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ABSTRACT

Despite the high rates of HIV infections in Tanzania, significant gaps in the depth and comprehensiveness of HIV knowledge persist among the population in Tanzania.

The aim of our study was to explore nurses' experiences of providing information about HIV prevention in Tanzania. Semi-structured interviews with open-ended questions were conducted with eight nurses in health care centers. The interviews were transcribed and analyzed using qualitative content analysis as described by Burnard. The results showed that the nurses carried out the preventive HIV work by giving information, offering counselling, and teaching precautions. The nurses faced many challenges: for example, misconceptions about condom use, people's lack of information about HIV, dealing with the stigma attached to HIV, and the lack of resources in the country. The preventive work affected the nurses emotionally, as they felt a sense of social responsibility to help prevent HIV.

Key words: experiences, HIV prevention, information, nursing, qualitative study, Tanzania.

BACKGROUND

Today, 36.7 million adults and children live with HIV worldwide (UNAIDS, 2016), and certain regions such as Sub-Saharan Africa are disproportionately affected. Information and education about HIV are considered the main strategies to prevent its spread (WHO, 2016). The key to reducing transmission rates is to encourage behavior change with a focus on supporting safer behavior and sustaining positive change. Behavioral interventions have aimed at providing information, motivation, and education regarding behavior in risky situations. The aim of these interventions is for individuals to gain the correct knowledge, skills, and self-beliefs to limit risk of HIV transmission and acquisition (WHO, 2014).

TRANSMISSION OF HIV

HIV transmission mechanisms vary across geographical areas (WHO, 2015a). In Africa, the main transmission route is through heterosexual intercourse; thus, the use of condoms is emphasized to decrease the prevalence of HIV in this region (WHO, 2015a). Africa includes Tanzania, where 80% of HIV transmissions were through heterosexual intercourse (Tanzania Commission for AIDS, 2014). Among children less than 5 years old, 90% of the infections were caused by mother-to-child transmission (Ministry of Health and Social Welfare, 2015), which could be prevented by antiretroviral therapy and avoiding breast feedings (Ministry of Health and Social Welfare, 2015). Pregnant women are tested for HIV during their first visit to the clinic in Tanzania. If the mother is infected, the baby is also at risk of becoming infected during the pregnancy, delivery, and breastfeeding. These mothers are followed closely and given antiretroviral therapy (ART), as well as instructions on proper medication use, prophylaxis to the

infant when delivered, and to avoid mixed breast and formula feeding (Ministry of Health and Social Welfare, 2015).

TANZANIA AND HIV PREVENTION

Significant gaps in the depth and comprehensiveness of HIV knowledge have been identified among the people of Tanzania (National Bureau of Statistics, 2011), a country located in Sub-Saharan Africa with a population of 52 million people (The World Bank Group, 2014). Overall, the level of knowledge about HIV is lower in rural areas compared to cities. Lower levels of HIV knowledge have also been found among people with lower levels of education and among those between the ages of 15 to 24 years (The World Bank Group, 2014). In Tanzania, most HIV prevention programs focus on using condoms, staying faithful to a partner, limiting the number of sexual partners, and delaying one's first sexual encounter (The World Bank Group, 2014).

Tanzania has implemented various policies and strategies to address the HIV epidemic (Tanzania Commission for AIDS, 2014). The Tanzania Commission for AIDS' control program created policies that address all the nation's sectors relating to HIV and AIDS. Thus far, five main goals to prevent HIV have been implemented nationally and the focus of these goals is on the prevention of new HIV infections in both adults and children (Tanzania Commission for AIDS, 2014). Other aims targeted the problems of behavior change when social and cultural norms, as well as cultural values and practices, were identified as obstacles for prevention behavior. Furthermore, there has been a drive to reduce the probability of infection after exposure has occurred (Tanzania Commission for AIDS, 2014).

