

ORIGINAL RESEARCH

Perceptions and Experiences of Nursing Students in Caring for People Living with HIV/AIDS in South Africa: A Qualitative Study



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Abstract

Background: Although previous studies focusing on nurses' perceptions of caring for people living with HIV (PLHIV) have been conducted in numerous countries, little is known about first-year student nurses' perceptions and experiences regarding their role in caring for PLHIV in South Africa. To ensure quality care for PLHIV, it is essential to explore first-year student nurses' roles in caring for PLHIV.

Purpose: This study aimed to explore the perceptions and experiences of first-year nursing students on their role in caring for PLHIV in South Africa.

Methods: A qualitative exploratory descriptive design was employed for this study, utilizing a purposive sampling method to recruit 18 participants. These participants were first-year nursing students aged 18 or older, enrolled in a 4-year bachelor's degree nursing program, and who had completed clinical placements in hospitals. Data collection involved two focus group discussions (FGDs), one comprising eight participants and the other ten participants. Thematic analysis was employed to analyze the collected data.

Results: Four main themes were drawn from two FGDs, including (1) students' unpreparedness in their role to care for PLHIV, (2) disclosure practices and student safety concerns, (3) personal backgrounds and attitudes towards PLHIV care, and (4) physical and psychological wellbeing of students while caring for PLHIV. Furthermore, 11 sub-themes were subsequently drawn from these main themes. Thematic sub-themes and individual focus group responses were relied on to reach data saturation despite the small number of FGD sessions.

Conclusion: First-year nursing students had negative and positive perceptions and experiences when caring for PLHIV. There is a need for these students to acquire adequate theoretical knowledge and practical skills to enhance clinical preparation for their role in clinical facilities. This could improve their perceptions regarding caring for PLHIV in the clinical setting and result in improved care.

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1. Introduction

The HIV/AIDS pandemic presents a significant global public health challenge, with around 37.9 million people living with HIV (PLHIV) worldwide, and two-thirds of them residing in Sub-Saharan Africa (Avert, 2021). South Africa remains at the forefront of the HIV/AIDS epidemic, with 20.4% of its population being PLHIV (Avert, 2021). Despite this, South Africa has made notable progress in recent years, setting ambitious goals aimed at achieving zero new infections, zero HIV-related deaths, and zero HIV-related stigma and discrimination (South African National AIDS Council, 2015). This has led to a high percentage of PLHIV being aware of their status in the country, although it has also placed considerable strain on the healthcare system. The burden of HIV/AIDS on hospital services is increasing as the epidemic persists, and antiretroviral treatment becomes more accessible (Mills et al., 2011).

Worldwide, nurses represent the highest number of healthcare providers who assist PLHIV in rural or urban areas, hospital, or community settings (Squires et al., 2015). Nurses, being in high numbers in the healthcare provision sector, are more in contact with all admitted patients in the hospital wards, including PLHIV. Nursing students form part of this nursing population as

they are actively involved in caring for PLHIV during their clinical placement as part of their nursing program. Early studies, as far back as the year 2002, displayed the unwillingness of nursing students to provide care for PLHIV due to their concern of being infected with HIV. Moreover, current studies have clearly shown that negative perceptions towards PLHIV persist among nursing students throughout the world (Pickles et al., 2017).

In South Africa, nursing education is a critical part of healthcare system, aiming to produce caring nurses who are able to serve diverse healthcare needs. Nursing education programs usually follow a structured curriculum including theoretical knowledge with practical clinical experience. Nursing education in South Africa is primarily offered at tertiary institutions such as universities and colleges. These institutions constitute nursing programs, including diplomas, degrees, and postgraduate qualifications in nursing. The curriculum for nursing programs is developed in alignment with national regulatory bodies such as the South African Nursing Council (SANC), which sets standards for nursing education and practice in the country (South African Nursing Council, 1984). Clinical practice is a fundamental aspect of nursing education in South Africa. Nursing students are required to complete clinical placements in various healthcare settings, including hospitals, clinics, and community health centers. These clinical placements provide students with hands-on experience under the supervision of qualified nurses and other healthcare professionals. During their clinical practices, students are exposed to a wide range of patient populations, including PLHIV. Clinical experiences allow students to apply theoretical knowledge gained in the classroom to real-life patient care situations (Pervaz Iqbal, 2020). Additionally, nursing students are expected to adhere to professional standards and ethical principles while providing care to patients, including those affected by HIV/AIDS (Marranzano et al., 2013). In South Africa, nursing education also highlights the importance of interprofessional relationships and teamwork in healthcare delivery (Armstrong & Rispel, 2015). They often work alongside other healthcare professionals, including doctors, pharmacists, and social workers, to provide holistic care to patients, including PLHIV.

First-year nursing students are among the nursing populations who, under the supervision of practicing registered nurses and clinical facilitators, are given roles such as admitting patients, history taking, specimen collection, bed baths, turning patients, wound care, and health education (Wang et al., 2022). These first-year student nurses are expected to spend a minimum of 536 hours in the hospital wards within their training period to attain clinical experience (South African Nursing Council, 1984). To ensure that student nurses achieve their required clinical experience, qualified practicing nurses mentor them, and clinical facilitators monitor them and assist them with clinical training in the wards, fulfilling their expected role in caring for all patients, including PLHIV. However, nursing students have been found to have negative perceptions towards PLHIV, and, as a result, most of the patients have become victims of ill-treatment, discrimination, and isolation, which usually results in poor health-seeking behaviors that have negative effects on the HIV and acquired immunodeficiency syndrome (AIDS) pandemic (Pickles et al., 2017). These attitudes may be related to the nurses' fear of contracting HIV, which may be because of culturally construed beliefs and perceptions (Pickles et al., 2017), and a lack of knowledge or misinformation (Akansel et al., 2012).

