

## **Identification of HIV and AIDS-related competencies for nurse graduates in South Africa**

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### **Abstract**

Three decades after the discovery of the human immunodeficiency virus (HIV), the global community has not been able to halt the epidemic of HIV infection. Various organisations have devised a number of policies and guidelines to guide efforts to deal with the epidemic. As nurses make up the bulk of healthcare workers in South Africa, as in many other countries, nurses are crucial in the management of HIV infection. The training of nurses must therefore be in line with such guidelines and policies, so that upon graduation they are able to serve the community. Using a qualitative approach and systematic research synthesis, this study identified core competencies related to HIV and AIDS for nurse graduates. Nominal group technique was used to collect data from nurse educators from various universities in South Africa. Individual interviews were also conducted with registered nurses in clinical practice, representatives from the South African Nursing Council, recent graduates, nurse educators and persons living with HIV infection. Three categories of competencies and seven core competencies were identified. The first category was the foundation that comprises knowledge competency, the second category comprises the supporting pillars of ethics, policies, interdisciplinary approach, personal and professional development, and performance was identified as the third category, comprising holistic safe practice and health education. This article provides an explanation of how each identified competency fits into the nurses' practice in providing care and management for persons with HIV infection. The identified core competencies will further be integrated into the nursing undergraduate programme at one university in South Africa.

**Key words:** Competency, HIV and AIDS, undergraduate, nursing, South Africa.

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### **Introduction**

It has been more than three decades since the human immunodeficiency virus (HIV) was discovered, and worldwide the spread of HIV infection has proven to be an epidemic that is hard to halt. The 2013 report of the Joint United Nations Programme on HIV and AIDS (UNAIDS) provided estimations that by the end of 2012, globally there were about 35.3 (32.2–38.8) million people who were living with HIV (UNAIDS, 2013). The number of people living with HIV has increased over the years, despite the 33% decrease in incidence rate noted between 2001 and 2012, and this is partly attributed to the increased availability

of treatment for HIV and AIDS, which has also facilitated the decrease in deaths due to AIDS (UNAIDS, 2013).

With about 6.1 (5.8–6.4) million people living with HIV infection, South Africa was recorded to have the highest number of people living with HIV by the end of 2012, with about 370 000 new HIV infections and about 5.3 million people who need antiretroviral treatment (ART) in the same year (UNAIDS, 2013). The burden of HIV was recorded to be quite high in South Africa, and studies by Colvin, Dawood, Kleinschmidt, Mullick, and Laloo (2001) and Pillay, Colvin, Williams and Coovadia (2001) reported that about 62% of children admitted in one academic hospital, and about 54% of adults admitted in medical wards at one tertiary institution were infected with HIV respectively. In a more specialized unit and more recently, Pandie, Van der Plas, Maartens, and Mendelson (2012) reported that about 80% of patients consulted at a tertiary hospital's infectious disease unit were infected with HIV.

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; this is in line with global efforts to deal with the HIV epidemic (Department of Health [DoH], 2010; Johnson, 2012). Some of the aspects of the governmental strategies include increasing numbers of patients living with HIV initiated on ART, followed up and managed by nurses as documented in the National Strategic plan on HIV, STI and TB (DoH, 2007; South African National AIDS Council, 2011).

Considering that nurses form the bulk of healthcare providers in South Africa, as in many other countries, nurses are expected to be providing care and management to the people living with HIV and AIDS. Such care needs to be holistic and effective to be able to improve patients' outcomes, and the nurses' ability to do that depends on the training that has been received; hence the importance of training nurses adequately to be able to implement the policies and guidelines set out for the management and care of HIV and AIDS (Breier Wildschut & Mgqolozana, 2009; Harrowing & Mill, 2010; Knebel, Puttkammer, Demes, Devirois & Prismy, 2008; Rispel, 2008; Yiu, Mak, Ho & Chui, 2010). Furthermore, Rackal, Tynan, Handford, Rzeznikewiz et al. (2011) highlighted the importance of the training of 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, as the nurses will be prepared to practice at a basic level of competency.

