Evaluation of Nurses' Attitudes toward Human Immuno Deficiency

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KEYWORDS

Evaluation , Nurses', Attitudes, Human Immuno Deficiency.

ABSTRACT

Background: HIV nursing protocols, including rapid HIV testing, face weaknesses such as improper data collection and ambiguity. To reduce stigmatization, interventions should promote the adoption of nursing practices that influence stigmatization experiences. The International Nursing Network for HIV Research recommends collaboration, global partnerships, and scientific work to increase nurses' impact in HIV research. Nurses' experiences with HIV/AIDS patients can impact their health and the spread of the virus. Barriers to HIV treatment include lack of knowledge, demotivation, resistance, and lack of adherence to treatment guidelines. Nurse involvement in HIV prevention is crucial for improving patient outcomes.

Objective(s): This study aims to evaluate nurses' attitudes toward human Immuno deficiency.

Methodology: A quasi-experimental design was conducted in 7 January 2024 to 7 May 2024, The study at Al Musayyib General Hospital in Babylon, Iraq, involved 100 nursing professionals in a health education program. The program aimed to improve nurses' understanding and attitudes towards HIV/AIDS. The program's effectiveness was assessed through questionnaires.

Results: The study found that nurses aged 23-less than 30 years, predominantly female, had moderate attitudes towards the human immunodeficiency virus. However, there was no significant relationship between nurses' attitudes and sociodemographic variables or professional variables such as education, years of experience, knowledge development, or participation in training courses. The majority of nurses were urban residents.

Conclusion: Healthcare professionals should therefore follow national infection prevention guidelines when working in hospitals. To increase nurses' understanding and proficiency in this area, policy designers ought to train them in infection prevention. Further research should include a qualitative study in order to obtain more detailed information.

Recommendation: Institutions may enhance their knowledge of HIV care practices by conducting frequent training sessions for nursing staff, personalizing instructional materials, gauging and reviewing attitude levels, encouraging peer learning, and expanding the scope of research. In order to provide effective HIV care, this will assist nurses in expanding their knowledge and adjusting their attitude.

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1. Introduction

Protocols, for HIV nursing care entail overseeing patients undergoing HIV testing, which includes conducting sessions providing post test counseling and delivering individual test results [1]. However the nursing teams performance has been criticized for issues like data collection, uncertainty in protocol execution and a lack of confidence in carrying out the procedures [2].

To combat HIV related stigma among nurses working in specialized healthcare settings interventions are essential to encourage nursing practices that can positively impact the experiences of people living with HIV (PLHIV) [3]. The International Nursing Network for HIV Research suggests forming teams establishing partnerships and disseminating robust scientific findings to enhance the role of nurses in HIV research. Furthermore healthcare providers should possess an understanding of HIV transmission risks to effectively administer exposure prophylaxis after sexual assault [4].

Clinical guidelines for managing HIV in nursing may vary based on circumstances and available resources. In settings with resources personalized decisions regarding therapy (ART) mode of delivery and breastfeeding must be made considering factors such, as the patients viral load and socioeconomic status [5].

Nurses, in healthcare settings not specialized in HIV care showing prejudice towards individuals with HIV is a concern that can have effects on the well being of those living with the virus and its transmission [6]. Strategies to reduce stigma among nurses should take into account the environments in which they are being implemented. In care settings providing care for individuals with HIV includes managing therapy, potential drug interactions and associated complications like insulin resistance and prolonged QT intervals [7]. The management of HIV infections involves administering therapy to both the mother during pregnancy and, to the child post delivery with established guidelines available to assist healthcare providers [8].

Nursing challenges in HIV care include the need for a variety of physical, psychological, social, and spiritual interventions to have a real impact on patients. Nursing students may have misconceptions and biases towards HIV/AIDS patients, including fear of contracting HIV through clinical practice. There is still stigma associated with HIV/AIDS, and students expressed concerns about interacting with affected individuals in various settings.

Healthcare providers should engage patients with diligence in the HIV care cascade process, considering the clinical, social, and emotional vulnerability of patients with HIV [9]. Iranian nurses who were caring for HIV patients report high rates of anxiety, worry, and lack of self-confidence due to the disease and its potential effects. Enhanced attitudes, emotions, and self-confidence in caring for HIV patients may be achieved via providing nurses with the right education and training [10].

There are several challenges that nurses face when it pertains to HIV treatment. These include a lack of knowledge and confidence, work demotivation, patients' resistance to changing medication regimens, difficulties with follow-up, ineffective leadership at the facility, medication shortages, staffing constraints, and the inability to track laboratory results [11]. Additionally, socioeconomic variables, scarce resources, stigma and discrimination, and restricted access to healthcare services are additional obstacles [12] [13].

In addition, factors affecting HIV/AIDS stigma in nursing students include sexual experience and attitude [14]. Nurses' knowledge on post-exposure prophylaxis (PEP) for HIV is also a barrier, with less than half having knowledge about appropriate treatment regimen, antiretroviral drugs used for PEP, and effectiveness of PEP [15] [16].

