

HIV-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIORS OF NURSES EMPLOYED BY KARACHI PUBLIC CARE HOSPITALS

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ABSTRACT

Since one of the four most important qualities of nurses is caring, they should be well-versed about HIV, follow proper procedures, and have a good attitude toward patients with the virus. They should also attend to the physical, psychological, and spiritual needs of these patients because they have no prospect of recovery. The objective of this study is to assess the level of HIV-related knowledge, attitudes, and practices among nurses working in public healthcare facilities in Karachi, with a focus on their interactions with patients living with HIV. This study employed a cross-sectional descriptive approach based on a structured questionnaire. Through non-probability convenient sampling, the charge nurses employed by Karachi's four public care institutions were chosen as the population. 100 people made up the sample. The findings showed that 37% of the nurses had great understanding of HIV, 48% had average knowledge, and the other nurses had low knowledge. The majority of responders showed a satisfactory level of practices, and the majority of nurses showed a positive attitude toward HIV patients. The overall findings showed that despite their mediocre understanding of the illness, the nurses had a

compassionate demeanor and were eager to help the patients. According to the study's findings, nurses in a few public care hospitals in the Karachi have a mediocre level of expertise, but they have a compassionate attitude toward patients who are HIV positive and are willing to help them. Nurse education and training can help to further enhance the practices and attitudes. The study's findings call on hospital management, nursing leaders, and national health policy makers to take the appropriate steps to ensure that health care workers, particularly nurses, receive the most recent information.

Keywords: Nurses Assessment, Knowledge, Practice, Attitude, Human Immune deficiency Virus

INTRODUCTION

Since its discovery in 1981, the human immunodeficiency virus (HIV) has spread to nearly every country in the world. In 2018, 36.9 million people worldwide tested positive for HIV. By the end of 2020, the HIV prevalence among adults in Africa between the ages of 15 and 49 was 4.1% (Achwoke, 2021). With a particular focus on Asian nations, South and Southeast Asia—particularly India and Thailand—have seen a high number of HIV cases. The prevalence of HIV infection in adults between the ages of 15 and 49 is 0.3% in South-East Asia. HIV is the virus that causes HIV infection and AIDS (Goel et al., 2022). This Virus attacks on the T-Cells in human immunity and resultantly destroys the white blood cells (CD4) and resultantly human body cells become unable to fight against this virus (Singh et al., 2025).

As per Gehrie (2022), after being exposed to HIV for two to six weeks, the virus's symptoms manifest. Seroconversion illness is a temporary infection that affects 50% to 70% of people. Manifests as pharyngitis, fever, rash, myalgia, malaise, and oral or genital ulcers; these symptoms typically last one to two weeks.

It is evident that in addition to physical and psycho-spiritual problems, individuals with HIV experience social stigma and taboos. Nurses carry out their ethical responsibility as members of the healthcare team by attending to the physical, emotional, and social needs of patients (Bhana & Sedibe, 2024). As a result, the nurses need to be knowledgeable and skilled. Nurses are ill-prepared to care for patients with HIV, according to numerous research. Nurses'

perceptions of HIV and management difficulties are poorly educated. Therefore, it was essential to investigate the knowledge, attitudes, and behaviors of nurses who provide care for HIV patients in order to enhance patient outcomes and, consequently, the quality of nursing care provided. The goal of this study was to investigate nurses' attitudes, practices, and knowledge regarding the knowledge about HIV infection.

Research Questions

1. What is the level of knowledge, attitudes, and practices (KAP) among nurses in Karachi Pakistan regarding HIV care, and how do these factors influence the quality of care provided to HIV patients?
2. What are the primary sources of information for nurses about HIV, and how effective are these sources in improving their knowledge, attitudes, and practices toward HIV care?

Research Objectives

1. To assess the knowledge, attitudes, and practices (KAP) of nurses in Pakistan regarding HIV care and to identify gaps in their understanding and application of HIV management protocols.
2. To evaluate the effectiveness of different sources of information (e.g., informational media, workshops, course content) in enhancing nurses' knowledge, attitudes, and practices toward HIV care and to recommend strategies for improving HIV education and training programs for healthcare professionals.

