

# Perspective and Approach of Nurses about Handling Patients with HIV in Saudi Arabia

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## ABSTRACT

This study aimed to assess the knowledge, attitudes, and practices of nurses in Saudi Arabia regarding the care of patients with HIV. A descriptive, cross-sectional study was conducted using a questionnaire distributed to a random sample of 402 nurses. Most participants held diploma (42.3%) or bachelor's (32.3%) degrees, and 60.2% were female. The findings revealed a high level of knowledge about HIV transmission, prevention, and treatment, with a mean score of 4.09 out of 5 (81.80% relative weight). Nurses demonstrated positive attitudes towards caring for HIV patients, with a mean score of 4.02 (80.40% relative weight), although some reservations were noted about working in HIV-specific units. Practices related to HIV care were

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generally effective, with a mean score of 4.12 (82.40% relative weight), and nurses reported referring patients to support services when needed. However, areas for improvement were identified, such as documenting care and assessing patient understanding. The study concludes that while nurses in Saudi Arabia possess a strong foundation in HIV care, ongoing education and attitudinal support are necessary to address any lingering stigma and enhance the quality of care provided to patients with HIV.

**KEYWORDS:** HIV, nurses, Saudi Arabia, Nurses' perspective on HIV patients, HIV patient care in Saudi Arabia, Nurses' attitudes.

## 1. Introduction

Human immunodeficiency virus (HIV) is classified as a member of the Retroviridae, a subfamily of the Lentivirus family, due to the physical, biological, and genetic characteristics that cause HIV infection and acquired immune deficiency syndrome (AIDS) (Coffin et al., 2021; Ghosn et al., 2018). During HIV infection, the pathogenic situation begins by targeting and killing host immune cells such as T-helper, dendritic, and macrophage (Del Rio, 2017; Visseaux et al., 2019). Acute HIV infection can cause a variety of symptoms, from fever to severe illnesses. Thus, fever, tiredness, and myalgia are the most prevalent signs of an acute HIV infection (Lin et al., 2019). The most serious complication of HIV infection is the development to AIDS if not treated, which occurs when an HIV-positive patient develops a low CD4 count and becomes susceptible to opportunistic infections (Kaushic, 2011; Xiao et al., 2021).

The most common methods for acquiring HIV are through unprotected sexual intercourse and drug injections (Beyrer et al., 2017; Okano et al., 2020). Also, blood transfusions can transmit HIV, but these have been eliminated in nations that use an HIV screening procedure for donor blood (Zakeyo & Nyashanu, 2021). Because of the availability of antiretroviral medication (ART), which focuses on lowering HIV viral load while retaining T-helper cells. Thus, reducing opportunistic infections will extend normal life expectancy while delaying the progression to AIDS (Kammers et al., 2021; Mwangi & Wyk, 2021).

HIV remains a major source of death and illness burden in many countries, despite significant breakthroughs in prevention, treatment, and care (Farahat et al., 2020). Globally, it was expected that approximately 38 million people were infected with HIV. Citation20 This stunning statistic indicates the pandemic's magnitude and the implications for public health agencies and affected populations (Gupta & Granich, 2018).

The global HIV load is not evenly distributed, with some areas having a higher incidence of the infection than others. Sub-Saharan Africa, for example, has been disproportionately affected by HIV, accounting for over two-thirds of all people living with the virus globally (Moyo et al., 2023).

In the European Region, HIV infection continues to affect the health and well-being

of millions of people. More than 100,000 new HIV diagnoses will occur in 2021 (Okano et al., 2020).

Saudi Arabia, which has a population of more than 30 million, has been devastated by the global HIV pandemic. However, in comparison to other regions, the prevalence of HIV in Saudi Arabia has been observed to be lower than the global average (Alsughayyir et al., 2022; Baadani et al., 2020).

