how HIV can affect a person	Staging, immune system, effect on a physical, psychological, social and financial level (OI: TB, STIs, skin problems, HIV-related cancers; signs and symptoms)
<b>A.5.</b> Management	A.5.1. Evaluate nursing management and medication used in the management of people with HIV and AIDS	PEP, PALS Plus, PMTCT, ART, HAART, IMCI, EML, resistance, adherence, complementary therapy, symptom management, HIV and AIDS-related symptoms
	A.5.2. Assess the principles of chronic and palliative care to be applied in HIV care and management	Chronic and palliative care principles, death and dying

## 2. Supporting pillars category

<b>B. Competency area - Ethics:</b> Ethics related to HIV and AIDS in the care and management of patients living with HIV and AIDS for the reduction of stigma and increase in patients' positive experience		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>B.1.</b> HIV and AIDS ethics-related issues	B.1.1. Correctly and appropriately deal with ethical dilemmas related to HIV and AIDS and adhere to and monitor the correct application of ethics on HIV-related research	Ethical principles Ethical dilemmas
	B.1.2. Participate in the reduction of stigma ensuring the rights of people living with HIV are protected and respected	Stigma Patients' rights
<b>B.2.</b> Professionalism	B.2.1. Demonstrate ethical behaviour and maintain professional relationships in the care and management of clients infected and affected with HIV and AIDS	Ethical and professional behaviour

<b>C. Competency area - Policies:</b> Legislation and policies related to HIV and AIDS when caring for various types of patients living with HIV and AIDS in different settings		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>C.1.</b> Legislation	C.1.1. Describe and follow the legal requirements as regulated in the care of patients living with HIV and AIDS	Legislation related to HIV and AIDS: Confidentiality and disclosure, eligibility criteria, Mental Health Care

<b>C. Competency area - Policies:</b> Legislation and policies related to HIV and AIDS when caring for various types of patients living with HIV and AIDS in different settings		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
		Act
<b>C.2.</b> Policies and protocol analysis and implementation	C.2.1. Evaluate the role of institutions that are involved in the development of HIV and AIDS-related policies and discuss own role to participate in developing HIV-related policies	Institutions that participate in HIV and AIDS-related policy development: SANAC, Treatment Action Campaign, etc.
	C.2.2. Explain and analyze the various local and global policies and protocols related to HIV and AIDS	Local (institutional, provincial, national, regional) and global policies related to HIV and AIDS
	C.2.3. Implement the various local policies and protocols related to HIV and AIDS	

<b>D. Competency area - Interdisciplinary approach:</b> Interdisciplinary approach in the care and management of patients living with HIV and AIDS		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>D.1.</b> Community involvement	D.1.1. Participate in community engagement, programmes and interventions within a collaborative framework enhancing involvement with NGOs, FBOs and CBOs in the care and management of HIV and AIDS	Community engagement principles and approaches

<b>D. Competency area - Interdisciplinary approach:</b> Interdisciplinary approach in the care and management of patients living with HIV and AIDS		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>D.2.</b> Referral systems	D.2.1. Describe and follow proper referral pathways in providing care and management to patients infected and affected with HIV and AIDS within a multidisciplinary team	Referral pathways
<b>D.3.</b> Support systems	D.3.1. Provide support and facilitate access to support systems to those infected with and affected by HIV and AIDS	Resources and support systems

<b>E. Competency area - Personal and professional development:</b> Personal and professional plan for continuous development and care of the carer as a health care provider for clients affected by and infected with HIV and AIDS		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>E.1.</b> Continuous personal development	E.1.1. Develop a continuous personal development plan and take responsibility to apply the learned information and skills in own life for the prevention and management of HIV	Self-awareness, clarifying own beliefs and values, emotional readiness
<b>E.2.</b> Continuous professional development	E.2.1. Develop a continuous professional development plan and take responsibility to obtain information and to remain updated with regard to HIV care and management	Personal responsibility in lifelong learning, develop and use research skills, self-directed learning



<b>E. Competency area - Personal and professional development:</b> Personal and professional plan for continuous development and care of the carer as a health care provider for clients affected by and infected with HIV and AIDS		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>E.3.</b> Care of the carer	E.3.1. Discuss the importance of care of the carer, develop and implement plans for own care to maintain own well-being as a health care provider for HIV and AIDS	Debriefing, congruence, reflection, personal care

### 3. Performance category

<b>F. Competency area - Health education:</b> Health education and promotion related to HIV and AIDS to different groups of clients that are at risk of getting infected, infected with HIV and those affected by HIV and AIDS		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
<b>F.1.</b> Information transfer	F.1.1. Appropriately transfer information related to HIV and AIDS to others and facilitate learning, taking into consideration various relevant aspects such as culture and context.	Information transfer Facilitation of learning
<b>F.2.</b> Provide appropriate content for health education and promotion to various groups of clients	F.2.1. Provide appropriate and correct content for health education and promotion on various aspects related to HIV and AIDS such as nutrition and adherence, and to various groups of clients such as pregnant women and school-going children.	Various topics for health education: health promotion, nutrition, wellness, lifestyle changes, safe sex, etc.

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>			
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	
<b>G.1. Interpersonal skills</b>	G.1.1. Demonstrate effective communication, interviewing and motivational skills in the care and management of HIV	Communication and interview skills, observation skills, therapeutic communication	
	G.1.2. Display positive attitude towards patients living with HIV and AIDS	Positive attitude: non-discrimination, non-judgemental, empathy, honesty, no fear, cultural sensitivity	
	G.1.3. Form trustworthy and supportive relationships with patients affected by or infected with HIV	Trust Patient support Vulnerable groups	
<b>G.2. Assessment</b>	G.2.1. Conduct holistic assessment and investigations that are related to HIV and AIDS care and management for diagnosis and management, and share findings of	G.2.1.1. Apply clinical judgement in conducting regular holistic assessment of person living with HIV and AIDS or at risk of HIV infection	History taking, physical and mental assessment Risk factors Immune system Psychosocial and cultural aspects Patient's background
		G.2.1.2. Correctly conduct pre-test counselling for HIV for different groups of people	Counselling: Pre-counselling models: VCT, PICT, ACTS
		G.2.1.3. Appropriately perform	Tests, indication for

**G. Competency area - Holistic safe practice:** Holistic and safe care and management for patients living with HIV and AIDS

Specific competency	Outcomes	Related concepts/content	
	investigations with patients	different tests for HIV diagnosis	testing
		G.2.1.4. Safely carry out various skills and investigations required for the care and management of HIV and AIDS	Nursing skills
		G.2.1.5. Interpret and share results for tests and investigations conducted in the care and management of HIV and AIDS	Interpretation of results: HIV test, antibody and antigen tests, CD4, VL, LFT, etc., treatment monitoring
		G.2.1.6. Correctly conduct post-test counselling for HIV for different groups of people	Counselling: Post-counselling models: VCT, PICT, ACTS
		G.2.2. Correctly stage a patient living with HIV	Staging system Opportunistic infections CD4 results
<b>G.3. Management</b>	G.3.1. Apply critical thinking in the provision of holistic care and management for HIV through a continuum of illness and	G.3.1.1. Provide management and care for HIV and AIDS for adults and children in various health care institutions and at home	Basic nursing skills Opportunistic infections Co-morbidities Reproductive health symptoms
		G.3.1.2. Participate in the provision of chronic care and	Principles of chronic care

<b>G. Competency area - Holistic safe practice:</b> Holistic and safe care and management for patients living with HIV and AIDS		
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>
	health in various settings	palliative care related to HIV Palliative care Grief counselling
	G.3.2. Provide HIV-related medication and follow up people living with HIV and AIDS and integrate treatment of TB and STIs with HIV	ART, HAART, IMCI, PMTCT, PALS plus, PEP, Pre-exposure prophylaxis (Pre-EP), EML
<b>G.4. Safe practice</b>	G.4.1. Appropriately apply infection control measures in the care of patients to eliminate risk of infection in various settings	Universal precautions, protective gear
	G.4.2. Ensure availability of input resources as required for the care and management of HIV and AIDS	Availability of ART, testing equipment and protective gear

### 5.3 Mapping of the HIV and AIDS core competencies into the four-year programme

Based on the developed outcomes for each specific competency, further outcomes were developed for each year level to provide a model of how the competencies related to HIV and AIDS can be integrated into the curriculum, so that the student nurses will be able to practice upon graduation.

Table 5-2: Mapping of HIV and AIDS core competencies and related outcomes for the four-year nursing programme

**1. Foundation category**

<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH<sup>7</sup> and CHN<sup>8</sup></b>	<b>Year 4- MHN<sup>9</sup></b>
<b>A.1.</b> Basic scientific knowledge about HIV and AIDS	A.1.1. Evaluate the basic scientific facts about HIV and how its applied in the care and management of HIV	HIV-related terms and concepts, history, microbiology and pathophysiology, epidemiology, myths	Define and differentiate the basic terms and concepts: HIV and AIDS; carrier and sufferer; and describe how the HIV looks as well its life cycle	Discuss the current epidemiology of HIV and sources of statistics used in compiling the epidemiology	Evaluate the application of basic scientific facts of HIV in the care and management of patients living with HIV	
			Discuss the historical background of HIV, explain how it is transmitted and how it is	Describe HIV microbiology and pathophysiology, and relate to the		

<sup>7</sup> MCH: Maternal and Child Health  
<sup>8</sup> CHN: Community Health Nursing  
<sup>9</sup> MHN: Mental Health Nursing


<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH<sup>7</sup> and CHN<sup>8</sup></b>	<b>Year 4- MHN<sup>9</sup></b>
			not transmitted	progression of HIV infection		
			Identify and dispel myths related to HIV and AIDS			
<b>A.2. HIV related issues</b>	A.2.1. Critically analyze the various issues that can influence HIV transmission and control	Issues that increase the risk of transmission; role of culture in spread and transmission; influence of environment, HIV and poverty	Explain sexuality and it's place in the context of HIV and AIDS transmission and prevention	Discuss the use of alternative medicine in HIV and AIDS care and management	Analyze psychosocial and cultural practices related to HIV and AIDS in the community	Participate in the discussion about the relevant issues related to HIV and AIDS such as access to care and management for patients living with HIV and AIDS and mental illnesses
					Analyze the need for reproductive health care for people living with HIV and AIDS	


<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH<sup>7</sup> and CHN<sup>8</sup></b>	<b>Year 4- MHN<sup>9</sup></b>
<b>A.3. HIV Prevention</b>	A.3.1. Analyze HIV preventative measures in various settings and for different groups of clients and health care workers	Prevention measures, universal precautions, risk factors, vulnerable groups	Describe and demonstrate the application of universal precautions in clinical settings	Identify vulnerable groups at risk of HIV infection and preventative measures	Identify and analyze community factors that increase the risk of HIV infection and measures to counteract the risks	Critically analyze preventative measures suitable for clients living with HIV and AIDS and an additional mental health problem
			Identify risk factors and populations at risk of HIV infection			
<b>A.4. Assessment</b>	A.4.1. Evaluate the assessment that is required for patients living with HIV and AIDS relating to history taking and	History taking, physical assessment, patient's context, mental health	Describe appropriate comprehensive assessment done for the care and management of HIV relating to history taking and physical			Differentiate primary and secondary mental illnesses associated with HIV

**A. Competency area - Knowledge:** Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS

Specific competency	Outcomes	Related concepts/content	Year 1 - General	Year 2- General	Year 3- MCH <sup>7</sup> and CHN <sup>8</sup>	Year 4- MHN <sup>9</sup>
	physical examination	illnesses related to HIV and AIDS	examination			
	A.4.2. Assess the different types of diagnostic tests done for HIV diagnosis and screening related to HIV and AIDS	Types of test (antibody and antigen test), indication, TB and STI screening	Locate the HIV testing sites in the community, identify the types of tests done at the sites and explain the importance of testing	Differentiate the types of HIV tests and screening test done for adults and their indication: ELISA and rapid test	Differentiate the types of HIV tests done for neonates and infants born to mothers living with HIV	
	A.4.3. Provide holistic explanation of how HIV can affect a person	Staging, immune system, effect on a physical, psychological, social	Describe how a normal immune system functions and symptoms related to	Explain the effect of HIV on the immune system, including clinical	Differentiate the various screenings related to HIV and AIDS	Differentiate the effect of HIV on the women in all stages of
						Evaluate the effect of HIV on mental health status of client



<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH<sup>7</sup> and CHN<sup>8</sup></b>	<b>Year 4- MHN<sup>9</sup></b>
		and financial level (OI: TB, STIs, Skin problems, HIV related cancers; signs and symptoms)	immunodeficiency 	manifestation, symptoms, staging process and opportunistic infections	confinement, neonates, infants, family, and community	and global effect of HIV and AIDS
<b>A.5. Management</b>	A.5.1. Evaluate nursing management and medication used in the management of people with HIV and AIDS	PEP, PALS Plus, PMTCT, ART, HAART, IMCI, EML, resistance, adherence, complementary therapy, symptom management, HIV and AIDS-related symptoms	Explain the need and benefit of medication for HIV and AIDS	Describe common HIV and AIDS-related symptoms and their management	Describe common HIV- related gynaecological symptoms and their management Describe common HIV- related symptoms in children and their management	Classify common mental health problems that are related to HIV and their management


<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH<sup>7</sup> and CHN<sup>8</sup></b>	<b>Year 4- MHN<sup>9</sup></b>
			 UNIVERSITY of the WESTERN CAPE	Identify and describe the different types of ART, mechanism of action, side-effects, interaction with other medication , the use of complementary therapy and sources of information about HIV and AIDS treatment	Describe and critique criteria for ART initiation and the use of guidelines such as HAART, IMCI, PEP, PALS plus, and PMTCT	Describe and assess the interaction of ART with medication given for common mental health illnesses
	A.5.2. Assess the principles of chronic and palliative care to be applied in HIV	Chronic and palliative care principles, death and dying	Identify the characteristics of chronic illnesses relevant to HIV and AIDS	Describe, discuss and apply the principles of chronic and palliative care in		

<b>A. Competency area - Knowledge:</b> Knowledge about care and management, scientific knowledge, health promotion and prevention, as well as issues related to HIV and AIDS						
Specific competency	Outcomes	Related concepts/content	Year 1 - General	Year 2- General	Year 3- MCH <sup>7</sup> and CHN <sup>8</sup>	Year 4- MHN <sup>9</sup>
	care and management		Explain death and the dying processes and palliative care principles	the care and management of HIV and AIDS		


**2. Supporting pillars category**





<b>B. Competency area - Ethics:</b> Ethics related to HIV and AIDS in the care and management of patients living with HIV and AIDS for the reduction of stigma and increase in patients' positive experience						
Specific competency	Outcomes	Related concepts/content	Year 1 - General	Year 2- General	Year 3- MCH and CHN	Year 4- MHN
<b>B.1.</b> HIV and AIDS ethics-related issues	B.1.1. Correctly and appropriately deal with ethical dilemmas related to HIV and AIDS and adhere to and monitor the correct application of ethics on HIV-related	Ethical principles Ethical dilemmas	Explain the ethical principles as applied in nursing practice	Apply ethical principles when dealing with ethical dilemmas and research related to HIV and AIDS	Appropriately manage ethical dilemmas related to: <ul style="list-style-type: none"> <li>• Access to treatment (PMTCT, ARV, prophylaxis) and</li> </ul>	Appropriately manage ethical issues related to access to care, counselling, screening and treatment for HIV and AIDS