The first-year nursing students are very clinically inexperienced but are faced with real-life practical situations that they must endure despite the support they receive from their mentors (Pickles et al., 2017). There is a research literature gap in the assessment of perceptions of first-year student nurses in their care of PLHIV in the clinical setting. A comparative study on Turkish and American undergraduate nursing students on their attitudes toward PLHIV showed that students from both countries mostly had positive attitudes towards PLHIV (Atav et al., 2015). This study was not done specifically on first-year students, although they were part of the population researched. Another study in Tanzania proved that nursing students were willing to work with PLHIV with minimal stigmatizing perceptions; however, they lacked knowledge of routes of HIV and AIDS infection as they only recognized sexual intercourse and needle sharing in drug use as routes of HIV transmission (Aggarwal et al., 2017). In Zimbabwe, of the 89.1% student nurses who had cared for PLHIV in the hospitals, 21.8% said that they were afraid, while 21.8% of the respondents also felt uncomfortable, 23.4% did not mind taking care of PLHIV, while 9.4% verbalized not being afraid of caring for PLHIV (Katsinde et al., 2011).

No recent studies have been conducted in South Africa on the nursing students' perceptions and experiences of their role in caring for PLHIV in the clinical setting. More importantly, first-

year nursing students were the chosen population in this research as previous studies in other countries were done on all nursing students excluding the first years. A study conducted in Barcelona (Spain) revealed that the attitudes of student nurses improved as their level of training increased (Leyva-Moral et al., 2017). Hence the less experienced first-year students would better describe their perceptions of the role of caring for PLHIV. Therefore, this study was conducted to explore the perceptions and experiences of first-year nursing students regarding the care of PLHIV. The study is expected to identify gaps in students' roles in PLHIV care and recommend areas for improvement to enhance healthcare quality.

2. Methods

2.1. Research design

This study adopted a qualitative exploratory descriptive design to explore first-year nursing students' perceptions and experiences regarding their role in caring for PLHIV. This qualitative design aims to understand phenomena holistically, with a focus on narrative data collection methods such as focus group discussions.

2.2. Setting and participants

This study was conducted among students at a university in the Gauteng province of South Africa, which offers Bachelor of Nursing degrees, in October 2019. The choice of this university allowed for a familiar setting for the participants, as the focus group discussions (FGDs) used for data collection were held in lecture rooms where they typically attended classes. This familiarity was expected to encourage participants to express their perceptions freely without the need to adapt to a new environment. First-year nursing students were purposefully sampled to participate in the study. Purposeful sampling, as advocated by Speziale et al. (2011), is suitable for qualitative research, aiming to cultivate informative descriptions of a phenomenon. This method involves deliberately selecting participants from the target population who can provide rich and detailed insights. For this study, the recruitment of participants was carried out in lecture halls, where interested students who met specific inclusion criteria were approached. Eligibility criteria included being first-year student nurses over 18 years old, registered in a 4-year bachelor's degree in a nursing science course, and having undergone clinical placements in medical or surgical wards as part of their training. Convenience sampling was also employed based on the availability of students who volunteered to participate in the research. However, participants were still required to meet the eligibility criteria outlined above. This approach allowed for flexibility in participant recruitment while ensuring the inclusion of individuals with relevant experiences and knowledge related to the research topic. This study included 18 first-year nursing students. Two FGDs were conducted, with the first group comprising 10 participants and the second group comprising 8 participants.

2.3. Data collection

In this study, FGDs were chosen as the methodological approach to allow participants to freely express their perceptions. Two FGDs were conducted by involving 18 first-year nursing students. The facilitator, who had no prior relationships with the participants, ensured adherence to ethical guidelines during the FGDs. Participants were informed of the study's purpose and provided consent for audio recording, with confidentiality guaranteed. In addition to audio recording, detailed field notes were taken during the FGDs to document observations, non-verbal cues, and contextual information. Participant observation was also conducted to actively observe behaviors and interactions. The FGDs were conducted using a guideline developed by the researchers. The central question was "As first year nursing students what is your perceptions of your role in the caring of PLHIV in the clinical area?" Following this question, follow-up questions were also used, including: "How did you perceive your role when you were caring for PLHIV in the clinical setting?", "Do you feel that your role in caring for PLHIV puts you at risk of contracting HIV?", "How do you feel when you perform bed baths, collect sputum, and do hourly turns or other nursing tasks to PLHIV in the clinical setting?", and "How did you feel when you became aware you were nursing PLHIV?"

Ten participants engaged in the first FGD, followed by eight in the second, both conducted in English. Each FGD lasted approximately 35 and 50 minutes, respectively, with data saturation achieved in the second FGD. Data saturation showed that sufficient information had been

gathered for a comprehensive understanding of participants' perceptions, making further data collection unnecessary. After the FGDs, the audio recordings were transcribed verbatim to ensure accurate capture of all verbal contributions.

2.4. Data analysis

The qualitative content analysis was used to analyze the meaning of participants' perceptions regarding their role in caring for PLHIV in the clinical setting following a structured approach by Botma et al. (2018). Initially, data transcription ensured accuracy and facilitated analysis by attributing speakers as "R" for the researcher and "P" for participants. Each data segment was transcribed individually to ensure precision (Creswell, 2014; Polit et al., 2017). Subsequently, essential concepts and ideas were identified from the data, forming smaller workable units for categorization. A category scheme was developed based on these concepts, facilitating consistent coding across interviews (Polit et al., 2017). The data were then grouped according to findings from two FGDs, and coding described settings, participants, and emerging themes. The researcher thoroughly read the data to ensure consistent coding across interviews, grouping data according to findings from the two FGDs. To fully understand the underlying meaning of some qualities of the data, the researcher read the categories three to four times. The researcher coded all the data and retrieved a coding balance across the interviews (Polit et al., 2017). The data were grouped according to the findings from two FGDs with different first-year student nurses. Next, coding was used to describe settings, participants, and themes emerging from the data. Categories formed themes representing the main findings of the study, supported by quotations and evidence. Themes were identified using color-coding for easy identification, depicting different experiences and perspectives from the participants and being supported by diverse quotations and specific evidence (Botma et al., 2018). In this study, the researcher used color-coding to indicate identified themes. The next step of data analysis involved presenting findings. The findings were narratively discussed, including main themes, subheadings, subthemes, direct quotations from participants, and different perspectives. Visual tables were used to illustrate findings and facilitate discussion. The final step of data analysis involved interpreting the data to find meaning. The researcher combined personal interpretation with existing literature or theories to derive lessons learned from the study. This interpretation aimed to uncover the true meaning of the data and participants' experiences in caring for PLHIV in clinical facilities, guided by the question: "What were the lessons learned?" The answer was a combination of the researcher's interpretation and literature or theories (Botma et al., 2018). The researcher interpreted the true meaning of the data and the first-year nursing students' experiences in caring for people living with HIV in clinical facilities. By following these comprehensive steps, the researchers thoroughly analyzed the qualitative data, leading to meaningful insights and interpretations aligned with the research question and objectives.

