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Hands, Hearts and Hope: Nurses' experiences in caring for people living with HIV in Moshi, Kilimanjaro Region, Tanzania

A qualitative study of challenges, strategies, and everyday nursing practice

Händer, Hjärtan och Hopp: Sjuksköterskors erfarenheter av att vårda personer som lever med HIV i Moshi, Kilimanjaro regionen, Tanzania

En kvalitativ studie om utmaningar, strategier, och daglig omvårdnadspraktik

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ABSTRACT

Background: HIV remains a major global health challenge, particularly affecting low- and middle-income countries, such as Tanzania. Nurses play a crucial role in caring for people living with HIV (PLHIV), and highlighting these experiences is essential for improving the quality of HIV care.

Aim: To highlight nurses' experiences of providing care for PLHIV in Moshi, Kilimanjaro region, Tanzania.

Method: A qualitative study with an inductive approach was conducted. Data was collected through semi-structured interviews with six nurses working in HIV care and analyzed using thematic analysis focusing on manifest content.

Results: Three themes were identified: *Challenges Affecting Nurses' Ability to provide care for PLHIV, Relational and Emotional Work in HIV Care* and *Adaptive Caring Strategies for a Better Future Through Teamwork and Education*. The nurses described navigating structural and emotional challenges through relational care, teamwork, empathy, and patient education, which were perceived as improving adherence and reducing stigma.

Conclusion: The findings illustrate the complexity of HIV care in a low-resource setting and highlight nurses' central role in supporting PLHIV. Education, relational care, and teamwork emerge as essential strategies for improving health outcomes in similar contexts.

Keywords: Global health; Health; HIV/AIDS; Nursing; Nurses' experiences; People Living with HIV.

SAMMANFATTNING

Bakgrund: HIV kvarstår som en stor global hälsoutmaning, särskilt i låg- och medelinkomstländer såsom Tanzania. Sjuksköterskor spelar en avgörande roll i omvårdnaden av personer som lever med HIV (PLHIV), och att belysa deras erfarenheter är viktigt för att öka kvaliteten inom HIV-vård.

Syfte: Att belysa sjuksköterskors erfarenheter av att vårda PLHIV i Moshi, Kilimanjaro-regionen, Tanzania.

Metod: En kvalitativ studie med induktiv ansats genomfördes. Data samlades in genom semistrukturerade intervjuer med sex sjuksköterskor som arbetar inom HIV-vård och analyserades med tematisk analys med fokus på manifest innehåll.

Resultat: Tre teman identifierades: *Utmaningar som påverkar sjuksköterskors möjlighet att vårda PLHIV*, *Relationellt och emotionellt arbete inom HIV-vård* samt *Anpassade omvårdnadsstrategier för en bättre framtid genom samarbete och utbildning*. Sjuksköterskorna beskrev hur de hanterade strukturella och emotionella utmaningar genom relationell omvårdnad, samarbete, empati och patientutbildning, vilket upplevdes förbättra följsamhet och minska stigma.

Slutsats: Resultaten visar komplexiteten inom HIV-vård i en resursbegränsad kontext och belyser sjuksköterskors centrala roll i att stödja PLHIV. Utbildning, relationell omvårdnad och teamwork framträder som avgörande strategier för att förbättra hälsoutfall i liknande kontext.

Nyckelord: Global health; Health; HIV/AIDS; Nursing; Nurses' experiences; People Living with HIV.

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Table of Contents

INTRODUCTION

Tanzania is one of the low- and middle-income countries with a high prevalence of people living with HIV (PLHIV), similar to many other countries in sub-Saharan Africa (UNAIDS, 2023). Although antiretroviral treatment has significantly improved life expectancy for PLHIV, HIV continues to pose substantial challenges, particularly in resource-limited settings such as Tanzania. Beyond its medical consequences, HIV also affects patients' social lives, access to healthcare, and overall well-being. Their lives are often reported as being shaped by stigma, financial constraints, and structural inequalities within healthcare systems (Holzemer et al., 2007).

Research shows that nurses play a central role in supporting treatment adherence, reducing HIV transmission, and improving the quality of life for PLHIV. Despite working under challenging conditions, nurses are frequently described as demonstrating strong commitment and professional responsibility, contributing to both medical and psychosocial dimensions of care for their patients (Harrowing & Mill, 2010).

By exploring nursing care within this context, this study aims to highlight the importance of the nurse–patient relationship and person-centered care in a globalized world. The study focuses on nurses' daily caring activities, the challenges they encounter, and the strategies they use in their work. More specifically, it explores nurses' experiences of providing care for people living with HIV in the Kilimanjaro Region, Tanzania.

BACKGROUND

HIV/AIDS as a global health challenge

World Health Organization (WHO, 2024) states that the Human Immunodeficiency Virus, HIV, is a virus that attacks the immune system, specifically the white blood cells. This virus compromises the body's immune system, posing difficulties for the body to combat various deadly diseases such as tuberculosis and other infections. The organization further explains that Acquired Immunodeficiency Syndrome, AIDS, is the most advanced stage of HIV, typically occurring in individuals that have lived with the virus for many years without receiving any treatment or have ceased treatment. WHO additionally explains that HIV is transmitted through body fluids including blood, breast milk, semen, and vaginal secretions. While this virus cannot be fully cured, it is preventable, and antiretroviral therapy (ART) is available to slow its progression and reduce the risk of developing AIDS.

As Maj et al. (2025) explain, newly patients diagnosed with HIV do not show any, or experience non-specific symptoms, which makes it difficult to early diagnose the virus. However, there are several commonly observed symptoms in the different stages of the infection. The article states that at the acute stage of the infection, meaning from two to four weeks post infection, there are commonly observed symptoms such as fever, fatigue, mouth soreness, non-specific skin rash and enlarged lymph nodes. WHO (2025) agrees and states that after the acute stage, many patients enter the latency phase, meaning that the virus continues replicating itself at lower levels, causing the immune system to slowly weaken. This stage is often asymptomatic or mildly symptomatic and can last several years. The next and most advanced stage of the infection is AIDS, meaning advanced HIV with severe immune suppression and serious developing of complications. At this stage the patients show serious symptoms such as severe and dramatic weight loss, chronic diarrhoea, persistent cough, breathing difficulties, severe fatigue, persistent fever and night sweats. As HIV weakens the immune system, wide array opportunist infections are also occurring, such as pneumonia, tuberculosis and hepatitis. The organization also underlines that without treatment, such as antiretroviral therapy (ART), this advanced stage of HIV is life threatening.

Moreover, WHO (2024) claims that there are approximately 42,3 million PLHIV globally, with 65% of these residing in Africa. The organization states that, in year 2023, approximately 630 000 people lost their lives due to HIV/AIDS related causes globally. WHO further explains that these numbers indicates that this sexually transmitted disease is still a crucial health problem globally, despite all the efforts that have been made throughout many years. The main reason for this ongoing problem is that there is still no cure. Looking at Tanzania specifically, UNAIDS (2023) reports that approximately 1.7 to 1.9 million people in Tanzania are living with HIV/AIDS. According to the report, the prevalence of HIV among women is higher than that among men, with rates of 5.1% and 3.8%, respectively.

The Right to Health: a fundamental human right

Human rights are universal rights stated by the United Nations (UN, n.d.). These rights are essential for, and owned by, all human beings globally, regardless of race, nationality, sex, age, religion, or other personal factors. One of these human rights are *the right to health*. WHO (2023) agrees and claims that every human being is entitled to have the highest attainable standard of both physical and mental health. This means that health is a fundamental human right and should be ensured to every human being in the world. The organization further outlines the four core components of the right to health, namely *availability*, *accessibility*, *acceptability*, and *quality*. These terms highlight how each country's health system should be structured to ensure accessible and functional health care that promotes optimal health for all within the population. In other words, it is every country's responsibility to assure that every citizen gets access to affordable health care, relevant information, and education about the health determinants as well as risk factors and prevention methods to reduce any risk of disease. The

right to health should be guaranteed to everyone, regardless of the person's geographical location, ethnicity, age, sex, education level or other personal characters (WHO, 2023).

On a similar topic, UN (n.d.) claims that many of the PLHIV, especially those living in low- and middle-income countries, have much less opportunities to obtain their right to health the way it is intended to. Some of the reasons to this problem are stigma, discrimination, lack in access to treatment, and limited financial resources. To provide a functional health care system to everyone in these vulnerable societies and guarantee health as a human right, the Office of the United Nations High Commissioner for Human Rights (OHCHR) is working with different strategies. These strategies include raising awareness about the virus, promoting access to treatments and prevention methods as well as helping countries to build structural capacities to fight HIV/AIDS related issues. These efforts are described as essential to fight the epidemic and enabling the world to reach the global goals planned to be obtained by the year 2030, namely Agenda 2030 (UN, n.d.).

Agenda 2030: The roadmap to a better future

The United Nation's Sustainable Development Goals (SDGs) are different aims and strategies established to guarantee health and quality of life for the population of the world. These global goals were established in New York in year 2015 and include 17 plans and strategies. These strategies aim to combat different barriers and difficulties that people are facing, to maintain a healthy and productive life. The goal is to make the world a more sustainable and peaceful place for every human being by the year 2030. One of the goals of the SDGs, goal number 3, is to *ensure healthy lives and promote well-being to all at all ages*. This specific goal focuses on minimizing and eradicating communicable diseases such as HIV/AIDS, tuberculosis, and malaria by providing safe and affordable care, vaccinations, and medications for all (UN, n.d.).

WHO (2022) agrees and states that the organization has several strategies and plans to reduce and end communicable diseases worldwide by the year of 2030. Amongst these diseases, HIV/AIDS is considered as one of the focus areas. To implement these strategies, all countries globally and their leaders need to establish educational programs for their population as well as provide affordable health care. The strategies aim to help people worldwide to understand the differences between the varies of diseases as well as their transmission ways, prevention methods and treatment alternatives. This plan also emphasizes the development of specific strategies for each disease, aiming to eliminate them through individualized approaches (WHO, 2022). Achieving these global goals requires political commitment and resources, but also healthcare professionals, including nurses, who can implement these strategies in daily clinical practice, particularly in regions with high prevalence of HIV and resource-limited settings.

Nursing care

The International Council of Nursing (ICN, 2021) describes the nursing profession with four vital and fundamental nursing roles and responsibilities, namely: *promoting health, preventing diseases, restoring health* and to *easing any pain and suffering*. In other words, nursing care includes providing patients with physical, emotional, and psychological support, while also considering ethical laws and rules. ICN further explains that nursing is a profession based on respect, empathy, caring, responsiveness, justice, trustworthiness, and integrity. It is a nurse's responsibility to provide evidence-informed and patient-centred care to every patient, regardless of the person's background, ethnicity, age, sex or other factors. Furthermore, ICN claims that nurses play a crucial role in reducing and ending global health problems by preparing for and responding to social crises, epidemics, pandemics, and emergencies.

Similarly, Brilowski & Wendler (2005) explains nursing as a relational, humanistic, and dynamic profession based on moral commitment, adaptability, and empathy. The writers categorize and describe the practice of nursing care with five essential attributes: *action, relationship, acceptance,*

attitude, and *variability*. *Action* is described as the nurses' practice through the physical presence, care, and touch that meets the patient's needs. In other words, it is about the nurse helping the patient by being physically and emotionally available to be able to give every patient the support needed. The second attribute, *relationship*, stands for the nurse creating a mutual, professional, and trusting relationship with the patient to create a solid foundation for effective care. The third term, *acceptance*, is explained as the nurse valuing the patient as a human being, regardless of the patient's disease, situation, or other personal factors. A*ttitude* is used to describe the nurse's ability to show empathy and respect as well as giving care according to ethical considerations. The last term, *variability*, is used to highlight that nursing practice includes adapting the care depending on each patient. This means that personal needs are to be considered to make the care more patient-centred. The article concludes that nurses who use all these attributes mentioned, are better equipped to build strong relationships with their patients, resulting in improved health outcomes and even enhanced professional satisfaction (Brilowski & Wendler, 2005).