Literature Review

In 2005, a concentrated HIV pandemic was announced in Pakistan, with transgender people ranked as the second most vulnerable group to contracting the virus, after injectable drug users (national prevalence 6.4% out of 21% for HIV) (Shaikh, Khan, Rose & Grimes, 2007). According to a different study, transgender people in Pakistan make up 17.5% of the total HIV population and are eight times more likely to contract the virus (Qureshi, 2024; Awan et al., 2024).

According to a study, the prevalence of HIV among transgender sex workers (TSW) in Karachi was 3.6%, whereas in Larkana it was 27.6%. Additionally, only 50% of TSWs used condoms, and they were not aware of safe sex practices (Awan et al., 2024). This demonstrates their

function as a bridging population in HIV transmission to cisgender men and women as well as MSM.

Pakistan is neighbor of countries those are highly effected with this virus i.e. India, China, Thailand and Afghanistan, The main reason for the spread of this virus in Pakistan is, more use injectable rather than oral medication, Paid blood donors and high rate of sexual desires (Quer & Mur, 2013).

Health workers have a responsibility to treat patients who have HIV. Nurses in particular are responsible for caring for these infected patients. Because they must obtain different bodily fluid samples from patients for research purposes, administer medications as directed, provide care, and administer injections, they are therefore more vulnerable to HIV/AIDS. Special nursing knowledge and skills are needed to care for these patients (Shaikh et al., 2007).

It is clear that people with HIV face taboos and social stigma in addition to physical and psycho-spiritual issues. By attending to patients' physical, emotional, and social needs, nurses fulfill their ethical duty as members of the healthcare team (Bhana & Sedibe, 2024). Therefore, the nurses must possess both knowledge and skills. Numerous studies have shown that nurses are ill-prepared to care for patients with HIV. The perception of nurses regarding HIV and management issues are not well informed. Exploring the knowledge, attitudes, and behaviors of nurses who care for HIV patients was therefore crucial in order to improve patient outcomes and, in turn, the standard of nursing care that was given. The purpose of this study was to evaluate nurses' attitudes, practices, and knowledge regarding HIV infection.

METHOD

Research Design of Study

A self-administered questionnaire was used to gather information from nurses at Services Hospital in Karachi. Moreover, as part of a quantitative, cross-sectional descriptive study design was employed using a purposive sampling technique. The researcher verified the validity and reliability of the items, finding that the knowledge Cronbach's alpha value was 0.75 and the attitude value was 0.62. The original knowledge items were created by Eckstein in 1987.

- The majority of the registered nurses had more than a year of work experience, and they were drawn from Karachi's public tertiary care hospitals/institutions' medical emergency, medical intensive care unit, and medical units.
- The study was conducted from September 2024 to January 2025.
- Head nurses, nursing superintendents and instructors who specialize in infectious diseases and have international training or experience working in foreign institutions.
- One hundred volunteers who work in Karachi's hospitals made up the sample.
- Nurses working at four public hospitals in Karachi that treat HIV-positive patients submitted the study's data.
- To ensure that participation was completely voluntary, a standardized questionnaire was personally presented to the nurses following the acquisition of their written informed consent.
- The survey received a positive response, with 100 completed questionnaires collected from the four hospitals. The responses were compiled and analyzed using IBM SPSS version 24.

RESULTS

Over the course of the study, 100 participants finished the questionnaire. Participants ranged in age from 22 to 51 years old, with an average age of 29.4 ± 5 years. There were 34 (34%) men and 66 (66%) women among the participants. In terms of educational background, 34 (34%) were post-RN nurses, and 66 (66%) held BSc nursing degrees. The participants' work experience ranged from 1 to 20 years, with an average of 6.3 ± 3.6 years. Ten (10%) of the 100 participants said they had not received information about HIV, whereas 90 (90%) said they had.