2.5. Rigor/trustworthiness

In this study, several principles were observed to ensure the trustworthiness of the findings. Trustworthiness, defined as the assurance the researcher has in the research regarding its accuracy (Polit & Beck, 2021), was upheld through rigorous methodological practices and transparency in reporting. To enhance credibility, data were collected from a source which involved two FGDs. Follow-up and probing questions were used to clarify and validate participants' responses. Verbatim transcripts of the discussions were created to accurately capture participants' views. Additionally, member checking was employed to further validate the accuracy and interpretation of the data. Efforts were also made to ensure the transferability of the results by conducting FGDs with first-year nursing students who had experience in clinical settings. Diversity among participants was incorporated to capture a wide range of perspectives. A rich, detailed description of participants' responses, including direct quotes and examples was done to ensure transferability. Dependability was ensured by providing a detailed account of the research process and findings, allowing for an auditable track of the study. The research aimed to gain a better understanding of the perceptions of first-year student nurses regarding their role in caring for PLHIV, with thorough probing to elicit comprehensive responses. Confirmability, which relates to the objectivity and neutrality of the research data, was achieved by maintaining reflexivity through continually reflecting on the researcher's own biases, assumptions, and

preconceptions throughout the research process. Furthermore, an audit trail was created in order to allow for transparency and scrutiny of the research process.

2.6. Ethical considerations

This study obtained ethical approval from the Ethics Committee of University of Pretoria, with a clearance number 510/2019. The researcher clearly communicated to participants that their involvement in the study was entirely voluntary, with no consequences for refusal to participate. Informed consent procedures were followed, explaining the purpose of the study, the procedures involved, and the rights of participants, including their right to withdraw from the study at any time without penalty. Additionally, participants were assured of confidentiality and anonymity to minimize any fear of repercussion for their responses. Participants engaged in an open dialogue, highlighting the significance of providing honest feedback. They were reassured that there were no correct or incorrect responses. Participants were reminded of their right to withdraw at any point during the discussions.

3. Results

3.1. Characteristics of the participants

As presented in Table 1, the participants in this study included 18 first-year students, with a gender distribution of 12 females (66.6%) and 6 males (33.4%). They all were pursuing a four-year Bachelor of Nursing program. Their ages ranged from 18 to 33 years old. This means that while they had not worked in clinical settings professionally, they may have had some exposure to clinical practices as part of their nursing education.

Table 1. Characteristics of the participants

| Characteristics | Frequency | Percentage % |
|--------------------|-----------|--------------|
| Gender | | |
| Female | 12 | 66.6 |
| Male | 6 | 33 |
| Level of education | | |
| Grade 12 | 18 | 100 |
| Other | - | - |
| Age (years) | | |
| 18 | 3 | 17 |
| 19 | 8 | 44 |
| 20 | 5 | 28 |
| 22 | 1 | 6 |
| 33 | 1 | 6 |

Figure 1 shows the major themes and subthemes obtained from the data analysis in this study. The themes and subthemes reflect the perceptions and experiences of first-year nursing students regarding their role in caring for PLHIV, including: (1) students' unpreparedness in their role to care for PLHIV, (2) disclosure practices and student safety concerns, (3) personal backgrounds and attitudes towards PLHIV care, and (4) physical and psychological wellbeing of students while caring for PLHIV.

3.2. Theme 1: Students' unpreparedness in their role to care for PLHIV

It is evident from the participants' perspectives that they felt inadequately prepared to fulfil their role in caring for PLHIV in clinical settings. Despite being tasked with basic nursing care responsibilities, such as bed making and vital observations, they expressed a sense of unpreparedness specifically when it came to caring for PLHIV. While they acknowledged having learned about HIV/AIDS in the classroom and gaining some information from high school and their communities, they believed it was insufficient in adequately equipping them for their responsibilities.

Furthermore, the participants also perceived inadequacy in their clinical roles, emphasizing the need for comprehensive education and training before engaging in clinical practice. The

analogy of going to war without a weapon highlighted the importance of being adequately equipped with knowledge and skills to handle care involving PLHIV, suggesting a sense of vulnerability among students who felt unprepared. Participants stated the following:

The procedures I feel that we can still continue with the procedures even if they involve body fluids, but we need to be educated fully before we go into clinical practise and before we get exposed to all of these things; it's like how can you go to war without a weapon". (Male FDG1, 19 years old)

The information that they gave me like to me it was not enough so I had just had to go with the procedures because they are telling us that we have to go to the hospital, I cannot tell them that I am not ready". (Female FDG1, 19-year-old)