Additional obstacles include nurses' anxiety with following tuberculosis and HIV treatment protocols, as well as their dissatisfaction with the protocols themselves, a lack of enthusiasm, inadequate clinical supervision and support, aversion to change, and ignorance [17] [18].

Nurse involvement in HIV prevention is key for reducing new infections and improving patient outcomes. Nurses have been shown to be effective in providing HIV prevention services such as pre-exposure prophylaxis (PrEP) [19]. Nurse-led HIV prevention services have been established to address limited access points for PrEP care, and patients have expressed positive attitudes towards nurses as experts in sexual healthcare. Identification of HIV-positive pregnant women, referral and relationship to treatment, and prescription of antiretroviral medication are all part of the nurse's role in preventing and eliminating perinatal HIV transmission [20].

2. Methodology

Study design

The research was carried out at Al Musayyib General Hospital, in Babylon city, Iraq using a quasi-experimental design that included control and manipulation elements but avoided randomization. The study involved pretest and posttest evaluations for both the control and study groups. It took place from 7 January 2024 to 7 May 2024 involving a total of 100 nursing.

Study sample

Participants were chosen using a non- probability convenience sampling method resulting in a group

of 100 nurses from the hospital. These nurses were evenly split into two groups; one group underwent a health education program consisting of 50 nurses from the morning shift while the other group comprised 50 nurses from the night shift who did not take part in the program.

Inclusion and Exclusion Criteria

Initially 129 nurses expressed interest in participating. However adjustments were made to finalize the sample size at 100 after some exclusions during the assessment need , pilot phase and dropouts due to refusal to participate.

To assess knowledge gaps, a structured survey containing 15 questions and an interview session lasting, between 15 to 25 minutes were conducted to evaluate attitudes through questions.

Data collection

Before embarking on the process of data collection, the researcher has made the arrangements required for obtaining the study samples from Al Musayyib General Hospital in Babylon City, to assess nurses' attitudes toward human immuno deficiency. The data were collected during the period from 7 January 2024 to 7 May 2024 , through the utilization of the self-administration questionnaire as a means of data collection from Al Musayyib General Hospital in Babylon City.

Education Program

The program, based on initial assessment results and following recommendations from organizations like WHO, CDC, UNCIE and HIV.gov aimed to improve nurses understanding and attitudes towards HIV. Covering topics such as transmission methods, pathophysiology, risk factors, symptoms, complications, diagnostic procedures, treatment options and preventive measures. This program took place from 28 January to 26 February in the year 2024.

Instrument

To assess the effectiveness of this initiative a questionnaire was given to nurses before and after the program focusing on their knowledge, attitudes and views on HIV. This questionnaire was designed by Zekeriya GOKTAS and was approved by the questionnaire's founder for use in my research (Zekeriya,2012)(24). That consisted of with two sections; Socio-demographic Characteristics and nurses' attitude toward human immuno deficiency virus.

Nurses' Perspectives on Human Immunodeficiency Virus

The evaluation of nurses perspectives was included in the section of the questionnaire which consisted of 11 items rated on a three point Likert scale; Agree (3) Neutral (2) Disagree (1) with items, like 1, 2 3 9,10 and11 being reverse scored.

Each item was assigned a rating based on its domain. The total scores were added up and presented as percentages. The attitude scale was crafted to capture responses allowing for an assessment of nurses attitudes.

The scores were evaluated as percentages of the score calculated within the range from the lowest, to scores. The overall attitude score was divided into three categories; Low (11. 18.33) Moderate (18.34. 25.67) and High (25.68. 33). Furthermore each items attitude level was determined by establishing the threshold for the score categorizing them into Low (1 – 1.66) Moderate (1.67 – 2.33) and High (2.34 – 3) levels.

Data Analysis

The data of the present study was analyzed electronically via the Statistical program (SPSS) version 26. The method used in this program aimed to find out the descriptive and inferential statistics ,by entering data to achieve the objectives of the study.

Ethical consideration

Ethical approval was obtained from ethical committee of research in the Faculty of Nursing/University of Baghdad before conducting the study in(22/11/2023), from the study's chosen community, explain the primary goal of the study and the objectives for the study's sample. Participants in both study and control groups received informed consent form which were distributed to the participants to obtain their writer permission to conduct the study whether they agree or refused to participate in the study, They also had been informed that they could withdraw from the study at any time. Emphasis was placed on creating a suitable environment during interview

3. Result and Discussion

The results in table (1) shows that nurses are with age group of "23-less than 30" years as reported among 62% of them in the study group and 72% of them in the control group. Regarding gender of nurses, more than half of nurses are females as reported among 66% of them in the study group and 54% in the control group. The marital status refers to married among 58% of nurses in the study group and unmarried among 46% in the control group. Concerning residency, more of nurses are resident in urban as reported by 82% nurses in the study group and 86% in the control group.

Table (1): Distribution of Participants according to their Socio-demographic Characteristics. No: Number, f: Frequency, %: Percentage.