With the advent of HIV infection, 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, as Knebel et al. (2008) and Renggli et al. (2008) noted. Inadequacies in pre-service training, nurses' deficiencies in knowledge about HIV-related care as well as decreased competency and nurses' experience were documented by a number of authors (Raisler & Cohn, 2005; Dohrn, Miller & Bakken, 2006; Knebel et al., 2008; Rispel, 2008; Breier et al., 2009; Evans & Ndirangu, 2009). As documented by Renggli et al. (2008), the World Health Organization (WHO) (2010), as well as some international HIV associations such as the Canadian Association of Nurses in AIDS Care (CANAC) (2013); the report from the Johns Hopkins Programme for International Education in Gynecology and Obstetrics (2009) recommended integration of HIV in the pre-service training of nurses, covering competencies related to HIV and AIDS care and management, including nurse-initiated and managed ART.

Madumo and Peu (2006) reported that even student nurses have reported the need for innovation with regard to HIV care and management, and Relf et al. (2011) stress that it is important to prepare new nurse graduates in a holistic manner for them to acquire the necessary competencies relating to HIV and AIDS. There is a 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 into the nursing curriculum for the new nurse graduates to enhance nurses' ability to provide effective and appropriate care and management to the population that they will be serving (Relf et al., 2011). Based on the UNAIDS statistics, that is more than six million people in South Africa alone (UNAIDS, 2013). This article presents the identification of HIV and AIDS-related competencies for nurse graduates in South Africa.

## **Methodology**

The study was conducted in three phases, and the two parts of the first phase are presented here. The first part was a qualitative research approach, and the second a systematic research synthesis to identify nursing core competencies related to HIV and AIDS for new nurse graduates.

The approaches used allowed the researcher to collect information from various stakeholders and literature on what are perceived to be important competencies that are related to HIV and AIDS for nurse graduates. The main question posed was: 'What are the core competencies (knowledge, skills, attitude) related to HIV and AIDS for a new nurse graduate?', and probing questions were used in order for the participants to clarify what they said.

Two methods were used to collect the data for the qualitative aspect of the study, and the first data collection was done following the five steps of the nominal

group technique (NGT), which allows the full participation of all participants while providing a priority list of the data that has been collected (Van Breda, 2005). NGT sessions were conducted with eight groups of nurses involved in nursing education and training from six universities in South Africa. The second data collection was done as individual interviews with five nurse educators from two universities in South Africa, five nurses in a clinical setting, four recent graduates from one university in South Africa, members of the South African Nursing Council (SANC) and one person living with HIV infection. Uys and Gwele (2005) noted that when determining competencies for graduates, information can be obtained from graduates, employers, community members and experienced practitioners. This was used as a basis for selection of different categories of participants using volunteer, purposive and snowball sampling techniques; the researcher identified them as having information about the subject of the research, and fitting in the categories identified by Uys and Gwele (2005). The nurse educators were knowledgeable about the topic as they are the ones that teach the nurses that will be working in the community. The governing body representatives were crucial in that they have insight on what is expected of a nurse who will get registration from the governing body. Nurses in the clinical settings were also crucial for inclusion as they are working with and providing care and management for people living with HIV and AIDS, and were able to describe their role as well as what they expect from the new graduates that will join their departments upon graduation.

Snowball sampling was carried out with the recent graduates and the persons living with HIV and AIDS. For the persons living with HIV and AIDS, in order to maintain privacy and confidentiality, an organisation that assists people living with HIV and AIDS in the community was approached, and the manager contacted persons concerned, informed them of the study, and when they agreed to participate the manager invited the researcher to the organisation for the interview. In the case of recent graduates, they were contacted using the snowballing sampling technique to participate in the study.

The second part of the identification was a systematic literature synthesis, in which a total of four documents were obtained and critically appraised using the Narrative, Opinion and Text Assessment and Review Instrument (NOTARI) from Joanna Briggs Institute (JBI) (JBI, 2012). The NOTARI appraisal focuses on conclusions and recommendations made from non-research text, by establishing the authority to be invested in the conclusions and recommendations and the expertise of the authors, as well as evidence of the analytical process (JBI, 2012).

Data from the NGT discussion were analysed following Van Breda's method of analysing multiple group NGT data (Van Breda, 2005). This allowed a ranking of the competencies that were developed. A further inductive thematic content

analysis of all the aspects that were obtained during the NGT discussion yielded a set of seven core competencies and 21 specific competencies.