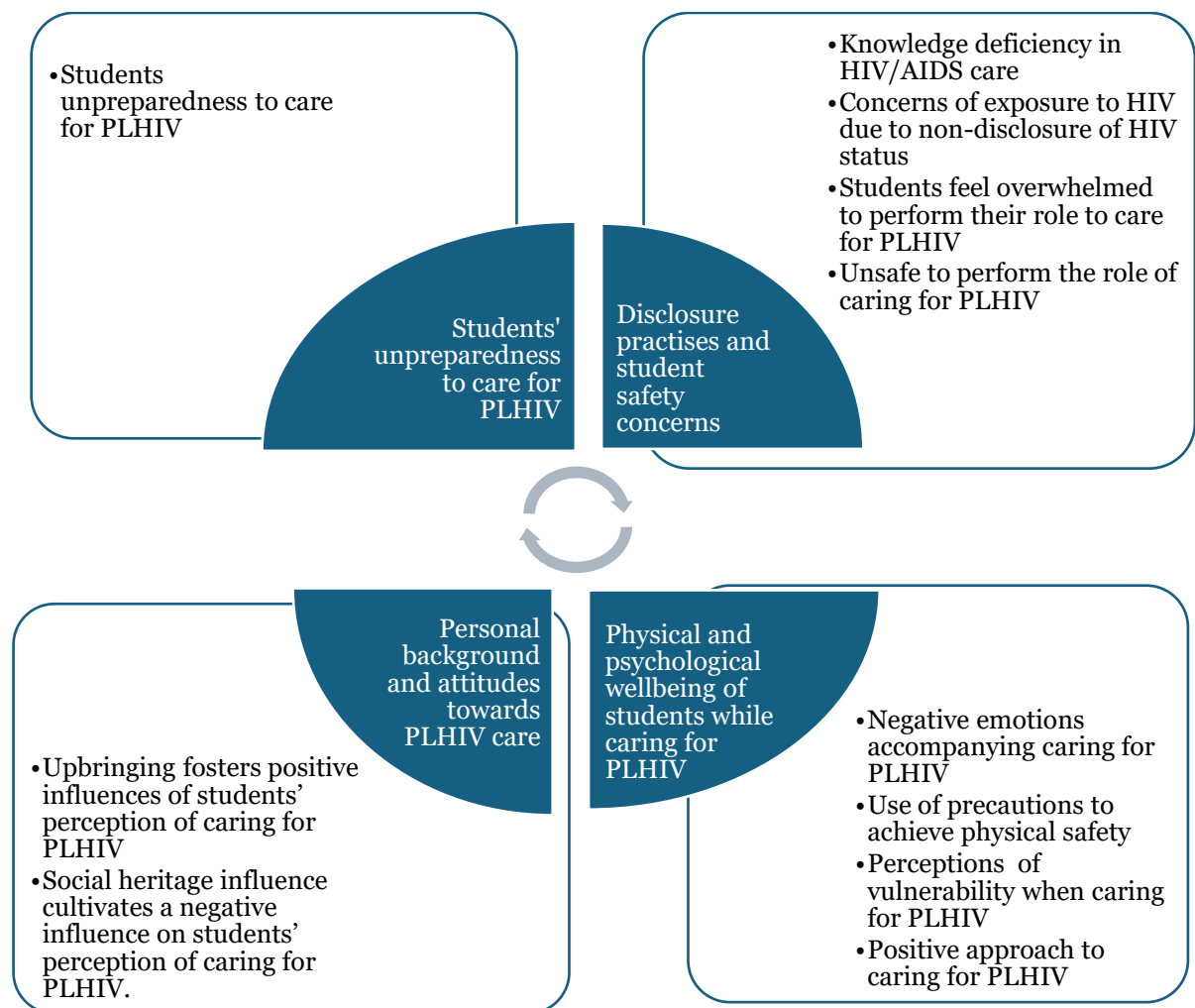


Figure 1. Presentation of themes and subthemes of the study

3.3. Theme 2: Disclosure practices and student safety concerns

The second theme highlights the lack of disclosure regarding the HIV status of patients to first-year nursing students, which resulted in negative emotions and challenges in fulfilling their roles in caring for PLHIV. The quotes below illustrate students' experiences who were unaware of the HIV status of patients they were assigned to care for, and how this lack of information affected their ability to perform their roles effectively: *"It would help if they told us about the status of the patients, so we know how to protect ourselves"* (Male FDG1, 19 years old). This quote reflects a student's reaction upon discovering the HIV-positive status of a patient they were assigned to care for. The student's response led them to avoid performing certain tasks related to the patient's

care, such as taking blood glucose measurements. This highlights the perception of lack of disclosure which resulted in lack of confidence and willingness of nursing students to engage in patient care, particularly when it involves PLHIV.

Furthermore, another participant also stated: *“How can they expect us to be comfortable in nursing the people who we do not know the status”* (Female FDG2, 20 years old). This emphasises the frustration and confusion experienced by students when they realized that senior nurses were avoiding certain patients, only to later discover that it was due to their HIV-positive status. This exacerbated negative perceptions and emotions among nursing students towards PLHIV possibly compromising the quality of care provided to those patients.

3.3.1. Subtheme 1: Knowledge deficiency in HIV/AIDS care

This subtheme focuses on the lack of knowledge among participants specifically concerning the care of PLHIV. Participants expressed concerns about the inadequacy of lectures in providing guidance on care for patients with HIV/AIDS, leading them to rely on misconceptions inherited from their backgrounds. The quote provided below highlight students' perceptions of insufficient education on HIV/AIDS care, which may result in anxiety and fear, particularly regarding the risks associated with handling body fluids. The quote stated: *“I knew very well if I was going to take the temperature without gloves I could contact the sweat and be exposed to the virus”* (Female FDG1, 20 years old).

3.3.2. Subtheme 2: Students' concerns of exposure to HIV due to non-disclosure of HIV status of the patient while performing their role

This subtheme highlights the concerns expressed by first-year nursing students regarding their potential exposure to HIV due to the lack of disclosure of the patient's HIV status. Participants emphasized the importance of knowing the HIV status of patients before performing nursing duties to ensure proper precautions are taken to prevent exposure to HIV. A participant stated: *“It concerns me when I think that I could have been infected when taking the blood glucose of the patient, I only found out later about the HIV”* (Female FDG1, 19 years old). This quote reflects the participants' anxiety about potential exposure to HIV while performing tasks such as taking the blood glucose of a patient whose HIV status was not disclosed beforehand. This uncertainty about the patient's HIV status can lead to heightened fear and concern among nursing students, impacting their ability to provide care effectively.