To understand the concept of nursing care even deeper, it is important to reflect upon the concept from different perspectives. Våga et al. (2013) discusses how the concept of care is widely debated and highlight that the way care is shaped, expressed, and experienced varies significantly across cultural and geographical contexts. Standards for what is seen as *quality care* are not universally translated, and what is seen as compassionate or professional in one setting may not be interpreted the same way in another. Their study from rural Tanzania emphasizes that care must be understood within the specific historical, socio-economic, and cultural context in which it is practiced. For example, authoritative communication by nurses is perceived by patients in this context as supportive and caring but the same approach in another country or context may be experienced as something negative. This highlights further the importance of understanding the context that the care is provided in and seeing care as something shaped by culture, resources, and social norms, such as those present in the Tanzanian settings.

Nursing care for PLHIV

As untreated HIV gradually progress into the life-threatening condition AIDS, nurses play a crucial role in discovering both early and advanced symptoms when patients seek healthcare, paying attention to the commonly reported symptoms of the disease. Bedert et al. (2023) identify the main and core roles of the nurses that provide care for PLHIV, starting from the diagnosis until the last minutes of a patient's life. The study shows that nursing care for this specific patient group involves addressing the medical, physical, psychological, and emotional burden of the patients as well as planning and providing person-cantered care. As the article states, nurses are responsible for supporting the patients taking their vital medicines, providing counselling on a regular basis as well as convincing the patients to bring their sexual partners for testing. Testing the patients' sexual partners is one of the strategies used to prevent transmission of the virus. The nurses also have ethical responsibilities to develop a unique relationship based on trust, respect, and empathy to be able to communicate and provide support. Further, the nurses play a vital role in identifying the patients that require additional care, such as those with high viral load or patients unable to take care of themselves due to different reasons. For those patients, the nurses need to plan and conduct extra efforts and actions to enable the patient to maintain their drug adherence (Bedert et al., 2023).

Nursing care in the context of HIV-related stigma and social consequences

Apart from the physical suffering, HIV/AIDS affects other factors for the individuals' lives as well. Holzemer et al. (2007) highlights that cultural and personal perceptions significantly influence both PLHIV and their families and relatives. The writers claim that one of the most difficult challenges related to HIV/AIDS is stigma surrounding both the disease and the PLHIV. The study is based on empirical data from five countries: Lesotho, Swaziland, Malawi, Tanzania, and South Africa, and describes stigma

as a complex and dynamic process affecting peoples' lives on multiple levels. The participants in this study reported that loss of social support, persecution, isolation, job loss and obstacles in accessing healthcare services were all due to stigma. Although, some effective responses towards stigma were identified, such as support from family and community, access to information and treatment, education, and empowerment programs. The study however emphasized that all suggested actions and responses require efforts at individual, social, and structural levels.

Even Harrowing & Mill (2010) studied the roles of nurses caring for patients with HIV/AIDS in a sub-Saharan country. The writers describe that the nurses work under challenging conditions, yet they demonstrate a strong sense of commitment and professional pride. Many view their work as a calling, often driven by religious and moral beliefs. The study describes that the nurses show deep loyalty to their patients despite resource shortages in medical supplies, staff members and facilities. Specialized HIV training has equipped them with better communication skills and strengthened their professional roles. The training enabled them to become more involved with patient education, counselling, and even political advocacy.

Additionally, as Rajaraman & Palmer (2008) state in their article, the nurses working within PLHIV are strongly influenced by emotional closeness to patients, the work environment, societal perceptions of the virus, and the support systems within healthcare. To ensure effective care within the HIV department, it is essential for the government or country to provide investments in education, resources, and structural support for the nurses.

However, even though previous studies describe the importance of the nurses' role, their emotional involvement, and the challenges of working in HIV care, there is still limited research about how nurses experience their day-to day work within these contextual settings.

Key concepts

This study explores nursing care through the key concepts of health and the caring relationship. Eriksson's caritative caring theory is used as the main theoretical framework to interpret the findings, where health is understood as a dynamic process shaped by suffering, dignity, and meaning. Travelbee's human-to-human relationship model is applied as a complementary perspective to strengthen the understanding of relational and communicative aspects of nursing care for PLHIV, especially in contexts shaped by challenges such as stigma and other socio-economic barriers.

Health

Wärnå-Furu (2022, p. 127) describes the concept of *health* as a central concept in the science of care, including various interpretations. Health is described by what exists within a person and is shaped by their daily choices, influencing both their own well-being and that of their surroundings. Historically health has been defined more narrowly, solely as the opposite of illness. Today health is viewed upon as a multidimensional phenomenon that is understood through several different concepts, for example with *quality of life*.

From a caring science perspective, health is understood in relation to life itself and the situation in which the individual currently finds themselves in (Wärnå-Furu, 2022, p. 129). The individual makes active and conscious choices that shapes their health and is expressed through emotions, attitudes, actions and achievements. By seeing health not only as the absence of suffering or illness, health can be achieved and felt by an individual despite also experiencing pain and vulnerability. Further, Wärnå-Furu (2022, p. 133) explains that understanding the different dimensions of health can serve as a framework for understanding every patient's unique situation. This subsequently leads to the caregiver making conscious choices and actions towards the patient's each specific needs and problems.

Diving deeper into the concept of health and exploring its multidimensional aspects, there are different theoretical frameworks that can be applied. *Eriksson's caritative caring theory* (Bergbom et al., 2021) describe health as a dynamic process shaped by a person's experiences of suffering, well-being and feeling of meaningfulness, rather than focusing on biological functions only. Health is further discussed to be developed through the caring relationship between a nurse and a patient. This means that the nurse's role, in addition to focusing on physical health, shall also include alleviating suffering and supporting the dignity and wholeness of the patient (Bergbom et al., 2021). For PLHIV, health is often a complex balance between medical, emotional, and social dimensions, where the individual often experience stigma from the community, adding to the sense of vulnerability. Therefore, a more caring focused practice in a meeting between nurse and a patient diagnosed with HIV, may contribute to the patient's feeling of safety, trust and meaning. These are all elements that, according to Eriksson's caritative theory, are central to the human pursuit of health.

As Bergbom et al. (2021) points out, by adapting a caritative approach, that the nurse can influence the patient's well-being and motivation to life even though the disease itself cannot be cured. Adapting this approach means acknowledging the patient's unique situation, listening and respecting their experience or suffering as well as responding to the patient with compassion and humanity. Practical strategies are explained, such as listening carefully without judging, bring hope, express love and respect, and giving extended time to a meeting with a patient. By adapting these strategies, a nurse can develop a functional patient-nurse meeting based on trust (Bergbom et al., 2021). This is specifically relevant in caring for this patient group suffering from HIV since stigma, fear and vulnerability often affect the patient's quality of life.

The caring relationship

The concept of *the caring relationship* is central in understanding how nurses deliver care and build relationships with their patients living with the virus, especially patients suffering from difficulties related to stigma and discrimination from the society. Nyström (2021, p. 469) describes the caring relationship used in health care context, as short meetings as well as long term interactions and relationships between a caregiver and a patient. This kind of relationship is usually based on the caregiver's ability to use their knowledge and experience as a foundation for a professional relationship that will have positive impact on the patient. Furthermore, Nyström (2021, p. 483) describes that the caring relationship can be seen as a central method to create trust and security when challenges related to lack of health needs to be managed, or when emotions need to be verbalized. Nyström (2021, p. 477) additionally states that, for a patient in need of regular visits in health care due to illness, a solid and continuous caring relationship is crucial in determining the outcome for the patient. But there are many factors that can interrupt the relationship being made, such as time limitations and concerns from the caregiver to present the patient with too high expectations.

To deeper understand how caring relationships can be implemented in practice, *the Travelbee's human-to-human relationship model* can be used as a perspective. Shelton (2016) describes Travelbee's model as nursing relationships being an interpersonal process built through stages such as encounter, empathy, sympathy, and ultimately rapport. This model emphasizes that all caring activities are rooted in the interaction between two unique human beings and describes the human being as a unique and irreplaceable individual. This means that the nurse needs to see every person as more than solely a patient but rather meet them as individuals with unique experiences and needs. Furthermore, illness and suffering are to be understood as human experiences affected by culture and personal life conditions and demands a nurse-patient relationship based on hope, understanding, and meaning (Shelton, 2016).

A core strategy to develop a genuine presence to help the suffering human being, is through communication skills. Travelbee's model further suggests that a therapeutic relationship is shaped by

developing a mutual identity between two human beings, based on empathy and sympathy. This model underscores how the nurse-patient relationship is a dynamic process, enabling understanding and person-centred care (Shelton, 2016). By adapting these strategies while caring for PLHIV, the nurses can develop a deeper relationship with their patients based on trust, making the patient feel supported and understood. This is highly relevant, and even crucial, to properly provide care for PLHIV, especially in a context strongly influenced by stigma and other challenges affecting patients' health, wellbeing and quality of life.

PROBLEM STATEMENT

The right to health is claimed as a fundamental human right by the United Nations, and the World Health Organization has developed global strategies to eliminate HIV/AIDS by 2030. Despite global efforts, significant challenges remain, particularly in low- and middle-income countries such as Tanzania. Several reasons for HIV/AIDS still being a major health problem have been identified, such as stigma and limited funding.

Nurses in sub-Saharan countries have been identified as front-line workers playing a crucial role in combating HIV/AIDS and improving quality of life for PLHIV. Additionally, nurses within this context have been described as often working under resource-constrained conditions yet demonstrating strong commitment and a deep sense of responsibility. Their ability to form meaningful and caring relationships with patients has been observed to be particularly important in settings where stigma and other socio-economical barriers are prevalent. However, there is limited research that highlight the nurses' own experiences of providing HIV care in Tanzanian contexts, particularly regarding relational and patient-centered caring dimensions. The lack of such a knowledge restricts future opportunities to develop more supportive work environments and strategies to improve efficiency of the nurses' effort which, in turn, are essential for enhancing the quality of care provided for the PLHIV in Tanzania.

AIM

The purpose of this study is to highlight the nurses' experiences in providing care for people living with HIV/AIDS (PLHIV) in Moshi, Kilimanjaro region, Tanzania.

METHOD

Design

This study was conducted using a qualitative design with an inductive approach, aiming to highlight the lived experiences of nurses caring for PLHIV. Inductive approach was chosen to allow the findings to emerge from the nurses' own descriptions, without being shaped from predefined theories or hypotheses. Data were collected through semi-structured interviews with six nurses working at the HIV/AIDS department at a hospital in Moshi, Kilimanjaro region, Tanzania.

Throughout the research process, the authors approached the data without predetermined assumptions about the nurses' experiences, aiming to keep an open mind towards the data. All collected data from the interviews were included in the analysis and shaped the base for the results. The inductive approach enabled the authors to identify patterns, meanings, and themes grounded in the participants' descriptions and own words, ensuring that the findings remained closely connected to the nurses' own perspectives of providing care for PLHIV.