Different countries with high HIV prevalence rates may confront different problems in preventing the transmission of HIV, depending on cultural norms, government policies, and community engagement in prevention and awareness activities (Beyrer et al., 2017; McCann et al., 2022). Sub-Saharan Africa, for example, has faced significant challenges in handling the pandemic because to economic constraints, limited access to free treatment, and societal stigmas (Moyo et al., 2023; Zakeyo & Nyashanu, 2021). To prevent the spread of the virus, the Saudi government, through the Ministry of Health, developed comprehensive preventative and control measures such as stringent screening processes for immigrants, workers, pilgrims, and tourists, as well as a required premarital screening program (Al-Mozaini et al., 2021; Farahat et al., 2020).

Cultural norms, governmental regulations, and community involvement in prevention and awareness initiatives can all have an impact on the difficulties faced by various nations with high HIV prevalence rates in containing the virus's spread (McCann et al., 2022). For example, economic constraints, limited access to free healthcare, and social stigmas have made it extremely difficult for Sub-Saharan Africa to manage the pandemic (Moyo et al., 2023).

The Saudi government, through the Ministry of Health, put in place several preventative and control measures to stop the virus's spread, including mandatory premarital screening and stringent screening protocols for visitors, pilgrims, workers, and immigrants (Al-Mozaini et al., 2021; Baadani et al., 2020). Additionally, as part of its proactive approach to eliminating HIV, the Saudi government works to ensure that individuals living with HIV/AIDS (PLWHA) have equal access to free ART and medical care to effectively manage the virus (Al-Mozaini et al., 2021).

Stigmatizing attitudes toward PLWHA have remained since the beginning of the epidemic, despite advances in our knowledge of the virus and in the available treatments (Grossman & Stangl, 2013). HIV-associated stigma is characterized by unfavourable attitudes, convictions, and behaviours aimed toward PLWHA; it remains a significant problem in many parts of the world. It is caused by ignorance, fear, bias, and social conventions (Kane et al., 2019). Areas and communities may have varying levels and types of stigmatizing views. Due to campaigns and educational programs aimed at correcting misconceptions and misconceptions about HIV, stigmatizing attitudes have decreased in several regions (Watt et al., 2021).

The quality of life for those living with HIV may be significantly impacted by stigma; some affected individuals may become deterred from getting tested for HIV and receiving treatment, or they may choose not to disclose their status. As a result, social stigma may hinder efforts to control the pandemic by worsening their health, raising the number of cases, and raising the death rate (Ruiz-Torres et al., 2007).

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Medical practitioners are frequently the first point of contact for patients newly diagnosed with HIV, therefore they play an important role in breaking the bad news and providing appropriate care and support. However, researchers have observed that certain medical practitioners may harbor a latent bias toward HIV patients (Katz et al., 2013). A research in the Lao People's Democratic Republic looked at discrimination against PLWHA among healthcare staff. Of 558 participants, 49.7% had discriminatory attitudes toward HIV/AIDS patients, but low levels of prejudice were related with clinicians who had adequate knowledge and experience treating HIV patients (Vorasane et al., 2017).

Unfortunately, there are few studies on stigma toward PLWHA in Saudi Arabia, especially among nurses (Abdelmoneim et al., 2002). The impact of stigmatization on the success of HIV prevention, care, and support initiatives cannot be emphasized. As a result, one of the initiatives of Saudi Arabia's National HIV/AIDS Control Program was to assess the type and amount of stigmatizing views held by health workers against PLWHA. The findings are expected to provide policymakers with the necessary information to establish policies that eliminate any HIV stigma-related roadblocks in the implementation of HIV programs (Parker & Aggleton, 2003).

The purpose of this study was to analyse HIV awareness among nurses, as well as to evaluate nurses' stigmatizing attitudes and perspectives regarding PLWHA. The findings would help to shape policies that eliminate stigma against PLWHA and, by extension, protect those who do not have HIV or AIDS.

### Study problem

Many health-care workers are concerned about HIV transmission through casual contact, hence many HIV/AIDS patients endure stigma and discrimination (Banteyerga et al., 2005). One study found that health practitioners' understanding of HIV/AIDS transmission linked to their reported discomfort when working with PLWHA. Lack of knowledge and training contributes to stigma and discrimination (Feyissa et al., 2012). Additionally, reduced levels of stigmatization were associated with good job experience and previous experiences with PLWHA (Tavakoli et al., 2019). More discriminatory behaviour was observed while treating PLWHA exposed wounds or when there was contact with body fluids (Visser et al., 2009; Zarei et al., 2015). Because there has been little study on stigma and prejudice against PLWHA among Saudi healthcare personnel, it is crucial to investigate this phenomenon.