<b>B. Competency area - Ethics: Ethics related to HIV and AIDS in the care and management of patients living with HIV and AIDS for the reduction of stigma and increase in patients' positive experience</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	research		 UNIVERSITY of the WESTERN CAPE		management of HIV and AIDS <ul style="list-style-type: none"> <li>• Application of policies and legislation regarding access and barriers to HIV and AIDS care and management</li> </ul>	
	B.1.2. Participate in the reduction of stigma ensuring the rights of people living with HIV are protected and respected	Stigma Patients' rights	Describe HIV stigma, its impact on people living with HIV, and uphold the patients' rights	Discuss the application of ethics in dealing with HIV-related stigma and adherence to patients' rights	Demonstrate the ability to deal with stigma in community and maternity units	Correctly manage the double stigmatization of HIV and mental health illnesses and promote patients' rights

**B. Competency area - Ethics: Ethics related to HIV and AIDS in the care and management of patients living with HIV and AIDS for the reduction of stigma and increase in patients' positive experience**


Specific competency	Outcomes	Related concepts/content	Year 1 - General	Year 2- General	Year 3- MCH and CHN	Year 4- MHN
<b>B.2.</b> Professionalism	B.2.1. Demonstrate ethical behaviour and maintain professional relationships in the care and management of clients infected and affected with HIV and AIDS	Ethical and Professional behaviour	Establish ethics, the required ethical behaviour and professional relationships, and maintain confidentiality  UNIVERSITY of the WESTERN CAPE	Apply ethical principles when establishing and maintaining professional relationships with patients living with HIV and AIDS	Display appropriate professional behaviour in the care and management of HIV and AIDS in community and maternity units	Enhance the application of appropriate professional behaviour in the care and management of HIV and AIDS in patients with mental health illnesses


<b>C. Competency area - Policies: Legislation and policies related to HIV and AIDS in the care of various types of patients living with HIV and AIDS in different settings</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>C.1. Legislation</b>	C.1.1. Describe and follow the legal requirements as regulated in the care of patients living with HIV and AIDS	Legislation related to HIV and AIDS: Confidentiality and disclosure; eligibility criteria, Mental Health Care Act	Identify and describe the regulations related to disclosure of HIV status  	Describe and adhere to the legal framework with regard to confidentiality and disclosure of HIV status	Practice within the correct legal framework when providing care and management to people infected with and affected by HIV and AIDS	Practice within the correct legal framework, including the Mental Health Care Act in providing care and management for people infected with and affected by HIV and AIDS
<b>C.2. Policies and protocol analysis and implementation</b>	C.2.1. Evaluate the role of institutions that are involved in the development of HIV and AIDS-related policies and discuss own role in	Institutions that participate in HIV and AIDS- related policy development: SANAC, TAC, etc.		Describe where policies are found and how they are developed		Critically analyze nurses' role in HIV-related policy development

<b>C. Competency area - Policies: Legislation and policies related to HIV and AIDS in the care of various types of patients living with HIV and AIDS in different settings</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	participating in developing HIV-related policies					
	C.2.2. Explain and analyze the various local and global policies and protocols related to HIV and AIDS	Local (institutional, provincial, national, regional) and global policies related to HIV and AIDS	Explain and apply Batho Pele principles  UNIVERSITY of the WESTERN CAPE	Describe policies, regulations and protocols related to HIV and AIDS, such as PALSA Plus, PEP, needle-stick injury and exposure to body fluid and describe how they are implemented	Analyze institutional, provincial, national and global policies related to HIV and AIDS, including MDG and beyond	Critically analyse and implement policies and regulations related to HIV and AIDS, including the NSP, MDG and beyond as well as the application of the Mental Health Care Act
	C.2.3. Implement the various local policies and protocols related to HIV and AIDS				Participate in the implementation of policies, guidelines and regulations related to HIV and AIDS such as	

<b>C. Competency area - Policies: Legislation and policies related to HIV and AIDS in the care of various types of patients living with HIV and AIDS in different settings</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
			 UNIVERSITY of the WESTERN CAPE		IMCI, TB and STIs, prophylaxis (INH, Human Papillomavirus [HPV]), PALSA Plus, PMTCT, ART, integrated management, women's health and nutrition for adult and children Acceptable, Feasible, Affordable, Sustainable and Safe (AFASS)	



<b>D. Competency area - Interdisciplinary approach: Interdisciplinary approach in the care and management of patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>D.1. Community involvement</b>	D.1.1. Participate in community engagement, programmes and interventions within a collaborative framework enhancing involvement with NGOs, FBOs and CBOs in the care and management of HIV and AIDS	Community engagement principles and approaches	Describe the primary health care approach and interdisciplinary team  	Demonstrate the ability to be involved in HIV and AIDS-related community activities, e.g. VCT drives, collection of statistics for research	Participate in community activities and collaborate with NGOs, CBOs and FBOs that target people at risk of being infected, infected with or affected by HIV and AIDS, following principles of community engagement	Participate in community activities with NGOs, CBOs and FBOs that target people at risk of being infected, infected with or affected by HIV  Collaborate with organizations in the community to provide support to home-based carers who assist patients living with HIV and AIDS

<b>D. Competency area - Interdisciplinary approach: Interdisciplinary approach in the care and management of patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>D.2.</b> Referral systems	D.2.1. Describe and follow proper referral pathways in providing care and management to patients infected and affected with HIV and AIDS within a multidisciplinary team	Referral pathways	 UNIVERSITY of the WESTERN CAPE	Identify and explain referral pathways for clients living with HIV and AIDS	Identify the need for referral and correctly refer patients by following proper pathways with the involvement of the multidisciplinary team for people infected with or affected by HIV and AIDS	Mobilize available resources and services in the community for people living with HIV and AIDS
<b>D.3.</b> Support systems	D.3.1. Provide support and facilitate access to support systems to those infected with and affected by HIV and AIDS	Resources and support systems	Demonstrate awareness of support system that may be useful for people infected with and affected by HIV	Develop awareness of available support services and resources that may be accessed by clients infected with or affected by HIV	Identify and link clients and patients living with HIV and AIDS to appropriate support systems and participate in support groups for	Set up and participate in support groups for people living with HIV and AIDS

<b>D. Competency area - Interdisciplinary approach: Interdisciplinary approach in the care and management of patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
					clients infected with and affected by HIV and AIDS	

<b>E. Competency area - Personal and professional development: Personal and professional plan for continuous development and care of the carer as a health care provider of clients affected by and infected with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>E.1.</b> Continuous personal development	E.1.1. Develop a continuous personal development plan and take responsibility to apply the learned information and	Self-awareness, clarifying own beliefs and values, emotional readiness	Identify own risk for HIV infection, and clarify own values and beliefs that may influence personal prevention of HIV infection. Apply new	Examine and overcome own cultural barriers and work toward emotional development	Assess own HIV risk behaviour, prevention opportunities and challenges, including family planning issues	Implement own strategies to prevent HIV infection, including issues related to gender-

<b>E. Competency area - Personal and professional development: Personal and professional plan for continuous development and care of the carer as a health care provider of clients affected by and infected with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	skills in own life for the prevention and management of HIV		knowledge and skills with a goal of reducing HIV and its negative effects		Discuss implementation of own strategies to prevent HIV infection	based violence and HIV in own life and community
<b>E.2.</b> Continuous professional development	E.2.1. Develop a continuous professional development plan and take responsibility to obtain information and to remain updated with regard to HIV care and management	Personal responsibility in lifelong learning; develop and use research skills Self-directed learning	Find own information on HIV and AIDS and attend to own further learning	Use research on HIV and AIDS, find own information on HIV and AIDS and attend to own further learning	Analyze the application of new scientific information on HIV and AIDS and attend to own further learning to increase competency level on HIV and AIDS	Participate in HIV-related research Analyze the application and implication of new scientific information on HIV and AIDS and attend to own further learning

<b>E. Competency area - Personal and professional development: Personal and professional plan for continuous development and care of the carer as a health care provider of clients affected by and infected with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>E.3. Care of the carer</b>	E.3.1. Discuss the importance of care of the carer, develop and implement plans for own care to maintain own well-being as a health care provider for HIV and AIDS	Debriefing, congruence, reflection, personal care	Attend to personal care for care of the carer to stay healthy in all aspects, e.g. debriefing, buddy system, keeping oneself healthy, use information and apply knowledge at a personal level, dealing with personal emotions, self-awareness and congruency (identification of own risk, own response to patient's response,	Attend to personal care for care of the carer to stay healthy in all aspects, e.g. how to separate oneself from the work environment, know your status, emotional readiness, dealing with own emotions, self-awareness and congruency (identification and	Attend to personal care for care of the carer to stay healthy in all aspects, e.g. reflect on own role and place in the community in the fight against HIV and AIDS, and congruency (identification and reduction of own risk, own response to patient's response,	Attend to personal care for care of the carer to stay healthy in all aspects, e.g. emotional resilience own role and place in the community, and workplace in the fight against HIV and AIDS, and congruency (identification

**E. Competency area - Personal and professional development: Personal and professional plan for continuous development and care of the carer as a health care provider of clients affected by and infected with HIV and AIDS**

Specific competency	Outcomes	Related concepts/content	Year 1 - General	Year 2- General	Year 3- MCH and CHN	Year 4- MHN
			overcoming own cultural barriers)	reduction of own risk, own response to patient's response, overcoming own cultural barriers)	overcoming own cultural barriers)	and reduction of own risk, own response to patient's response, overcoming own cultural barriers)




### 3. Performance category

<b>F. Competency area - Health education: Health education and promotion related to HIV and AIDS to different groups of clients that are at risk of getting infected, infected with HIV and those affected by HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>F.1.</b> Information transfer	F.1.1. Appropriately transfer information related to HIV and AIDS to others and facilitate learning, taking into consideration various relevant aspects such as culture and context.	Information transfer Facilitation of learning	Demonstrate ability to share information about HIV and AIDS, speak in front of people, and take into consideration the client's socio-cultural background and intergenerational aspects	Apply appropriate behavioural theory to demonstrate ability to transfer information about HIV and AIDS, and facilitate learning, taking into consideration the client's socio-cultural background and intergenerational aspects	Demonstrate ability to transfer information about HIV and AIDS, stimulate discussion, and enhance learning, taking into consideration the patients' socio-cultural background and intergenerational aspects	Demonstrate the ability to transfer information about HIV and AIDS, initiate discussion, and enhance learning, taking into consideration the audience's socio-cultural background, mental health

<b>F. Competency area - Health education: Health education and promotion related to HIV and AIDS to different groups of clients that are at risk of getting infected, infected with HIV and those affected by HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
						status and intergenerational aspects
<b>F.2.</b> Provide appropriate content for health education and promotion to various groups of clients	F.2.1. Provide appropriate and correct content for health education and promotion on various aspects related to HIV and AIDS such as nutrition and adherence, and to various groups of clients such as pregnant women and school-going	Various topics for health education: health promotion, nutrition, wellness, lifestyle changes, safe sex, etc.	Provide correct content for health promotion and prevention of HIV and AIDS to individuals and at-risk groups	Provide appropriate content for health education and health promotion related to HIV and AIDS to individuals and groups: healthy lifestyle (nutrition, wellness, lifestyle changes, behavioural	Provide appropriate content related to HIV and AIDS to individuals, groups of clients, women in all stages of confinement, families, communities, schools, at-risk groups: healthy lifestyle	Provide appropriate content related to HIV and AIDS and mental health to individuals, groups of clients, pregnant women, families, communities, schools, at-risk



**F. Competency area - Health education: Health education and promotion related to HIV and AIDS to different groups of clients that are at risk of getting infected, infected with HIV and those affected by HIV and AIDS**

Specific competency	Outcomes	Related concepts/content	Year 1 - General	Year 2- General	Year 3- MCH and CHN	Year 4- MHN
	children.		 <p>UNIVERSITY of the WESTERN CAPE</p>	modification, living healthily with HIV, treatment and symptoms identification and management), and preventative measures (health education on prevention, prevention of pregnancy and safe sex)	(nutrition, wellness, lifestyle changes, behavioural modification, living healthily with HIV, treatment and symptoms) and preventative measures (health education on prevention, prevention of pregnancy and safe sex, infant feeding options	groups and vulnerable groups: healthy lifestyle (nutrition, wellness, lifestyle changes, behavioural modification, living healthily with HIV, treatment and symptoms) and preventative measures and

<b>F. Competency area - Health education: Health education and promotion related to HIV and AIDS to different groups of clients that are at risk of getting infected, infected with HIV and those affected by HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
					(AFASS), reproductive health, safe sex)	managing mental health illness with HIV



<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>G.1.</b> Interpersonal skills	G.1.1. Demonstrate effective communication, interviewing and motivational skills in the care and management of HIV	Communication and interview skills, observation skills, therapeutic communication	Communicate properly with patients living with HIV and AIDS, including record keeping	Apply appropriate communication skills when addressing groups providing HIV and AIDS-related information, e.g.	Properly communicate with clients and patients living with HIV, ensuring that the patient understands	Properly and effectively communicate with client living with HIV and mental health illness

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
				during the VCT drives		
			Apply interviewing skills when admitting a client living with HIV and AIDS	Apply interviewing skills when taking the history of a patient living with HIV, collect holistic information	Motivate patients living with HIV and AIDS to continue with care in community and for women in all stages of confinement	Demonstrate interviewing and motivational skills for patients living with HIV and additional mental health illness
	G.1.2. Display positive attitude towards patients living with HIV and AIDS	Positive attitude: non-discrimination, non-judgemental, empathy, honesty,	Display acceptance, be non-judgemental and sensitive to culture when	Display acceptance, be non-judgemental, and show empathy and	Display positive attitude toward clients and patients living with HIV and	Display and enhance positive attitude towards clients

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
		no fear, cultural sensitivity	interacting with patients living with HIV and AIDS	cultural sensitivity when interacting with patients living with HIV and AIDS	AIDS showing sensitivity to their socio-cultural aspects	and family members infected with or affected by HIV
	G.1.3. Form trustworthy and supportive relationships with patients affected by or infected with HIV	Trust Patient support Vulnerable groups	Display ability to create trust and support patients living with HIV and AIDS in a simulated setting	Create trust and support patients living with HIV and AIDS and their families in clinical settings and take into consideration patients' background	Support clients affected by or infected with HIV, women in maternity units and community as well as members of the community and their families, taking into consideration	Provide support to clients affected by or infected with HIV in a mental health clinical settings as well as vulnerable groups (e.g. orphans)

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
						client's background	
<b>G.2.</b> Assessment	G.2.1. Conduct holistic assessment and investigations that are related to HIV and AIDS care and management for diagnosis and management, and share findings of	G.2.1.1. Apply clinical judgement in conducting regular holistic assessment of persons living with HIV and AIDS or at risk of HIV infection	History taking, Physical and mental assessment Risk factors Immune system Psychosocial and cultural aspects Patient's background	Identify normal immune response	Conduct history taking and physical assessment for adult patients living with HIV and AIDS	Conduct history taking and physical assessment for adults, women in all stages of confinement and children living with HIV and AIDS	Conduct mental state exam and assess the effect of HIV on mental health of patient living with HIV and AIDS
					Identify the effect of HIV on the immune system, common opportunistic infections, co-	Conduct client's full physical assessment and identify psychosocial and cultural aspects	

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	investigations with patients				morbidity, clinical manifestations and HIV- related symptoms	relevant to the patient and assess the holistic effect of HIV	
					Assess and rectify situations that can impact access to and administration of ART in hospital settings	Assess and rectify situations that can impact access to and administration of ART in community	
				Assess patient's background and other aspects that influence the person's risk for	Assess aspects of the patient's background that influence the well-being of the	Assess aspects of the patient's background that influence the well-being of	Assess aspects in the patient's background that influence the well-being