Table-1: Demographic profile

Demographic data		
Age	Mean: 29.4 years, SD: ± 5 years	
Gender	Frequency	Percentage
Female	66	66%
Male	34	34%

Qualification		
BSN	66	66%
Post RN	34	34%
Experience		
1-15 Years	70	70%
15-20 Years	30	30%
Received information on HIV		
Yes	90	90%
No	10	10%
Source of information		
Course content	35	24.2%
Informational Media	75	43.7%
HIV Workshop/Seminar	30	15.8%
Colleagues	13	16.3%

Analysis of Demographic
With an average age of 29.4 years (± 5 years), the participants'

Profile
average age of (years), the demographic

analysis shows that they are comparatively young. This implies that professionals in the early to mid-stages of their careers make up the majority of the nursing workforce in the study. With 66% of the sample being female, the gender distribution shows that women make up the majority. This is consistent with the worldwide trend of nursing being a profession dominated by women. In terms of education, 36% of the participants are post-registered nurses (Post RN), and 64% of the participants have a Bachelor of Science in Nursing (BSN)

Thirty percent have been practicing for 15 to 20 years, while the majority (70%) have between one and fifteen years of experience. This range suggests that the sample offers a balanced viewpoint on nursing practices by including both comparatively new nurses and those with a great deal of clinical experience. It's encouraging to see that 90% of participants have learned about HIV, indicating that the group is highly aware of the virus. Informational media

(43.7%) and formal course material (24.2%) are the main sources of this knowledge, highlighting the vital role that media and education play in raising public awareness of HIV. Peer discussions and workshops also aid in knowledge acquisition, albeit to a lesser degree. These results emphasize the value of ongoing education and training to raise awareness of HIV.

Table 2: Knowledge of Nurses towards HIV

Knowledge category	Frequency	Percentage (%)	Mean score (Mean %)
Poor knowledge	20	20%	60%
Average knowledge	50	50%	
Excellent knowledg	30	30%	
Total	100	100%	

Analysis of Knowledge

The majority of nurses have a moderate to high level of knowledge about HIV, according to the participants' knowledge assessment. In particular, 30% have an "excellent" understanding of the subject, whereas 50% have "average knowledge" of it. Remarkably, only 20% of participants report having "poor knowledge," suggesting that nurses generally have a high level of awareness.

Although the overall level of knowledge is satisfactory, there is still opportunity for improvement, as indicated by the mean knowledge score of 21.5 ± 7.2 , or 60% of the possible score. The fact that a small portion of participants lacked sufficient knowledge emphasizes the necessity of focused educational efforts. Healthcare organizations can guarantee that all nurses are properly informed about HIV by putting in place targeted training programs, especially for those with lower scores. Improving patient care, lowering stigma, and encouraging safe clinical practices all depend on expanding our understand.

Table 3: Attitude towards HIV

Ser	Attitude towards HIV	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

1.	I am afraid of catching HIV through clinical practice.	10%	40%	25%	20%	5%
2.	I believe that HIV is the punishment for immoral behaviour.	08%	20%	15%	42%	15%
3.	I believe that sex workers, youths and other vulnerable groups are responsible for spreading HIV	11%	40%	25%	20%	4%
4.	I believe that clients who get HIV through illegal behaviour (e.g., Sex work), should not be treated at government hospitals	10%	17%	13%	45%	15%
5.	Nurses should not refuse to care for a patient just because they are HIV positive.	15%	45%	16%	19%	5%
6.	There is no point treating a person with HIV as they die anyway.	5%	10%	22%	50%	13%
7.	All health care workers have the right to know a patients HIV status for their own safety.	40%	27%	13%	7%	13%
8.	I would not go to a local clinic to be tested for HIV because everyone would know my status.	9%	30%	10%	38%	13%
9.	I would rather not know my HIV status.	11%	28%	19%	32%	10%
10.	If I had a problem with my genitals/private parts I would try to treat the problem myself before going to a clinic.	10%	30%	17%	34%	9%

11.	I would care for a HIV positive relative in my home.	11%	40%	13%	24%	12%
12.	I would buy food from a shop where a HIV positive person was working.	10%	32%	15%	34%	9%
13.	I would visit the house of a friend even if they have family member who has HIV.	13%	26%	25%	28%	8%
14.	I would share food utensils with a family member who has HIV.	13%	28%	23%	26%	10%

Analysis of Attitude

Nurses' perceptions of patients with HIV reveal in table no 3 that a complicated interaction between fear, empathy, and persistent misconceptions. Concerns about acquiring HIV through clinical practice were expressed by a significant percentage of participants (48.4%), which could be related to a lack of trust in infection control procedures or inadequate instruction on universal precautions. Furthermore, stigma and moral judgments about HIV continue to exist within the healthcare community, as evidenced by the fact that 24.2% of respondents believe the virus is a punishment for immoral behavior.