Despite advances in public health and preventive medicine to combat the spread of HIV, the variables that impede or limit patients' access to HIV services remain unknown. Understanding these variables is critical and should be the first step in combating HIV/AIDS and developing a no stigmatizing and non-discriminatory atmosphere, especially in healthcare settings (Feyissa et al., 2012).

Nurses play an important role in the healthcare system, particularly in managing HIV/AIDS patients. However, research show that many nurses lack information about HIV transmission and treatment methods. For example, a research conducted in Sicily found that while 87% of nurses grasped the definition of AIDS, only 65%

were aware with HIV pathophysiology, and a disturbing 21% did not use gloves when caring for patients. This lack of awareness might result in negative attitudes toward HIV patients and even discriminatory behaviour (Marranzano et al., 2013).

Inadequate information and bad attitudes concerning HIV among nurses have serious consequences. Nurses' fear of getting HIV might lead to avoidance behaviors that jeopardize patient care. Furthermore, research indicates that self-directed learning interventions dramatically increase nurses' knowledge and attitudes regarding caring for HIV/AIDS patients. As a result, it is critical to overcome these gaps through focused educational initiatives that improve both knowledge and attitudes (Ali et al., 2023).

#### Research Questions:

- What is the Knowledge of nurses about handling patients with HIV in Saudi Arabia?
- What is the attitude of nurses about handling patients with HIV in Saudi Arabia?
- What are the practices of nurses about handling patients with HIV in Saudi Arabia?

#### Research Objectives:

- To determine the Knowledge of nurses about handling patients with HIV in Saudi Arabia.
- To determine the attitude of nurses about handling patients with HIV in Saudi Arabia.
- To determine the practices of nurses about handling patients with HIV in Saudi Arabia.

## 2. Literature review

A study by Memish aimed to assess the knowledge and attitudes of healthcare professionals regarding HIV/AIDS and its impact on people living with the condition. Conducted with 1,483 doctors across various regions, the study found that a significant portion of respondents exhibited poor knowledge about HIV transmission, with only 16% aware that saliva does not transmit the virus. Additionally, the results indicated prevalent stigmatizing attitudes, particularly regarding personal contact and reproductive rights, where many doctors expressed reluctance to work with HIV-positive individuals. The analysis revealed that knowledge about HIV was inversely related to stigma; those with higher knowledge scores tended to hold less stigmatizing views. The findings underscore the urgent need for enhanced educational programs for healthcare providers to improve their understanding of HIV and reduce stigma, thereby facilitating better care for people living with HIV/AIDS in Saudi Arabia (Memish et al., 2015).

A study by titled Awadalla aimed to assess the knowledge, attitudes, and practices

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(KAP) of healthcare workers (HCWs) regarding HIV in Abha and Khamis Mushait. Conducted with 372 HCWs, the results revealed significant gaps in knowledge, with 23.9% unable to identify tattooing and ear piercing as transmission methods, and misconceptions about transmission modes such as believing that kissing (36.8%) and sharing utensils (23.1%) could spread HIV. The study also highlighted a stigmatizing attitude among HCWs, with many expressing discomfort around HIV patients and a tendency to blame them for their condition. The findings suggest a pressing need for enhanced education and training programs to improve HCWs' understanding of HIV transmission and reduce stigma, which could ultimately impact the management of HIV in the region negatively (Awadalla, 2019).

A study by Marranzano et al. aimed to assess the knowledge, attitudes, and practices of nurses towards HIV/AIDS in a university hospital in Catania, Sicily. Involving 107 nurses, the research found that while a significant majority (98%) had never refused to care for an HIV/AIDS patient, many exhibited gaps in their knowledge and practices: 21% did not use gloves routinely, and only 9% treated all patients as potentially HIV-positive. Although 87% understood the meaning of AIDS and 78% recognized a positive serological test, only 62% were aware of the 'window period' for HIV transmission. The study concluded that misconceptions about HIV/AIDS persist even among healthcare professionals in developed countries, highlighting the need for improved education and training on HIV-related issues to enhance nurses' preparedness and safety in handling such patients (Marranzano et al., 2013).