Selection of participants

Information power refers to the degree to which the participants in a study contribute valuable and relevant information in relation to the aim of the study. In other words, the more relevant information participants hold for addressing the aim of the study, the fewer participants are required. The sample size is determined by essential factors that are considered to influence information power, namely the aim of the study, the sample specificity as well as the quality of dialogue (Malterud et al., 2016). The sample size for this study was, therefore, determined based on key factors influencing information power, including a focused aim, a specific study sample, and the expected quality of dialogue.

This study was conducted through interviews with six nurses working with PLHIV at a department of HIV/AIDS in a hospital in Moshi, Kilimanjaro region, Tanzania. The objective was to highlight the lived experiences of the nurses which is considered narrow and well-defined. According to Malterud et al. (2016), a focused aim and a specific study sample can contribute to high information power, allowing for a smaller number of participants.

To strengthen information power further, the authors made a purposeful selection of the participants, using inclusion and exclusion criteria, to guarantee sample specificity. These inclusion- and exclusion criteria were that every participant nurse should have been working with PLHIV for a minimum of six months, providing nursing care as well as working with this specific patient group at least three times a week. Aligning with Malterud et al. (2016), this purposeful selection enabled a collection of rich and relevant data from participants with wide experience within the area of the study. Furthermore, the variation in length of professional experience among the participating nurses allowed for a wide range of perspectives related to caring for PLHIV. Based on these considerations, the authors assess the information power of this study to be high.

As the authors of this study are not from Tanzania, it was necessary that the leading nurse of the department selected the participants strategically according to the inclusion and exclusion criteria for this study. To reduce the risk of non-participation, information- and consent forms (appendix 2) were handed out to all participant nurses in the HIV/AIDS department prior to data collection.

The inclusion criteria for this study:

- The individual is a registered or licensed nurse.
- The individual has been working in the department of HIV/AIDS for a minimum of six months.

- The individual is working with patients living with HIV/AIDS for a minimum of three days per week.

The exclusion criteria for this study:

- The individual has not worked as a nurse in the HIV/AIDS department for more than six months prior to data collection.
- The individual is unavailable to be interviewed due to annual- or sick leave.
- The individual has not consented to participate.
- The individual feels uncomfortable participating or being voice-recorded.

Data collection

As emphasized by Malterud et al. (2016*), quality of dialogue* is an important factor for achieving sufficient information power. In this study, quality of dialogue was actively considered during data collection by creating a trusting and open interview situation. Time was allocated for informal conversation prior to each interview, and open-ended questions with relevant follow-up questions were used to encourage reflection and elaboration. Both authors were present during all interviews, enabling active listening, clarification of unclear responses, and deeper exploration of the nurses' experiences. This approach contributed to rich and relevant data aligned with the aim of the study.

Semi-structured interviews are considered an effective method for collecting data during qualitative studies, enabling researchers to cover topics of interest while participants can feel free to speak about their experiences and feelings (Polit & Beck, 2021, p. 514). Therefore, the data for this study was collected through semi-structured interviews with six nurses that work at the HIV/AIDS department at a hospital, Moshi, Kilimanjaro region, Tanzania. The interviews were conducted at the participants' workplace within the hospital, in a setting chosen by the nurse in charge to promote comfort and confidentiality. Each interview lasted approximately 30–50 minutes and was being held in English. Prior to the interviews, the authors had prepared a flexible interview guide (appendix 1) with a list of open-ended questions, enabling the authors to ask follow-up questions depending on the answers given from the nurses. The interview guide was designed to cover several key areas related to the aim of the study. The questions addressed the nurses' professional background, their daily tasks within HIV care, emotional and relational aspects of caring for PLHIV, communication skills, experiences of stigma, and perceived challenges and rewards in their work. Additional questions focused on the participants' coping strategies in emotionally strained situations, and their reflections on how nursing care may influence patients' health, self-care, and quality of life. Participants were also invited to share suggestions for improving HIV care and to add any further reflections they considered relevant for the study. This structure allowed the authors to explore both practical and caring dimensions of nursing while maintaining flexibility to follow up on topics raised by the participants.

The authors started the interviews by presenting themselves and creating a friendly environment. This was made to enable the participants to feel comfortable enough to express their views and nuanced experiences, both professional and emotional. Prior to the interviews, extra time of approximately fifteen minutes was arranged with each participant to allow for open discussions. During these discussions, general questions were asked, enabling the nurses to answer freely and express their thoughts. It was also common that the participants asked questions about the authors' background and professions, which were answered thoroughly. This approach was used to help both the authors and the participants to get familiar with each other, and to feel more comfortable.

Both authors attended all interviews and acted as interviewers and observers, adding follow-up questions when needed. This approach enabled the authors to gain a shared understanding of the participants' answers and to adjust the questions in cases of unclear responses. The interviews were audio-recorded

after permission was obtained from each participating nurse, and participants were informed that the recording could be paused at any time if discomfort arose. Therefore, the recording device was placed closer to the participants than the authors. The recorded interviews were subsequently transcribed and analyzed to formulate the results of this study.

Data analysis

To analyze the data collected, the six-phase thematic analysis method was used as described by Braun & Clarke (2006). This method enabled the authors of this study to identify the similarities and differences between all the answers given during the interviews and thereafter to identify key information and patterns that could be used for the purpose of this study.

By following the brief step-by-step data analysis process by Braun & Clarke (2006), the authors of this study started the analysis process by transcribing the interviews. The transcribing was conducted using the built-in Microsoft Word transcription tool. Afterwards, the transcripts were read several times by both authors individually at the same time as listening to the interviews. This step enabled the authors to get familiar with the collected data as well as correct the wrongly transcribed terms. The authors individually identified the most occurring answers during the interviews as key information. Afterwards, the authors joined together for discussions regarding the collected quotes and answers from the transcripts and started to organize similar quotes under initial codes. In cases where differences in interpretation occurred, the original transcripts were revisited and discussed until consensus was reached. Furthermore, the authors agreed on a joint collection of quotes and started organizing them using a coding table. The coding table includes key information and citations that are mostly said by the participants without leaving the relevant information for the purpose of this study (Table 1). The original citations chosen from the interviews are those that are considered to answer the specific aim of this study as well as give core information about how the nurses work on their daily activities on providing care for the PLHIV. The citations then got different initial codes that were generated to organize similar information said during the interviews while new codes were generated when citations that did not match others were identified. Further, the codes were used to identify sub-themes and themes to see the collected data more clearly. The data was read more times to make sure that no important information was left out. During this process, multiple codes were identified, read carefully, and analyzed by both authors and supervisors to proceed with the process.

Table 1: Excerpt from data analysis process- Quotes and Codes

Quotes	Codes
"...Some of them, they are still doing unprotective sex without knowing their status. So I think when we, maybe the education about changing the lifestyle will help to reduce HIV infections..."	• Health education needed in the community • Transmission due to risky sexual behaviors
"...When you stigmatize these people, they feel very, very inferior. And if you are not open to them, they can't be open to you. So, you can't get more information what you want from them..."	• Nurses need to have an open relationship with patients • The importance of not stigmatizing
"...Put yourself on their shoe. When you put yourself on their shoe, you cannot become prestige of yourself..."	• Empathy for the patient

Further, as Braun & Clarke (2006) explain, the data analysis process continued by identifying similar initial codes that can be collected and generalized into potential subthemes. The authors of this study went through the data multiple times to guarantee that the created subthemes and the initial codes

define the collected data and that they are relevant to answer the objective of this study. The subthemes were again reviewed and analyzed to generate potential themes. After reading carefully all the codes created, subthemes and themes as well as ensuring that all the key information from the data is included, a thematic map of the data analysis could be generated (Table 2). The thematic map, including all the codes, sub-themes, and themes, were reviewed multiple times by both authors and supervisors before moving forward to present the findings as a result. The authors of this study also decided to analyze only the manifest content, meaning what the participants have actually said during the interviews, as explained by Braun & Clarke (2006), as it was difficult to understand the body languages or the non-verbal clues because of the cultural differences between the authors and the participants.

Table 2: Excerpt from data analysis process- Quotes, Codes, Sub-themes, and Themes

Quotes	Codes	Sub-themes	Themes
"...put yourself on their shoe. When you put yourself on their shoe, you cannot become prestige of yourself..."	• Empathy for the patient	The Nurse–Patient Relationship	Relational and Emotional Work in HIV Care
"...The most important thing which I can say for a healthcare provider who is taking care of people living with HIV, I can say is love. When you love them, when you show them love, they feel good..."	• To show love towards the patient		
"... I think we need to continue giving them health education so that they can take care of themselves and remain healthy..."	• Health education to community needs to be strengthened	Patient Education for Prevention and Adherence	The Importance of Education and Knowledge Development
"... Sharing the knowledge so that we can maybe when I go to Ethiopia, the client of who living with HIV, they are more better. Why us? What we miss?..."	• The importance of sharing knowledge globally about HIV		

Ethical considerations

To conduct this thesis project, the authors have acquired and received the necessary ethical permits from the Swedish Red Cross University in Stockholm (appendix 4), the Kilimanjaro Christian Medical University College (KCMC) (appendix 6) and the National Institute for Medical Research (NIMR) (appendix 5) in Tanzania. The matron at the department has also approved the data collection at the

department of HIV/AIDS as well as chose the participant nurses and prepared them for the interviews. Following the laws of the Ethics Reviews Act (SFS, 2003:460, 16§-17§) the authors distributed an informed written consent form in both English (appendix 2) and Swahili (appendix 3) to the participant nurses in advance of the interviews. The form includes criteria stated in the law that aim to protect the participants and ensure human dignity during the research. The form further includes information about the study, description of the purpose of the study, and how the authors will be using all data collected, the structure and methodology of the study while also ensuring confidentiality. The participants were informed, both in written and orally, of their right to withdraw from the study at any time since being a part of this study is not mandatory of any kind. The form also includes information about the authors and contact information, what university we are studying at and where the study will be published once concluded. As quotations are used to present the findings, each quotation is assigned with a confidential identifier, where the letter N denotes "Nurse", followed by a number that represents the nurse's interview number. This increases the confidentiality of the participants.

The Declaration of Helsinki (WMA, 2024) states that *every precaution must be taken to protect the privacy of research subjects and the confidentiality of their personal information* (WMA, 2024). Following these ethical considerations and laws, the authors stored all data gathered to conduct the study, meaning all voice recordings and transcribed materials, privately and confidentially on their own computers. All data collected are destroyed once this thesis is approved. The participants and the administration of the hospital have received written information on how the data collected will be handled. The approved findings of the study will be published on DiVA, the Swedish scientific archive, and will also be sent to the medical director of the hospital where the study was conducted.

Furthermore, World Medical Association, WMA (2024) quotes the Declaration of Helsinki, stating that all medical research involving human participants shall align with ethical standards that promote and ensure respect for all participants and protect their health and rights. Researchers shall carefully consider how the benefits, risks, and burdens are distributed. It also states that meaningful engagement with potential and enrolled participants and their communities should occur before, during, and following medical research. Researchers should enable potential participants and their communities to share their priorities and values; to participate in research design, implementation, and other relevant activities; and to engage in understanding and disseminating results (WMA, 2024). Therefore, throughout the planning and execution of this study, the authors have come to understand that ethical considerations extend beyond simply following laws and guidelines. While also following mentioned ethical laws and declarations, the authors have made it their highest priority to maintain a humble and ethnographic approach during the study, meaning being understanding of the local culture, to make all individuals participating feel comfortable and safe. By recognizing the power dynamics that may exist between researchers and participants, the authors have continuously communicated with the participants about the interview format and questions before and after the data collection.

The potential risks associated with this study were considered to be limited. However, discussing experiences of caring for patients with HIV/AIDS could evoke emotional discomfort. To minimize this risk, participants were informed that they could pause or end the interview at any time without providing a reason. The interviews were also conducted in a respectful and supportive manner.