<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
				HIV infection	person living with HIV while in hospital	person with HIV in the community and for women in all stages of confinement, neonates and infants	of persons with HIV and mental health illness
		G.2.1.2. Correctly conduct pre-test counselling for HIV for different groups of people	Counselling: Pre-counselling models: VCT, PICT, ACTS	Explain and discuss the purpose of HIV counselling and motivate client to go for HIV counselling	Describe the various HIV counselling approaches, indication and processes, and provide HIV pre-counselling for individuals	Provide HIV pre-test counselling: VCT and PICT, applying various models to individuals, groups, and families, and discuss the way forward	Provide HIV pre-test counselling to couples and to clients with mental health illness

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
		G.2.1.3. Appropriately perform different tests for HIV diagnosis	Tests, indication for testing		Describe the different types of HIV tests and indication: ELISA and rapid test	Participate in HIV testing including identification of need for PCR test	Conduct tests for diagnosis of HIV
		G.2.1.4. Safely carry out various skills and investigations required for the care and management of HIV and AIDS	Nursing skills	Perform basic non-invasive nursing skills for assessment of patients living with HIV and AIDS	Participate in conducting HIV-related investigations– specimen collection, catheterization, etc.	Participate in NIM-ART and monitor related investigations  Perform invasive skills: Draw blood, set up an IV line, pelvic assessment, rupturing of membranes	



<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	G.2.1.5. Interpret and share results for tests and investigations conducted in the care and management of HIV and AIDS		Interpretation of results: HIV test, antibody and antigen tests, CD4, VL, LFT, etc. Treatment monitoring	Differentiate between the possible results of an HIV test	Interpret results of HIV-related test and other blood tests conducted in the care and management of HIV and AIDS: VL and CD4, follow-up tests and blood results (full blood count (FBC), Haemoglobin (Hb), white blood cell count (WCC), PLT, ALT, creatinine	Interpret results: Test and other blood test results: VL and CD4, follow-up tests and blood results to assess treatment failure or complications	Display understanding and interpretation of results, and communicate results: HIV test and other blood test results: VL and CD4, follow-up tests and blood results to assess treatment failure or complications

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
					clearance, Hepatitis B)		
		G.2.1.6. Correctly conduct post-test counselling for HIV for different groups of people	Counselling: post-Counselling models: VCT, PICT, ACTS		Provide post-test HIV counselling and support to individuals	Provide HIV post-test counselling: to individuals, groups, and families, and discuss the way forward	Provide HIV post-test counselling to couples and to clients with mental health illness
	G.2.2. Correctly stage a patient living with HIV		Staging system Opportunistic infections CD4 results		Identify staging systems and stage an adult patient living with HIV	Demonstrate the ability to correctly stage patients living with HIV, including neonates, infants and children	Correctly stage a client with HIV and mental health illness related to HIV



<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
<b>G.3. Management</b>	G.3.1. Apply critical thinking in the provision of holistic care and management for HIV through a continuum of illness and health in various settings	G.3.1.1. Provide management and care for HIV and AIDS for adults and children in various health care institutions and at home	Basic nursing skills Opportunistic infections Co-morbidities Reproductive health symptoms	Provide basic nursing care to patients living with HIV in various settings	Provide advanced nursing care such as injections and suturing to patients living with HIV, identify the management of common opportunistic infections and common symptoms in hospitals and community health care centres	Provide nursing care to adults, women in all stages of confinement and children living with HIV and AIDS in community and health care institution. Manage common opportunistic infections and other common co-morbidities in the specific community, and	Provide nursing care to patients living with HIV and AIDS and a mental health illness in the management of common mental health illnesses related to HIV in various settings including mental health settings and manage crisis

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>							
<b>Specific competency</b>	<b>Outcomes</b>		<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
						provide reproductive health care to people living with HIV and AIDS	
		G.3.1.2. Participate in the provision of chronic care and palliative care related to HIV	Principles of chronic care Palliative care Grief counselling	Identify palliative care principles in the care of those dying from HIV and related illnesses	Provide palliative care to people with AIDS and apply principles of chronic care management maintaining continuity of care for patients living with HIV and AIDS	Provide chronic care to patients living with HIV, ensuring continuity of care	Provide grief counselling to carers and family members affected by HIV, enhancing continuity of care

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	G.3.2. Provide HIV-related medication and follow up people living with HIV and AIDS and integrate treatment of TB and STIs with HIV	ART, HAART, IMCI, PMTCT, PALSAs plus, PEP, Pre-EP, EML		Identify ART prescribed for the patient, explain mechanism of action, identify side-effects and interaction with other medication as well as the use of complementary therapy	Participate in the provision of HAART, IMCI, PALSAs plus and PMTCT, and enhance adherence of patients already on ART	Participate in the provision of ART and explain the interaction of ART and medication given for common mental health illnesses
				Enhance adherence for patients on ART and understand the basic principles of PALSAs plus,	Participate in the integrated management of clients and patients with TB, STIs and HIV and AIDS	Enhance adherence of patients on both ART and any other medication for



<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
				PEP, Pre-EP and EML		mental health illness
<b>G.4. Safe practice</b>	G.4.1. Appropriately apply infection control measures in the care of patients to eliminate risk of infection in various settings	Universal precautions, protective gear,	Display awareness and adherence to the universal precautions for safe practice: discarding sharp objects, contact with body fluid (e.g. eye splash) and care of an open skin (wound)	Apply universal precautions correctly in nursing practice: prevention of needle-stick injury, exposure to body fluids	Correctly apply and evaluate adherence to universal precautions in nursing practice (e.g. late rupturing of membranes during labour; needle-stick injury prevention; better birth initiatives)	Apply, enhance and monitor adherence to correct universal precautions in nursing practice in any clinical setting and home-based care settings
	G.4.2. Ensure availability of input resources as required	Availability of ART, testing		Identify resources and equipment	Monitor availability of	

<b>G. Competency area - Holistic safe practice: Holistic and safe care and management for patients living with HIV and AIDS</b>						
<b>Specific competency</b>	<b>Outcomes</b>	<b>Related concepts/content</b>	<b>Year 1 - General</b>	<b>Year 2- General</b>	<b>Year 3- MCH and CHN</b>	<b>Year 4- MHN</b>
	for the care and management of HIV and AIDS	equipment and protective gear		required for provision of care and management of HIV and AIDS	resources required for care and management of HIV and AIDS	



#### **5.4 Core competencies and related outcomes for each year level**

This section presents the various outcomes for each year level for each of the developed HIV and AIDS nursing competencies to be integrated in the four-year nursing programme at UWC. The various teaching staff will be able to identify the modules where each of the outcomes presented in Table 5-3, Table 5-4, Table 5-5 and Table 5-6 can be integrated, with a choice of combining the various outcomes in one session, depending on the aspects that are to be covered in each year level. For example, in the first year the nurse educators may choose to include the outcome [1<sup>st</sup>.A.iv.] in one of the fundamental modules, while outcome [1<sup>st</sup>.A.v.] and [1<sup>st</sup>.G.xii] may be integrated in the clinical module done in the first year. Similarly, outcomes [1<sup>st</sup>.A. iv.] and [1<sup>st</sup>.A.vi.] can be combined in one module in the first year of the nursing programme at UWC.

As horizontal integration was also maintained in the study, the outcomes are to be integrated in the various modules that are done in each year level, for example, the outcomes [1<sup>st</sup>.A.i.] and [1<sup>st</sup>.A.ii.] can be integrated in the human biology modules in the first year of the nursing programme. Similarly, the outcomes [2<sup>nd</sup>.A.ii.] and [2<sup>nd</sup>.A.iii.] can easily be integrated in the human biology and pharmacology modules respectively in the second year of the nursing programme. This will ensure horizontal as well as vertical integration in the second year, as the outcomes in the second year of the nursing programme build on the outcomes covered in the first year of the nursing programme.

The same principle will be applicable with the new nursing curriculum that will start in 2016 at UWC, and those involved in the teaching of the nursing programme at UWC will be able to revisit the various outcomes and integrate them in their modules, ensuring programme fit as well as development of HIV and AIDS competencies by the nursing students. With the current nursing programmes at UWC, community health and midwifery are both done in the third year. Nurse educators involved in those programmes can be flexible when choosing which outcomes to focus on in each of the nursing areas, in an attempt to eliminate duplications and to ensure that the students achieve all the outcomes and gain all the competencies during the training programme.



Table 5-3: List of HIV and AIDS core competencies and related outcomes for the first-year nursing programme

<b>First-year level</b>
<b>1. Foundation category</b>
<b>1st.A. Knowledge</b>
1st.A.i. Define and differentiate the basic terms and concepts: HIV and AIDS; carrier and sufferer; and describe how the HIV looks as well its life cycle
1st.A.ii. Discuss the historical background of HIV, explain how it is transmitted and how it is not transmitted
1st.A.iii. Identify and dispel myths related to HIV and AIDS
1st.A.iv. Explain sexuality and it's place in the context of HIV and AIDS transmission and prevention
1st.A.v. Describe and demonstrate the application of universal precautions in clinical settings
1st.A.vi. Identify risk factors and populations at risk of HIV infection
1st.A.vii. Describe appropriate comprehensive assessment done for the care and management of HIV relating to history taking and physical examination
1st.A.viii. Locate the HIV testing sites in the community, identify the types of tests done at the sites and explain the importance of testing
1st.A.ix. Describe how a normal immune system functions and symptoms related to immunodeficiency
1st.A.x. Explain the need and benefit of medication for HIV and AIDS
1st.A.xi. Identify the characteristics of chronic illnesses relevant to HIV and AIDS
1st.A.xii. Explain death and the dying processes and palliative care principles
<b>2. Supporting pillars category</b>
<b>1st.B. Ethics</b>
1st.B.i. Explain the ethical principles as applied in nursing practice
1st.B.ii. Describe HIV stigma, its impact on people living with HIV, and uphold the patients' rights
1st.B.iii. Establish ethics, the required ethical behaviour and professional relationships, and maintain confidentiality
<b>1st.C. Policies</b>
1st.C.i. Identify and describe the regulations related to disclosure of HIV status
1st.C.ii. Explain and apply Batho Pele principles

<b>First-year level</b>
<b>1st.D. Interdisciplinary approach</b>
1st.D.i. Describe the primary health care approach and interdisciplinary team
1st.D.ii. Demonstrate awareness of support systems that may be useful for people infected with and affected by HIV
<b>1st.E. Personal and professional development</b>
1st.E.i. Identify own risk for HIV infection, and clarify own values and beliefs that may influence personal prevention of HIV infection. Apply new knowledge and skills with a goal of reducing HIV and its negative effects
1st.E.ii. Find own information on HIV and AIDS and attend to own further learning
1st.E.iii. Attend to personal care for care of the carer to stay healthy in all aspects, e.g. debriefing, buddy system, keeping oneself healthy, use information and apply knowledge at a personal level, dealing with personal emotions, self-awareness and congruency (identification of own risk, own response to patient's response, overcoming own cultural barriers)
<b>3. Performance category</b>
<b>1st.F. Health education</b>
1st.F.i. Demonstrate ability to share information about HIV and AIDS, speak in front of people, and take into consideration the client's socio-cultural background and intergenerational aspects
1st.F.ii. Provide correct content for health promotion and prevention of HIV and AIDS to individuals and at-risk groups
<b>1st.G. Holistic safe practice</b>
1st.G.i. Communicate properly with patients living with HIV and AIDS, including record keeping
1st.G.ii. Apply interviewing skills when admitting a client living with HIV and AIDS
1st.G.iii. Display acceptance, be non-judgemental and sensitive to culture when interacting with patients living with HIV and AIDS
1st.G.iv. Display ability to create trust and support patients living with HIV and AIDS in a simulated setting
1st.G.v. Identify normal immune response
1st.G.vi. Assess patient's background and other aspects that influence the person's risk for HIV infection

<b>First-year level</b>
1st.G.vii. Explain and discuss the purpose of HIV counselling and motivate client to go for HIV counselling
1st.G.viii. Perform basic non-invasive nursing skills for assessment of patients living with HIV and AIDS
1st.G.ix. Differentiate between the possible results of an HIV test
1st.G.x. Provide basic nursing care to patients living with HIV in various settings
1st.G.xi. Identify palliative care principles in the care of those dying with HIV and related illnesses
1st.G.xii. Display awareness and adherence to the universal precautions for safe practice: discarding sharp objects, contact with body fluid (e.g. eye splash) and care of an open skin (wound)

Table 5-4: List of HIV and AIDS core competencies and related outcomes for the second-year nursing programme.

<b>Second-year level</b>
<b>1. Foundation category</b>
<b>2nd.A. Knowledge</b>
2nd.A.i. Discuss the current epidemiology of HIV and AIDS and sources of statistics used in compiling the epidemiology
2nd.A.ii. Describe HIV microbiology and pathophysiology, and relate to the progression of HIV infection
2nd.A.iii. Discuss the use of alternative medicine in HIV and AIDS care and management
2nd.A.iv. Identify vulnerable groups at risk of HIV infection and preventative measures
2nd.A.v. Differentiate the types of HIV tests and screening test done for adults and their indication: ELISA and rapid test
2nd.A.vi. Explain the effect of HIV on the immune system, including clinical manifestation, symptoms, staging process and opportunistic infections
2nd.A.vii. Describe common HIV and AIDS-related symptoms and their management
2nd.A.viii. Identify and describe the different types of ART, mechanism of action, side-effects, interaction with other medication, the use of complementary therapy and sources of information about HIV and AIDS treatment
2nd.A.ix. Describe, discuss and apply the principles of chronic and palliative care in the

<b>Second-year level</b>
care and management of HIV and AIDS
<b>2. Supporting pillars category</b>
<b>2nd.B. Ethics</b>
2nd.B.i. Apply ethical principles when dealing with ethical dilemmas and research related to HIV and AIDS
2nd.B.ii. Discuss the application of ethics in dealing with HIV-related stigma and adherence to patients' rights
2nd.B.iii. Apply ethical principles when establishing and maintaining professional relationships with patients living with HIV and AIDS
<b>2nd.C. Policies</b>
2nd.C.i. Describe and adhere to the legal framework with regard to confidentiality and disclosure of HIV status
2nd.C.ii. Describe where policies are found and how they are developed
2nd.C.iii. Describe policies, regulations and protocols related to HIV and AIDS, such as PALSA Plus, PEP, needle-stick injury and exposure to body fluid, and describe how they are implemented
<b>2nd.D. Interdisciplinary approach</b>
2nd.D.i. Demonstrate the ability to be involved in HIV and AIDS-related community activities: e.g. VCT drives, collection of statistics for research
2nd.D.ii. Identify and explain referral pathways for clients living with HIV and AIDS
2nd.D.iii. Develop awareness of available support services and resources that may be accessed by clients infected with or affected by HIV
<b>2nd.E. Personal and professional development</b>
2nd.E.i. Examine and overcome own cultural barriers and work toward emotional development
2nd.E.ii. Use research on HIV and AIDS, find own information on HIV and AIDS and attend to own further learning
2nd.E.iii. Attend to personal care for care of the carer to stay healthy in all aspects, e.g. how to separate oneself from the work environment, know your status, emotional readiness, dealing with own emotions, self-awareness and congruency (identification and reduction of own risk, own response to patient's response, overcoming own cultural barriers)

<b>3. Performance category</b>
<b>2nd.F. Health education</b>
2nd.F.i. Apply appropriate behavioural theory to demonstrate ability to transfer information about HIV and AIDS, and facilitate learning, taking into consideration the client's socio-cultural background and intergenerational aspects
2nd.F.ii. Provide appropriate content for health education and health promotion related to HIV and AIDS to individuals and groups: healthy lifestyle (nutrition, wellness, lifestyle changes, behavioural modification, living healthily with HIV, treatment and symptoms identification and management), and preventative measures (health education on prevention, prevention of pregnancy and safe sex)
<b>2nd.G. Holistic safe practice</b>
2nd.G.i. Apply appropriate communication skills when addressing groups providing HIV and AIDS-related information, e.g. during the VCT drives
2nd.G.ii. Apply interviewing skills when taking the history of a patient living with HIV, collect holistic information
2nd.G.iii. Display acceptance, be non-judgemental, and show empathy and cultural sensitivity when interacting with patients living with HIV and AIDS
2nd.G.iv. Create trust, and support patients living with HIV and AIDS and their families in clinical settings and take into consideration the patients' background
2nd.G.v. Conduct history taking and physical assessment for adult patients living with HIV and AIDS
2nd.G.vi. Identify the effect of HIV on the immune system, common opportunistic infections, co-morbidity, clinical manifestations and HIV-related symptoms
2nd.G.vii. Assess and rectify situations that can impact access to and administration of ART in hospital settings
2nd.G.viii. Assess aspects of the patient's background that influence the well-being of the person living with HIV while in hospital
2nd.G.ix. Describe the various HIV counselling approaches, indication and process, and provide HIV pre-counselling to individuals
2nd.G.x. Describe the different types of HIV tests and indication: ELISA and rapid test
2nd.G.xi. Participate in conducting HIV-related investigations: specimen collection, catheterization, etc.