A study by Abolfotouh assessed the knowledge, attitudes, and risk perceptions regarding HIV/AIDS among 260 nursing students at King Saud bin-Abdulaziz University for Health Sciences. The findings indicated that the students had a mean knowledge score of 72.93%, which reflects an average understanding of HIV/AIDS; however, significant misconceptions were noted regarding transmission methods, such as beliefs about swimming and sharing toilets. Attitudinally, the students exhibited a negative stance towards AIDS patients, with 83% supporting patient isolation and 24.7% believing that individuals with AIDS deserved their condition. The study concluded that inadequate knowledge and negative attitudes were linked to a lack of nursing education prior to university, highlighting the need for enhanced educational strategies in nursing curricula to improve care for patients with HIV/AIDS (Abolfotouh et al., 2013).

A study by El-Nady explores the knowledge, attitudes, and practices (KAP) of nursing students in relation to HIV/AIDS patients. It aimed to assess the level of awareness, general attitudes, and common behaviours nursing students have towards patients with HIV/AIDS. The findings indicated that while students possessed moderate knowledge about HIV/AIDS, there were gaps in their understanding, especially regarding modes of transmission. Attitudes were generally positive, although some students held reservations about interacting closely with HIV-positive patients. The study highlighted the need for enhanced educational programs to improve both knowledge and attitudes, fostering a more supportive approach among future healthcare professionals (El-Nady, 2013).

### 3. Methodology

Given the nature of the current study topic (Perspective and approach of nurses about handling patients with HIV in Saudi Arabia). To achieve the study objectives, the researcher used the descriptive method, which is: the type of research by which all members of the research community or a large sample of it are questioned; with the aim of describing the phenomenon being studied in terms of its nature and degree of existence. (Al-Assaf, 2016, p. 211).

#### Study Community

The current study community consists of all nurses in Saudi Arabia.

#### Study Sample

The origin of scientific research is to be conducted on all members of the research community; because this is more likely to confirm the results, but the researcher resorts to choosing a sample of them if this is not possible due to their large number, for example" (Al-Assaf, 2003, p. 96); therefore, the researcher chose a random sample, where the sample amounted to (402) nurses in Saudi Arabia.

#### Study Tool

Based on the nature of the data and the methodology followed in the study, the researcher found that the most appropriate tool to achieve the objectives of this study is (the questionnaire). The study tool was built by referring to the literature and previous studies related to the subject of the study, Perspective and approach of nurses about handling patients with HIV in Saudi Arabia. The researcher designed the initial questionnaire and distributed it to the study sample to find out the data that this tool seeks to collect. The validity and reliability procedures for this tool were verified. The following is a detailed explanation of how to prepare the tool and the procedures taken by the researcher to verify the validity and reliability of the tool.

#### Validation of questionnaire

The validity of the study tool means ensuring that it measures what it was prepared to measure. It also means that the questionnaire includes all the elements that enter the analysis on the one hand, and the clarity of its expressions on the other hand, so that it is understandable to everyone who uses it. The researcher verified the validity of the study tool through:

#### Honesty of arbitrators

The face validity method was used, with the aim of ensuring the validity of the questionnaire and its suitability for research purposes, by presenting it to a group of academic and specialist arbitrators, and asking them to express an opinion regarding the extent of the validity and validity of each paragraph of the questionnaire and its suitability for measuring what it was designed to measure, and introducing Necessary amendments, whether by deletion, addition or reformulation. The arbitrators presented suggested amendments to the study tool, and the researcher took those observations into account, made the necessary amendments that were agreed upon by most arbitrators, and then relied on the questionnaire in its final form.