NURSES AND HIV

Nurses in Tanzania have described their work as filled with much difficulty (Häggström, Mbusa & Wadensten 2008). They have expressed feeling overwhelmed due to many duties, the lack of equipment or defective equipment, not having enough training or knowledge, and not being valued by their supervisors. While they try to make the best of the situation to protect their patients, their working conditions paired with certain ethical dilemmas often get in the way, and this has had negative effects on their self-confidence and self-reliance (Häggström et al, 2008). The overwhelming working conditions of nurses working to prevent new HIV infections, combined with the 1.4 million people in Tanzania who are already infected with HIV (Avert, 2015), has led to an urgent need to understand the nurses' experiences related to HIV prevention. Although Tanzania has made advances in improving access to counseling services and HIV testing, infection rates are increasing. Children and adolescents are a particular concern because one-third of the Tanzanian population is ages 10 to 24, a range when most people become sexually active (Avert, 2015). Therefore, it is important to understand the experiences of Tanzanian nurses related to HIV prevention in order to inform systems and policy changes that will facilitate their work. The aim of this qualitative study was to understand nurses' experiences when providing information about HIV prevention to patients in Tanzania.

METHOD

A qualitative design was used and interviews were conducted among nurses working in health care centers in Tanzania. The interviews were conducted, transcribed, and analyzed with descriptive content analysis following the method by Burnard (1991). The study was approved by the Ethical Advisory Board at the local university and was approved by the contact person who also worked as a director. It was emphasized that participation in the study was completely

voluntary and that the participants could withdraw from the study at any time without any explanation; all participants were asked to sign a written consent form.

SETTING

The interviews were conducted in various settings, including a dispensary, an HIV clinic, a maternity ward, and at the present health center and during the time period 04/2016-05/2016.

SAMPLE

All participants were registered nurses who spoke fluent English and engaged in HIV prevention efforts within the previous year in Tanzania. An individual who worked as a nurse and director functioned as a contact person and helped to find and contact nurses who matched the inclusion criteria. The contact person was trustworthy and had a good relationship with several nurses working with HIV and prevention. She contacted nurses who fit the study's inclusion criteria and whom she found willing to talk. She provided them with information about the study, and after they agreed to participate, the first and second author contacted them. The participants were assured that no information would be published that could reveal their identities and anonymity was maintained.

INSTRUMENT

The data were collected through semi-structured interviews with open-ended questions and the interviewers used a list of topics or broad questions that would be covered during the interviews (Polit & Beck, 2014). Semi-structured interviews were deemed suitable because they allow respondents to answer openly. The same questions were asked in all interviews.

PROCEDURES

The interviews and related work were carried out in various settings, including a dispensary, an HIV clinic, a maternity ward, and at the present health center. Saturation was

reached after seven interviews, after which one more interview was conducted to ensure no new topics arose (Polit & Beck, 2014).

Two investigators (the first and the second authors) conducted the interviews. They took turns asking the questions and taking notes. The interviewers received methodological training concerning interviewing during their nursing programs. A pilot interview was conducted prior to the study interviews that identified potential problems. First, the pilot participant did not speak English and an interpreter was used. The translator and participant were both nurses and thus it was unclear whose opinion was being expressed. In addition, the interview took place in a stressful environment where the questions were misunderstood and not directly answered. Thereafter, a decision was made to only include nurses who spoke fluent English and to make sure the interview environment was calm and allowed for adequate time to talk. The original interview guide was also changed to make the questions more easily understood. The interviews were conducted in a place where the participants felt comfortable, for example, in an office at their workplace. Audio recordings were made and notes were taken; however, two of the participants did not wish to be recorded. The interviews were conducted in English, which is one of the two official languages of the country and is widely spoken among the local nurses. The interviews lasted between 23 and 45 minutes, with an average of 32 minutes.

DATA ANALYSIS

In qualitative studies where in-depth interviews are conducted with only a few participants, it is especially important that the information is adequately disguised (LeBaron, Iribarren, Perri, & Beck, 2015). Thus, the coding of the participants' identities was done to make it difficult to identify them. The code key was kept on a USB stick, then locked and secured to protect against

misuse or theft. In addition, the transcriptions were done on a computer with password protection and no Internet connection.

The interviews were analyzed with descriptive content analysis following the method by Burnard (1991), with the steps in the analysis process represented in Table 1. The first and the second authors determined the coding and the analysis. The results and extracts from the analysis can be seen in Table 2.

Table 1.