2nd.G.xii. Interpret results of HIV-related test and other blood tests conducted in the care and management of HIV and AIDS: VL and CD4, follow-up tests and blood results (FBC, Hb, WCC, PLT, ALT, creatinine clearance, Hepatitis B)
2nd.G.xiii. Provide post-test HIV counselling and support to individuals
2nd.G.xiv. Identify staging systems and stage an adult patient living with HIV
2nd.G.xv. Provide advanced nursing care such as injections and suturing to clients living with HIV, identify the management of common opportunistic infections and common symptoms in hospitals and community health care centres
2nd.G.xvi. Provide palliative care to people with AIDS and apply principles of chronic care management maintaining continuity of care for patients living with HIV and AIDS
2nd.G.xvii. Identify ART prescribed for the patient, explain mechanism of action, identify side-effects and interaction with other medication as well as the use of complementary therapy
2nd.G.xviii. Enhance adherence for patients on ART and understand the basic principles of PALS plus, PEP, Pre-EP and EML
2nd.G.xix. Apply universal precautions correctly in nursing practice: prevention of needle-stick injury, exposure to body fluids
2nd.G.xx. Identify resources and equipment required for provision of care and management of HIV and AIDS

Table 5-5: List of HIV and AIDS core competencies and related outcomes for the third- year nursing programme

<b>Third-year level</b>
<b>1. Foundation category</b>
<b>3rd.A. Knowledge</b>
3rd.A.i. Evaluate the application of basic scientific facts of HIV in the care and management of clients living with HIV
3rd.A.ii. Analyze psychosocial and cultural practices related to HIV and AIDS in the community
3rd.A.iii. Analyze the need for reproductive health care for people living with HIV and AIDS
3rd.A.iv. Identify and analyze community factors that increase the risk of HIV infection and measures to counteract the risks
3rd.A.v. Differentiate the types of HIV tests done for neonates and infants born to mothers living with HIV
3rd.A.vi. Differentiate the various screenings related to HIV and AIDS
3rd.A.vii. Discuss the effect of HIV on the women in all stages of confinement, neonates, infants, family and community
3rd.A.viii. Describe common HIV-related gynaecological symptoms and their management
3rd.A.ix. Describe common HIV-related symptoms in children and their management
3rd.A.x. Describe and critique criteria for ART initiation and the use of guidelines such as HAART, IMCI, PEP, PALS plus and PMTCT
<b>2. Supporting pillars category</b>
<b>3rd.B. Ethics</b>
3rd.B.i. Appropriately manage ethical dilemmas related to: <ul style="list-style-type: none"> <li>• access to treatment (PMTCT, ARV, prophylaxis) and management of HIV and AIDS</li> <li>• application of policies and legislation regarding access and barriers to HIV and AIDS care and management</li> </ul>
3rd.B.ii. Demonstrate the ability to deal with stigma in community and maternity units
3rd.B.iii. Display appropriate professional behaviour in the care and management of HIV and AIDS in community and maternity units

<b>Third-year level</b>
<b>3rd.C. Policies</b>
3rd.C.i. Practice within the correct legal framework when providing care and management to people infected with and affected by HIV and AIDS
3rd.C.ii. Analyze institutional, provincial, national and global policies related to HIV and AIDS, including MDG and beyond
3rd.C.iii. Participate in the implementation of policies, guidelines and regulations related to HIV and AIDS such IMCI, TB and STIs, prophylaxis (INH, HPV), PALS Plus, PMTCT, ART, integrated management, women's health and nutrition for adult and children (WHO-AFASS)
<b>3rd.D. Interdisciplinary approach</b>
3rd.D.i. Participate in community activities and collaborate with NGOs, CBOs, and FBOs who target people at risk of being infected, infected with or affected by HIV and AIDS, following principles of community engagement
3rd.D.ii. Identify the need for referral, and correctly refer patients by following proper pathways with the involvement of the multidisciplinary team for people infected with or affected by HIV and AIDS
3rd.D.iii. Identify and link clients and patients living with HIV and AIDS to appropriate support systems, and participate in support groups for clients infected with and affected by HIV and AIDS
<b>3rd.E. Personal and professional development</b>
3rd.E.i. Assess own HIV risk behaviour, prevention opportunities and challenges, including family planning issues
3rd.E.ii. Discuss implementation of own strategies to prevent HIV infection
3rd.E.iii. Analyze the application of new scientific information on HIV and AIDS and attend to own further learning to increase competency level on HIV and AIDS
3rd.E.iv. Attend to personal care for care of the carer to stay healthy in all aspects, e.g. reflect on own role and place in the community in the fight against HIV and AIDS, and congruency (identification and reduction of own risk, own response to patient's response, overcoming own cultural barriers)
<b>3. Performance category</b>
<b>3rd.F. Health education</b>
3rd.F.i. Demonstrate ability to transfer information about HIV and AIDS, stimulate



<b>Third-year level</b>
discussion, and enhance learning, taking into consideration the client's socio-cultural background and intergenerational aspects
3rd.F.ii. Provide appropriate content related to HIV and AIDS to individuals, groups of clients, women in all stages of confinement, families, communities, schools, at-risk groups: healthy lifestyle (nutrition, wellness, lifestyle changes, behavioural modification, living healthily with HIV, treatment and symptoms) and preventative measures (health education on prevention, prevention of pregnancy and safe sex, infant feeding options (AFASS), reproductive health, safe sex)
<b>3rd.G. Holistic safe practice</b>
3rd.G.i. Properly communicate with clients and patients living with HIV, ensuring that the patient understands
3rd.G.ii. Motivate patients living with HIV and AIDS to continue with care in community and for women in all stages of confinement
3rd.G.iii. Display positive attitude toward clients and patients living with HIV and AIDS showing sensitivity to their socio-cultural aspects
3rd.G.iv. Support clients affected by or infected with HIV, women in maternity units and community as well as members of the community and their families, taking into consideration client's background
3rd.G.v. Conduct history taking and physical assessment for adults, women in all stages of confinement and children living with HIV and AIDS
3rd.G.vi. Conduct client's full physical assessment and identify psychosocial and cultural aspect relevant for the client and assess the holistic effect of HIV
3rd.G.vii. Assess and rectify situations that can impact access to and administration of ART in community
3rd.G.viii. Assess aspects of the patient's background that influence the well-being of person with HIV in the community and for women in all stages of confinement, neonates and infants
3rd.G.ix. Provide HIV pre-test counselling: VCT and PICT, applying various models to individuals, groups, and families, and discuss the way forward
3rd.G.x. Participate in HIV testing, including identification of need for PCR test
3rd.G.xi. Participate in NIM-ART and monitor related investigations

<b>Third-year level</b>
3rd.G.xii. Perform invasive skills: draw blood, set up an IV line, pelvic assessment, rupturing of membranes
3rd.G.xiii. Interpret results: Test and other blood test results: VL and CD4, follow-up tests and blood results to assess treatment failure or complications
3rd.G.xiv. Provide HIV post-test counselling to individuals, groups and families, and discuss the way forward
3rd.G.xv. Demonstrate the ability to correctly stage patients living with HIV, including neonates, infants and children
3rd.G.xvi. Provide nursing care to adults, women in all stages of confinement and children living with HIV and AIDS in community and health care institutions.
3rd.G.xvii. Manage common opportunistic infections and other common co-morbidities in the specific community, and provide reproductive health care to people living with HIV and AIDS
3rd.G.xviii. Provide chronic care to patients living with HIV, ensuring continuity of care
3rd.G.xix. Participate in the provision of HAART, IMCI, PALSA plus and PMTCT, and enhance adherence of patients already on ART
3rd.G.xx. Participate in the integrated management of clients and patients with TB, STI and HIV and AIDS
3rd.G.xxi. Correctly apply and evaluate adherence to universal precautions in nursing practice (e.g. late rupturing of membranes during labour; needle-stick injury prevention; better birth initiatives)
3rd.G.xxii. Monitor availability of resources required for care and management of HIV and AIDS

Table 5-6: List of HIV and AIDS core competencies and related outcomes for the fourth-year nursing programme

<b><u>Fourth Year level</u></b>
<b>1. Foundation category</b>
<b>4th.A. Knowledge</b>
4th.A.i. Participate in the discussion about the relevant issues related to HIV and AIDS, such as access to care and management for patients living with HIV and AIDS and mental illnesses
4th.A.ii. Critically analyze preventative measures suitable for clients living with HIV and AIDS and an additional mental health problem
4th.A.iii. Differentiate primary and secondary mental illnesses associated with HIV
4th.A.iv. Evaluate the effect of HIV on mental health status of client and global effect of HIV and AIDS
4th.A.v. Classify common mental health problems that are related to HIV and their management
4th.A.vi. Describe and assess the interaction of ART with medication given for common mental health illnesses
<b>2. Supporting pillars category</b>
<b>4th.B. Ethics</b>
4th.B.i. Appropriately manage ethical issues related to access to care, counselling, screening and treatment for HIV and AIDS
4th.B.ii. Correctly manage the double stigmatization of HIV and mental health illnesses and promote patients' rights
4th.B.iii. Enhance the application of appropriate professional behaviour in the care and management of HIV and AIDS in patients with mental health illnesses
<b>4th.C. Policies</b>
4th.C.i. Practice within the correct legal framework, including the Mental Health Care Act in providing care and management for people infected with and affected by HIV and AIDS
4th.C.ii. Critically analyze nurses' role in HIV-related policy development
4th.C.iii. Critically analyze and implement policies and regulations related to HIV and AIDS, including the NSP, MDG and beyond as well as the application of the Mental Health Care Act

<b><u>Fourth Year level</u></b>
<b>4th.D. Interdisciplinary approach</b>
4th.D.i. Participate in community activities with NGOs, CBOs, and FBOs that target people at risk of being infected, infected with or affected by HIV
4th.D.ii. Collaborate with organizations in the community to provide support to home-based carers who assist patients living with HIV and AIDS
4th.D.iii. Mobilize available resources and services in the community for people living with HIV and AIDS
4th.D.iv. Set up and participate in support groups for people living with HIV and AIDS
<b>4th.E. Personal and professional development</b>
4th.E.i. Implement own strategies to prevent HIV infection, including issues related to gender-based violence and HIV in own life and community
4th.E.ii. Participate in HIV-related research
4th.E.iii. Analyze the application and implication of new scientific information on HIV and AIDS and attend to own further learning
4th.E.iv. Attend to personal care for care of the carer to stay healthy in all aspects, e.g. emotional resilience own role and place in the community, and workplace in the fight against HIV and AIDS, and congruency (identification and reduction of own risk, own response to patient's response, overcoming own cultural barriers)
<b>3. Performance category</b>
<b>4th.F. Health education</b>
4th.F.i. Demonstrate the ability to transfer information about HIV and AIDS, initiate discussion, and enhance learning, taking into consideration the audience's socio-cultural background, mental health status and intergenerational aspects
4th.F.ii. Provide appropriate content related to HIV and AIDS and mental health to individuals, groups of clients, pregnant women, families, communities, schools, at-risk groups and vulnerable groups: Healthy lifestyle (nutrition, wellness, lifestyle changes, behavioural modification, living healthily with HIV, treatment and symptoms) and preventative measures and managing mental health illness with HIV
<b>4th.G. Holistic safe practice</b>
4th.G.i. Properly and effectively communicate with client living with HIV and mental health illness

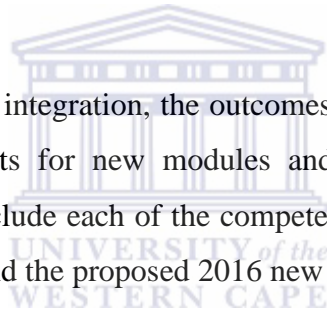
<b><u>Fourth Year level</u></b>
4th.G.ii. Demonstrate interviewing and motivational skills for patients living with HIV and additional mental health illness
4th.G.iii. Display and enhance positive attitude towards clients and family members infected with or affected by HIV
4th.G.iv. Provide support to clients affected by or infected with HIV in a mental health clinical settings as well as vulnerable group (e.g. orphans)
4th.G.v. Conduct mental state exam and assess the effect of HIV on mental health of patient living with HIV and AIDS
4th.G.vi. Assess aspects in the patient's background that influence the well-being of person with HIV and mental health illness
4th.G.vii. Provide HIV pre-test counselling to couples and to clients with mental health illness
4th.G.viii. Conduct tests for diagnosis of HIV
4th.G.ix. Display understanding and interpretation of results, and communicate results: HIV test and other blood test results: VL and CD4, follow-up tests and blood results to assess treatment failure or complication
4th.G.x. Provide HIV post-test counselling to couples and clients with mental health illness
4th.G.xi. Correctly stage a client with HIV and mental health illness related to HIV
4th.G.xii. Provide nursing care to patients with HIV and AIDS and a mental health illness in the management of common mental health illnesses related to HIV in various settings, including mental health settings and manage crisis
4th.G.xiii. Provide grief counselling to carers and family members affected by HIV, enhancing continuity of care
4th.G.xiv. Participate in the provision of ART and explain the interaction of ART and medication given for common mental health illnesses
4th.G.xv. Enhance adherence of patients on both ART and any other medication for the mental health illness
4th.G.xvi. Apply, enhance and monitor adherence to correct universal precautions in nursing practice in any clinical settings and home-based care settings

## 5.5 Conclusion

This chapter presented a short summary of the theoretical basis for the development and integration of the HIV and AIDS competencies that can be integrated into the nursing programme at UWC. The presented product of the study is in the form of the list of HIV and AIDS nursing competencies that were developed from the study, highlighting the specific competencies and outcomes that were developed at programme level and examples of concepts and content that are covered in each competency, providing direction for implementation.

The mapping of the competencies in the four-year nursing programme is presented by providing the various outcomes that can be covered in each year level, providing opportunity for the development of the competencies as evidenced in the incremental nature of the outcomes, with increasing levels of complexities being developed as the student nurse moves from one year level to the other.

As this model was developed for integration, the outcomes are to be included in the existing programme, without requirements for new modules and additional credits. In this line, examples of modules that can include each of the competencies are also presented, based on the current nursing programme and the proposed 2016 new curriculum modules.