Furthermore, another participant mentioned: *“We will get infected because now we don't know if the person has it and we are busy making their beds with no gloves”* (Male FDG2, 22 years old). This quote reflects the perceived risk of exposure to HIV among nursing students when performing tasks such as making beds without wearing gloves, particularly in the absence of knowledge about the patient's HIV status.

3.3.3. Subtheme 3: Students feel overwhelmed to perform their role to care for PLHIV

This subtheme highlights the emotional and psychological impact experienced by first-year nursing students upon learning that they were caring for PLHIV. Participants described feeling overwhelmed by emotions and uncertainty, which hindered their ability to effectively perform their roles in caring for PLHIV in the clinical facility. A participant stated: *“It concerns me when I think that I could have been infected when taking the blood glucose of the patient, I only found out later about the HIV”* (Female FDG1, 20 years old). This shows a participant's concern about potential exposure to HIV while performing nursing tasks, reflecting the heightened anxiety and fear experienced upon learning about the patient's HIV status. Another participant also stated:

Like from school like we learned that like a person living with HIV is just like you and me but since we came to university, it's like; “arrrrggggghhhh”, this thing and going to the hospital and actually facing the thing was like overwhelming... It is better when they tell you from the beginning, I mean the status. (Female FDG1, 20 years old)

The above quote captures the sentiment of being overwhelmed upon facing the reality of caring for PLHIV in a clinical setting. Despite learning about HIV/AIDS in school, participants described feeling a sense of shock and disbelief when confronted with the actual experience in the

hospital. This highlights the disparity between theoretical knowledge and real-world practice, contributing to feelings of overwhelm and uncertainty.

3.3.4. Subtheme 4: Students feel unsafe to perform their role in caring for PLHIV

This subtheme highlights the perception of first-year nursing students that it is unsafe for them to perform their roles in caring for PLHIV. This perception stems from various factors, including insufficient knowledge about the virus and its transmission, the stigma associated with HIV/AIDS, and a fear of contracting the virus, as stated by the participants below:

Like you know what if you catch it (HIV) then your life's going to change like, as the society is seeing this epidemic like that's the disease that you're going to get and then your life is going to change and then you're gonna die and everything.” (Male FDG2, 20 years old)

I also know that I wouldn't be comfortable treating them (PLHIV) coz I would also be afraid that I will contract the virus because even though we know that it is transmitted through body fluids, but we grow up with stereotype that HIV people are not safe.” (Female FDG1, 18 years old)

The first quote reflects the fear of the unknown and the perceived consequences of contracting HIV. Participants expressed concerns about how their lives would change if they were to become infected, reflecting broader societal fears and misconceptions surrounding HIV/AIDS. The second quote denoted the influence of societal stereotypes and stigma on the perception of safety when caring for PLHIV. Despite theoretical knowledge about HIV transmission, participants described feeling uncomfortable and afraid when tasked with caring for PLHIV, highlighting the pervasive impact of stigma and fear on their attitudes and behaviors.

When allocated to care for PLHIV, participants experienced psychological and emotional distress, leading them to employ compensatory mechanisms to address fears. This included using gloves during procedures and avoiding certain tasks perceived to increase their risk of exposure to HIV/AIDS. A participant stated:

I would focus on the precaution measures that would take, when we are doing procedures that or things on those patients (PLHIV) they give us those unsterile gloves and that's not right. Like if you have an accident, it's possible to get a spillage of fluids which will that expose us. (Male FDG1, 20 years old)

3.4. Theme 3: Personal backgrounds and attitudes towards PLHIV care

The third theme explores the factors that influence the perceptions of first-year nursing students when caring for PLHIV. One significant factor is the influence of the students' backgrounds and upbringing, which shape their attitudes and behaviors towards PLHIV. Participants in this study stated:

I came across a person with HIV when I was in primary school, I think I was in grade 3 or she was a friend, and she would always tell don't seclude or make me uncomfortable in a certain way so when I came across a patient had the virus, I didn't want to make them uncomfortable. (Female FDG2, 18 years old)

My mum always talked down relatives with HV so for me HIV was a no-go area I would not even want to touch anyone with HIV or whom I suspect has it. (Male FDG1, 20 years old)

The first quote illustrates how personal experiences from childhood can impact the way nursing students perceive and interact with PLHIV. In this case, the participant recounted a positive experience with a person living with HIV during their primary school years. This encounter left a lasting impression, instilling empathy, and a desire to treat PLHIV with dignity and respect. Conversely, the second quote highlights the influence of family attitudes and beliefs on the participant's perception of PLHIV. Growing up in an environment where HIV was

stigmatized and viewed negatively, the participants adapted these sentiments, leading to reluctance when faced with the role of caring for PLHIV in the clinical setting.

3.4.1. Subtheme 1: Upbringing fosters a positive influence of students' perception of caring for PLHIV

This subtheme highlights how early exposure and positive experiences with PLHIV can shape nursing students' attitudes and perceptions towards caring for individuals living with HIV. Participants stated: *"No, I didn't feel a different way like I said with the first patient that I worked with, she made me feel comfortable, so I didn't feel indifferent"* (Female FDG2, 19 years old), *"My aunt was HIV positive, we used to help her around so when I came to the wards, I was very comfortable because it was not something new"* (Male FDG 2, 19 years old). Another participant mentioned:

We grew up with a girl that was HIV-positive, and she was not different from us, so coming across someone that had it in the hospital it was like any other patient with any other condition, nothing special really." (Female FDG1, 18 years old)

The quotes provided illustrate how personal experiences within the participants' families or communities have positively influenced their perceptions of PLHIV. For example, one participant mentions growing up with a family member who was HIV-positive and recalls assisting them without feeling any different or stigmatizing them. This experience normalized HIV for the participants, allowing them to approach caring for PLHIV in the clinical setting with confidence and empathy. Similarly, another participant shares how their upbringing, which involved interacting with a friend or relative who was HIV-positive, contributed to their comfort and familiarity with PLHIV. These early experiences gave a sense of acceptance and understanding, ensuring the participants viewed PLHIV as individuals requiring equal care and respect, without discrimination or prejudice.