The Analysis Process

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|---|
| <ul style="list-style-type: none">• Notes were made after every interview• Transcripts were read thoroughly in order to become immersed in the data• Transcripts were read thoroughly and headings were written down to describe the content• The list of categories was grouped together under higher-order headings• The list of categories and sub-headings was reviewed and similar headings were removed• The last author checked the category system, and it was discussed among all authors• Transcripts were re-read alongside the final, agreed upon list of categories and sub-headings• Colored highlighter pens were used to distinguish between each piece of the transcript allocated to a category and sub-heading• All items of each code were placed together• All codes were put under the appropriate headings and sub-headings• All sections were filed together• The result was written |
|---|

Graneheim and Lundman (2003) defined ‘credibility’ as how well the data and the analysis process address the intended focus. In our study, the participants had different experiences; however, the results covered the data well, and the primary author reviewed the analysis process to ensure that the categories were sufficient and fitting (Graneheim & Lundman, 2003).

Transferability should not be determined by the writer, but by the reader (Graneheim & Lundman, 2003). In this study, the results were exhaustive with comprehensive quotations. The participants’ opinions and experiences were well-portrayed without compromising

confidentiality. All these elements contribute to ensuring that the reader is able to determine if the study can be transferred to another setting or sample.

Table 2

Selected Examples to Illustrate the Analysis Process

Meaning unit	Code	Under category	Category
“My objective is to make sure that whether she is educated or not educated, I provide information about HIV/AIDS.” (Nurse 3)	Make sure that provision of HIV/AIDS is given whether the person is educated or not.	To Inform the patient.	Preventive work while focusing on the patient.
“They give up. They cry. They think that this is the end of their life, but then you have to tell them this is not really the end of their life. We have found a way to take it positive and then there is medicine to prolong your life. ... So, it’s tough.” (Nurse 2)	They cry and think it is the end of their life when we tell them, but we tell them there is medicine to prolong their life.	Informing someone that they are HIV positive	Challenges nurses face in the preventive work
“We will stay a productive nation. Yes, we will be productive, although maybe I’ll have HIV/AIDS, but I will be productive. I can do something for my family and for my nation.” (Nurse 1)	We will stay productive, and we will do something for our family and nation	Social responsibility	How the preventive work affects the nurse

Results

The results were based on the analysis of eight interviews. The participants were seven women and one man, ages 30–67 years. The nurses had worked between 2 and 41 years, with the average career being 28 years. The interviews were transcribed, analyzed, and then arranged in three different categories with subcategories (see Table 3). Three themes emerged from the data analysis: preventative work while focusing on the person, challenges nurses face in the preventative work, and how the preventative work affects the nurses.

Table 3

Data Categories and Sub-Categories

Category	Subcategory
Preventative work while focusing on the person	<ul style="list-style-type: none"> - To inform the patient - To counsel the patient - Protecting the nurse and the patient
Challenges nurses face in the preventative work	<ul style="list-style-type: none"> - Misconceptions of condom use - Telling someone they are HIV positive - Stigma - Lack of resources and nurses
How the preventative work affects the nurses	<ul style="list-style-type: none"> - Emotional response - Social responsibility

Preventative Work While Focusing on the Person

During the interviews, the nurses spoke about the preventative work they carry out with patients by providing information, counselling, and teaching precautions.

To inform the patient. In every meeting with the patients, the nurses used an existing protocol that followed the national guidelines for HIV preventative work. In addition to the protocol, they used their own experiences and personality to make the information provided to every patient as acceptable as possible. Due to the sensitive nature of HIV, it was considered important to build trust from the beginning. This is how Nurse 8 described her method:

Of course, then I would like to talk to them. Small talk first, as we do in Tanzania. We do quite a lot of small talk. And then I would start to talk about the family and their life – if they are married, have children, any health challenges lately, if there is something that they are wondering about. In that way, I would like to come closer and then find the right time to maybe ask if it would be good to take a HIV test.

According to the interviewed nurses, the first step was to give information to the patient about how HIV is transmitted and what one can do to protect oneself. This was considered the most important and easiest way to prevent HIV, as it has been shown to be a disease where precautions can be taken on an individual level. One of the nurses considered knowledge about HIV as a human right. All the nurses thought that a significant part of the preventative work was to encourage people to know their HIV status. Nurse 6 explained, “It is a dangerous disease. It’s important to know for yourself and to prevent the disease from being more spread. ... It’s best to work preventatively to avoid that the disease occurs more.”