The data from individual interviews were also analysed using the steps outlined by Terre Blanche, Durheim and Painter (2006), namely familiarisation and immersion; inducing themes; coding; elaboration and interpretation. This analysis obtained a set of competencies that were combined with the previous competencies from the NGT discussions, and was completed by following deductive analysis based on the themes identified from the NGT analysis.

The systematic research synthesis was done to identify publications that have identified the HIV-related competencies for inclusion in the undergraduate nursing programme. A systematic search through the literature using various databases, such as EBSCO Host, Medline, ERIC and Scopus, did not yield a typical research publication. Two publications were obtained, one being a methodology article and the other a report from a regional committee. Further searching yielded two documents from HIV and AIDS nurses' associations in Canada and England. The four documents were critically appraised using the NOTARI checklist from JBI. The NOTARI appraisal instrument grades text and opinion papers, and the criteria include whether the source has standing in the field, the literature has been explained, and whether peers support the document (JBI, 2012). Similar to the individual interview data, the competencies listed in the four documents obtained from the systematic research synthesis were synthesised using deductive content analysis following the steps highlighted by Terre Blanche et al. (2006), based on the themes identified from the NGT and individual interviews.

As noted by Brink (1996), it is the researcher's responsibility to ensure that research is conducted ethically. In this study ethical clearance was obtained from the University of the Western Cape, as well as from the various institutions where participants were contacted. In order to adhere to the ethical principles, the participants were given an information document about the study and explanations were given. Signed informed consent was obtained from each participant, and permission was obtained for recording of the discussions. Participants' anonymity and confidentiality were maintained, and they were informed of their right to withdraw at any time.

To ensure trustworthiness of the study, member checks were done by continued communication with the participants, and for the NGT discussions participants' participation in the ranking ensured that they all agreed with the final document of the discussion. The use of different data collection methods allowed triangulation of data, and use of different categories of stakeholders allowed a comprehensive collection of data. This combination also facilitated corroborating evidence, and as noted in literature this increases the merits of the data

(Creswell, 1998). Data collection was continued until saturation was reached, and the addition of systematic research synthesis allowed the researcher to obtain a comprehensive and literature-supported list of competencies. The use of an appraisal instrument for the systematic research synthesis allowed a more rigorous process in selection of publications to be included in the study, as this eliminated researcher bias.

## **Results**

A total of 64 participants were included in the first phase of the study, from seven out of the nine provinces in South Africa. From the three sources of data, 21 specific competencies were identified, and they were further synthesised into seven core competencies. Continuing with thematic content analysis, the seven core competencies were further synthesised into three categories of competencies for HIV and AIDS care, namely foundation, supporting pillars and performance. The three categories contain seven core competencies, namely knowledge, ethics, policies, interdisciplinary approach, personal and professional development, holistic safe practice, and health education (Table 1).

The knowledge competency is part of the foundational category as the effective care and management of HIV and AIDS depends on the nurses' knowledge about the science of HIV, treatment options, as well as other issues related to HIV infection. The supporting pillars comprised four core competencies, namely ethics, policies, interdisciplinary approach, as well as personal and professional development. These competencies were identified as supporting pillars as it was understood that the nurses' practice needs to be in line with the policies in place to guide the care and management for HIV infection, and the practice needs to adhere to the ethics for the management of ethical-related dilemmas and issues.

The nurse does not work in isolation, hence the importance of the interdisciplinary team. Personal and professional development competency is essential in that the nurses also need to be able to prevent their own HIV infection, and if infected already nurses need to be able to adopt a healthy lifestyle for positive outcomes. Furthermore, nurses need to care for themselves as carers dealing with the impact of HIV infection on their personal and professional lives, in addition to being able to continuously update themselves as the science around HIV and AIDS changes continuously. This highlighted the importance of applying the learnt skills in their own life, and the professional aspect related to the nurses' ability to continuously update their own knowledge in this area when new knowledge is produced on a continuous basis.