3.4.2. Subtheme 2: Social heritage influence cultivates a negative influence on students' perception of caring for PLHIV

This subtheme highlights how negative societal attitudes and misconceptions surrounding HIV/AIDS can adversely impact nursing students' perceptions and attitudes towards PLHIV. Participants stated:

Society where we come from most of the time contributes our thoughts and our mind-set, how these people are treated that's what we come with to the hospital for example where I come from people who are HIV positive are isolated from the rest of the people. So, when I come I come with the ideology in the hospital that I have to isolate myself from that patient and I have to isolate other patients from them as they might be HIV positive." (Female FDG1, 18 years old)

I also know that I wouldn't be comfortable treating them (PLHIV) coz I would also be afraid that I will contract the virus because even though we know that it is transmitted through body fluids, but we grow up with stereotype that HIV people are not safe." (Female FDG1, 19 years old)

The quotes provided shows how societal norms and cultural beliefs, particularly those in stigma and discrimination, influence the participants' perceptions of PLHIV. For instance, one participant mentions how societal attitudes in their community involve isolating individuals living with HIV/AIDS, which they bring into the hospital setting. This belief result in feelings of discomfort and reluctance to interact with PLHIV, reflecting a negative perception of caring for them. Similarly, another participant expresses fear in caring for PLHIV due to the stigma associated with the virus. Despite knowing HIV transmission, the participant acknowledges that societal stereotypes and misconceptions about the safety of interacting with PLHIV contribute to their discomfort and reluctance to provide care.

3.5. Theme 4: Physical and psychological wellbeing of students while caring for PLHIV

This theme highlights the diverse range of experiences and perceptions that first-year nursing students encounter when providing care for PLHIV. These experiences can significantly impact their physical and mental well-being, influencing their ability to perform their clinical roles effectively.

3.5.1. Subtheme 1: Negative emotions accompanying caring for PLHIV

This subtheme highlights the emotional challenges that first-year nursing students face when providing care for PLHIV. These negative emotions stem from a combination of factors, including misinformation, lack of knowledge, and personal biases. A participant stated: *“I would be uncomfortable to work with that patient (PLHIV) and what mum would say to me would actually come to my mind and it would make me scared* (Female FDG2, 20 years old). Similarly, another participant mentioned:

Like caring for a patient is who is HIV positive to me is not an easy thing for me to do, most of the time I'm not feeling comfortable and safe around them based on their symptoms they present with such as rapid weight loss, fever, flu, so they make me uncomfortable especially when it comes to body fluids as you know HIV it can be transmitted through only body fluids. (Female FDG2, 33 years old)

The quotes provided illustrate how some students feel uncomfortable and uneasy when caring for PLHIV due to misconceptions and fear surrounding HIV. For instance, one participant expressed discomfort around patients with HIV/AIDS, stating symptoms such as rapid weight loss as factors that made them uncomfortable. Another participant mentioned feeling scared and recalling negative messages from family members, which increased their fear and anxiety. These responses highlight the importance of addressing misconceptions and providing accurate education about HIV/AIDS to nursing students. By equipping students with the knowledge and understanding necessary to provide proper care, educators can help to lessen negative emotions and promote confidence in students' ability to care for PLHIV.

3.5.2. Subtheme 2: Use of precautions to achieve physical safety

This subtheme highlights how first-year nursing students adopt extra precautions when caring for PLHIV to protect themselves from potential exposure to the virus. This increased their sense of caution caused by awareness of the patient's HIV status and the perceived risk of contracting the disease, as stated by the following participants:

Yes, it feels very differently when you know that the person has the virus you come in with the mind of, I need to guard every corner and every move that I make right now in order to also protect myself because the first thing that you are taught is that your protection is important. (Male FDG2, 19 years old)

Others coz you cannot really, really treat them the same in other instances because of the precaution you need to take over the person without the virus and a person with the virus. (Female FDG1, 18 years old)

The quotes above provided illustrate how students approach care differently when they know that the patient is living with HIV. They express the need to be extra careful in their actions to minimize the risk of exposure to body fluids and possible transmission of the virus. Students however might become too cautious or hesitant during their care for these patients, resulting in compromised quality of care and patient outcomes. Additionally, it might contribute to feelings of stigma and discrimination experienced by PLHIV, further increasing existing challenges in healthcare delivery. Educators and clinical preceptors need to address these concerns and provide guidance to students on appropriate infection control measures while also emphasizing the importance of delivering compassionate and non-discriminatory care to all patients, regardless of their HIV status.

3.5.3. Subtheme 3: Perception of vulnerability when caring for PLHIV

This subtheme highlights the sense of vulnerability experienced by first-year nursing students when tasked with duties beyond their scope of practice, particularly in the context of caring for PLHIV. These students expressed feeling intimidated by qualified nursing staff, who often assigned them tasks outside their level of training and experience. A participant mentioned:

.....because you are first year nurse they'll tell you to do specific things for them (senior nurses) because they don't want to do them and sometimes those are out of your scope and if you don't do it then you really like you can get like shouted at and everything so you're in a vulnerable position as a first year so then you'll do certain things that will obviously put you at a greater risk and expose you more. (Male FDG2, 20 years old)

The first-year nursing students felt that the senior nurses influenced them as novice students, forcing them to perform tasks that may not adhere to their level of competency or training. This made the students attain a sense of vulnerability and insecurity in their role as caregivers. This environment fostered a sense of unpreparedness and fear to care for PLHIV due to their vulnerable status.