According to the nurses, one should be even more focused on giving the information if a person is HIV-infected, given that the person becomes a risk for other individuals. The information needed to be adjusted depending on whether the person was HIV-infected, had a high or low level of education, and if someone in their propinquity was infected. An important part of the care was to determine if the patient had any previous HIV knowledge. Thereafter, due to the nurses’ work experience, they could easily adapt the information so that it could be received favorably. Assessment of prior knowledge could be done by asking the patient about how to protect oneself, how HIV transmits, and by follow-up questions such as “What does safe sex mean?” At times, it was clear that the patient had some misconceptions, which the nurse then

addressed. The nurses valued meeting with patients and providing them accurate information unconditionally. Nurse 3 said, “My objective is to make sure that, whether she is educated or not educated, [to] provide the information about HIV/AIDS.”

To counsel the patient. If a person requested an HIV test, a pre-counselling session was conducted. The nurse prepared the patient for the upcoming result by teaching about HIV and how to live with the virus if the test result was positive.

It’s important to give education until someone understand that they will be able to live a normal life like everyone else. Counselling takes [a] long time. It’s not something that is done over one day. (Nurse 5)

The nurses taught the patients about certain lifestyle changes that follow a positive test result. The quality of the pre-counselling could affect how the patient would later receive the results. Good counselling meant that patients who received a positive result were more likely to accept it.

Protecting the nurse and the patient. By ensuring that correct procedures were followed, the nurses believed that they could prevent HIV transmission. Four nurses stated that it was important that the nurse was well-educated about how to protect oneself and others. All the nurses had the same education and knowledge about how to use protective gear and how to carry out nursing procedures without contaminating or spreading the virus across patients. Nevertheless, adherence to these procedures varied. Two nurses experienced excessive use of the protective gear.

Some who are well educated, they really think both ways, preventing for themselves and preventing [for] the patient. But also, I have looked, and some of them is rather like preventing [for only] themselves [rather] than bothering about the patient. (Nurse 2)

Over-use of protective equipment could make the patient feel insecure, uncomfortable, and increase self-stigmatization. HIV was considered to only be transmitted through body fluids; therefore, protective gear should only be used in situations where there was a risk of contact with body fluids.

Challenges Nurses Face in Preventative Work

The various challenges nurses face at work was mentioned often. Three of the nurses stated that HIV prevention was challenging because the key to prevention is behavioural change.

Misconceptions of condom use. Every one of the interviewed nurses identified condoms as the most important form of protection; however, they also talked about several problems with condom use. There was a common misconception among patients that there is a Western plot to kill Africans by placing HIV in condoms. Also, some nurses had heard patients say that the use of condoms leads to a bad sensation. Additionally, not all patients know how to use a condom; thus, it is important for the nurses to teach the patients how to use a condom correctly. According to one nurse, religious beliefs were also considered to be a hindrance to condom use. Nurse 9 said, “Here in Tanzania, the use of condoms is very, very ... they are not agreeing on this because of religions and problems, so the most cases do not use condoms.”

Informing patients that they are HIV-infected. One of the main areas of focus in the nurses' preventative work was to ensure that patients knew their status so that they could start taking medications and implement precautions for their family. In earlier times, a diagnosis of HIV infection was a death sentence. Although this is no longer the case, five nurses discussed the difficulty of informing patients of a positive test result. Nurses must be brave and prepared for strong emotions from the patients.

They give up. They cry. They think that this is the end of their life, but then you have to tell them this is not really the end of their life. We found a way to take it positive and then there is medicine to prolong your life. ... So, it's tough. (Nurse 2)

Some patients could accept the results, others would go into denial; therefore, the nurses were advised to give as much counselling as needed to the patient. Some nurses reported that without counselling the patient may not accept the results and may even try to commit suicide.

Stigma. Stigma was considered the biggest obstacle to patients adhering to the advice regarding prevention. The persons who developed AIDS often were aware that they had the virus, but did not want to go to the clinic to get medicine or tell near relatives. Nurse 7 described how the patients may feel:

You know, when I say, "I'm positive", I'm just thinking, "What will they think of me?" That's why they don't go to the CTC to take the medication. Or any other service, I can see my friend there. So, that's why I say nothing.