## CHAPTER 6: DISCUSSION

### 6.1 Introduction

This chapter discusses the findings and outcomes of the study, which are presented according to the format of the COPA model that has been adopted for this study. First, the HIV and AIDS nursing competencies are presented in summary, and literature is presented to support the findings of the study. A discussion on the outcomes with the use of Bloom's taxonomy is presented, and the teaching and learning process is included, summarizing the teaching strategies and learning opportunities that can be adopted for the integration of HIV and AIDS competencies into the undergraduate nursing programme. The contribution of the study to the body of nursing knowledge is presented, as well as implications for further research. The limitations of the study are highlighted, providing steps taken to minimize the negative effect of the limitations.

### 6.2 HIV and AIDS core competencies for nurses

The HIV and AIDS core competencies for nurses relate to the first pillar of the COPA model that was used as a framework for the study, and was identified in the first phase of the study. As a nurse educator, the researcher realises that the HIV epidemic is in its third decade, and efforts to stop the epidemic have not been fully successful, as new people are being infected every year. However, advances have been made in terms of treatment and management strategies, which include development of policies and guidelines to guide HIV and AIDS care and management. The WHO (2009) notes that medical and nursing education should consider the epidemiological profile of a country. With South Africa being the country with the highest number of people living with HIV and AIDS, and nurses being the bulk of health care providers, nurses need to be adequately trained and competent to provide care and management for HIV and AIDS as soon as they graduate.

The purpose and findings of this study correspond to the recommendations of Pruitt and Epping-Jordan (2005) that all health care workers should be trained and able to provide care and management appropriate for the 21<sup>st</sup> century, where HIV and AIDS is one of the major health problems. Enhancing the training of nurses with regard to the care and management of HIV will also promote the fight against HIV and AIDS. According to Pruitt and Epping-

Jordan (2005), there is a need to mobilize the resources needed to fight against HIV and AIDS in meeting the MDGs, therefore the revisiting of the training of nurses who provide the bulk of health care services for HIV and AIDS. The WHO (2005) also highlights that a list of core competencies is useful when deciding what should be included in the training programme, and the teaching methods used should enhance active participation of learners. In this study, by following the steps of intervention research, design and development, the study identified seven HIV and AIDS core competencies for nurses through NGT sessions, individual interviews and SRS. The identification of HIV and AIDS-related competencies that could be integrated into the undergraduate nursing programme addressed the first research question of the study. Three categories of competencies were developed, namely foundation, supporting pillars and performance categories of competencies related to HIV and AIDS for nurses in South Africa. Seven core competencies were identified in the HIV and AIDS nursing competency categories, namely knowledge, ethics, policies, interdisciplinary approach, personal and professional development, health education and holistic safe practice, and for each a number of specific competencies were identified.

### **6.2.1 Foundation category of competencies**

For any project, and more so in nursing education, one needs to ensure a good foundation that can provide the basis for nursing practice. In this study the first category of competency was developed as the foundation category, and it comprised the knowledge core competency related to HIV and AIDS. From the various sources of data it was noted that nurses have to acquire knowledge that is related to HIV and AIDS, and this forms the foundation of their practice once they graduate. Focusing on the foundation category of HIV and AIDS nursing competencies provides an opportunity to address the various HIV and AIDS knowledge deficiencies that have been documented among nurses (Delobelle et al., 2009; Kamiru, Ross, Bartholomew, McCurdy, & Kline, 2009). Nurses should be equipped with scientific facts related to HIV and AIDS, in addition to enhancing critical analysis of the various issues related to HIV and AIDS prevention, care and management, as detailed in the HIV and AIDS-specific competencies developed in this study.

#### **6.2.1.1 Knowledge**

The knowledge core competency is part of the foundation category of competencies, and forms the basis of care and management for HIV and AIDS. For effective care and



management of HIV and AIDS, nurses need to be competent in the knowledge area related to HIV and AIDS. Literature indicates limitations in nurses' knowledge of HIV and AIDS (Yiu et al., 2010; Mulaudzi et al., 2011), and as practice depends mostly on what the practitioner knows, lack of knowledge could have a negative effect on the care and management provided to patients living with HIV and AIDS (Madumo & Peu, 2006; Li, Scott, & Li, 2008). In this study the knowledge competency was identified as the most important competency from the eight NGT sessions, and was developed to fill the gaps noted in the literature, covering the required knowledge that can support and inform nurses in order to be able to provide care and management for HIV and AIDS. The specific competencies included in the knowledge competency provide understanding of the science of HIV in terms of its structure, its transmission as well as how the medication works in the management of HIV.

The competency related to the issues related to HIV and AIDS facilitates understanding and appreciation of the various aspects that have the potential to influence HIV management and control of HIV and AIDS. The various socio-economic and cultural factors that can impact HIV management and control need to be well understood, and a good analysis of such factors can inform the nurse when doing assessments, planning the care that will be implemented, providing health education and mobilising the support system of the person living with HIV and AIDS. Nurses should know about HIV prevention and management, and the necessary assessments, because such knowledge informs practice. In addition to acquiring knowledge, nurses should have a critical attitude towards the knowledge and be realistic so that they can explore alternatives. Instead of being receivers of knowledge, they can participate in the process of knowledge creation. This will enhance the critical analysis skills within the knowledge nursing core competency for HIV and AIDS, and further enhance the practice.

### **6.2.2 Supporting pillar category of competencies**

For nurses to provide care and management for patients living with HIV and AIDS, more than knowledge is needed. In this study four other competencies were identified as part of the supporting pillars category of HIV and AIDS nursing competencies. These competencies were identified to be informed by the foundation category, and support the practice of nurses who care for patients living with HIV and AIDS.

### **6.2.2.1 Ethics**

The ethics core competency is one of the four core competencies of the supporting pillars category of competencies. In their practices nurses are required to adhere to ethical principles and demonstrate ethical behaviour in general. When providing care and management to patients living with HIV and AIDS, an illness stigmatized in most communities, nurses need the competency to apply ethical principles and to identify and deal with the ethical dilemmas that can arise in the provision of care and management for HIV and AIDS. Such dilemmas relate to issues of disclosure, confidentiality and stigma, as noted in this study and documented by Hall (2004); Delobelle et al. (2009) and Relf et al. (2009), who indicated that nurses' inability to inform the partners of the patients living with HIV presents a problem, because they are unable to address precautionary measures when providing health education.

According to SANC (2006) nurses must respect the patient's right to confidentiality and they condemn discrimination; however, Madumo and Peu (2006) as well as Mulaudzi et al. (2011) note that stigma still exist, and is often accompanied by discrimination. Relf et al. (2009) note in their study that about 40% of student nurses in South Africa and the USA were willing to test a patient for HIV without consent, with more than 20% of the South African students being willing to breach confidentiality of a patient's HIV status. The training of a competent nurse who will provide care and management to patients living with HIV and AIDS needs to address such ethical aspects related to HIV and AIDS, to ensure nurses are competent by the time they complete the training programme.

As part of maintaining professionalism and ethical behaviour, nurses must be able to assess, prevent and manage stigma. This will enhance the development of ethical behaviour, and produce ethically competent nurses who provide care and management for HIV and AIDS, in addition to maintaining professional relationships. These are some of the aspects covered in the ethics core competency developed in this study. They form part of the required competencies for care and management of HIV and AIDS by nurses who complete their initial undergraduate training.

### **6.2.2.2 Policies**

The other core competency that is part of the supporting pillar category of competencies is the policies core competency, which includes legislation, and policy and protocol analysis and implementation. Nurses need to develop competency in legislation so that they can

adhere to and apply the legal requirements when providing HIV and AIDS care and management. Laws related to patients' ability to give consent and the age when a minor may access health care are some of the crucial issues in the care of patients living with HIV and AIDS, as one may be in a situation when these need to be applied. For example, one has to be competent when providing HIV testing to a patient that has a mental health illness, and needs to assess the patient's ability to give informed consent before testing for HIV, or disclosing the HIV status of a minor. These are clarified in the Mental Health Act, 2002 (Act 17 of 2002) and Children's Act, 2005 (Act 38 of 2005) (McQuoid-Mason & Dada, 2011).

The legal aspects need to be mastered so that they can be applied to enhance a better working environment. For instance, in this study it was mentioned that there are times when protective wear is not available, which has been noted to increase the nurses' fear of HIV infection, with the potential to reduce the quality of health care provided to patients living with HIV and AIDS. Competency in legislation will empower nurses to demand from their employers the provision and availability of the necessary equipment, as stipulated in the Occupational Health and Safety Act, 1993 (Act 85 of 1993), which states that the employer should provide a safe working environment (McQuoid-Mason & Dada, 2011).

In addition to legislation, nurses should be competent with regard to policies. It is required of them to identify, analyze and implement policies relevant to the care of patients living HIV and AIDS. According to Bharat and Mahendra (2007), health care providers are crucial for the implementation of HIV policies and guidelines, and this strengthens the need for nurses to develop competency in policies related to HIV and AIDS from their undergraduate training. According to the information on the SAQA for the registered qualification: Bachelor of Nursing Science: General, Psychiatric, Community Nursing and Midwifery for UWC, one of the purposes of the qualification is to produce health care practitioners that will ne be able to influence policy making at all levels. This corresponds to the competency that involves policies, their analysis and implementation, as well as participation in influencing HIV and AIDS-related policy development.

### ***6.2.2.3 Interdisciplinary approach***

The third core competency of the supporting pillars category of competencies is the interdisciplinary core competency that relates to the nurses' involvement in community organization, referral and support systems. The competency in community involvement of

nurses needs to be developed during their training, and opportunities to do so are limitless. For example, de Wet et al. (2013) noted about the nurses' involvement in community, that during training, student nurses could be participating in endeavours to provided information to patients living with HIV and AIDS. This was identified in the study, and outcomes that will facilitate its development have been developed.

Pruitt and Epping-Jordan (2005) indicate the need to train health care workers to attain competencies that will improve tackling the problems of the 21<sup>st</sup> century. They emphasise that effective health care for patients who experience long-term illnesses, such as HIV and AIDS, needs to be continued across the various health care settings. There should be continuous collaboration amongst the various health care providers, hence the importance of the interdisciplinary approach competency identified in this study. With this competency, nurses will be able to participate and remain engaged in the various community organizations and programmes, with the aim of providing comprehensive care and management for HIV and AIDS. This will not only address the curative aspect of health care, but also the preventative and rehabilitation aspects. This is identified in the study as involvement in activities such as campaigns that are run in the community, referring patients living with HIV and AIDS to the various other resources that provide care as well as mobilizing the support services to people affected by and infected with HIV.

#### **6.2.2.4 Personal and professional development**

Personal and professional development is the other core competency of the supporting pillars category of competencies, and the competency that relates to the nurse who provides care and management to patients living with HIV and AIDS. Relf et al. (2009) recommended that nursing training and education include student nurses' self-assessment of their attitude and beliefs. This will not only facilitate clarification of their values, it will also enhance their competency in ethics. This further highlights the interrelationship between the various competencies.

Nurses providing care and management for HIV and AIDS experience stress and emotional exhaustion, and there need to be systems in place that can support nurses and care of the carer services (Van Dyk, 2001; Bharat & Mahendra, 2007; Delobelle et al., 2009; Mulaudzi et al., 2011). The stigma attached to HIV and AIDS, secrecy surrounding HIV disclosure, over-involvement with patients living with HIV and AIDS, families' lack of resources and

increased workload are some of the factors that cause the stress related to providing care and management to patients living with HIV and AIDS (Van Dyk, 2001). This stress, exhaustion and burnout were indicated in the study, and the study developed the personal and professional development competency to facilitate development of nurses' ability to disengage, care for themselves, access support and develop plans on how they can enhance their competence in the provision of care and management related to HIV and AIDS.

Nurses are at the forefront in the fight against HIV and AIDS (Zulu & Lehmann, 2004), and one needs to give attention to their needs, by providing support and attending to all other issues, such as limited knowledge about some aspects of HIV and AIDS care and management, and also by empowering them to develop competencies that will enhance their ability to provide HIV and AIDS-related care. The competency identified in this study relates to personal development, facilitating nurses to apply what has been learned in their own lives to ensure the prevention of HIV infection, or adequate and timeous management if infected. Furthermore, this competency assists nurses to develop the required skills to stay abreast with regard to the practice of HIV and AIDS care and management. New knowledge is created continually, and policies, guidelines and protocols about HIV and AIDS care and management change constantly. Nurses' competency also needs to include the ability to care for themselves with regard to managing the various stressors that have been noted to be related to the provision of HIV and AIDS care and management.

### **6.2.3 Performance category of competencies**

The performance category of HIV and AIDS nursing competencies identified in this study comprises competencies that relate to the main activities that a nurse performs, namely the provision of holistic safe practice and health education. This category is based on the foundation category developed in the study, and the performance of a nurse in the provision of care and management for HIV and AIDS is supported by the competencies identified in the supporting pillars category of HIV and AIDS competencies. When providing HIV and AIDS care and management nurses need to practice ethically, analyze and implement the policies that relate to the care and management for HIV and AIDS, and collaborate with other health care professionals and services that are involved in the care and management of HIV and AIDS. Furthermore, nurses need to be able to develop themselves at a professional and personal level with regard to HIV and AIDS, ensuring they are well equipped to provide HIV and AIDS care and management as well as avoiding HIV infection or accessing care if

infected with HIV. The two HIV and AIDS competencies developed in this category are holistic safe practice and health education.

### **6.2.3.1 Health education**

The health education core competency forms part of the performance category of the HIV and AIDS competencies for nurses that have been developed in this study, as the provision of health education is one of the main activities of a nurse. The health education competency developed in this study needs to be developed during training, and nurses have plenty of opportunity to develop the competency for the care and management of patients living with HIV and AIDS. Such opportunities present with every encounter with a patient infected with or affected by HIV, as well as those who are at risk of HIV infection, which includes every patient that comes into the nurses' care, allowing nurses to provide information for promotion of health.

As recommended in this study and noted by de Wet et al. (2013) and Madumo and Peu (2006), student nurses' participation in HIV and AIDS campaigns is included in the study. The content of health education should be comprehensive, and include information on prevention and health promotion, with specific topics that address nutrition, sexuality and safe sex, to name a few. Various topics were included in the study for consideration, such as sexual and reproductive health. Bharat and Mahendra (2007) note that information related to sexuality is often incomplete. This is a result of various factors, such as the perceived inability of patients living with HIV and AIDS to understand, some judgemental attitudes that people living with HIV and AIDS do not deserve such services, or that health care providers do not assess needs related to sexual and reproductive health. In this study, the person living with HIV noted that pregnancy status is not checked regularly.

The health education core competency also includes being competent in transferring information that is not only accurate, but also relevant to the audience, taking into consideration the audience's culture and ability to understand. This refers to the use of lay terms and examples, and repetition of information to ensure the receiver of health information understands. It also refers to the assessment of the effect of the health education sessions, as appropriate behavioural modification theories are applied. Furthermore, nurses' competency in health education enables nurses to address different groups and categories of people who represent those that access health care services and are cared for by nurses.