3.5.4. Subtheme 4: Positive approach to caring for PLHIV

This subtheme indicates that familiarity with PLHIV, either through personal encounters or prior education, contributed to these students' positive outlook. The students perceived normally that caring for PLHIV was not different from caring for patients with other conditions. Instead of feeling fearful or anxious, these students approached their duties normally. They were aware of the necessary precautions to prevent exposure to blood and body fluids felt a sense of preparedness and completed their role in caring for PLHIV. Participants stated:

When I became aware of it nothing changed it was just like ok so now, I'm aware of this I need to be slightly more cautious but it was just like another patient because you won't change the way you take the temperature pin from a patients mouth you will still hold the tip cause not one actually wants to touch anyone's spit (giggles). So, for me nothing clearly changed. (Male FDG2, 19 years old)

I don't think you feel more uncomfortable, but I think you feel more like safe in a sense because I knew oh this is what you're supposed to do if it happens if you get blood on you this is where you're supposed to go. (Female FDG1, 22 years old)

4. Discussion

The study aimed to investigate the perceptions and experiences of first-year nursing students regarding their role in caring for people living with HIV (PLHIV) in a clinical setting. Through focus group discussions and qualitative content analysis, several themes and subthemes emerged, shedding light on the experiences and attitudes of these students.

4.1 Students' unpreparedness to care for PLHIV

The current study sheds light on first-year nursing students' perceptions of being ill-prepared to care for PLHIV, citing inadequate training and knowledge acquisition. This finding echoes with a previous study conducted by Rana and Cheung (2019), which emphasizes the critical role of comprehensive HIV/AIDS education in nursing curricula. However, Ngcobo and Mchunu (2019) argue that practical training and the provision of protective gear are important to allay students fears of contagion, providing a practical aspect to the discussion. Moreover, the issue of disclosing patients' HIV status emerged as a significant concern among participants, leading to feelings of insecurity and fear. This finding aligns with the findings of Dong et al. (2018), who advocate for disclosing patient HIV status to prevent accidental exposure and enhance students' confidence in providing care. However, Salvadori and Hahn (2019) highlighted the importance of medical confidentiality in the care of patients with HIV/AIDS.

This study also highlighted the psychological and emotional challenges experienced by many participants while caring for PLHIV, leading to resorting to protective measures and avoidance behaviors. This finding aligns with research by Pickles et al. (2009), which highlights similar fears

and concerns among nursing students globally. Further exploration could compare coping strategies and support mechanisms employed by students in different settings, informing interventions to promote students' well-being in clinical settings. To deepen the analysis, it is essential to consider insights from studies conducted over the past few years. For instance, Shi and Cleofas (2023) identified gaps in knowledge and skills among student nurses regarding HIV/AIDS care, stressing the need for intensive education and training programs. Moreover, Mikkonen et al. (2022) emphasized the importance of clinical mentoring and support for student nurses during their clinical placements, which can significantly enhance students' competencies and confidence in providing care for PLHIV. Additionally, Atav et al. (2015) explored the attitudes and perceptions of nursing students towards PLHIV, highlighting the need to address misconceptions and negative attitudes through education and training programs. By synthesizing findings from these studies, researchers can develop comprehensive solutions to improve care for PLHIV, addressing educational gaps, policy challenges, and cultural influences. This holistic approach is crucial for enhancing nursing education and practice in the context of HIV/AIDS care.

4.2 Disclosure practices and student safety concerns

First-year nursing students were of the perception that they were not given a full report when it came to the status of PLHIV. They perceived that the senior nursing staff omitted divulging the status of the patient. Literature review states that concealing HIV status in the medical settings was discovered to be associated with concerns about contravention of confidentiality, denial of quality medical care and judgment from health care providers (Dudina et al., 2020). The current study reveals a lack of disclosure of patients' HIV status to first-year nursing students, leading to feelings of insecurity and fear among students. This finding relates with Soler et al. (2021), who highlights the importance of disclosing patient information, including HIV status, to ensure the safety and confidence of healthcare professionals. However, the study by Soler et al. (2021) focuses on nurses rather than nursing students, noting a gap in research on disclosure practices specifically concerning student education and safety.

Medical information is confidential and, even more importantly, HIV-related information is more classified hence surplus protection has been afforded to HIV-related medical records (Hlongwa, 2016). As a result, it is not permissible to release HIV information randomly without permission; however, exceptions have been made for healthcare providers to divulge a patient's HIV infection to people at risk of infection without offence (Hlongwa, 2016). The senior health careers, therefore, have a duty to decide if it is beneficial to disclose the status of the patient to the students (Vaismoradi et al., 2020). It may be helpful for other medical health workers to make known to the first-year nursing students the status of the patient where implicated without violating their rights to privacy or compromising the quality of care rendered to them. Moreover, this may assist in addressing their anxieties and fears of contagion and improve the perceptions of their role in the care they provide to PLHIV. On the other hand, the role of first-year nursing students in clinical facilities involves less invasive procedures. Subsequently, it may not be necessary to divulge the status of the patient as it may not be implicated in the required care treatment they offer to the patient but instead, it may result in negative implications such as stigma (Shah et al., 2014).

Involving the first-year student nurse in holistic care in the clinical facilities will enable them to develop a sympathetic clinical experience which will improve their transition into practice. Moreover, mentorship will enhance their socialisation into the profession with added accountability and responsibility which will create self-confidence in taking their roles in caring for PLHIV. Education and mitigation of safe practices within the healthcare system, as well as the use of recommended guidelines will lead to optimal patient outcome (Gazaway et al., 2019). Failure of these practices will create fear in the first-year student nurses of contracting HIV which will delay the healing outcomes of PLHIV and create overcrowding of patients in the health facilities.

The health care workers in the clinical facilities should involve the first-year nursing students in the holistic care of the patient so that they do not become fearful of nursing any patients and become accustomed to necessary precautions that should be taken when caring for all patients, especially when performing invasive procedures (Gularte-Rinaldo et al., 2023). In their role of caring for the patients, they need to be reminded of the rights of the patient, especially on HIV legislation including internal and external work policies on HIV/AIDS which will speak to them

on why sometimes the status of the patient may be withheld (Kupcewicz et al., 2021). Senior healthcare workers should be trained on mentorship so that when the first-year students are in the clinical setting, mentorship can be assumed by the qualified healthcare staff. Moreover, first-year nursing students need to be made aware of safe practices so that they treat every patient with caution and care to prevent any nosocomial infections. Emphasis must be made on utilising standard guidelines for infection control (Chang et al., 2023).