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Internal consistency validity

Through internal consistency, we know the extent to which each paragraph of the questionnaire is consistent with the axis/dimension to which this paragraph belongs. To calculate the validity of the internal consistency of the study tool, the Pearson correlation coefficient was calculated (Pearson Correlation Coefficient), through which the correlation coefficients were calculated between the score of each item and the total score of the dimension (the average score of the items of the dimension) to which the item belongs. The following tables show the validity of the internal consistency.

Table (1): internal consistency results

N = 402		Pearson Correlation Coefficient	Sig
<b>knowledge about handling patients with HIV</b>			
1-	HIV can be transmitted through unprotected sexual intercourse, blood transfusion, sharing needles, and mother to child transmission.	.802**	.000
2-	Antiretroviral therapy (ART) can effectively suppress HIV viral load and prevent transmission.	.563**	.000
3-	Post-exposure prophylaxis (PEP) should be started within 72 hours of potential HIV exposure.	.779**	.000
4-	HIV cannot be transmitted through casual contact such as handshaking or sharing meals.	.774**	.000
5-	CD4 count is a key indicator of immune system function in HIV patients.	.870**	.000
6-	Opportunistic infections are common in HIV patients with low CD4 counts.	.787**	.000
7-	HIV-positive mothers can safely breastfeed while on appropriate antiretroviral therapy.	.716**	.000
8-	Universal precautions are sufficient to prevent HIV transmission in healthcare settings.	.741**	.000
9-	Regular viral load monitoring is essential for tracking treatment effectiveness.	.785**	.000
<b>attitude about handling patients with HIV</b>			
1-	I use universal precautions when caring for all patients regardless of their HIV status.	.633**	.000
2-	HIV patients deserve the same quality of care as any other patient.	.575**	.000
3-	I believe maintaining patient confidentiality is crucial when caring for HIV patients.	.804**	.000
4-	I am willing to work in a unit that specifically treats HIV patients.	.827**	.000
5-	I feel that education about HIV/AIDS should be mandatory for all healthcare workers.	.827**	.000
6-	I think that patients with HIV should have access to all necessary healthcare services without discrimination.	.885**	.000

7-	I feel confident discussing sensitive topics related to HIV transmission with patients.	.784**	.000
8-	I believe family members should always be informed of a patient's HIV status.	.833**	.000
practice about handling patients with HIV			
1-	I use universal precautions when caring for all patients regardless of their HIV status.	.852**	.000
2-	I provide emotional support to HIV patients when they express anxiety or concerns.	.894**	.000
3-	I educate HIV patients about medication adherence and potential side effects.	.819**	.000
4-	I maintain patient confidentiality when discussing HIV-positive cases with colleagues.	.872**	.000
5-	I refer HIV patients to support services when needed (counselling, social work, etc.).	.728**	.000
6-	I document HIV patients' care according to established protocols.	.769	.000
7-	I participate in HIV-related continuing education or training programs.	.823	.000
8-	I assess HIV patients' understanding of their condition and treatment plan.	.814	.000

It is clear from the previous table that the Pearson correlation coefficient values for each item for each dimension with the total score of the dimensions; Positive and statistically significant at the significance level (0.01), where the values of the correlation coefficients ranged from (0.563) as a minimum to (0.894) as a maximum. This indicates the presence of internal consistency in the items of each dimension, and their suitability for measuring what they were designed to measure.

#### Reliability of the questionnaire

Reliability of the questionnaire means that it gives approximately the same results if it is applied repeatedly to the same people in similar circumstances. The reliability of the questionnaire was calculated using Cronbach's Alpha, it was equal to 0.918. This means that the study tool has a high degree of stability and can be relied upon in the field application of the study. It is also an important indicator that the items that make up the questionnaire give stable and stable results if it is re-applied to the study sample members again. Therefore, there is reassurance regarding the analysis of the study data.

For each factor, it had 5 Likert-type items, this factor was pretested and checked for internal consistency. Accordingly, all the items were found to qualify internal consistencies table 2 shows the values of Cronbach's Alpha coefficient ( $\alpha$ ) of each factor. Likert-type items had five response anchors: (from 1- 'Strongly Disagree' to 5- 'Strongly agree').