### **6.2.3.2 Holistic safe practice**

The holistic safe practice core competency was ranked the second most important competency from the eight NGT sessions, and it forms the second part of the performance category of competencies for HIV and AIDS for nurses. The holistic safe practice competency includes assessment, interpersonal skills, management, safe practice, and specific HIV and AIDS nursing competencies. These competencies were developed to assist in improving the provision of care and management for HIV and AIDS that are holistic, including physical, mental, psychological and spiritual care. However, nurses are not always competent to provide comprehensive care and management for HIV and AIDS. For example, Jonsson et al. (2013) note a high prevalence of mental health disorders in people living with HIV and AIDS, with about 25% of those living with HIV and AIDS in South Africa suffering from some form of depression in the course of their illness. However, Chorwe-Sungani (2013) notes that many nurses have limitations related to providing mental health care and management of patients living with HIV and AIDS in Malawi. Chorwe-Sungani (2013) recommends that the nursing curriculum prepares nurses to provide mental health care to people living with HIV and AIDS. In the study this was taken into consideration and applied in the mapping of the HIV and AIDS core competencies, with the development of outcomes that related to people living with HIV and AIDS and a mental health illness, whether primary or secondary to the HIV infection.

A number of authors have noted aspects that can interfere with nurses' ability to provide care and management for HIV and AIDS, such as Madumo and Peu (2006), who note that fear of contracting HIV, caused the inability to nurse with passion. This study has identified competencies and related aspects that will be covered in the curriculum to counteract the negative effect of such aspects. The one issue related to the management of HIV and AIDS is about initiation of ART by nurses. With the various policies currently in place and the application of task shifting, nurses are required to initiate ART, and Swart et al. (2013) recommend that initiation of ART, side-effects of ART, TB and switching therapy be included in the training of nurses, as these were aspects that nurses needed the most help with when contacting the ARV helpline. Considering the implementation of task shifting and recommendations by the WHO (2005; 2010) to integrate all aspects of HIV and AIDS care and management, including the provision of ART into the training of health care providers at

pre-service level, this study attempted to provide a comprehensive integration that includes initiation of ART into the undergraduate nursing programme.

From this study there seemed to be no clear agreement on including NIM-ART into the undergraduate programme, as some of the participants indicated that it is a competency for the postgraduate level. However, in the 2004 meeting on HIV service delivery the WHO indicated that as task shifting will facilitate the success of scaling up treatment and care for HIV and AIDS, including ART, training of health care workers should include ART in the pre-service programme and nurses should recommend and initiate ART (WHO, 2005). The Minister of Health (Mostoaledi, 2014) recently announced that all those with a CD4 count less than 500 would be started on ART as from January 2015. This means that the number of people living with HIV and AIDS who are on treatment will increase, hence the necessity to ensure that nurses are ready to participate in such care as soon as they graduate. Furthermore, in the 2013 RSA UNGASS mid-term report, one of the programmatic actions that are reported to be necessary for achieving the target related to reaching 15 million people living with HIV on ART by the year 2015, is strengthening the capacity of nurses to initiate and monitor people living with HIV on ART. The report notes that the ability of new nurse graduates to manage adults and children living with HIV will be enhanced by inclusion of NIM-ART in the pre-service training (RSA, 2013). This guided this study, with the inclusion of outcomes that relate to participation in initiation and monitoring of ART, which will require the student nurse to have the opportunity to participate in ART initiation and monitoring. This will facilitate the new nurse graduate improving the competency after graduation, and prior exposure to NIMART during undergraduate training will enhance reduction of reliance on in-service training, while speeding up provision of ART to people living with HIV (WHO 2010; RSA, 2013).

A combination of basic training, support, phased implementation and nurse-specific guidelines is important in the long-term development of nurses' ability to develop competence in the provision of ART, as indicated by Colvin et al. (2010). In the study it was mentioned that training of nurses at undergraduate level in NIM-ART is essential and outcomes were developed to commence the development of skills required for NIM-ART at undergraduate level. It is to be noted that one needs to enhance the mastering of the holistic safe practice competency, which includes management as a specific competency, before



sending nurses into practice. Zuber et al. (2014) note that this could be more cost-effective than in-service training and it is also more cost-effective than a postgraduate qualification.

Nurses should be able to practice as soon as they complete their undergraduate training, and fewer nurses embark on postgraduate courses. Based on SANC's statistics, at the end of 2013 there were about 129 015 registered nurses/midwives, and about 100 323 additional qualifications, with Community Nursing Science (23 006), Nursing Administration (22 929), Clinical Nursing Science, Health Assessment, Treatment and Care (13 128) and Nursing Education (13 056) having the most number of registered nurses/midwives with additional qualification, with some nurses having more than one additional qualification (SANC, 2014b; 2014c). Considering that every practising nurse will need to provide care and management to patients living with HIV and AIDS, as indicated by Zuber et al. (2014), keeping NIM-ART for a postgraduate course will not provide the long-term solution required for the fight against the HIV epidemic. By including NIM-ART in the undergraduate programme there will be opportunity to eliminate hindrance to nurses initiating and monitoring patients living with HIV and AIDS on ARV as part of holistic safe practice competency.

As noted by one of the participants and by Ford (2013), section 56 of the 2005 Nursing Act (Act 33 of 2005) provides the legal framework for the implementation of NIM-ART, especially in public health services, and one of the outstanding aspects is an agreement on the curriculum that can provide the development of this competency. This study has provided a number of competencies and outcomes that can facilitate effective provision of comprehensive care and management of HIV and AIDS, providing the potential to achieve the needed consensus.

De Wet et al. (2013) also note that it is important to include communication skills and cultural aspects into the nursing curriculum. Nurses would need these skills in providing care and management to patients living with HIV and AIDS, especially with regard to health education sessions. A positive attitude, such as kindness and understanding, has been documented as ideal when nurses interact with patients living with HIV and AIDS, and this is greatly appreciated by the patients, as noted by Campbell et al. (2011). This aspect of care and management was included in the interpersonal skills-specific competency of the holistic safe practice core competency developed in this study, as creating opportunity to ensure development of such competency is needed to increase the positive experience of patients living with HIV and AIDS.

#### **6.2.4 Relating the HIV and AIDS competencies to the COPA universal competencies**

The seven core competencies and 21 specific competencies related to HIV and AIDS for a new nurse graduate were developed from the NGT sessions, individual interviews with various stakeholders as well as the SRS conducted in this study. These HIV and AIDS nursing competencies were developed to enhance the nurses' ability to provide care and management for HIV and AIDS upon graduation, and the COPA model was used as a guiding framework, focusing on the first three pillars that related to identification of competencies, outcomes and teaching and learning strategies used to enhance performance. From the development of the COPA model, Lenburg (1999) provides eight universal competencies, and considering that the COPA model was applied in the study, the researcher aimed to ensure that the universal competencies of Lenburg (1999) have been covered in the HIV and AIDS nursing competencies. The universal core competencies outlined in the COPA model were reviewed and compared to the HIV and AIDS nursing competencies developed in the study, and they are all included in one or more of the HIV and AIDS competencies that have been developed in this study, as reflected in Table 6-1.

As each of the Lenburg (1999) universal competencies has a number of subskills that are performed by nurses, these were reviewed and seen to have been covered by the developed HIV and AIDS-related competencies in the study. For example, the aspects covered in the assessment and intervention skills, such as therapeutic treatment and procedures, are covered in the knowledge and holistic assessment competencies developed in the study. The communication skills aspects that have been documented by Lenburg (1999) are included in the HIV and AIDS-related competencies developed in this study, such as an aspect of holistic safe practice with the interpersonal skills-specific competency, as well as application in the health education competency. The subskills relating to information search and inquiry are embedded in the professional development-specific competency developed in this study.

Having applied OBE and constructivism as the guiding educational philosophy, the critical thinking skills identified by Lenburg (1999) are embedded in the various HIV and AIDS-related competencies developed in this study, as a critical approach is applied in the teaching and learning process.

The human caring and relationship skills documented by Lenburg (1999) can also be found in the ethics, interdisciplinary approach as well as the holistic safe practice competencies

developed and integrated in this study. Furthermore, while the management skills can be found embedded in the knowledge, interdisciplinary approach and holistic safe practice competencies, the leadership skills are embedded in the policies and ethics competencies, as nurses are to develop competencies that not only apply to the policies as set, but which also influence policies related to HIV and AIDS, as well as maintaining professional accountability that is embedded in the personal and professional competency developed in this study. The teaching skills and knowledge and integration skills developed by Lenburg (1999) are covered in this study in the health education competencies, knowledge and holistic safe practice as well as the personal and professional development competencies developed.



Table 6-1: Indication of where the COPA competencies are embedded in the HIV and AIDS nursing competencies developed in this study

<b>COPA Competencies</b>	<b>Assessment and intervention</b>	<b>Communication</b>	<b>Critical thinking</b>	<b>Human caring and relationships</b>	<b>Management</b>	<b>Leadership</b>	<b>Teaching</b>	<b>Knowledge and integration</b>
<b>HIV/AIDS competencies</b>								
Knowledge	X		X		X			X
Ethics				X		X		
Policies			X			X		
Personal and professional development		X	X					X
Interdisciplinary approach				X	X	X		
Health education		X	X				X	
Holistic safe practice	X	X	X	X	X			X

### 6.3 Outcomes

The identified nursing core competencies and specific competencies for HIV and AIDS were mapped into the four-year nursing curriculum at UWC using the curriculum mapping process. Outcomes were developed for each competency at a programme level, and at each year level highlighting the level of competency that will be expected to be achieved for each. The development of outcomes correspond to the second pillar of the COPA model that was used in the study as a framework, and were developed in the second phase of the study, while the third phase of the study served as validation of the outcomes and the mapping done.

Integrating the HIV and AIDS competencies into the nursing four-year undergraduate programme facilitates nurses' development of competencies, and this has the potential to improve the practice upon graduation, as noted by Farrand et al. (2006).

Bloom's taxonomy was used and allowed increase in complexity from one year level to another, as well as the inclusion of cognitive, psychomotor and affective outcomes for the various year levels. As the provision of HIV and AIDS care and management is comprehensive and holistic, the various competencies integrated are interrelated, and so are the outcomes. The various teaching groups will decide on how to combine the outcomes in a way that fits the whole year programme. This study provided a full list of outcomes for each year level; however, based on each year-level programme, two or more outcomes can be combined in one session based on the micro-curriculum planning of each subject. The outcomes for each competency were developed, taking into consideration the current nursing programme, as there were no plans to change the whole curriculum. Instead an integrated approach was applied as opposed to stand-alone subjects on HIV and AIDS, or delegating the teaching of HIV and AIDS to other service providers. Considering that there is a global move to provide integrated care and management of HIV and AIDS into the various health care services, the teaching of HIV and AIDS aspects should take the same format, and this will facilitate the application of what was learned into practice upon graduation.

The developed outcomes provide a clear picture of how HIV is covered in one year level over the various modules that are taught, and also provides a vertical view of how the competencies are developed, showing the increase in complexity and what the nurse in training will be able to do at the end of each year level. During the formulation of outcomes, some were found to be very generic; however, they were kept in the mapping as they

provided insight into the pre-requisites for the specific outcome. For example, in the interdisciplinary approach core competency, the first year level has a competency that relates to primary health care. This outcome is a prerequisite for what is to be done in the second year when student nurses will be involved in community programmes such as VCT campaigns.

#### **6.4 Teaching and learning process**

As part of the third pillar of the COPA framework, teaching strategies and learning opportunities were identified in the second phase of the study. The teaching and learning process applied within a programme that aims at integration needs to consider innovative teaching approaches and learning opportunities that enhance student participation. This is also valid for the integration of HIV and AIDS competencies in the undergraduate nursing programme, as it will enhance student nurses' development of the required HIV and AIDS competencies, and such development will happen in a variety of settings (SAQA, 2009; HEAIDS, 2010).

For the development of HIV and AIDS nursing competencies the constructivist educational philosophy was adopted for the study, and supports Kolb's experiential learning theory that can guide the teaching and learning process, with consideration of the learning cycle that includes concrete experience, reflective observation, abstract conceptualization and active experimentation (Svinicki & Dixon, 1987; Kolb & Kolb, 2012). As noted by Brandon and All (2010), nurses need to be self-directed, lifelong learners, reflective practitioners, and critical thinkers who can synthesize information while being able to criticize themselves. Applying experiential learning with a constructivist perspective will ensure that student nurses are involved with experiences that relate to the learning required for the development of HIV and AIDS competencies, and foster reflection skills to find new meanings in the construction of knowledge. This will facilitate the formulation of conclusions that are incorporated into already possessed knowledge, and will guide the practice required in the provision of care and management for HIV and AIDS. To achieve this, nursing educators will use various teaching strategies that facilitate student nurses' active participation, reflection and integration of theory and practice to develop HIV and AIDS nursing competencies.

Some of the strategies that have been discussed in the study include the use of CBE, SLM, participation in projects, reflective journals and expert presenters. The expert presenters can

be those practitioners that have expertise related to HIV and AIDS, or the people living with HIV and AIDS. The use of people living with HIV and AIDS in teaching has previously been documented by Solomon et al. (2005) and Maina et al. (2014). This practice has been reported to be appreciated by students who were exposed to the people living with HIV and AIDS in their training. It provides the opportunity to enhance student nurses' learning and development of competencies related to the care and management of HIV and AIDS, as well as the exploration of issues that they may later encounter in practice. It has been noted that by using people living with HIV and AIDS in teaching and learning, students are provided with the opportunity to enhance their communication skills, to understand the various aspects of culture, medication and economic status, and their effect on the person living with HIV and AIDS, with the added potential to reduce stigma (Solomon et al., 2005; Yiu et al., 2010; Maina et al., 2014).

Various learning opportunities were identified, and these will happen in class and clinical settings. The clinical settings include health care institution placement, skills laboratory for simulation, group activities and communities. As noted by Kamiru et al. (2009), training programmes need to provide opportunities for learners to have contact with patients during the course of their training. In this study such opportunities were identified to facilitate the development of HIV and AIDS competencies by nurses during their training, enhancing their ability to practice safely and effectively upon graduation. In addition, De Wet et al. (2013) identified student nurses' participation in community work, and this is another teaching strategy and learning opportunity that has been identified in the study, and can be implemented for the development of HIV and AIDS nursing competencies. The teaching strategies and learning opportunities identified in the study, such as group work, clinical placement, CBE and role-play, have the potential to facilitate students' participation. According to the WHO (2005), practical experience should get specific attention during the pre-service training, because this will reinforce the theoretical aspects covered in class, enhancing application of knowledge in practice, as well as making use of pre-existing knowledge.

As noted by Odland, Sneltvedtm and Sörlie (2014), training institutions should prepare nurses to transition easily into the workplace, and this integration was designed to facilitate progressive development of competencies related to HIV and AIDS to enable new nurse graduates to adjust and function effectively upon graduation.

The initiative to map the HIV and AIDS competencies into the undergraduate nursing programme to ensure integration requires focus on the teaching staff's professional development in terms of their experience and expertise related to HIV and AIDS, as well as the teaching methods that need to be implemented within a constructive educational philosophy. This has been considered in the study, with the identification of staff development as one of the structural requirements, in addition to setting readiness. These two aspects are crucial, as they have the potential to maximize the benefits of the teaching strategies and learning opportunities. Faculty development has proven to improve the integration of specific aspects in curriculum, such as substance abuse (Hayes, 2002), and this was seen with an increase in continuing education activities, obtaining more teaching resources, increase in clinical contact and integration in curriculum (Hayes, 2002).

## **6.5 Conclusion**

This discussion chapter provided a summary of competencies and the literature support. In addition to the outcomes, the learning and teaching process presented provides insight into the teaching and learning process to be implemented to facilitate the development of the HIV and AIDS nursing competencies that will enable the new graduate nurse to practice effectively and safely in provision of care and management for HIV and AIDS. The contributions of the study and further research projects that can be undertaken were highlighted, as well as the efforts made to minimize the limitations experienced in the study.