4.3 Personal backgrounds and attitudes towards PLHIV care

Some of the first-year nursing students have prior knowledge about either a relative or friend who had been diagnosed with HIV previously. This led the students to either have a negative or positive perception of PLHIV when they had to perform their role in caring for PLHIV. Fear of contagion was coupled with erroneous beliefs about HIV transmission, leading to negative attitudes and misinformation. Both the current study and Pickles et al. (2019) demonstrate the significant impact of personal backgrounds on attitudes towards PLHIV care. Participants with prior exposure to HIV/AIDS, either through personal experiences or close relationships, generally held more positive attitudes. Addressing culturally construed misinformation will enhance HIV/AIDS knowledge thereby empowering the first-year nursing students to perform their caring role more effectively and efficiently in a positive environment which does not entertain superstitions and beliefs. However, the inability to speak to misinformation will result in first-year nursing students developing negative attitudes towards PLHIV and resulting in an adverse healthcare system with reduced quality care of PLHIV and a poor prognosis.

This study also showed the influence of personal backgrounds and prior experiences on students' attitudes towards caring for PLHIV. This aspect resonates with the findings of Pickles et al. (2017), suggesting that cultural factors significantly shape perceptions of PLHIV care. Further exploration could compare specific cultural influences across different contexts and examine the effectiveness of educational interventions in challenging negative beliefs. It is recommended that training programmes seek to investigate the student nurses' culturally construed misinformation on HIV/AIDS to prepare them with appropriate knowledge. Philip et al. (2014) reaffirm that training programs and curricula for healthcare students should generate an understanding of personal biases and prejudices toward PLHIV. A recommendation for further studies is made to explore the effects of diversities, for instance, gender, cultural values, and clinical experience on nursing students' attitudes.

4.4 Physical and psychological well-being of students while caring for PLHIV

Most participants in this study, while performing their role in caring for PLHIV, experienced many psychological and emotional challenges. They resorted to using some approaches to protect themselves, including limited contact with PLHIV, using safety clothing, and absconding from their delegated duties. The findings in this study is congruent with Pickles et al. (2019) that found significant psychological and emotional challenges faced by nursing students when caring for PLHIV. These challenges include fears of contagion, feelings of insecurity, and reluctance to provide care (Pickles et al., 2019). The present study also showed that first-year nursing students were aware of their role in caring for PLHIV, however, some felt unsafe and unprepared when given the task to perform their role in caring for the PLHIV, which is in line with a study by Bonacaro et al. (2022). Other first-year students felt that they were manipulated to care for PLHIV even if some procedures were outside their scope. However, some first-year nursing students were receptive to perform their role as they had previous encounters with PLHIV in their childhood or as their relatives. Addressing inequalities towards first-year student nurses will ensure they gain strength and adopt strategies that assist in forming an improved nursing environment (Rozendo et al., 2017). Mentoring offers a multidisciplinary approach which acquires adequate knowledge and positive attitudes during training the training of first-year student nurses. Adversely, absence of mentoring will result in negative attitudes which will have negative effects on PLHIV during their hospital stay (Zulu et al., 2021). Imparting more knowledge to first year student nurses will create more positive attitudes and weaken their personal concerns of their role in caring for PLHIV.

First-year nursing students are the basis of the nursing cadre and, therefore, need to be considered as the most important group of students which need to be carefully mentored and given the right information before being assigned their role in clinical duties. It cannot be

overemphasised that there is need for intensive access to HIV and AIDS information for first year student nurses before they assume their clinical duties to ensure that quality care is given to PLHIV (Shi & Cleofas, 2023). The clinical staff should allow forums which enable student nurses to air their concerns with assurance that there will be no threats to their educational marks if they report any injustice they may be facing. First-year nursing students should be made aware of the availability of access to counsellors who may assist them to face their fears and anxiety, which will improve their patient care for PLHIV (Bøe & Debesay, 2021).

5. Implications and limitations

This study underscores the imperative for nursing education programs to integrate comprehensive HIV/AIDS care training into their curricula, ensuring students acquire essential knowledge and skills. Clinical instructors should offer robust support and mentorship to students during clinical training, fostering hands-on experience in PLHIV care. Additionally, nursing students ought to engage in ongoing professional development activities related to HIV/AIDS care, including workshops and seminars. Further research is warranted to explore nursing students' perceptions across diverse contexts and the efficacy of educational interventions on clinical practice.

While valuable, this study's findings may lack generalizability beyond the specific institution and geographic location studied. Exclusion of older nursing students could limit the diversity of perspectives. Additionally, the focus on first-year students without prior medical experience may restrict the applicability of findings to broader student populations. Future research should include diverse age groups and educational levels to enhance the comprehensiveness and relevance of findings to nursing education and practice.

6. Conclusion

In conclusion, this study highlights varied perceptions among first-year nursing students regarding their role in caring for PLHIV. While challenges such as lack of preparedness and negative emotions were evident, opportunities for improvement also emerged. Recommendations include enhancing education and training programs to cover comprehensive HIV/AIDS care, providing adequate clinical mentoring and support, encouraging continuous professional development, and promoting further research to inform evidence-based practices. By addressing these challenges and implementing targeted interventions, nursing education programs can better prepare students to provide quality care to PLHIV and contribute to improved health outcomes for this population.

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Author contribution

RDM obtained ethical clearance for the project, conducted the literature review, collected interview data, and performed data analysis. RDM was primarily responsible for the final development of the research article. VB and HS served as the project leader, overseeing the research process.

Conflict of interest

No conflict of interest was observed whilst the research was being conducted and concluded.

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