The last category is the performance category that comprised holistic safe practice and health education core competencies. These two core competencies related to the nurses' main activities in the care and management of HIV and

AIDS, with the support of the four supporting pillars and knowledge being the foundation of their practice. These seven HIV and AIDS related nursing core competencies developed in the study are not stand-alone competencies as they are related and complementary to each other in the care and management of HIV and AIDS.

**Table 1:** Categories of HIV and AIDS nursing competencies, core competencies and specific competencies identified

Category	Foundation		Supporting pillar			Performance	
Core competency	Knowledge	Ethics	Policies	Interdisciplinary approach	Personal and professional development	Health education	Holistic safe practice
	Assessment	HIV and AIDS ethics-related issues	Legislation	Community involvement	Continuous personal development	Knowledge transfer	Assessment
Specific competency		Professionalism	Policies analysis and implementation	Referral systems	Continuous professional development	Provision of appropriate content of health education and promotion to various groups of clients	Interpersonal skills
	Basic scientific knowledge about HIV and AIDS						
	Management Prevention HIV-related issues			Support systems	Care of the carer		Management Safe practice

The core competencies are defined and specified as outlined as follows.

*Knowledge:* This competency area relates to the understanding of basic scientific facts about HIV and AIDS, including the principles of prevention, assessment and management, and issues relevant in South Africa. The specific competencies relating to this competency area are assessment, general knowledge, management, prevention, and issues around HIV and AIDS.

*Ethics:* This competency area is related to ethics related to HIV and AIDS and how to deal with the ethical dilemmas related to HIV and AIDS. The specific competencies that are covered are ethical issues around HIV and AIDS and professionalism.

*Policies:* This competency area covers the awareness, critical analysis and implementation of HIV and AIDS-related policies at different levels, and the specific competencies that are covered are legal aspects and legislation,

understanding of policies at local and global level as well as policy implementation.

*Interdisciplinary approach:* This competency area relates to the ability to identify and be able to provide care within a multidisciplinary team, and the specific competencies that are involved are community involvement, referral system and support system.

*Personal and professional development:* This competency area relates to the nurses' ability to continue their own development and care for themselves in their role as health care providers for people living with HIV and AIDS, as well as attending to their own professional development. The specific competencies included are care of the carer, professional continuous development and personal continuous development.

*Holistic safe practice:* This competency area relates to the provision of safe and holistic care and management to clients living with HIV and AIDS. The specific competencies that form part of this competency area are assessment, counselling, interpersonal skills, management and safe practice.

*Health education:* This competency area relates to the ability to provide health education, and the specific competencies included are ability to transfer knowledge and provision of appropriate content for health education to different groups of clients.

As shown in Table 1, specific competencies were identified for each of the identified core competencies, and in the second phase of the main study outcomes were developed providing more details about expectations of the nurse who will provide care and management for HIV and AIDS. This will further facilitate mapping of the competencies in the nursing undergraduate curriculum.

## **Discussion**

A number of studies have identified nurses' deficiencies in knowledge, such as care and treatment; misconceptions on occupational HIV transmission; disease presentation; HIV risk prevention (Delobelle et al., 2009); mode of transmission (Williams et al., 2006); misconceptions on HIV transmission; basic HIV/AIDS concepts (Li, Scott & Li, 2008); triple therapy; treatment side-effects, response and counselling; feeding advice (Dohrn et al., 2006), deficiencies in skills such as counselling (Zulu & Lehmann, 2004); and deficiencies in attitude, such as unwillingness to take care of patients with HIV infection (Mockiene et al., 2011) less empathy and avoidance (Williams et al., 2006). The identified competencies from this study cover all of these aspects, in an attempt to ensure that nurses are well prepared to provide effective care and management for persons with HIV and AIDS.

The participants in the study mentioned the importance of having knowledge about HIV and AIDS, as mentioned by one nurse educator participant: "So in

*terms of education, I think that 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.*” Similarly, one of the registered nurses spoke about the knowledge aspect, highlighting some specific aspects to be covered: *“She [nurse] should be well ... knowledgeable about HIV, prevention and when the person is having the HIV, how to manage that person.”* Policies related to HIV and AIDS were also identified by participants, and apart from knowing that the policies exist, the nurse is expected to understand, implement and critically analyse the policies that are related to HIV infection. As noted in the national strategic plan for nurse education, training and practice, nurses are critical to achievement of the new HIV and AIDS-related policy initiatives, hence their need to be able to apply the local policies for effective HIV and AIDS care and management (DoH, 2013).