Stigma may lead to rejection from one's family and community. Some do not want to get registered, which is necessary for medical treatment. Even patients who were registered did not want to pick up their medicine because they were afraid to meet someone they knew. In Tanzania, the community and family play a big part in a person's life, and the fear of becoming an outcast lingers. The health care system tries its best to get both partners to be tested together, but this has proved difficult. Four nurses emphasized that openness with one's partner is very important. Three nurses talked about a fear among the HIV-infected women that their husbands would divorce them if they found out about their status. The nurses' experiences were that the level of education made no difference to the extent of stigmatization. The nurses all agreed the way to reduce stigma was information.

In order to prevent this condition, I sit with the client. I tell her that this is a normal condition. This is a normal condition like malaria, like fever, so don't worry! Be free, be happy [that] we are together. (Nurse 4)

It was considered important to talk about HIV as if one were discussing diabetes or another chronic disease. If the person and family were ready to receive more information, then the stigma could decrease. The knowledge would lessen preconceptions and normalize the disease.

Lack of resources and nurses. A serious lack of resources and nurses in Tanzania negatively affects the nurses' work environments and leads to lessened motivation, since it is impossible for the nurses to do their best if they don't have enough colleagues to support them. A contributing factor to the shortage of nurses was that the nursing profession carries with it a

low status in the country. Nurses work in a stressful environment, are overworked, and carry the weight of much responsibility.

We are not more than ten, but the number of patients is more than 50,000. You see?

It is two different things. The staff are few, but the number of clients [patients] is high. (Nurse 3)

The economy and funding also affect the nurses' work environments. Due to poor economic conditions, nurses' further education and training is often subordinated. One of the nurses felt that there was no prioritizing of factors that could increase the nurses' motivation to work with HIV prevention. As a nurse, it is necessary to stay updated and have the latest information. Nursing is viewed as an area where new research is constantly needed, and therefore, it is considered important to adapt the nurses' training and education accordingly. Two informants emphasized the importance of further education and that increased training could lead to increased work motivation.

How the Preventative Work Affects the Nurses

Working closely with a chronic disease that affects many lives and has been characterized by taboo and stigma for years also affects the nurses on different levels. Nurses emphasized that it was important to feel that their work led to positive outcomes.

Emotional response. One of the nurses described HIV prevention as special work and that providing information to the patients gave a feeling of wellness for the nurses. Six nurses described positive feelings about helping and educating others and that patients' positive

outcomes made the hard work worth it. Two nurses talked about how nursing came from their hearts and that when working closely with the patients, it was impossible not to feel compassion. Although the work generated strong feelings, one must still do one's job and be strong in front of the patient to help them. To do this, five nurses expressed that support from colleagues had a big impact. One nurse described how, before being educated about HIV/AIDS, there was an imminent fear of the disease, but once the nurse became educated, the fear was replaced with a feeling of how important it is to have information and knowledge. Overall, the most common emotion the nurses felt was that of pride.

I feel proud if I see my patients doing fine. I feel proud. Yes, I feel that, okay, at least I have given my knowledge and somebody has used it properly and they are happy. Of course, if you do something, and you see the good result you feel proud and happy. (Nurse 1)

This pride was because the knowledge they shared and the time they spent with their patients made a difference and prevented people from dying.

Social responsibility. Once the nurses had learned about HIV and HIV prevention, they felt a responsibility to pass on the knowledge. Providing information about HIV prevention was neither place nor time bound. All informants talked about how HIV prevention could be applied anywhere and in any meeting. When there was an opportunity to provide information, they took advantage of it. It was common that nurses talked about HIV prevention with the people in the community in their spare time. Two nurses described the importance of building good relationships with patients. For instance, if a patient did not show up at a scheduled appointment,

the nurse would call the patient to make sure that everything was all right and to make a new appointment. One nurse described when patients missed appointments.

I go to the community, to the parents, to the mother's house. I sit with them to share ideas, to chat, to cook together, to eat together and to discuss about the condition of them, maybe the children or mothers. (Nurse 4)

All the informants described feelings of responsibility to the nation and its population. Four nurses discussed the matter on a deeper level and spoke about how HIV leads to suffering not only for the individual but also for the nation.