The potential benefits of the study were assessed to outweigh the risks, as the findings contribute to increased knowledge about nurses' experiences of HIV care in a low-resource setting. This knowledge may support the development of improved support strategies and working conditions for nurses caring for people living with HIV in similar contexts.

RESULT

The findings of this study indicate the various aspects of nursing, nursing care strategies and nurse-patient relationships that are viewed as valuable and crucial for providing patient centered care for the PLHIV. The results are presented with the following themes and subthemes (figure 1) that are considered to clearly reflect the stories told by the participant nurses to describe aspects of providing care to the PLHIV is about in Kilimanjaro region, Tanzania.

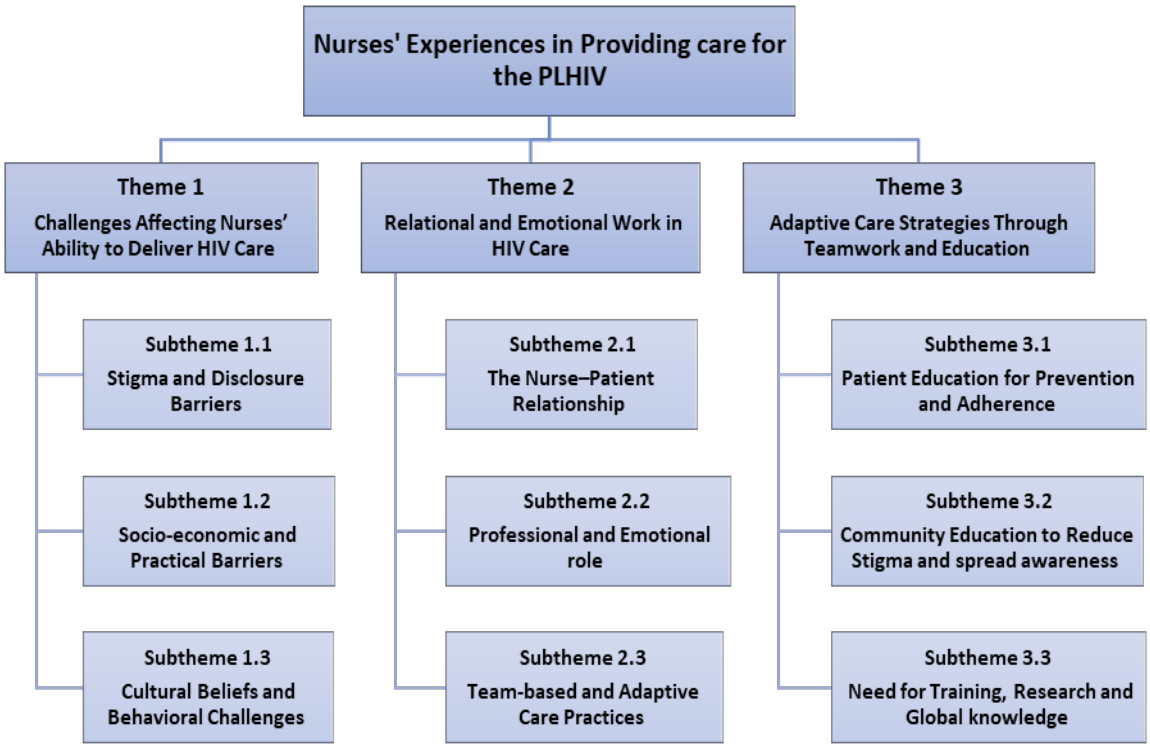

Figure 1: Themes and Sub-themes

THEME 1: Challenges Affecting Nurses' Ability to Deliver HIV Care

The nurses described several challenges that affected their daily work, such as financial and structural barriers, stigma, and cultural and behavioral factors. According to the participants, these challenges affected patients' engagement in treatment and adherence in medication. These challenges were also described as affecting the nurses' abilities to properly support their patients. As a result, nurses described how they often found themselves balancing professional responsibilities, emotional burdens, and other practical issues surrounding their patients.

SUBTHEME 1.1: Stigma and Disclosure Barriers

The nurses emphasized stigma and issues related to disclosure as major challenges in their work. Stigma was described within different dimensions, including within families, in the community, and even the patients themselves. According to the participants, many patients feared being recognized at the clinic and therefore chose to seek care far away from their homes or avoid visiting the clinic at all. This makes stigma and disclosure barriers a major challenge in patients' well-being and treatment as they may fall out of medical treatment.

> *"And the problem is they fear that some of them are businessmen and women so they are many people know them so they are afraid of coming here... others have their self-stigma they don't even want other staffs to see them... others they have friends or close relative So they fear when they see them, they really, they will say their status in their community. So that's why some of them have still stigma." (N3)*

Other consequences due to stigma and disclosure issues were described by the nurses with some patients hiding their medication or avoiding using the medication regularly due to fear of being exposed. They also reported that this stigma is rooted in the issue of the population not having proper knowledge about HIV.

> *"They have a stigma according to the situation because people, they are not the most, in the community, they have not much knowledge about HIV. So they don't use the drugs. Sometimes they hide the drugs so much they don't want to use."* (N6)

The result showed another challenge related to stigma, concerning young PLHIV. Many younger patients were discussed by the nurses, as being uncomfortable talking about their HIV status due to fear of exposure. This was explained as leading to self-stigma, reduced treatment engagement, and poor drug adherence. As this patient group is not willing to disclose their condition, they may hide their health status from family and friends and avoid seeking care, increasing the risk of higher viral loads and virus transmission, all factors adding to the nurses' challenges in providing care.

> *"Some they still have stigma within themselves...And the second one is disclosure. Most of our clients, especially youth, they are not free to discuss or to engage them, to tell others about their conditions... sometimes it's very difficult for them to have a good drug adherence because of stigma from themselves".* (N5)

In summary, these challenges illustrate how stigma and disclosure difficulties create a significant barrier in providing proper care to PLHIV. For nurses, managing these challenges requires balancing sensitivity, confidentiality, and ongoing efforts to spread knowledge. The nurses experienced that their daily work included considering how every patient is affected by the self- and community stigmatization surrounding the virus and patient group.

SUBTHEME 1.2: Socio-economic and Practical Barriers

Socio-economic and practical barriers emerged as a major challenge affecting patients' ability to access proper and continual HIV care. The participating nurses described that many patients faced financial difficulties. In particular, the inability to afford transportation was one of the most common reasons for missed appointments, additionally leading to poor drug adherence.

During the interviews, financial challenges were expressed by every participant nurse as a crucial barrier for patients to access proper HIV care and treatment. The nurses frequently emphasized that due to patients' lack economic stability, they struggled to afford transportation to the clinic, leading to interruptions in treatment, poor drug adherence, and additionally high viral loads. To avoid this, the nurses sometimes offered patients money for transportation from their own pockets, due to not having any funds available from the clinic. The participants described this as a way to help their patients, who otherwise would miss clinic appointments, leading to interruptions in treatment.

> *"When they miss appointment, when we call them, sometimes they say they have no bus fare and others have family problems. So, the one who have problem with bus fare we try to give them from our pocket because we don't have funds for them for giving them the bus fare". (N3)*

To summarize, this subtheme shows how socio-economic and practical barriers affect the nurses' daily work with PLHIV, having them manage interruptions in treatment, while also providing additional support. The findings show that limited funding within the health system influenced both patients' access to care and the nurses' ethical work conditions.

SUBTHEME 1.3: Cultural Beliefs and Behavioral Challenges

Cultural beliefs and behavioral patterns amongst PLHIV represented as another layer of complexity in the nurses' experiences in their work. The nurses described how cultural norms, religion, and risky behaviors influenced patients' health and treatment. These challenges often existed despite the nurses' continuous efforts to guide and counsel their patients.

Participants explained that, despite their efforts to influence patients in taking medications regularly, or visiting the clinic for follow-ups and counseling, some patients still chose to go for prayers instead. These behavioral aspects lead to the virus progressing to a more advanced stage and may cause patients to develop high viral load and opportunistic infections.

> *"Some patients may prefer to go for prayers". (N1)*

Additionally, the participant nurses discussed challenges in patients' risky behaviors. By risky behaviors, the participants explained that some patients continued to have multiple sexual partners and engage in unprotected sexual relations despite being diagnosed with HIV. Several nurses expressed that they experienced challenges in influencing patients' behaviors, particularly regarding prevention, despite efforts in counseling and health education. The nurses added that these behaviors made their preventive work more difficult and were a recurring issue in their daily practice.

> *"Some people who are infected... Still, they have multiple sexual partners. We need to strengthen the way we give the health education. And it is very difficult to change someone's behavior. So, I can say the health education should be ongoing." (N1)*

> *"When we tell them, can you take a condom for prevention and not be transmitting, they don't do that." (N6)*

To conclude this subtheme, the nurses are facing multidimensional challenges to provide care for the PLHIV in a community where cultural or religious norms as well as personal behaviors directly affect the individual's health, wellbeing, quality of life as well as the broader goal of reducing the transmission. Despite systematic and ongoing health education efforts, the nurses expressed that patients' behaviors are difficult to change. This shows how even minor behavioral aspects can have several crucial health consequences and contribute to the emotional burden to the nurses. The nurses also emphasized the need for more education for this patient group.

THEME 2: Relational and Emotional Work in HIV Care

This theme illustrates the relational and emotional aspects of nursing care as experienced by the participants. The nurses described how building relationships with patients, providing emotional support, and creating a safe and trusting environment, was the core of their work. The theme further highlights the strategies and actions taken by nurses in their daily meetings with patients.

SUBTHEME 2.1: The Nurse–Patient Relationship

A good and functional nurse-patient relationship was the most discussed type of relationship by the participants of this study. The nurses mentioned how they work to enable patients to feel safe and comfortable enough to share their thoughts and questions.

The participants discussed the significance of encouraging the patients to feel free to ask questions or express their feelings during clinic appointments, highlighting that a good relationship is the key factor to care and treatment. Furthermore, the nurses emphasized that every patient may not feel comfortable with the first nurse they meet when they come to the clinic. To avoid this scenario, the nurses explain to their patients that there are other nurses or doctors to discuss with.

> *"Make them feel comfortable. You also introduce to them. I'm your nurse of today. I'll be offering health education and I'll be offering the service today. Feel free if you have any question to ask. But if you feel you're not comfortable with talking to me, we have different other nurses and doctors. You can talk to them. And then, yeah, you give them ability or whatever so that they can be comfortable talking to you." (N2)*

On the parallel side, the participating nurses expressed the necessity of understanding the pain and struggles that the patients are living with and providing care with empathy. The participants described that, to create a good nurse-patient relationship with the PLHIV, one should have the ability to feel the situation that these patients are experiencing. One of the participants also discussed understanding the financial struggles the patients may experience and contributing financially to motivate their patients' engagement.

> *"I'm trying to wear the shoes of my clients. So, through that empathy, I can feel them. Through care, I can see there's others, maybe they don't have those, maybe fare to go to their home, I take from my pocket, I can just give them. Yeah. So, as I can motivate them in the next event, they will come." (N5)*

The nurses further described the work in providing care for PLHIV as showing affection, expressing love, and treating patients as more than just patients. Practical strategies were explained as listening carefully, offering guidance, and showing understanding towards their patients. One nurse described their approach as showing love towards their patients.