The other competency that was mentioned by participants was related to ethics, as nurses are expected to know and understand the ethical principles and ethical dilemmas that are related to HIV and AIDS. One of the issues discussed was confidentiality and disclosure, and the ethical dilemmas related to this, especially in cases where the client is not ready to disclose to a partner. These issues have been documented as crucial following a diagnosis of HIV infection (Relf, Laverriere, Devlin & Salerno, 2009), and it is further recommended that the nursing students’ education and training should include clarification of own beliefs, values and attitudes, aspects identified as being part of the personal and professional development competency in this study.

As noted in the SANC HIV/AIDS policy, nurses should practice in an ethical manner and prevent and manage the stigma that is related to HIV infection (SANC, 2006). The need for ethics was mentioned by participants. As one said: *“And the other thing is ethics. Our students don’t understand ethics. If I say, if your patient refuses treatment, your HIV-positive patient, they refuse treatment, and you take all your ethical principles, how do you handle a situation like that? And they just sit. No, now I’m stuck. I don’t know what to do now.”* From the group discussions, participants identified ethical issues that the nurse should be competent in, such as ethical issues related to treatment eligibility: *“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 [antiretrovirals], the ethical issues related to that.”*

The participants not only identified the need to identify ethical issues, but also critical thinking and how to deal with the ethical issues and the stigma associated with HIV infection. This was mentioned in one group, where a participant said: *“How they are they 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.”* The participant expanded on the

discussion as follows: *“While you are talking, they need to know about issues of disclosure, because it’s an issue. Because disclosure leads to stigma, and how to reduce that...”*

With regard to personal and professional development competency, it was mentioned that nurses need to be able to apply the learnt skills in their personal prevention of HIV infection. This concurs with what was documented in the 2010 Higher Education HIV and AIDS Programme (HEAIDS) study, where students narrated their own vulnerability and the need for HIV and AIDS to be presented in higher education training at a more personal level (HEAIDS, 2010). In addition, nurses need to be able to care for themselves in order to be able to cope with the stresses of their workplace, as noted by one group: *“So that they also know that at some stage they will also need to be cared for, with some debriefing.”* This issue was also picked up in an individual interview, where one participant explained as follows: *“... 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 communication 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. So how do they deal with issues like debriefing ...”* As HIV has been noted to affect nurses in every aspect of their practice, nurses need to be competent in how to deal with such effects, and the outcome related to this competency will provide opportunity for personal development (UNAIDS, 2003).

With regard to professional development, participants reported that the nurse needs to be able to assess her/his own information needs and attend to these by finding the required information, as stated by one of the recent graduates as follows: *“You can improve your own learning. You should be able to identify your own weaknesses and be able to say I’m going to fix this by looking for information”*. A person living with HIV mentioned the importance and need for nurses to continually update their knowledge when providing care and management for those with HIV infection, when she said that:

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

When providing care and management for persons with HIV and AIDS, the nurses need to be able to collaborate with other healthcare providers as well as the various organisations that are available in communities to assist such people. The participants in this study indicated the need for nurses to be competent with regard to the referral system, with the expectation of being able to identify the need for referral and pathways, as well as referring the client promptly, following the correct pathway. In addition to that, the nurse should be able to identify, link and collaborate with the various support services and community organisations, as noted by one participant who said:

*“What is it that you have that is available in the community in the health services? Who finds what? Where do they get those medications, for example? What services are there for the community? Like, for example, like organisations, where do you refer people?”*

It has been documented in the literature that there is a challenge to provide appropriate multidisciplinary healthcare services to people living with HIV and AIDS (Hughes, Jelsma, Maclean, Darder & Tinise, 2004), and development of the interdisciplinary approach competency will prepare nurses to be able to work within the multidisciplinary team, with effective inclusion of referral and support systems, while applying and adhering to the principles of community involvement. This is in line with what was documented by Msidi et al. (2011) as being part of HIV nurse practitioners’ training, and Delobelle et al. (2009) noted referral practices among nurses providing HIV and AIDS care and management. With regard to this competency participants also mentioned the need for nurses to support community healthcare workers who are involved in providing home-based care to people with HIV and AIDS, an aspect that has also been noted by Relf et al. (2011).