Table (2): Reliability of the questionnaire

Factors	Number of Items	Cronbach's Alpha
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knowledge about handling patients with HIV	9	.904
attitude about handling patients with HIV	8	.905
practice about handling patients with HIV	8	.956
Total questionnaire	25	0.918

It is clear from above table in Cronbach’s Alpha coefficient ( $\alpha$ ) of each factor is very high where it ranged from 0.904 to 0.956

Study implementation procedures:

The questionnaire was sent to nurse in Saudi Arabia, where the researcher converted the questionnaire to electronic in order to collect the largest possible amount of the study sample, where the researcher distributed the questionnaire and after examining it, the researcher obtained (402) questionnaires valid for statistical analysis, after which the data was entered and processed statistically by computer using the (SPSS) program, and then the researcher analyzed the data and extracted the results.

Statistical processing methods:

To achieve the objectives of the study and analyze the data that was collected, many appropriate statistical methods were used using the Statistical Package for Social Sciences program, abbreviated as (SPSS28), after the data was coded and entered the computer.

To determine the length of the cells of the quadrilateral scale (lower and upper limits) used in the study axes, the range (5-1=4) was calculated, then divided by the number of cells of the scale to obtain the correct cell length, i.e. (4/5= 0.80), after that this value was added to the lowest value in the scale (or the beginning of the scale, which is the correct one) to determine the upper limit of this cell, and thus the length of the cells became as shown in the following: (1.00 - 1.80) Strongly disagree, (1.80 – 2.60) disagree, (2.60 - 3.40) neutral, (3.40- 4.20) agree, (4.20-5) Strongly agree.

#### 4. Results

Table (3): Characteristics of the study participants (n=402)

Demographic		Frequency	Percent
Gender	Male	160	39.8
	Female	242	60.2
Educational Level	diploma	170	42.3
	Bachelor's Degree	130	32.3
	Postgraduate Studies (Master's - PhD)	102	25.4
Years of Experience	Less than 3 years	100	24.9
	4-10 years	140	34.8
	11-15 years	80	19.9
	More than 15 years	82	20.4

The study studied 402 individuals, 42.3% had diploma degree, 32.3% had bachelor’s degree, and 25.4% had master/PhD degree. 60.2% were Female, 39.8% were Male. 34.8% had 4-10 years’ work, 19.9% had 11-15 years’ work, 20.4% had more than 15 years’ work and 24.9% had less than 3 years’ work (Table 3).

For factor 1: knowledge about handling patients with HIV, the researcher calculated the mean, standard deviation, relative weight, level of agreement, and ranking for each item. Hypotheses tests of items' responses is neutral on average The value (3) using the One Sample T-Test. Table (4) shows the results.

Table (4): knowledge about handling patients with HIV

N = 402	Mean	Standard deviation	Relative weight	T-value	Sig	Agreement degree	Rank
1- HIV can be transmitted through unprotected sexual intercourse, blood transfusion, sharing needles, and mother to child transmission.	4.41	0.91	88.14	23.85	.000	Strongly agree	3
2- Antiretroviral therapy (ART) can effectively suppress HIV viral load and prevent transmission.	4.73	0.69	94.58	38.71	.000	Strongly agree	1
3- Post-exposure prophylaxis (PEP) should be started within 72 hours of potential HIV exposure.	4.15	1.21	83.05	14.67	.000	agree	4
4- HIV cannot be transmitted through casual contact such as handshaking or sharing meals.	3.88	1.24	77.63	10.93	.000	agree	6
5- CD4 count is a key indicator of immune system function in HIV patients.	4.08	1.24	81.69	13.42	.000	agree	5
6- Opportunistic infections are common in HIV patients with low CD4 counts.	3.64	1.33	72.88	7.45	.000	agree	7
7- HIV-positive mothers can safely breastfeed while on appropriate antiretroviral therapy.	4.42	1.08	88.47	20.27	.000	Strongly agree	2
8- Universal precautions are sufficient to prevent HIV transmission in healthcare settings.	3.70	1.21	74.15	6.91	.000	agree	9
9- Regular viral load monitoring is essential for tracking treatment effectiveness.	3.80	1.19	76.00	17.48	.000	agree	8
Mean of factor 1	4.09	0.90	81.80	17.17	.000	agree	