> *"The most important thing which I can say for a healthcare provider..who is taking care of people living with HIV, I can say is love. When you love them, when you show them love, they feel good." (N1)*

To summarize this subtheme, a good and functional nurse-patient relationship begins with putting yourself in the patients' position and understanding the struggles and feelings every patient faces. By understanding the patient's situation, a nurse can provide the necessary care and even motivate the patients to continue striving for a better health outcome. This is also a strategy that can enhance openness between the patient and the nurses, leading to a trusting caring relationship and better treatment.

SUBTHEME 2.2: Professional and Emotional role

This subtheme reflects how the nurses' role extended beyond routine clinical tasks, encompassing both emotional and analytical dimensions when providing care for the PLHIV. The nurses explained different approaches to identify the root causes for the high viral loads in some patients, as well as strategies they use to track the virus and reduce transmission. Additionally, this subtheme highlights how the nurses' caring role requires emotional understanding, advanced counseling skills, and a strong sense of responsibility for guiding PLHIV.

A central part of the nurses' professional role includes identifying root causes for high viral loads. This approach was described as a crucial part to managing person-centered care and suppressing viral loads. This highlights how the nurses are planning and conducting individualized treatment and follow-up strategies.

> *"Come up with a root cause so that we can plan for solution, we can plan for action, what they have to do for them to suppress". (N1)*

In addition to having an analytical approach, the participants also expressed the importance of counseling and educating their patients in medical treatment, emphasizing how education and providing evidence-based information to their patients is the very core in nursing care to prevent high viral loads. This illustrates the nurses' efforts in educating the patients to understand their health conditions and further be able to prevent transmission and high viral loads, which are core elements for the patient's well-being.

> *"Give them proper counseling on how to take the medication and to have good adherence because when the client have good adherence, we expect that the HIV infection is reduced and the rate of transfusion will be low because they will have suppressed the viral load" (N3)*

On the other hand, nurses that provide care for the PLHIV play a significant role in adapting strategies to track the virus and decrease the level of transmission. The nurses are responsible for tracking the patients and their sexual partners and performing tests to prevent transmission. To be able to this, the nurses need to create a trusting and functional relationship with every patient and convince the patients to tell if they have sexual relations with others.

> *"But now we try to do elicitations so that when the wife or husband come, they're supposed to tell us a sexual partner. So this will make an effort, a lot of effort. So when you get a client, they're supposed to tell us his or her sexual partner to come for testing" (N6)*

In conclusion, this subtheme demonstrates that the nurses' roles include both clinical and personal expertise, and sheds light on multidimensional aspects of nursing care. That is to say, the nurses are required to combine clinical knowledge, critical thinking, and empathetic communication methods to support their patients.

SUBTHEME 2.3: Team-based and Patient-centered Care

This subtheme highlights how nurses relied on teamwork and adaptable care strategies to meet the different needs of PLHIV. The participants emphasized that using team-based work enabled the whole group of staff members to get others' opinions and knowledge. Additionally, this approach contributed to the nurses' work environment by helping them manage the emotional and psychological burden of their daily work, making them feel less alone in caring for PLHIV.

> *"So we work as a team. Also we share the knowledge together, not to grasp the patient alone. So we share like we are here, we have the patient, we try to discuss together how to go about so that the patient can get a good management team." (N6)*

This subtheme also illustrates how nurses adapt different strategies depending on which patient group. Strategies described were such as dividing the patient group and organizing care through separate clinics for adolescents and another for patients with high viral loads. This way, the nurses were able to adapt communication, education, and follow-up to each group's specific needs, ensuring more individualized and appropriate care. These strategies demonstrate the nurses' strong commitment to person-centered care, as they adjusted both the structure of clinic visits and their communication approaches to make patients feel more comfortable and supported. This was described as creating a caring environment where patients felt that they belonged to a group of people who could better understand their situation.

As an example, the participant nurses mentioned that they have observed how adolescents are uncomfortable talking about their health status amongst adults. To avoid such a barrier, the nurses have

made a clinic meant only for the younger generation. This way the patients feel more comfortable and more likely to express their feelings. Separating the adult patient group with a high viral load is another strategy the nurses have adopted, as these patients need more time, patience, and enhanced counselling regarding their health issues. These strategies illustrate how the nurses care not only for medical treatment, but also for other needs they observe and consider for their patients, such as comfortability and patient integrity.

> *"The first special clinic is those who are having high viral load. And the other clinic is the youth clinic. We don't prefer to mix with adults one, so as they can be comfortable coming here and express their feelings" (N5)*

To conclude, the nurses provide care for the PLHIV with a person-centered care concept, considering every patient's specific needs as well as guaranteeing the comfortability and integrity of the patient. It also shows how the nurses work continuously in improving their care activity through teamwork, learning from one another as well as supporting each other both emotionally and physically.

THEME 3: Adaptive Caring Strategies for a Better Future Through Teamwork and Education

The third and last theme identified strategies and suggestions discussed by the participant nurses regarding HIV care and the disease itself. The participants discussed different actions they considered important based on their experiences of working with PLHIV. These suggestions are related to preventing further spread of HIV, improving care for PLHIV, and managing challenges encountered in their daily work. The nurses described actions they believed could strengthen drug- and appointment adherence and improve the overall quality of life for PLHIV.

SUBTHEME 3.1: Patient Education for Prevention and Adherence

Patient education emerged as a central strategy for supporting both prevention and adherence among the PLHIV. The nurses emphasized that continuous and person-centered education is essential for increasing the patients' knowledge about the disease, managing their treatment, and making changes in their behaviors. Education was specifically described by the participants as an ongoing process needed in every patient meeting, with additional focus on the patients with high viral loads.

The nurses described how providing health education included giving information about the importance of drug adherence, clinic appointments, nutrition, and prevention of transmission. Education was provided to all patients and adjusted depending on individual circumstances, such as patients being pregnant.

> *"We provide health education about HIV for each client to hear what they're supposed, if they're suffering from HIV, we're supposed to do, how can we be able to stay with HIV, how can we be able to adhere in drugs, appointments, the importance of that, the importance of nutrition, and also we include also that if they have a pregnant woman, how was they supposed to do it before Pregnancy and after conceiving pregnancy". (N6)*

In summary, the results show that patient education and counselling were described by the nurses as crucial parts of their work with PLHIV and needed to be adjusted to every individual's needs. Several nurses also described that their work required patience, professional commitment, and that they used different counselling approaches depending on the patients' situation.

SUBTHEME 3.2: Community Education to Reduce Stigma and Spread Awareness

Community education was described by the participant nurses as an important strategy in their work with PLHIV. The nurses explained that many challenges faced by patients, such as stigma, and prejudices about HIV, were related to limited knowledge within the community. They discussed education on a community level as a strategy to manage these challenges and support patients in their health and treatment.

A recurring discussion in the interviews was the need for education to begin at an early age, especially in schools. The nurses described that education starting from primary school and continuing through higher levels was needed to increase knowledge about HIV, particularly among children and youth.

> *"Things which can help us to reduce or can help us to eradicate this issue? Mostly it's education… starting from primary schools, secondary schools, high schools, universities." (N4)*

The participant nurses also suggested that community-based education should be provided to remote and rural areas, where misconceptions regarding HIV are more reoccurring. According to the nurses, patients living in more rural areas face greater challenges compared to those living in urban settings. Urban areas were described as having better access to information through media and health campaigns, while rural areas were described to have less access to knowledge regarding HIV. This was expressed by the nurses as creating geographical inequities in awareness of HIV, causing PLHIV in rural areas to face more difficulties.

> *"Maybe the education should be given at the remote areas because in rural areas… they have education and there is TV, radio… But in the rural, in the urban area, in the rural areas, they are still some of the people have no idea what is HIV or any education about that. So I think when you go to the remote areas, it will help to reduce their pain." (N3)*

However, despite the challenges in education discussed, the nurses observe signs of progress due to their ongoing work in the matter. Increased knowledge in the community was described to have had a positive impact on stigma reduction and shows that education efforts have had an improvement in general in the community, contributing to reductions in stigma.

> *"But through the health education… I can say that issue now is coming down, not as it was in the beginning." (N1)*

Overall, the participant nurses described community-based education as an important task of their work with HIV care. They explained that through education and outreach, particularly focusing on rural areas, knowledge in the community regarding the disease could be increased. The nurses emphasized that raising awareness in this way was important for addressing stigma and supporting patients in managing their health.

SUBTHEME 3.3: Need for Training, Research and Global Knowledge

This subtheme discussed the importance of strategic planning to reduce the prevalence and incidence of the virus in the region. The participant nurses described issues that need to be addressed from different directions, such as more financial investments to produce more well-educated health care providers, the need for more research regarding the virus and the PLHIV as well as sharing knowledge globally to learn from one another.

More funds and investments in health care, as well as education, are mentioned repeatedly by the participant nurses as the most important aspects to improve treatments for PLHIV. For example, more

funds were expressed by the nurses as needed for the nurses to obtain home-visits as a strategy to encourage drug- and appointment adherence.

> *"What I've observed, I think, funding is everything. More training to nurses, especially those who are in care and treatment clinic. So also, And I want to explain, I can explain more in funds. That maybe home visiting is very important. And most of us, most in our facility here, we fail to do so because of financial issues". (N5)*

Several nurses described mental health issues among PLHIV and expressed a need for more research regarding both mental health and other needs within this patient group. This highlights not only that the nurses experience the issue of mental health within these patient groups, but also how not enough is being done to cover the whole spectrum of needs for PLHIV.

> *"I think we need to do more research about the needs of people living with HIV. As currently we are working on the mental health needs, but I think they have some other needs which we can come up with those needs if we do some research." (N1)*

In addition to research, participants suggested that the knowledge within HIV care should be shared globally, questioning why HIV remains a major health burden in some countries while others have made significant improvements. This expressed a sense of frustration among the nurses, who are striving to improve HIV care, but lack access to strategies that have proven to be successful elsewhere. The nurses are even questioning if they are doing something wrong, suggesting that sharing knowledge with other countries may contribute to managing the problem.

> *"Sharing the knowledge so that we can maybe when I go to Ethiopia, the client of who living with HIV, they are more better. Why us? What we miss?" (N6)*

The participants have also reflected the importance of nurses' competence and clinical knowledge, pointing out that the delicacy in providing proper care to PLHIV is by being knowledgeable. This highlights how crucial it is for a nurse in this area of care, to be updated and educated on the subject in order to provide evidence-based knowledge and care.

> *"To offer care to people living with HIV, first be knowledgeable. Being knowledgeable of what you are saying is very important." (N2)*

In summon, this subtheme demonstrates that nurses place significant value on knowledge being the core for making the caring activities more effective, whether through research, clinical training, or global collaboration. Their emphasis on evidence-based competence demonstrates the complexity and multidimensional layers of their daily work, where updated knowledge is essential for managing both clinical challenges and patients' needs. The findings also highlighted the nurses' strong professional commitment, as they express a need for additional tools such as research, global perspectives and knowledge exchanges to strengthen their ability to support PLHIV and contribute to reducing the overall burden of HIV in Tanzania.

DISCUSSION

Discussion of method

To enhance the trustworthiness of this qualitative study, the authors have followed the guidelines described by Elo et al. (2014). According to these guidelines, a qualitative study should be conducted to meet five criteria that contribute to enhance the trustworthiness of a qualitative study. These criteria, namely *credibility*, *dependability*, *confirmability*, *transferability,* and *authenticity* are used as a framework for the methodological review to evaluate and discuss the trustworthiness of this study.

Credibility

Elo et al. (2014) describe the term *credibility* as one of the criteria that can be strengthened by writing a result that reflects the participants' actual experiences and perspectives. This means representing the voice of the participants accurately. Credibility is also about ensuring that the collected data addresses the purpose of the study as well as the data analysis process being transparent. In this study, direct quotations from the interviews are used to generate the subthemes and themes to generate the result. The participant nurses are represented as well as their views and opinions being presented authentically.