We will stay a productive nation. Yes, we will be productive although maybe [one can think], "I have HIV/AIDS, but I will be productive. I can do something for my family and for my nation." (Nurse 1)

Every working person is considered an asset to the nation by paying taxes and having the means to make purchases. However, when people become infected with HIV, it results in great costs for the nation, particularly if the person does not have enough support or information and develops AIDS.

Discussion

The nurses concluded that to prevent HIV transmission, important information has to be communicated to the patients, and how well the patients receive the information will affect transmission rates. Therefore, the nurses' ability to provide accurate information is a key part of

preventative work. Manuela de Paoli, Manongi, and Klepp (2002) studied Northern Tanzanian counsellors' perspectives of HIV testing and advising. Consistent with our findings, they concluded that it is important for counsellors to be sensitive and non-judgemental, and to prepare their patients for testing. Also, to counsel the patient only once before the testing of HIV was seldom considered enough (Manuela de Paoli et al., 2002). According to the International Council of Nurses (2012), nurses are responsible for providing and ensuring that patients receive adequate and correct information in a culturally-appropriate way (International Council of Nurses, 2012). Nurses need to individually-tailor their communication to patients to promote behavioural changes that will reduce transmission. Also, to provide proper care, the nurses need adequate time per patient, the correct knowledge, and more resources, such as more colleagues and better facilities.

In our study, to ensure the patients received the correct information, the nurses used person-centered care, which is recommended by Cronenwett et al. (2007). Also, the nurses used their personalities and own experiences to adjust the information and make it as acceptable to the patient as possible. According to Cronenwett et al. (2007), the core competency of person-centered care is seeing the patient as the expert of his or her own life. The nurse must respect and understand the patient's self-provision, integrity, and will (Cronenwett et al., 2007).

All the challenges that the nurses faced in our study had a common thread – the lack of both human and economic resources. As per the World Health Organization (WHO; 2006), the world's health care resources have been unequally distributed between rich and poor countries. Sub-Saharan countries, including Tanzania, suffer from a critical shortage of health care providers. This shortage has been exacerbated by the migration of health care workers to wealthier countries with better working conditions and higher wages (WHO, 2006). Working in

settings with limited human and economic capital is unsustainable for the nurses and may ultimately lead to poor health outcomes for both the nurses and patients.

Nurses in our study stated that they sometimes found their jobs to be difficult and challenging. Mullin (2009) reported similar findings among rural nurses who cared for HIV-infected persons. In that study, rural nurses described their work as intense, difficult, and emotionally and physically exhausting. However, they also reported that feeling emotionally invested in their patients was important as it engendered compassion and additionally balanced feelings of helplessness, which could lead to burnout (Mullin, 2009).

To cope with negative feelings, the nurses sought support from their colleagues. This finding supports the International Council of Nurses' recommendation that nurses share their experiences with colleagues to promote adaptive coping (International Council of Nurses, 2012). The teamwork attendant to nursing provides opportunities for the development of supportive relationships.

Conclusion

The aim of this study was to describe nurses' experiences in providing information about HIV prevention to patients in Tanzania. The results of our study showed that nurses perceived their work as sometimes difficult but also important and rewarding, both personally and in the community. Their work involved challenges, such as a lack of resources and confronting stigma; nevertheless, the nurses felt proud because the work involved saving people's lives and helping to build a strong nation. In reaching the patients and thus contributing to the prevention of HIV, the nurses needed to individually tailor the information and its communication within a framework of patient-centered care.

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Key considerations

- In order to prevent the spread of HIV, important information must be communicated to the patients. How the patient receives the information affects transmission outcomes. Nurses need to individually tailor the information and its delivery to achieve behavior changes that will reduce HIV transmission.
- Nurses described their work as difficult and challenging at times. They shared their experiences with supportive colleagues to promote adaptive coping.
- Nurses' challenges had a common thread – inadequate human and economic resources. To reduce workforce turnover and its adverse effects on patient outcomes, strategic plans must be formulated to offer fair compensation, create favourable working conditions with sufficient equipment, and provide opportunities for continuing education and career development.