## **CHAPTER 7: CONCLUSION AND RECOMMENDATIONS**

### **7.1 Introduction**

This final chapter of the report presents the conclusions of the research study done to develop a model of integration of HIV and AIDS core competencies into the four-year undergraduate nursing programme at UWC. The conclusion section first presents a brief outline of what is contained in each chapter of the report, and then follows the research questions that the study set out to answer. Final conclusions are provided, and recommendations are presented before concluding the whole report.

### **7.2 Concluding the report**

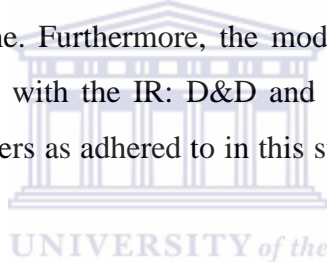
This report is presented in seven chapters, with the first three chapters presenting the sections related to the planning done in preparation for the study, as well as the method used to conduct the study; this provided the background and objectives of the study, literature review, and methodology chapters. The results of the study are presented in chapters four and five, with chapter four presenting the details of findings of the study and their explanations, while chapter five provides the integration of HIV and AIDS into the nursing programme. In chapter five the various outcomes related to each core competency for the whole four-year nursing programme are presented, as well as year-level outcomes for each of the identified core competencies, highlighting how the identified HIV and AIDS nursing competencies may be developed in the nursing programme. Chapter six presents a summary of findings and a discussion of the study findings, with consideration to further research studies that can emanate from this study and how the limitations were addressed in the study. This final chapter provides the final conclusion and recommendations of the study.

### **7.3 Methodological and theoretical support for the study**

The study was conducted following the first four steps of IR: D&D, with constructivism being the research paradigm adopted in the study. The two first steps of IR: D&D allowed for the collection of information related to the identification of HIV and AIDS competencies for nurses from NGT sessions and individual interviews, as well as SRS. The third step of IR: D&D is design, and curriculum mapping was the strategy used for the design of the model for

integration. The early development step was done through workshops and expert reviews, which allowed for confirmation of the design model developed in the study.

The study adopted the COPA model, and only the first three pillars were applied in the study, with the ‘assessment’ pillar being reserved for further research as it was beyond the scope of this study. Reconstructionism was the educational philosophy adopted for the study, and constructivism was the psychological philosophy adopted for the curriculum that is to integrate the HIV and AIDS competencies for nurses. These philosophies provide guidance and direction for the teaching and learning process that is to be implemented for the development of the HIV and AIDS competencies. It will enhance active participation of student nurses, and continuous creation and discovery of knowledge by the student nurses, with the recognition that teachers are not in charge of transferring knowledge, but facilitators in the creation of knowledge. The philosophies also guided the adoption of OBE as the curriculum approach for the integration of HIV and AIDS competencies into the undergraduate nursing programme. Furthermore, the model for curriculum development in nursing adopted in the study fits with the IR: D&D and the COPA framework, enhancing participation of various stakeholders as adhered to in this study and illustrated in Chapter 2 – Table 2-3.



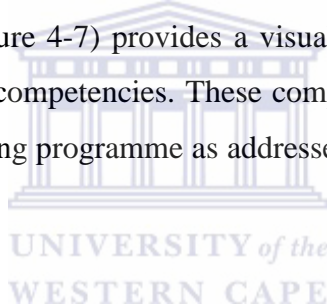
The integrated model that allows vertical and horizontal integration was adopted, with sequenced and connected levels of integration being chosen in the integration of HIV and AIDS competencies in the undergraduate nursing programme, with consideration of the current programme at UWC. These theoretical and methodological considerations provided guidelines for the study and assisted in the identification of HIV and AIDS nursing competencies and how they can be integrated into the undergraduate nursing programme at UWC.

#### **7.4 HIV and AIDS core competencies for a new graduate nurse**

The identification of the HIV and AIDS nursing competencies answers the first question of the study, and corresponds to the first pillar of the COPA framework. With the participation of various stakeholders that include nurse educators, nurses in clinical practice, people living with HIV and AIDS, recent graduates and members of SANC as governing body, NGT sessions and individual interviews were conducted. During data collection discussions were related to what is expected of a new nurse graduate for the provision of care and management

for HIV and AIDS. Aspects that nurses struggle with in caring for patients living with HIV and AIDS were also discussed. In addition to the identification of the seven HIV and AIDS nursing core competencies, structural requirements such as staff development and teaching strategies that are to be put in place for the development of HIV and AID nursing competencies were identified.

The identified core competencies are knowledge, which is part of the foundation category of competencies, ethics, policies, interdisciplinary approach and personal and professional development core competencies, which are part of the supporting pillars category of competencies. The performance category of competencies is made up of health education and holistic safe practice core competencies. Each core competency has a number of specific competencies that make up the core competency. The study notes the comprehensiveness of care and management of HIV and AIDS, and the interrelation and interconnection between the core competencies and specific competencies were also highlighted. The graphic presentation in chapter four (Figure 4-7) provides a visual representation of the framework for HIV and AIDS nursing core competencies. These competencies are to be integrated into the four-year undergraduate nursing programme as addressed by the second research question of the study.



## **7.5 Identification of outcomes and teaching and learning process**

The second research question of the study related to how the identified HIV and AIDS core competencies for nurses can be integrated into the four-year nursing programme at UWC, fitting with the second and third pillars of the COPA framework.

For each core competency and specific competency, outcomes were developed, and examples of content and concepts that are included in each competency to be covered in the curriculum were presented. The study espoused the experiential learning theory based on constructivism, and various teaching strategies, such as the CBE, SLM and class discussions were identified as having the potential to facilitate the development of competencies. The learning opportunities identified in classroom and clinical settings enhance active participation and take into consideration previous knowledge and the creation and discovery of new knowledge. Further outcomes were developed for each year level, using Bloom's taxonomy to ensure progressive development of competency levels, necessitating the acquisition of a lower level of competency before moving on to another year level. In Chapter 4 Figure 4-9

provides a graphic presentation of how the competencies can be integrated into the four-year nursing programme, with consideration of vertical and horizontal integration. The development of HIV and AIDS competencies by nurses in their training is to be supported by the teaching and learning processes that are put in place. In this regard, the study identified teaching strategies and learning opportunities that can be included in the programme.

## **7.6 Validation of the integration model for HIV and AIDS nursing competencies**

The last research question of the study was addressed in the third phase of the study. It was related to the validation of the integration of the HIV and AIDS nursing competencies into the four-year nursing programme at UWC, and was covered in the early development step of IR: D&D. For the validation a workshop was conducted with various stakeholders, and an additional two experts reviewed the integration model, and provided electronic feedback.

The participants in the third phase of the study had expertise in the fields of both HIV and AIDS nursing and nursing education. The majority of participants had participated in the previous phases of the study, and this continued participation strengthened the validation process, as the participants could relate to previous discussions. There were also participants who had not been part of the previous two phases, and their input provided an opportunity to strengthen the final product of verification, as their input was viewed as bringing a fresh perspective to the study, allowing identification of aspects that could have been missed by the participants who were immersed in the process.

The participants confirmed and supported the identified competencies related to HIV and AIDS for nurses, and they viewed them as being appropriate, complete and relevant for the new nurse graduate. The outcomes and the mapping in the four-year nursing programme at UWC were also reviewed, and participants supported the presented integration, with relevant adjustments being made and adopted. The adjustments were useful in that they provided an opportunity to present the outcomes logically, fitting the current practice that the student nurses will be exposed to.

The workshop participants also viewed the integration of HIV and AIDS core competencies into the undergraduate nursing programme at UWC as being feasible and practical, in addition to being important for the training of nurses who are to provide care and management to patients in the South African context.

## 7.7 Recommendations

From the findings of this study, HIV and AIDS competencies for nurses were identified, and how these competencies can be integrated in one nursing programme in South Africa has been presented and validated. From these findings, the researcher presents the following recommendations:

1. The study has identified HIV and AIDS competencies for nurses with the participation of various stakeholders, and recommends that nursing education institutions assess their nursing programmes to identify how these competencies are developed in their programmes. This is viewed as important, because the various nursing programmes produce nurses who will provide care and management to people affected by or infected with HIV, or are at risk of infection in South Africa. Ensuring that the new nurse graduate has developed all these competencies will enhance safe practice, and has the potential to ensure effective practice upon graduation, with no or limited need for further training related to HIV and AIDS as is currently the case.
2. In the study some shortfalls were identified, and the researcher recommends that the nurse educators look at the shortfalls closely and identify how these can be addressed in the nursing education and training programmes as a whole. Although discussed in the context of HIV and AIDS care and management, due to transferability of skills and knowledge as expected in education, some of the shortfalls are applicable and can be part of nursing care in general. An example relates to the setting up of an intravenous line, a skill that was noted by nurse graduates as problematic for them when they started in practice. The implications are extensive in the care and management of HIV and AIDS, as patients living with HIV and AIDS often present with diarrhoea and need fluid replacement, and such a shortfall can endanger patients' lives. Additionally, this shortfall has the potential of increasing the risk of needle-stick injury, an aspect that is covered in the holistic safe practice core competency.
3. The integration of HIV and AIDS core competencies into the four-year undergraduate nursing programme provides outcomes for each year level, highlighting the incremental nature of competency development. The recommendation from the study is that the nurse educators in various schools review the various outcomes for each year level, rearrange them to ensure it will fit into their programmes, and then implement the integration based on the relevancy to their programme and health care needs. They should consider the

learning opportunities available for the student nurses to develop the HIV and AIDS competencies, in order for them to effectively provide care and management related to HIV and AIDS upon graduation.

4. Possible barriers and solutions were presented, and as successful integration depends on buy-in from the educators involved in the teaching, the study recommends staff development sessions for the teaching staff on HIV and AIDS care and management, and on teaching and learning strategies, to support integration, maximize the integration and facilitate enhanced development of HIV and AIDS competencies. As information on HIV evolves continuously, these staff development sessions will also provide opportunities to inform the nurse educators on changes that are relevant in the field of HIV and AIDS, in addition to evaluating the process regularly to fill any possible gaps.

## **7.8 Contribution of the study**

This study has contributed to the knowledge base of nursing in general and the field of HIV and AIDS and nursing education in particular. Additionally, the study contributes to the methodological body of knowledge with the various strategies that were implemented in the study, and these will be detailed in the next section.

### **7.8.1 Contribution to the body of nursing knowledge**

In this study the main focus was to develop a model of integration of HIV into the undergraduate nursing programme at UWC. The process followed to achieve this has provided for the development of a framework that highlights HIV and AIDS nursing competencies for a new nurse graduate, including the structural requirements for integration that will facilitate the development of the HIV and AIDS competencies (Figure 4-7). A model was also developed, which highlighted how the HIV and AIDS competencies can be integrated into the undergraduate nursing programme (Figure 4-9), using one school of nursing in South Africa as an example. This was done with the contribution from nurse educators based at seven universities in South Africa, nurses in clinical practice, recent graduates from one university in South Africa, representatives from SANC as the governing body and people living with HIV and AIDS.

The study had the added advantage of establishing the HIV and AIDS competencies for a new graduate in South Africa, an activity that has not been done previously in South Africa's

undergraduate nursing programme, with involvement from various stakeholders. Additionally, the study provided a systematic approach on how the HIV and AIDS competencies for nurses can be integrated into an existing curriculum, facilitating development of HIV and AIDS nursing competencies required by a nurse graduate in South Africa, taking into consideration the South African context with regard to health needs of the population, and the laws and policies that are applied in the country. The findings and outcomes of the study have the potential of addressing one of the problems that relates to closing the gap between education and practice with regard to the management and care of HIV and AIDS. It focuses on developing HIV and AIDS nursing competencies for a new graduate so that she can adjust quickly in practice upon graduation (Burns & Poster, 2008).

The development of year-level outcomes makes it possible to apply the model and framework in any other nursing programme, even if it is structured differently. The interested nurse educators would be able to move the year-level competencies from one year level to another, and considerations will just have to be made in terms of setting the outcomes to the right complexity level for each that needs to be moved to a different year level. This was noted in the feedback from one reviewer in the last phase of the study, who indicated that some of the outcomes that were planned for the third year can move to the second year, because the nursing programme of that specific nursing school covers community nursing in their second year, while it is covered in the third year of the nursing programme at UWC. A further advantage of the developed framework and model is its ability to be modified for the integration of any other aspect that needs to be integrated into the curriculum, with the interested nurse educators working towards identification of related content and concepts, and then following the same format to integrate the aspect of interest.

### **7.8.2 Methodological contribution**

The study used the IR: D&D as a methodological framework, and in each of the three IR: D&D phases that were applied to the study the researcher used a variety of other research methods. In the first phase the combination of NGT, individual interviews and SRS provided access to a vast amount of information, in addition to being able to access a large number of participants from seven of the nine provinces in South Africa. The use of NGT was a new data collection method in the environment where the researcher was based, and this not only enriched the researcher' experience in trying out a new technique, but also enlightened the nurse educators, who could identify the benefit of the technique in research. This was evident

from two requests that the researcher received to facilitate NGT sessions in the school where the researcher is based.

Furthermore, the data analysis of multiple groups of NGT was done and presented in more detail in the study. In the study the researcher expanded on the technique presented by Van Breda (2005), providing more clarity and insight on how the multiple group NGT data can be analyzed to identify common priorities from different groups. The combination of the NGT data and individual interview data also provided more methodological insight, as it provided the basis for continued content analysis beyond the provision of a priority list from NGT sessions; hence the development of a more comprehensive list of HIV and AIDS core competencies for a new nurse graduate.

Fawcett et al. (1994) documented IR: D&D to be the design phase of the list development phase, and this prompted the researcher to find creative ways of completing the design phase while ensuring participation of other stakeholders. The use of curriculum mapping for one specific aspect was a first in the School, and it provided nurse educators an opportunity to revisit the programme as a whole and identify aspects in the curriculum that can be strengthened. The continued active participation in the study by participants also served as groundwork preparation for the implementation plan, and the acceptability and feasibility of integrating HIV and AIDS into the undergraduate nursing programme was established through the workshop evaluation, where the participants indicated that integration is practical and feasible. Furthermore, the continued participation and involvement of the many nurse educators based at the institution where the research was conducted provided an opportunity for collaboration amongst staff, setting the stage for further collaboration among colleagues, an advantage that has been noted in a similar work on curriculum by Uchiyama and Radin (2009).

The process of SRS used in the study provided an opportunity to search and obtain publications of a different nature, and the use of JBI-NOTARI, a critical appraisal tool that has been developed to appraise documents and texts, enabled an increase in the quality and acceptability of the publications included in the review. This provided a review of literature on HIV and AIDS that has been published previously, and added to comprehensiveness when identifying competencies related to HIV and AIDS. The studies that were not included in the SRS were still considered by identifying whether the aspects that have been published have been identified in the list of HIV and AIDS core competencies for nurses.



The combination of the various techniques enriched the generation of knowledge, and the rigorous approach adopted in combining data from different sources as well as the continuous participation of stakeholders strengthened the quality of data and findings in the study. In any research project the researcher strives to ensure high quality of data, and in this study this was achieved, as indicated by the participants who reported agreement with the developed competencies that were delivered from the data collection sessions.

## **7.9 Implications for further research**

The developed HIV and AIDS core competencies, specific competencies and their outcomes as well as mapping of the competencies in the nursing curriculum were obtained in this study. Further research could be done to pilot test the integration model, implement the model and evaluate effectiveness of the model after implementation in the undergraduate nursing curriculum, which will richly contribute to the body of knowledge in nursing education as well as nursing care and management related to HIV and AIDS.