Additionally, the results of this study can be considered credible as the data collection and analysis method are described clearly. Moreover, the data collected is considered accurate for the purpose of this study. As both authors have years of experience working in health care within a different context than the participants it was also considered important to mitigate the risk of subjective interpretating the collected data, meaning reflexivity was given a serious consideration throughout the data collection and analysis to avoid interpreting the participants answers subjectively and other related bias (Dodgson, 2019). To minimize misinterpretation, the process of organizing the collected data, finding similarities and differences and identifying the initial codes, sub-themes and themes have been made through discussion and collaboration between the authors as well as presented clearly in this study.

Although there are limitations that need to be acknowledged in this study, one important aspect is that the authors and participants are from different countries and cultural contexts. This may influence how verbal expressions and meanings are understood. To reduce the risk of misinterpretation and to enhance the trustworthiness of the study, the analysis was limited to manifest content, focusing on what was explicitly said by the participants.

To further strengthen credibility, investigator triangulation was applied. According to Polit and Beck (2021, p. 575), this method involves conducting interviews, repeatedly reviewing transcripts, and generating codes as a team to ensure shared understanding. In this study, both authors participated in all stages of data collection and analysis, and differences in interpretation were discussed until consensus was reached. This process helped ensure that the subthemes, themes, and findings were all reflections on agreements between both authors.

Furthermore, as there is still a cultural or traditional taboo to speak about sex and sexual relations in the region which this study was conducted in, some of the participants appeared reserved on answering to some of the questions. The authors were fully aware of the cultural differences and tried to enlighten the situation by, for example, adopting interview techniques as well as rephrasing the questions to increase comfort among the participants and enhance the quality of dialogue as recommended by Malterud et al. (2014). Despite these efforts, there is still a potential risk that the participants answered some of the sensitive questions cautiously which may have affected the richness and depth of the collected data and thus the findings of this study.

It is also important to consider the interviewer's and participant's positions during the interviews. To minimize this risk of the participants feeling that they are being interrogated, the authors created a friendly environment by letting the participants choose the location of the interviews as well as deciding when the voice-recordings could start. The authors spoke in a very friendly way as well as explained that the voice recordings are confidential and will solely be used for this study. This was also stated in the written *consent and information form* (appendix 2) that the participants received prior to the data collection.

Dependability

Dependability of a study refers to the consistency of the result, method, and research process, ensuring stability of the data over time and under different conditions. This trustworthiness criterion can be achieved through a transparent data collection, using suitable method for the aim of the study, clear participant criteria as well as the researcher following a clear path through the whole process of data analysis (Elo et al., 2014). In this study, dependability was strengthened by using a clearly described research process, where data collection and analysis followed a structured and transparent approach. Both authors were involved in all stages of the study, which contributed to consistency in decision-making and interpretation.

The authors also decided the inclusion- and exclusion criteria in advance so that the participants' answers were more likely to answer the aim of the study. Therefore, the authors of this study believe that the method and process of this study can be considered dependable if similar studies would be done in the future in any other hospitals or similar conditions.

However, it is important to reflect on how the researchers' cultural and contextual differences may have influenced the data. As the authors are not from Tanzania, these kinds of differences may have affected the interview situation. It is possible that the nurses' responses could have differed if the interviews had been conducted by a local researcher who shared the same cultural background, language nuances, or professional context. To address this, the authors worked actively to create a respectful and open interview environment. Both authors' presence during the interviews and analysis allowed for continuous reflection on how questions were asked and interpreted. Although the researchers' external position may have influenced the interaction, it also allowed for reflective questioning and careful attention to the participants' explicit statements, which contributes to the dependability of the study.

Confirmability

C*onfirmability* is another criterion used for a study to be considered trustworthy, especially in a qualitative study conducted through inductive approach. The concept refers to the extent to which the study's findings accurately and neutrally represent the information provided by the participants, illustrating what they have directly conveyed rather than the researchers' interpretations or biases (Elo et al., 2014). To achieve confirmability in this study, the authors used direct citations from the interviews to further generate the subthemes and themes that have been used to present the result. The whole process can be retraced to the original data as all voice recordings, transcriptions and data analysis documents are saved to be presented upon request.

An additional strategy to enhance confirmability can be member checking, meaning findings can be returned to participants for validation. This was not conducted in the present study due to time constraints. The absence of participant validation may have limited the opportunity to confirm whether the nurses fully recognized themselves in the findings. Therefore, the authors focused on staying close to the manifest content of the interviews while analyzing the data, in order to support confirmability of the results.

Transferability

According to Elo et al. (2014), *transferability* refers to the extent to which the findings of a qualitative study can be transferred to other groups of participants or contexts. Therefore, to support transferability, the authors of this study described the participants' experiences richly as well as explained the location of the study, the participant selection, the data collection and the data analysis methods in detail. This level of transparency enables other researchers to follow the same method and similar populations to get results that can be fairly compared to the results of this study.

However, despite measures taken to enhance transferability, certain limitations should be acknowledged. The selection of participants was conducted by the nurse in charge of the HIV department, following the inclusion and exclusion criteria defined by the authors. In other words, the authors did not have the opportunity to affect the selection or the population of the participants directly, which ultimately may introduce a selection bias (Polit & Beck, 2021, p. 443). As a result, the findings of this study are limited to data collected from six nurses, all selected by the nurse in charge of the HIV department, which may restrict the transferability of the results. However, the authors of this study consider the data collected from the interviews to be sufficient to address the aim of the study and to achieve information power.

Furthermore, as the authors and the participant come from different countries and cultural contexts, it was sometimes impossible for the authors to understand non-verbal communications such as body language and implicit responses. To minimize the risk of interpretative bias related to these differences, the analysis was therefore restricted to the manifest content of the data, meaning the authors focused exclusively on what was actually told by the participants (Elo et al., 2014).

Authenticity

Authenticity of qualitative research refers to the researcher's ability to represent the real experiences of every participant in a fair and faithful manner (Elo et al., 2014). In other words, it is about demonstrating what the participants are saying without controlling the narratives in any way. One potential source of bias is that the researcher may use only the most dramatic or emotional quotes that are considered most relevant for the study and ignoring the rest of the answers from the participants. The authors of this study have used direct citations from the interviews to find the themes and subthemes and generate the results. Although, it was considered most valuable to concentrate on the quotes that were most relevant for this study as well as mostly repeated citations. This means that the authors did not take every topic discussed at the interviews but focused more on what the participants have mentioned and discussed frequently as well as those similar citations that were considered to thoroughly highlight the nurses' experiences providing care for PLHIV, which is the purpose of this study.

Discussion of results

The result of this study illustrates that the nurses' day-to-day practice in providing care for PLHIV is strongly influenced by structural, cultural, and relational factors. These findings need to be understood within a context where socio-economic barriers, stigma, and limited structural resources have a crucial impact on patients' health as well as affecting nurses' professional practice. Nursing care emerges as a complex practice involving emotional engagement and continuous adaptation to patient's circumstance as well as clinical management of HIV.

Furthermore, the findings of this study demonstrate that the nurses' role includes emotional and psychological responsibilities that are essential for creating functional relationships with patients. The outcome of the care provided is strongly dependent on the nurses' ability to build trust and to understand each patient's unique situation. This reflects that caring activities are shaped by the nurses' ability to teach their patients based on their professional competence, ethical considerations, and personal commitment. At the same time, the findings illustrate how the nurses, despite the challenges

they face, continually adapt different strategies to improve care by teamwork and continuous training. Overall, the results in this study highlight how HIV care in this context requires a holistic and person-centered approach. It strongly shows how caring for PLHIV means more than medical treatment and is rather shaped by the nurses' ability to communicate and show empathy towards their patients.

The following sections discuss all the findings identified in this study, in relation to previous research, global health frameworks, and caring science theories. This way, the findings can be understood not only as isolated experiences, but also as global patterns in HIV care.

Structural inequities and moral distress in HIV nursing care

The first theme focuses on different challenges identified in HIV care and highlights what has also been emphasized in global health research. These are challenges related to structural and socio-economical inequities and stigma within a community. Our findings demonstrate that nurses experience patients' challenges in adherence primarily as a consequence of structural and socio-economic barriers, rather than individual unwillingness. This highlights the need for health systems to address these obstacles at a systemic level.

Financial barriers emerged as a central factor shaping nurses' ability to provide continuous and effective HIV care. As Tanzania is a the low- and middle-income country, it is not totally unexpected that most of the patients may not afford to pay the transport fare to every clinic appointment. From a structural inequity perspective, the financial barriers described by the nurses illustrate how access to care is unevenly distributed within the population. Patients struggling with adherence due to lacking sufficient financial means to travel to the clinic made a major challenge for nurses to follow up their patients and control the patients' viral loads. As several of the participants expressed, there is a need for more funding within health care in order to perform more home-based visits for patients not able to attend the clinic.

From a global nursing perspective, moral distress is described as a key challenge when nurses are unable to act in accordance with what they believe to be the right course of action due to systemic barriers. In a study by Helmers et al. (2020), healthcare providers reported moral distress when real or perceived constraints, such as lack of adequate support or resources, prevented them from providing care aligning with their ethical and professional standards. This distress was described as often leading to emotional burden and nurses having to adapt coping strategies to deal with these limitations (Helmers et al., 2020). This concept aligns with our findings, where nurses described taking additional personal responsibility to support their patients despite structural limitations in the healthcare system. These examples highlight how, in similar settings, the burden of addressing inequities in healthcare often falls on individual nurses rather than being supported by the system itself.

Viewing these barriers from a patient's point of view, in relation to the fundamental human rights to health, health should be accessible, acceptable, and of good quality for all people (WHO, 2023). These structural and socio-economical barriers threaten the individual's ability to fulfill their fundamental human rights to health. When patients lack financial means to attend clinics, their access to this human right is limited. These findings underscore health systems' responsibility to ensure PLHIV can exercise their right to health, by providing financial and community-based support, to ensure that all PLHIV can achieve their human rights.

Similar findings were made by Sande et al., (2020), in a study conducted in Malawi focusing on care for PLHIV. The article describes how patients are falling out of drug adherence due to transport costs being too high. In this article, the authors have investigated the effects of community-based health care with home visits to their patients. One of the central positive effects of home visits and community lead nursing care, according to the article, was that the care provided became more individualized as the nurses were visiting their patients within their own personal settings. This made the nurses understand

more of the patients' circumstances and strengthened the nurse-patient relationship. However, the article also describes the various obstacles related to these strategies, especially barriers within financial means and funding. The home-based visits demand more funds within health care as the nurses needed to travel long distances to reach their patients. It also required a large amount of time (Sande et al., 2020). This study, combined with our own findings, clearly shows how funding on a structural level plays a fundamental role in the care for PLHIV as well as combating the disease. Both results highlight that individuals' fundamental right to health is depending on context, country and structural strategies. This raises questions regarding how financial means can shape an individual's health and wellbeing in a world marked by inequities in access to healthcare, and underscores the need for global collaboration to fulfill the right to health.

From a caring science perspective, the socio-economic barriers found in this study, limit more than peoples' access to treatment. It is also a major barrier for peoples' ability to experience health. Wärnå-Furu states that health is shaped through the individual's ability to make conscious and active choices regarding their own life and situation (Wärnå-Furu, 2022, p. 129). However, when patients are unable to attend clinics due to financial constraints, their ability to make active choices concerning their own well-being is strongly reduced, directly affecting their experience of health in a negative way. This also brings to light how a person's options to reach their best health outcome are directly depending on the socio-economic context the person lives in.