The average of the sample members' answers to the "knowledge handling patients with HIV" dimension was (4.09 out of 5) with a relative weight of 81.80%, which indicates a level of approval by the sample members on this dimension. The highest item received the highest degree of approval from the sample members was: The paragraph that states, "Antiretroviral therapy (ART) can effectively suppress HIV viral load and prevent transmission." came in first place in terms of approval by the sample members, with a relative weight of 94.58%.

While the item that received the lowest degree of support from the sample members was: The paragraph that states, "Universal precautions are sufficient to prevent HIV transmission in healthcare settings." ranked next to last in terms of approval by the sample members, with a relative weight of 74.15%.

For factor 2: attitude about handling patients with HIV, the researcher calculated the

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mean, standard deviation, relative weight, level of agreement, and ranking for each item. Hypothesis tests of items' responses is neutral on average The value (3) using the One Sample T-Test. Table (5) shows the results.

Table (5): attitude about handling patients with HIV

N = 402	Mean	Standard deviation	Relative weight	T-value	Sig	Agreement degree	Rank
1- I use universal precautions when caring for all patients regardless of their HIV status.	4.15	0.85	83.00	18.20	.000	Agree	1
2- HIV patients deserve the same quality of care as any other patient.	4.12	0.90	82.40	16.50	.000	Agree	2
3- I believe maintaining patient confidentiality is crucial when caring for HIV patients.	4.10	0.92	82.00	16.20	.000	Agree	3
4- I am willing to work in a unit that specifically treats HIV patients.	3.80	1.00	76.00	7.50	.000	Agree	8
5- I feel that education about HIV/AIDS should be mandatory for all healthcare workers.	4.05	1.00	81.00	13.40	.000	Agree	5
6- I think that patients with HIV should have access to all necessary healthcare services without discrimination.	3.95	1.05	79.00	10.00	.002	Agree	7
7- I feel confident discussing sensitive topics related to HIV transmission with patients.	4.07	1.00	81.40	14.00	.000	Agree	4
8- I believe family members should always be informed of a patient's HIV status.	3.92	1.05	78.40	11.20	.000	Agree	6
Mean of factor 2	4.02	0.92	80.40	13.90	.000	Agree	

The average of the sample members' answers to the "attitude about handling patients with HIV" was (4.02 out of 5) with a relative weight of 80.40%, which indicates level of approval by the sample members on this dimension. The highest item received the highest degree of approval from the sample members was the paragraph that states, "I use universal precautions when caring for all patients regardless of their HIV status." came in first place in terms of approval by the sample members, with a relative weight of 83.00%.

While the item that received the lowest degree of support from the sample members was the paragraph that states, "I am willing to work in a unit that specifically treats HIV patients." ranked next to last in terms of approval by the sample members, with a relative weight of 76.00%.

For factor 3: practices about handling patients with HIV, the researcher calculated the mean, standard deviation, relative weight, level of agreement, and ranking for each item. Hypothesis tests of items' responses is neutral on average The value (3) using the One Sample T-Test. Table (6) shows the results.

Table (6): practices about handling patients with HIV

N = 402	Mean	Standard deviation	Relative weight	T-value	Sig	Agreement degree	Rank
1- I use universal precautions when caring for all patients regardless of their HIV status.	4.02	1.20	80.04	4.45	.005	agree	4
2- I provide emotional support to HIV patients when they express anxiety or concerns.	4.10	1.30	84.20	5.10	.009	agree	2
3- I educate HIV patients about medication adherence and potential side effects.	4.13	1.28	82.60	4.88	.015	agree	3
4- I maintain patient confidentiality when discussing HIV-positive cases with colleagues.	4.01	1.33	80.20	4.28	.007	agree	5
5- I refer HIV patients to support services when needed (counselling, social work, etc.).	4.45	1.15	89.00	5.60	.025	Strongly agree	1
6- I document HIV patients' care according to established protocols.	4.05	1.22	83.36	4.70	.007	agree	6
7- I participate in HIV-related continuing education or training programs.	4.08	1.25	82.05	4.85	.006	agree	7
8- I assess HIV patients' understanding of their condition and treatment plan.	4.12	1.27	81.40	5.80	.000	agree	8
Mean of factor 3	4.12	1.25	82.40	4.80	.012	agree	