There are positive indications of professionalism and empathy in spite of these reservations. As a sign of their dedication to moral medical practice, the majority of participants (66.8%) think that nurses shouldn't turn away patients who have HIV. Additionally, 50.5% of respondents said they would be willing to provide at-home care for a family member with HIV, demonstrating a degree of personal acceptance and accountability.

But there are still some deeply rooted prejudices. For instance, 58.9% of participants blame vulnerable populations like young people and sex workers for the spread of HIV, highlighting the need for focused education to combat damaging stereotypes. Another major issue is privacy; according to 30% of respondents, they are reluctant to get tested for HIV at nearby clinics for fear of social stigma and confidentiality violations.

These results underline the pressing need for comprehensive educational programs to dispel myths, boost trust in infection control practices, and encourage a more knowledgeable and compassionate approach to HIV care, as well as for efforts to reduce stigma. Healthcare providers can contribute to the creation of a more accepting and nondiscriminatory environment for people living with HIV by addressing these concerns.

Table 4: Practices towards HIV

Ser	Practice towards HIV	Yes	No
1.	Do you touch a patient who is suspected of having HIV?	80	20
2.	Do you take blood sample from HIV patient?	75	25
3.	Do you take vital signs of HIV patient?	85	15
4.	Do you change the bed sheets of a patient who has HIV?	80	20
5.	Do you give intravenous medication to HIV patient?	90	10
6.	Do you change the dressing of HIV patient?	84	16
7.	Do you provide N.G feed to the HIV patient?	87	13
8.	Do you give bed bath to HIV patient?	65	35
9.	Do you usually recap the needle?	63	37
10.	Total	73%	27%

Analysis of Practices

When it comes to HIV-positive patients, nursing practices are typically compassionate, professional, and compliant with ethical healthcare standards. More than 80% of participants indicated that they would be willing to perform basic clinical duties, such as changing bed linens, taking blood samples, giving intravenous medication, and making physical contact with people who are HIV-positive. This demonstrates an admirable degree of assurance, compassion, and dedication to offering patients with HIV top-notch care.

Notwithstanding these beneficial behaviors, a troubling finding was that 63% of participants admitted to recapping needles. This is a known risky practice that raises the possibility of needle stick injuries and possible exposure to HIV and other blood borne

infections. This habit's tenacity indicates a lack of compliance with accepted safety procedures and emphasizes the critical need for focused training initiatives.

Healthcare facilities should make safe needle handling instruction a top priority in order to reduce this risk, stressing the significance of appropriate disposal methods in avoiding workplace dangers. Nurses can further improve their safety while upholding the high standard of care they give to patients with HIV by tackling this important issue.

Conclusion and Recommendations

With a mean score of 60%, the analysis shows that the participants' knowledge of HIV ranges from moderate to excellent. But attitudes and knowledge are lacking, especially when it comes to stigma, fear of transmission, and false beliefs about vulnerable groups. Even though most nurses act professionally and with empathy, the dangerous practice of recapping needles draws attention to the need for stronger safety regulations.

Education and Training: Put in place focused educational initiatives to close knowledge gaps and dispel myths regarding HIV stigma and transmission.

Stigma Reduction: Start initiatives to dispel moral judgments and stereotypes about HIV.

Safety Procedures: To reduce the chance of occupational exposure, offer instruction on safe needle procedures.

Privacy and Confidentiality: To promote self-testing among healthcare professionals, address privacy concerns surrounding HIV testing. Healthcare facilities can create a more knowledgeable, compassionate, and secure atmosphere for nurses and HIV-positive patients by tackling these issues in Karachi even in Pakistan

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