Another major challenge identified in this study is the phenomena of stigma. Sande et al. (2020) investigated if community-based care could work as a strategy to reduce stigma. However, their findings indicate mixed experiences among patients. Some patients described that community-based care helped reduce stigma due to increased knowledge among the population, more social support, and a normalization of HIV within the community. On the contrary, several other patients reported that this approach actually increased the stigma due to patients' privacy being threatened, having them exposed as HIV positive (Sande et al., 2020). These findings illustrate that community-based care can both increase and decrease stigma depending on contextual factors and show that an outreach approach may not be the only solution in reducing stigma and increase the wellbeing of PLHIV.

Findings related to stigma-related issues are also shown in Holzemer et al. (2007), who describes stigma surrounding HIV/AIDS contributing to a complex environment for PLHIV. The article asserts that stigma is affecting individuals on multiple levels, resulting in loss of social support, isolation, discrimination, and difficulties accessing healthcare services due to fear of being exposed. As Holzemer et al. (2007) further highlight, effective approaches to reduce stigma require interventions at individual, community, and systemic levels. The health care system, according to the article, needs to provide and strengthen family and community support as well as making it easier for the population to access information and education regarding HIV (Holzemer et al., 2007). This perspective underscores that the financial and structural barriers identified in our study are closely related to stigma, emphasizing the need for multi-level strategies such as community-based care and patient education, in order to improve health outcomes for PLHIV. Nurses in our study try to respond to this by identifying individual obstacles behind high viral loads and by offering counseling to each patient's individual circumstances.

This aligns with Eriksson's caritative caring theory, explaining health as a dynamic process shaped by a person's experiences of suffering, well-being and feeling of meaningfulness, rather than solely focusing on biological functions. Health is explained to be developed in relation to caring, meaning that the nurse's role, in addition to focusing on physical health, also shall include alleviating suffering and supporting the dignity and wholeness in a patient (Bergbom et al., 2021). This is also shown in our study by nurses continuously trying to help their patients depending on each patient's needs. Several nurses even explained how they gave money to their patients for them to be able to attend their appointments. This highlights how the nurses see each patient's issues and try to help with all means possible for their patients to experience a better health outcome. These examples of support from the

nurses aligns with Eriksson's caritative caring theory (Bergbom et al., 2021) as they explain responding to patients with compassion and practical support.

To summarize, these structural and socio-economic barriers identified does not only affect the patients individually but also shed a light on the systemic challenges in HIV care delivery. The findings emphasize the need for health care systems to receive financial support in these kinds of contexts. For Tanzania, and other socio-economically vulnerable countries, there is a need for community-based strategies to improve adherence, reduce stigma through education and provide knowledge regarding transmission to defeat this health challenge. However, providing community-based care is expensive, which not only challenges healthcare systems financially but also contribute to moral distress among nurses. This highlights a critical issue in global nursing where nurses often carry the larger burden of ethical and practical responsibility in resource-limited settings

Caring relationships as a foundation for quality of life

The second theme relates to the relational and emotional aspects of nursing described both in earlier research and in key caring theories. As emphasized in the background, emotional and communicative competence shape the foundation of effective HIV care. This is particularly important in contexts where stigma and fear affect patients' ability to engage in treatment and adherence. Discussing the findings through a global perspective illustrates how the nurses' relational work strengthens patients' ability to achieve their right to health.

The findings in this study clearly illustrate the relational and emotional dimensions of the nurses' work within caring for PLHIV. The participants' emphasis on trust, confidentiality, and empathy illustrates how effective HIV care is strongly dependent on patient-nurse relational factors. A trustworthy and empathetic approach enables patients to engage openly in their care as they feel more comfortable. In contexts shaped by stigma and fear, these relational qualities are crucial in improving drug adherence and treatment engagement, as they reduce patients' fear of exposure and judgment. The nurses explained that when they were able to understand each patient's personal circumstances, fears, and barriers, they could adjust the care approach and strengthen their patients' adherence. Furthermore, this indicates that emotional support and counseling function as a well-integrated part of nursing practice, directly shaping their patients' experience of health.

These findings are strongly mirrored in previous research. An article by Abraham & Clow (2023) highlights that trust, non-judgmental communication, and emotional support improve psychological well-being and adherence among PLHIV. Similarly, Sande et al. (2020) emphasize that providing HIV care strongly involves giving emotional support and navigate patients' experience of fear, stigma, and shame while also managing their own emotional burden as a nurse. Their article demonstrates that skilled communication based on empathy and a non-judgmental approach towards PLHIV works as a foundation for building trust. This creates a safe environment for patients to talk about sensitive issues such as sexual health, transmission, and adherence (Sande et al., 2020). These findings directly align with the experiences described by nurses in our study, who stressed that a nurse-patient relationship based on empathy is crucial for effective care.

From a theoretical perspective, the relational work in our study and previous research aligns with Travelbee's interpersonal theory, which describes nursing as a human-to-human process developing through stages of encounter, empathy, sympathy, and rapport. According to Travelbee's theory, illness and suffering must be understood as individual experiences shaped by culture and life conditions. Therefore, by adapting a therapeutic communication approach including active listening, emotional presence and tailored support based on each individual's circumstances, the caregiver can be able to alleviate suffering (Shelton, 2016).

In addition, looking at Eriksson's caritative caring theory also contributes to understanding the ethical and moral dimensions of this relational work. By responding to patients with compassion, respect, and a strong commitment to alleviate suffering, nurses support not only their patients' physical health but also their feeling of dignity, meaning, and inner strength. Strategies described in Eriksson's theory to be used by nurses are to listen attentively, offer hope, and spend extended time with patients depending on their needs (Bergbom et al., 2021). These are similar strategies described by most of the participants in this study. The participants asserted the importance of listening carefully to their patients without interrupting and providing hope and emotional support for their patients. The clinic also uses different strategies such as providing extended time and specific days during their week, solely focusing on patients with high viral loads. This shows how the nurses experience the use of strategies in all their work in contributing to their patients' experience of health.

The result also reflects the professional and theoretical perspectives of nursing as described in the background. The International Council of Nursing (ICN, 2021) claims that nursing includes providing physical, emotional, and psychological support to each patient depending on their specific needs. It also includes balancing these tasks while still upholding ethical principles and providing patient-centered and evidence-based care (ICN, 2021). Similarly, Brilowski & Wendler (2005) describe nursing as a relational and humanistic profession, where action, relationship, acceptance, attitude, and variability are core components for building trust and promoting health. Våga et al. (2013) further highlight that care must be understood in its cultural and contextual setting, meaning that the care provided by the nurses needs to be adjusted according to the context it is provided in.

In summary, the findings demonstrate that relational and emotional aspects work as central mechanisms in shaping the health outcome for PLHIV. Rather than being an optional aspect of nursing care, the caring relationship functions as a safe space where stigma, fear, and vulnerability can be addressed and reduced. From a caring science perspective, health can be improved in the meeting between nurse and patient, where trust and empathy enable patients to experience meaning and participation in their own care, health and wellbeing which are fundamental factors for the patients' quality of life despite the disease they are living with. In contexts surrounded by stigma and limited resources, this relational work becomes, therefore, crucial for both adherence and overall well-being among PLHIV.

Promoting health and dignity through education and teamwork

The third theme illustrates the multidimensional and proactive strategies nurses use to strengthen patient engagement and adherence. These strategies function as mechanisms through which nurses are adapting their care to global standards for the right to health in their clinical practice. Access to reliable information, education, and proper care are demonstrated in the background as central components of the right to health. In this result and discussion, it is shown how the nurses' practice meets international recommendations in care and caring science principles. This is also shown in the result with the participants highlighting their work within teamwork, professional development, and community education.

A central finding in this study is the importance of nurses' knowledge and education in HIV care. The participants emphasized how professional competence, continuous training, and patient education were the key strategies for strengthening their patients' engagement in care and adherence. By adapting these strategies, the nurses enabled their patients to make active choices regarding their experience of health. Similar findings have been reported in other studies made in sub-Saharan countries, such as the article by Abraham & Clow (2023) regarding PMTCT care (Prevention of Mother-to-Child Transmission of HIV) in Ghana. The authors stress how being a well-educated nurse is crucial for providing psychological support and covering the needs of PLHIV. The article additionally points out the importance of nurses' and midwives' abilities to shape nurse-patient relationships built on trust, confidentiality, clear communication, and emotional support. Being accepting and non-judgmental as a

nurse was described in the article as key features for building a trusting relationship between the nurses and their clients and were reported to improve adherence and patient engagement (Abraham & Clow, 2023). Similar patterns are shown in our study conducted in Moshi, Tanzania, where the participants underscore how being educated and building a trustworthy relationship are crucial factors for nurses to provide proper care for PLHIV.

Nurses in this study describe how educating their patients requires not only transfer of information, but a relational process where the nurses discover each patient's health conditions, challenges, and life experiences that are essential to achieve the best possible health outcome for the patients. This approach closely aligns with Wärnå-Furu's (2022) concept of *health*, which emphasizes that health is to be understood in relation to each person's life situation and the active and conscious choices they make. These choices shape the patient's experience of health and are expressed through emotions, actions, and daily achievements. By viewing health not only as the absence of disease, but as a holistic phenomenon, Wärnå-Furu (2022, p. 129) argues that a person can experience health even while living with illness or suffering. In line with this perspective on health, the efforts made by the nurses in this result, such as strengthening their patients' knowledge and engagement in their own care, support not only physical well-being but also patients' sense of control and participation. These are essential factors of health within caring science. The nurses' strategies in educating their patients, identifying root causes for high viral loads, and counseling their patients demonstrate how the nurses are using a holistic and person-centered approach. These strategies can also be understood through Eriksson's theory of caritative caring (Bergbom et al., 2021), where decreasing suffering and protecting dignity and wholeness for patients are central concepts. By meeting patients with respect and compassion, nurses help transform vulnerability into a sense of meaning and control, which are central dimensions of health.

The strategies and approaches used by the nurses, such as providing education, counseling, and emotional support, are directly contributing to fulfilling their patients' right to health (WHO, 2023). By ensuring that patients understand their condition, treatment options, and self-care actions, the nurses strengthen the patients' ability to improve and experience health. This mirrors the nurses' strategies to global standards for equitable and qualitative care.

Combined, these adaptive caring strategies reflect a multidimensional understanding of HIV care. Through teamwork, education, and relational competence, the nurses in this study work not only to provide medical treatment but also to strengthen patients' ability to experience health by making informed choices, even in the presence of chronic illness.

CONCLUSION

This study highlights that the nurses in Moshi, Kilimanjaro region, Tanzania are the front-line workers that play a crucial role to control the spreading of HIV as well as caring and advocating for the PLHIV. Their nursing care activities for this specific patient group is an abstract and complex day-to-day activity that requires not only advanced clinical expertise but also emotional availability. It includes tasks such as monitoring of the patients' vital signs and managing opportunistic infections, administration of the ART as well as educating and counselling the patients. The nurses emphasize the value of companionate understanding and non-judgmental approach that leads to a close and trustful relationship between the nurse and patients. The nurses understand the patient's physical and psychological pain as well as demonstrate a strong commitment to their patients' health. They emphasize the importance of functional patient-nurse relationship and communication. On the other side, to be a nurse in a third-world country like Tanzania means struggling and working against socioeconomical obstacles such as stigma and financial limitations. The study underscore, therefore, that there is still a need for more community-level education to reduce stigma and even supportive organizational plans to provide financial support to the patients.