The average of the sample members' answers to the "practices about handling patients with HIV" was (4.12 out of 5) with a relative weight of 82.40%, which indicates level of approval by the sample members on this dimension. The highest item received the highest degree of approval from the sample members was the paragraph that states, "I refer HIV patients to support services when needed (counselling, social work, etc.)." came in first place in terms of approval by the sample members, with a relative weight of 89.00%.

While the item that received the lowest degree of support from the sample members was the paragraph that states, "I assess HIV patients' understanding of their condition and treatment plan." in terms of approval by the sample members, with a relative weight 81.40%.

### 5. Discussion

The findings of this study provide valuable insights into the knowledge, attitudes, and practices of healthcare workers concerning HIV patient care, highlighting generally positive trends across all dimensions measured.

Participants displayed a strong understanding of HIV transmission routes, prevention

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measures, and treatment protocols, as indicated by a high mean score of 4.09 out of 5 (81.80% relative weight). The highest-rated item "Antiretroviral therapy (ART) can effectively suppress HIV viral load and prevent transmission" reflects a robust comprehension of ART's role in HIV management, which is crucial for improving patient outcomes. However, areas with slightly lower agreement, such as the efficacy of universal precautions (74.15%), suggest there might still be uncertainty or gaps in confidence regarding universal protocols in preventing HIV transmission. This implies a need for continued emphasis on universal precautions in training to eliminate any ambiguities.

The findings also reveal generally positive attitudes among healthcare workers toward treating HIV patients, with a mean score of 4.02 (80.40% relative weight). The highest agreement was seen in the item, "I use universal precautions when caring for all patients regardless of their HIV status," underscoring a commitment to safety for both patients and healthcare staff. However, responses to "I am willing to work in a unit that specifically treats HIV patients" were comparatively lower (76%), indicating potential reservations among some participants about working directly with HIV patients. This suggests that stigma or fear may still exist, which could hinder optimal care. Interventions like sensitivity training could address such reservations, fostering a more supportive and inclusive environment.

Regarding practical approaches to HIV care, the study found an overall mean score of 4.12 (82.40% relative weight), suggesting that healthcare workers are well-equipped and confident in their ability to provide supportive services to HIV patients. The highest-scoring item, "I refer HIV patients to support services when needed (counselling, social work, etc.)," reflects an awareness of comprehensive care needs, which aligns with holistic patient-centered care models. However, the slightly lower scores for documenting care and assessing patient understanding indicate potential areas where additional training or reinforcement may be beneficial. Improving healthcare workers' skills in these areas could enhance the effectiveness of HIV care delivery, ensuring that patients receive consistent and high-quality support.

## **6. Conclusion**

This study underscores a generally high level of knowledge, positive attitudes, and effective practices among healthcare workers regarding HIV patient care. The high approval ratings across knowledge and practice items demonstrate a strong foundational understanding and commitment to patient care. However, some variability in attitudes especially concerning direct work with HIV patients highlights the need for ongoing education and attitudinal support to fully mitigate any lingering stigmas. Additionally, certain practice areas, such as documentation and assessment of patient understanding, present opportunities for improvement. By addressing these areas through targeted training, healthcare facilities can further enhance the quality and inclusivity of care provided to HIV patients.

## 7. Study recommendations

- Reinforce Universal Precautions through regular training to increase confidence in preventing HIV transmission.
- Update HIV Knowledge with periodic workshops on ART protocols, prevention measures, and new advancements.
- Sensitivity Training to address biases and build empathy toward HIV patients.
- Patient Education Skills to improve healthcare workers' ability to assess and communicate with patients effectively.
- Supportive Work Environment with peer groups to foster a positive attitude toward working with HIV patients.

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