A larger study validating the integration model as well as the HIV and AIDS competency framework, including participants from the various levels of nursing qualification and nursing programmes in different nursing education institutions, will provide insight on how the model can be adapted and adopted by the various nursing programmes in South Africa and Africa as a whole. A further research study can start with the outcomes of this study to identify the competencies that will be developed for the advanced nurse practitioner, and this can form the basis of a postgraduate programme in HIV care and management, as well as highlighting the aspects to be considered in the in-service training that would be used not to provide the basic information, but to provide development of an advanced level of competency.

As this study did not consider the fourth assessment pillar of the COPA framework, a research study focusing on the assessment part of the HIV and AIDS nursing competencies in the undergraduate nursing programme would enlighten the nursing practitioners in education and clinical practice, allowing standardized assessments by new nurse graduates upon graduation to identify each nurse's competency level as well as gaps that may still exist between education and practice.

## 7.10 Limitations of the study

In conducting the study the researcher attempted to review the various philosophical perspectives that guided the project's theory and methodology, and chose methods and strategies that have the potential to increase the quality of data and findings. However, the study still presents with some limitations, although efforts were made to counteract the negative effect of these.

One limitation noted in the study was time and financial constraints, which limited the researcher's ability to visit places like Haiti that have integrated HIV into the pre-service curriculum using a competency-based approach. Such a visit would have facilitated the identification of successful functional elements to be considered in integration of the HIV and AIDS competencies into an undergraduate nursing programme. To counteract that, the researcher used literature to get information on integration by other programmes in places where integration of HIV and AIDS was done in undergraduate nursing programmes. Furthermore, an analysis of structural requirements was undertaken from the individual interviews, as well as asking the participants to identify barriers to integration and how the barriers can be removed.

The other limitation is in the recruitment of the nurses practising in the clinical setting. At first the researcher planned to interview nurses from two different hospitals; however, permission was obtained only from one hospital. Permission from the second hospital was denied as the nursing manager indicated that interviews will take away from the nurses' time which was designed to provide care and management to patients, and was only willing to provide permission if a questionnaire was administered. Due to the nature of the research, the researcher and supervisor did not view a questionnaire as an appropriate tool to collect the data, as face-to-face contact was required to get a full understanding of the participants' views. Another hospital was contacted; however, permission was not obtained as no feedback was obtained despite numerous requests and reminders for a period of 18 months. To counteract the limitation the researcher increased the number of nurses that were interviewed from the hospital that provided permission, and two nurses in clinical practice were recruited from two other clinical settings to participate in the validation phase of the study. This provided input from nurses working in different settings, and the opportunity for input from participants with varied experience.

During the data collection two participants refused to participate in the study, and they indicated that this was for personal reasons related to the fact that they did not agree with the current approach to the management of HIV and AIDS in public health care institutions. This comes as a limitation, as one misses the opportunity to hear from the people that do not agree with how the care and management are being provided in the fight against HIV and AIDS. To counteract the limitation, the researcher tried to include a variety of participants, asked open-ended questions, and asked participants if there was anything that they would like to add. However, there were no reports from the participants to provide an indication of what caused their unhappiness. Due to the requirement to respect ethical principles, the discussion with the participants who withdrew from the study was not added to the analysis.

For the validation phase of the study the financial constraints limited the number of people from outside the Western Cape that could participate in the workshop, and only one person outside of the province managed to attend and participate. To reduce the effect of the limited heterogeneity in the last phase, two more people were invited to review the final document and to send electronic feedback, which was included in the outcome of the workshop. Furthermore, the invited recent graduate could not make it, and sent another registered nurse from her workplace. This provided an added advantage of having a person who had not been involved in the previous two phases to review and contribute to the study, and hence the limitation was minimized.

## **7.11 Conclusion**

This study set out to develop a model for integration of HIV and AIDS core competencies into the undergraduate nursing programme at UWC, applying IR: D&D as methodological framework and the COPA model as theoretical framework. Various stakeholders as well as literature provided information for the development of the HIV and AIDS nursing core competencies and specific competencies. Outcomes were developed for each competency and using curriculum mapping, workshops were run to map the competencies in each year level, providing vertical and horizontal integration, based on a constructivist educational philosophy and experiential learning theory that enhance active participation of students and creation of knowledge, as well as the teachers' role as facilitator of learning. The mapping of competencies was verified and validated by participants who have expertise in the field of HIV and AIDS and nursing education.

This final chapter provides a final conclusion to the study with reference to the research questions that were to be answered, as well as recommendations from the study. The whole process and outcome of the study provides an opportunity to enhance the development of HIV and AIDS competency levels for nurses who provide care and management for HIV and AIDS, as they are the backbone of the health care system in South Africa, as in many other countries.



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# APPENDICES

## Appendix 1: Ethical clearance



UNIVERSITY of the  
WESTERN CAPE

### OFFICE OF THE DEAN DEPARTMENT OF RESEARCH DEVELOPMENT

07 November 2011

#### To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape has approved the methodology and ethics of the following research project by:  
Ms R Marie Modeste (School of Nursing)

Research Project: Developing a model for integration of core competencies related to HIV and AIDS into undergraduate nursing curriculum at UWC.

Registration no: 11/9/19

A handwritten signature in black ink, appearing to read 'Josias'.

*Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape*

## Appendix 2: Information document



UNIVERSITY OF THE WESTERN CAPE  
Private Bag X 17, Bellville 7535, South Africa  
*Tel: +27 21-959 2271, Fax: 27 21-959 2679*  
E-mail: [rmodeste@uwc.ac.za](mailto:rmodeste@uwc.ac.za)

### INFORMATION SHEET

#### **Project Title: Developing a model for integration of core competencies related to HIV and AIDS into undergraduate nursing curriculum at UWC**

##### **What is this study about?**

This is a research project being conducted by Regis Rugira Marie Modeste at the University of the Western Cape. I am inviting you to participate in this research project because you are able to provide information on the core competencies that upon graduation nurses should have to be able to provide comprehensive care and management to patients living with HIV and AIDS. The purpose of this research project is to “design and develop a model for the integration of core competencies related to HIV and AIDS into the nursing curriculum at UWC to prepare the new graduates to competently provide HIV and AIDS care and management upon graduation”.

##### **What will I be asked to do if I agree to participate?**

You will be asked to participate in a focus group discussion, individual interview or workshop. The study will be done using focus group discussions/individual interviews that will last about one to two hours each session, and workshops.

The focus group discussions/interviews will be audio recorded.

##### **Would my participation in this study be kept confidential?**

I will do my best to keep your personal information confidential. To help protect your confidentiality, no names will be mentioned, instead code will be used linking you to your response, and this will be kept by me, the researcher. The recorded tapes and signed consents

will be kept in a locked place known only to the researcher throughout the study and will be destroyed about five years after completion of the study.

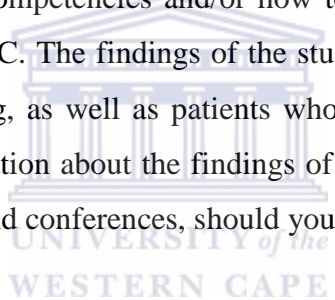
When a report or article will be written about this research project, your identity will be protected to the maximum extent possible, and pseudonyms will be used.

**What are the risks of this research?**

There are no known risks associated with participating in this research project and no harm will occur to you as a participant. Should you feel distressed or uncomfortable, please feel free to inform me, and I will refer you for help with these feelings.

**What are the benefits of this research?**

This research is not designed to help you personally, but by participating in the study, you will help to identify HIV core competencies and/or how to integrate them into the nursing undergraduate curriculum at UWC. The findings of the study will also benefit other nursing schools and all nurses in training, as well as patients who will be cared for by the trained nurses. You may request information about the findings of the study, and the results will be published in academic journals and conferences, should you want to access them.



**Do I have to be in this research and may I stop participating at any time?**

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

**Is any assistance available if I am negatively affected by participating in this study?**

Should you feel distressed or uncomfortable, please feel free to inform me, and I will refer you for help with these feelings.

**What if I have questions?**

This research is being conducted by Regis Rugira Marie Modeste at the School of Nursing at the University of the Western Cape. If you have any questions about the research study itself, please contact Regis Rugira Marie Modeste at:

Room G4

Senate building  
School of Nursing  
University of the Western Cape  
Bellville  
7535  
Tel: 021 959 3070  
Cell: 079 341 1180  
Email: [rmodeste@uwc.ac.za](mailto:rmodeste@uwc.ac.za) or [rrugira@gmail.com](mailto:rrugira@gmail.com)

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Supervisor: Prof O Adejumo  
School of Nursing - UWC  
Email: [oadejumo@uwc.ac.za](mailto:oadejumo@uwc.ac.za);

Tel: 021 959 3024

Or

Head of School: Prof K Jooste  
School of Nursing - UWC  
Email: [kjooste@uwc.ac.za](mailto:kjooste@uwc.ac.za);

Tel: 021 959 2274



Or

Dean of the Faculty of Community and Health Sciences: Prof J Frantz  
University of the Western Cape  
Private Bag X17  
Bellville 7535

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.



### Appendix 3: Individual interview consent form



#### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

*Tel: +27 21-959 2271, Fax: 27 21-959 2679*

**E-mail:** [rmodeste@uwc.ac.za](mailto:rmodeste@uwc.ac.za)

#### Consent Form

You have been invited to participate in the study entitled “**Developing a model for integration of core competencies related to HIV and AIDS into undergraduate nursing curriculum at UWC**”.

Miss Regis Rugira Marie Modeste has informed you about the study, and information about benefits, risk, compensation and your right to withdraw has been given. You can contact the researcher at any time you have a question about the study or if you are harmed in any way in the study.

Researcher’s telephone number: 021 959 3070 or 079 341 1180.

Your participation is voluntary, you will not be penalized or lose any benefit if you do not participate or if you withdraw. If you agree to participate in the study, you will be given a signed copy of this document and the participant information sheet, which is a written summary of the study.

**The research study, including the above information, has been described to me orally and in writing in a language that I understand.**

**..... I understand what my involvement in the study means and I voluntarily agree to participate, and**

**..... I agree for the audio recording of the interview/focus group discussions.**

**..... I understand that my identity will not be disclosed, and that I may withdraw my participation at any time without any consequence.**

**..... I am aware that I can request counselling assistance when I feel I need it, and that I may request access to the information anytime**

Participant’s name: .....

Signature of participant ----- Date: ----- Place: -----

Witness name:

Witness signature: ..... Date: ..... Place: .....

Should you have any question regarding the study or wish to report any problems you experienced related to the study, please contact the study supervisor:

Supervisor: Prof O Adejumo

School of Nursing

UWC

Email: [oadejumo@uwc.ac.za](mailto:oadejumo@uwc.ac.za);

Tel: 021 959 3024





## Appendix 4: Consent form for group discussion

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2271, Fax: 27 21-959 2679

E-mail: [rmodeste@uwc.ac.za](mailto:rmodeste@uwc.ac.za)

### GROUP DISCUSSION CONSENT FORM

You have been invited to participate in the study entitled “**Developing a model for integration of core competencies related to HIV and AIDS into undergraduate nursing curriculum at UWC**”.

Miss Regis Rugira Marie Modeste has informed you about the study, and information about benefits, risk, compensation and your right to withdraw has been given. You can contact the researcher at any time you have a question about the study or if you are harmed in any way in the study.

Researcher’s telephone number: 021 959 3070 or 079 341 1180.

Your participation is voluntary, you will not be penalized or lose any benefit if you do not participate or if you withdraw. If you agree to participate in the study, you will be given a signed copy of this document and the participant information sheet, which is a written summary of the study.

**The research study, including the above information, has been described to me orally in a language that I understand.**

**..... I understand what my involvement in the study means and I voluntarily agree to participate, and**

**..... I agree for the audio recording of the interview/focus group discussions.**

**..... I understand that my identity will not be disclosed outside the group discussion, and that discussions in the group will not be discussed outside this group.**

**..... I understand and commit to not discussing any other participant’s personal information outside this group.**

**..... I am aware that I may withdraw my participation at anytime without any consequence.**

**..... I am aware that I can request counselling assistance when I feel I need it, and that I may request access to the information anytime**

Participant's name: .....

Signature of participant ----- Date: ----- Place: -----

Witness name:

Witness signature: ..... Date: ..... Place: .....

Should you have any question regarding the study or wish to report any problems you experienced related to the study, please contact the study supervisor:

Supervisor: Prof O Adejumo

School of Nursing

UWC

Email: [oadejumo@uwc.ac.za](mailto:oadejumo@uwc.ac.za);

Tel: 021 959 3024



### Appendix 5: Validation instrument

From your personal and professional view, read document one “List of HIV and AIDS core competencies and related outcomes for the 4-year nursing programme 19 May 2014” (Document 1), and provide answers and comments for questions 1, 2 and 3:

Instruction: Please tick the appropriate box and provide comments

Review question	Yes	No
1. Do the HIV and AIDS related competencies listed reflect all the required competencies for a new nurse graduate to be able to provide care and management for HIV and AIDS upon graduation?		
2. Could you identify competencies that should be added to or removed from the list?		

Please provide comments:

2.1. If No to question 1, please provide comments

-----

2.2. If Yes to question 2, please provide comments

-----

2.3. Please provide information to highlight the thinking behind your recommendation/s

-----

Instruction: Please tick the appropriate box and provide comments

Review question	Not at all	Somewhat	Moderately	Completely
3. Are the HIV and AIDS related competency statements written to most effectively communicate performance expectations?				

If you answered not at all or somewhat, please answer the following two questions

3.1. What competency statement/s can be rephrased and the reasons? (use the numbering of each competency statement as reflected on document 3 when giving feedback)

-----

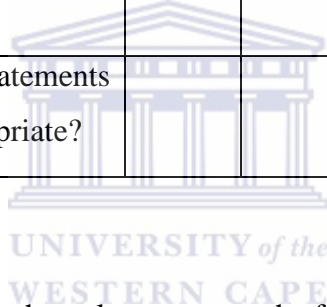
3.2. How do you suggest rephrasing the competency statement/s?

-----

From your personal and professional view, read document two “specific competencies for each year level– 19 May 2014” (Document 2), you will answer question 4 (Use document 3: Are the competency statements allocated to each year level appropriate? – questions for the workshop on 22 May 2014) to answer for each competency, and provide answers and comments for question 4.

Instruction: Please tick the appropriate box and provide comments

<b>Review question</b>	<b>Not at all</b>	<b>Somewhat</b>	<b>Moderately</b>	<b>Completely</b>
4. Are the competency statements allocated to each year level appropriate?				



If you answered not at all or somewhat, please answer the following two questions

4.1. What competency statements need to be moved and the reasons?

-----

4.2. The competency statement (s) to be moved. Where do you suggest they should be placed?

-----

Please add any other comment you have

-----

Thank you!

**Appendix 6: Phase 3 Workshop evaluation – 22 May 2014**

**A.** Please respond to the following questions to indicate to which extent you agree with each statement (tick for the appropriate answer):

<b>Evaluation item</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
1. The objectives of the workshop were clear				
2. The workshop was well organized				
3. The venue for the workshop was appropriate				
4. The refreshments were adequate				
5. The material was appropriate				

**B.** Please answer the following questions and give comments

1. What are your views on how feasible it is to integrate the mapped HIV and AIDS competencies into the 4-year nursing curriculum?

-----

2. Do you find that it is practical to integrate the mapped HIV and AIDS competencies into the 4-year nursing curriculum? Please elaborate.

-----

3. What are the resources that should be put in place for effective implementation of this integration?

-----

4. What do you view as barrier for implementation of this integration?

-----

5. How can such barriers be eliminated?

-----

6. What are your comments about the workshop in general

-----

7. Any further comments?

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**Thank you!**