Further research is also considered necessary to highlight the patient' experiences and perspectives as well as to explore the possibility of potential interventions that can improve the nursing activities and patients' quality of life in countries with limited resources.

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APPENDICES

Appendix 1: Interview guide

- Can you tell us about your professional background and what led you to pursue a career as a nurse?
- What does your current role as a nurse at the hospital look like?
- How has your experience in caring for patients with HIV/AIDS evolved over time?
- What aspects of care do you find most challenging and rewarding?
- How are you personally affected by caring for patients with HIV/AIDS?
- Can you describe a situation where you found yourself emotionally engaged or challenged in the care for patients with HIV/AIDS?
- How do you manage your emotional aspects of your work in these encounters?
- How would you describe your relationship with the patients?
- What factors do you think implicates communication with these patients?
- Can you give examples on how you adapt your communication to meet the needs of your patients?
- How do you describe the knowledge and training you have received in caring for patients with HIV/AIDS?
- In what ways have your knowledge regarding the disease evolved over the years?
- How would you describe your experience, as a nurse, for the patients that are living with HIV/AIDS?
- Is there anything you wish you would have learned earlier in your career? Or any area you would like to further develop your competence?
- Are there any changes you believe would improve the quality of care for these patients?
- How do you believe the guidance and care you provide to the patients impact on their health, self-care and quality of life?
- Do you feel there is a positive/negative development within knowledge of the disease among your patients, from the day you started as a nurse up till this date, working with HIV patients?
- What do you think nurses, in general, should learn more about when it comes to HIV care?
- Is there anything more you want to add regarding this matter/subject that has not been discussed in this interview?

Appendix 2: Participant information and Consent form in English

The authors of this study are Karolina Forsberg and Mekdes Seifu Mamo. We are students in the nursing programme at the Swedish Red Cross University in Stockholm, Sweden. The programme includes completing a bachelor thesis in the main subject of Nursing in the form of an essay of 15 university credits.

We intend to carry out interviews within the framework of the degree project. The preliminary name of the study is: **Nurses' experiences in providing care for patients living with HIV/AIDS in Tanzania.** The area we wish to study is: **Nurses' experiences in educating, guiding and caring for patients with HIV/AIDS diagnosis.**

We would therefore like to ask you to participate in an interview regarding: **Your own experiences as a working nurse caring for patients living with HIV/AIDS in your daily work.** The interview takes about 30-60 minutes to complete. We will voice record the interview and save the file confidentially on a phone that will not be listened to by anyone else but the authors (Karolina Forsberg and Mekdes Seifu Mamo).
What emerges from the interview, along with your signature on the consent form, will be treated confidentially and reported in a form where no individual participants can be identified. Any personal information about you as a participant or patients will be excluded in the report to increase the risk of any personal information being published.

Participation is voluntary and you can cancel your participation at any time, and without explanation. If you choose not to participate or if you decide to cancel, this will not affect you in any way.

The results of this interview will provide increased knowledge that can contribute to an improved work environment and give you a wider knowledge of how your daily work impacts your patients.

If you would like further information regarding this interview, please contact us (see the next page).

Student/Author name: Karolina Forsberg.
Student/Author name: Mekdes Seifu Mamo.
Supervisor: Jason Murphy (Associate Professor).

Consent form

Title of the work: **Nurses' experiences in providing care for patients living with HIV/AIDS in Tanzania.**

I have received oral and written information about the study and have had the opportunity to ask questions. I also have the right to keep the written information.

This consent form will be treated confidentially and will only be saved by the authors and the manager of the hospital. All consent forms will be destroyed by the end of this study, in January 2026.

- ❑ I agree to participate in the study described in the "participant information" form.

Location and date	Signature
	Name clarification

Appendix 3: Participant Information and Consent form in Swahilli

Taarifa kwa Washiriki na Fomu ya Ridhaa

Taarifa kwa Washiriki

Waandishi wa utafiti huu ni Karolina Forsberg na Mekdes Seifu Mamo. Sisi ni wanafunzi wa programu ya uuguzi katika Chuo Kikuu cha Msalaba Mwekundu cha Uswidi kilichopo Stockholm, Uswidi. Programu hii inajumuisha kuandika tasnifu ya shahada ya kwanza katika fani kuu ya Uuguzi kwa ajili ya kupata alama 15 za vyuo vikuu.

Tunakusudia kufanya mahojiano kama sehemu ya mradi wa shahada. Jina la awali la utafiti ni: Uzoefu wa wauguzi katika kutoa huduma kwa wagonjwa wanaoishi na VVU/UKIMWI nchini Tanzania.

Eneo tunalotaka kuchunguza ni: Uzoefu wa wauguzi katika kuelimisha, kutoa mwongozo na kuwahudumia wagonjwa waliogunduliwa kuwa na VVU/UKIMWI.

Kwa hiyo tungependa kukuomba ushiriki katika mahojiano kuhusu: Uzoefu wako binafsi kama muuguzi unayefanya kazi ya kuwahudumia wagonjwa wanaoishi na VVU/UKIMWI katika kazi yako ya kila siku.

Mahojiano yatadumu kwa takriban dakika 30-60. Tutarekodi sauti ya mahojiano na faili hiyo itahifadhiwa kwa usiri kwenye simu ambayo haitasikilizwa na mtu yeyote isipokuwa waandishi (Karolina Forsberg na Mekdes Seifu Mamo).
Yale yatakayojitokeza katika mahojiano, pamoja na saini yako kwenye fomu ya ridhaa, yatashughulikiwa kwa usiri na kuripotiwa kwa njia ambayo hakuna mshiriki atakayejulikana. Taarifa yoyote binafsi kukuhusu wewe kama mshiriki au wagonjwa haitajumuishwa katika ripoti ili kupunguza hatari ya kuchapishwa kwa taarifa binafsi.

Ushiriki ni wa hiari na unaweza kujiondoa wakati wowote bila kutoa sababu. Ikiwa hautaki kushiriki au ukiamua kujiondoa, hili halitaathiri chochote kwako.

Matokeo ya mahojiano haya yatatoa maarifa zaidi ambayo yanaweza kusaidia kuboresha mazingira ya kazi na kukuongezea uelewa mpana wa jinsi kazi yako ya kila siku inavyowaathiri wagonjwa.

Ikiwa ungependa maelezo zaidi kuhusu mahojiano haya, tafadhali wasiliana nasi (angalia ukurasa unaofuata).

Jina la mwanafunzi/mwandishi: Karolina Forsberg
Jina la mwanafunzi/mwandishi: Mekdes Seifu Mamo

Fomu ya Ridhaa

Jina la utafiti: Uzoefu wa wauguzi katika kutoa huduma kwa wagonjwa wanaoishi na VVU/UKIMWI nchini Tanzania.

Nimepokea taarifa ya mdomo na ya maandishi kuhusu utafiti huu na nimepewa nafasi ya kuuliza maswali. Nitahifadhi nakala ya maandishi.

Fomu hii ya ridhaa itahifadhiwa kwa usiri na itahifadhiwa tu na waandishi pamoja na msimamizi wa hospitali. Fomu zote za ridhaa zitaharibiwa mwisho wa utafiti huu, Januari 2026.

☐ Ninakubali kushiriki katika utafiti ulioelezwa kwenye fomu ya “taarifa kwa mshiriki”.

Mahali na tarehe:

Sahihi:

Jina kamili:

Appendix 4: Ethical Permit from Red Cross University

Decision
2025-03-20

Dnr: 01/2025

Decision for ethical application

Title: Nurses' experience in providing care for patients living with HIV/AIDS in Tanzania: A qualitative study on nurses' experiences in educating, guiding and caring for patients with HIV/AIDS diagnosis in Kibosho, Kilimanjaro region, Tanzania.

Applicants: Karolina Forsberg & Mekdes Seifu Mamo, nursing students at the Swedish Red Cross University.

Ethical application

The applicants have handed in an ethical application to the course management of the Bachelor Thesis Course in Nursing. The course management have reviewed the ethical application and see no obstacles from an ethical perspective that the study "Nurses' experience in providing care for patients living with HIV/AIDS in Tanzania: A qualitative study on nurses' experiences in educating, guiding and caring for patients with HIV/AIDS diagnosis in Tanzania." can be carried out.

Decision

The ethical application 01/2025 is approved.

[redacted]

Catarina Nahlén Bose
Ph.D. Examinator of the Bachelor Thesis Course in Nursing
The Swedish Red Cross University

Röda Korsets Högskola
Besöksadress: Hälsovägen 11C, 141 57 Huddinge | Postadress: Röda Korsets Högskola, Box 1059, 141 21 Huddinge
Telefon: 08 – 587 516 00 | E-post: info@rkh.se | www.rkh.se

Appendix 5: Ethical Permit from NIMR

THE UNITED REPUBLIC OF TANZANIA

Permanent Secretary
Ministry of Health
Government City Mtumba
Health Road
P.O. Box 743
40478 Dodoma

NIMR/HQ/R.8a/Vol.IX/5095

Ms. Karolina Forsberg
C/o Dr. Paulo Lino Kidayi
KCMC University
P. O. Box 2240
Moshi

National Institute for Medical Research
3 Barack Obama Drive
P.O. Box 9653
11101 Dar es Salaam
Tel: 255 22 2121400
Fax: 255 22 2121360
E-mail: ethics@nimr.or.tz

25 September 2025

RE: ETHICAL CLEARANCE CERTIFICATE FOR CONDUCTING MEDICAL RESEARCH IN TANZANIA

This is to certify that the research entitled **"NursesÂcâ€"Âc experiences in caring for people living with HIV (PLHIV) in Tanzania: A qualitative study" (Forsberg, K *et al.*)**, has been granted ethical clearance to be conducted in Tanzania.

The Principal Investigator of the study must ensure that the following conditions are fulfilled:

1. Progress reports are submitted to the Ministry of Health and the National Institute for Medical Research, Regional and District Medical Officers after every six months.
2. Permission to publish the results is obtained from the National Institute for Medical Research.
3. Copies of final publications are made available to the Ministry of Health and the National Institute for Medical Research.
4. Research permits are obtained from the Tanzania Commission for Science and Technology (COSTECH) if the research involves investigators who are not Tanzanian residents.
5. Any researcher, who contravenes or fails to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III Section 10(2).
6. Sites: Kilimanjaro region.

Approval is valid for one year from: 25 September 2025 to 24 September 2026

[redacted]

CHAIRPERSON
MEDICAL RESEARCH
COORDINATING COMMITTEE

CHIEF MEDICAL OFFICER
MINISTRY OF HEALTH

CC:Director, Health Services-TAMISEMI, Dodoma.
RMO of Kilimanjaro region.
DMO/DED of respective districts.

Appendix 6: Ethical Permit from KCMC

KURERC 07

KCMC UNIVERSITY

RESEARCH ETHICAL CLEARANCE CERTIFICATE

No. 2769

Research Proposal No. 1586

Study Title: Nurses experiences in caring for patients living with HIV (PLHIV) in Tanzania: A qualitative study

Study Area: Tanzania

PI's Name: Karolina Forsberg and Mekdes Seifu Mamo

Coinvestigator(s): Jason Murphy and Paul L. Kidayi

Institution (s): KCMC University

The Proposal was approved by KURERC on: 09th September, 2025

Duration of Study: One year

From: 09th September, 2025 to 7th September, 2026

[redacted]

DR. ELINGARAMI. S. NKYA
Chair – KURERC

[redacted]

PROF. EPHATA KAAYA
Vice Chancellor

Swedish Red Cross University
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