As part of the performance category the holistic safe practice competency was developed, and this competency covers the nurses’ performance in providing care and management for HIV infection. The nurse is expected to be competent in completing holistic assessment, counselling and management and to have interpersonal skills. The assessment is supposed to be holistic, including aspects such as staging, as was noted by the registered nurse who stated: *“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”*. A person with HIV infection indicated an aspect that is often lacking, despite its usefulness in picking up a problem early:

*“Another thing is when you go for your dates, when you go for your dates, they [nurses] 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 [physical*

*assessment]. 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."*

As noted by Uys and Gwele (2005), patients are good informants as they are able to highlight what they need in terms of care and how it is being provided. The assessment is to be holistic, including assessing the patient's home situation, as mentioned by one recent graduate: "*You need to ... how to assess the situation at home. How to ... you can even support the family*". In addition to assessment, nurses are to develop competencies in counselling in providing management for HIV and AIDS, including initiation of ART. Considering the implementation of task-shifting and recommendation by WHO (2005) and Swart et al. (2013) to integrate all aspects of HIV and AIDS care and management including provision of ART into the training of health care providers at pre-service level, this study includes competency related to initiation of ART to be developed in the undergraduate nursing programme. Nurses are also to display a positive attitude, and competency in interpersonal skills will be developed to facilitate nurses being able to relate in a positive way to those affected or infected with HIV.

The practice of nurses should also be safe, with implementation of universal precautions, but also with the input necessary for effective management, as noted by Knebel et al. (2008). This is crucial in South Africa, as we often hear about the issue of shortage of equipment and medication; this is often brought to the public's attention by the Treatment Action Campaign when they address the shortage of medication.

The final core competency obtained was health education, and the study identified the following specific competencies, namely knowledge transfer and provision of appropriate content of health education to different groups. The study identified that the nurse should have the ability to transfer knowledge, as one participant noted:

*"And what I've also seen is that if I talk about transfer of knowledge, now I see that this is the most difficult thing, for the students to be able to tell a patient how the medicine is working, especially regarding cultural stuff now. The patient wants to know how it is working in simple terms."*

This aspect of giving information in an understandable way was also noted by Jones, Messmer, Charron, and Parns (2002). As discussed in the groups, the behavioural modification theories were identified to form the basis for facilitating effective health education sessions, and strategies to facilitate learning for the audience of their health education sessions, as noted by the National HIV Nurse Association (2007) and Relf et al. (2011). Furthermore, the

nurse will be expected to provide health education about a variety of topics, such as condom use, nutrition, medication and healthy lifestyle, and to be able to address a variety of groups, including the young, adults, school going learners and women, similar to what was identified by CANAC (2013) and Knebel et al. (2008).

## **Limitations**

The limitation noted in this study is that it is context-specific, and the identification of the competencies is guided by the South African context; hence it cannot be generalised to other countries. However, the inclusion of literature minimises this limitation, as the literature from the systematic literature synthesis provided competencies from other countries such as Haiti, Canada and England.

## **Conclusion**

This study identified seven core competencies that are related to management and care of HIV and AIDS by a nurse graduate, and each competency comprised specific competencies providing more details about the core competency, as derived and synthesised from the multiple data sources. This provided a more comprehensive list of competencies related to HIV and AIDS care and management for nurse graduates.

Following the recommendations from various organisations, and in order to be able to prepare nurses who are able to attend to the population that will be served upon graduation, the identified competencies will be further integrated into the undergraduate nursing programme at one university in South Africa.

It is to be noted that the competencies as presented are not isolated from each other, but they interrelate, since the nurse's provision of care and management for HIV infection is not fragmented and a holistic approach is adopted. With the current governmental and global move to integrate HIV services with the other healthcare services, identification of HIV and AIDS related nursing competencies has the potential to improve the nurses' competency level and ability to provide effective care and management for HIV infection, which has been noted to be limited in developing countries, especially in the pre-service training. The next phase of the study will specify the related outcomes for each outcome, and these will be further mapped into the four-year nursing undergraduate programme at the University of the Western Cape.

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