No.	Characteristics		Study group		Control group	
			f	%	f	%
1	**Age (year)**	23 – less than 30	31	62	36	72
		30 – less than 40	11	22	11	22
		40 – less than 50	8	16	3	6
		50 and more	0	0	0	
		Total	***50***	***100***	***50***	***100***
2	**Gender**	Male	17	34	23	46
		Female	33	66	27	54
		Total	***50***	***100***	***50***	***100***
3	**Marital status**	Unmarried	14	28	23	46
		Married	29	58	19	38
		Divorced	7	14	5	10
		Widowed/er	0	0	3	6
		Total	***50***	***100***	***50***	***100***
4	**Residency**	Rural	9	18	7	14
		Urban	41	82	43	86

	Total	***50***	***100***	***50***	***100***

No: Number, f: Frequency, %: Percentage

The results of Distribution of Participants according to their Professional Characteristics shown in table (2) reveals that 44% of nurses in the study group and 50% in the control group are graduated with bachelor degree in nursing.

The years of experience refers to "1-less than 6" years as reported by 54% of nurses in the study group and 62% in the control group.

More of nurses reported that they are developing their knowledge about human immunodeficiency virus as reported by 70% of them in the study group and 68% in the control group; the sources of knowledge are highly referred to experienced nurses (study=24% and control= 28%), Facebook (study=16% and control= 16%), health care provider (study= 14% and control= 10%), and google scholar (study= 10% and control=10%).

Regarding participation in training courses, 90% of nurses in the study group and 90% in the control group is reported that they didn't participated in training courses.

Table (2): Distribution of Participants according to their Professional Characteristics

No.	**Characteristics**		**Study group**		**Control group**	
			F	**%**	**f**	**%**
1	**Level of education in nursing**	Secondary school	10	20	7	14
		Diploma	17	34	17	34
		Bachelor	22	44	25	50
		Postgraduate	1	2	1	2
		Total	***50***	***100***	***50***	***100***
2	**Years of experience**	1 – less than 6	27	54	31	62
		6 – less than 11	11	22	13	26
		11 - less than 16	9	18	5	10
		16 and more	3	6	1	2
		Total	***50***	***100***	***50***	***100***
3	**Developing knowledge**	No	15	30	16	32
		Yes	35	70	34	68
		Total	***50***	***100***	***50***	***100***
4	**Sources of knowledge**	None	15	30	16	32
		Facebook	8	16	8	16
		Google scholar	5	10	5	10
		Library	3	6	2	4
		Health care provider	7	14	5	10
		Experienced nurses	12	24	14	28
		Total	***50***	***100***	***50***	***100***
5	**Participate in training course**	No	45	90	45	90
		Yes	5	10	5	10
		Total	***50***	***100***	***50***	***100***

No: Number, f: Frequency, %: Percentage

Table (3) presents the items of nurses' attitude toward human immunodeficiency virus; the findings in the study group reveal that nurses hold moderate attitude toward human immunodeficiency virus among most of items during pretest while they hold high attitude among most of items during

posttest. The findings in the control group reveal that nurses hold moderate attitude among most of items during pretest and posttest.

Table (3): Assessment of Nurses' Attitude toward Human Immunodeficiency Virus among the Study and Control Group

List	Attitude	Scale	Study Group (N=50)						Control Group (N=50)					
			Pre-test			Post-test			Pre-test			Post-test		
			f (%)	M	Ass.	f (%)	M	Ass.	f (%)	M	Ass.	f (%)	M	Ass.
1	I think that Human Immunodeficiency Virus (HIV) is not a serious public health problem.	**Agree**	11(22)	2.18	Moderate	15(30)	2.12	Moderate	11(22)	2.18	Moderate	28(56)	1.64	Low
		Neutral	19(38)			14(28)			19(38)			12(24)		
		Disagree	20(40)			21(42)			20(40)			10(20)		
2	I think that People with Human Immunodeficiency Virus (HIV) should be banned from working.	**Agree**	18(36)	1.80	Moderate	17(34)	1.90	Moderate	18(36)	1.86	Moderate	20(40)	2.24	Moderate
		Neutral	24(48)			21(34)			21(42)			19(38)		
		Disagree	8(16)			12(24)			11(22)			11(22)		
3	I feel that Social contact with people infected with Human Immunodeficiency Virus (HIV) is dangerous.	**Agree**	28(56)	1.64	Low	0(0)	1.96	Moderate	29(58)	1.56	Low	18(36)	1.80	Moderate
		Neutral	12(24)			2(4)			14(28)			24(48)		
		Disagree	10(20)			48(96)			7(14)			8(16)		
4	I think that People with Human Immunodeficiency Virus (HIV) should inform others about their illness.	**Disagree**	11(22)	2.18	Moderate	0(0)	2.94	High	3(6)	2.72	Good	1(2)	2.90	Good
		Neutral	19(38)			3(6)			8(16)			3(6)		
		Agree	20(40)			47(94)			39(78)			46(92)		
5	Individuals who are infected with Human Immunodeficiency Virus (HIV) require assistance, treatment, and support.	**Disagree**	20(40)	2.24	Moderate	0(0)	3.00	High	18(36)	1.80	Moderate	29(58)	1.56	Low
		Neutral	19(38)			0(0)			24(48)			14(28)		
		Agree	11(22)			50(100)			8(16)			7(14)		
6	HIV prevention education should be made	**Disagree**	11(22)	2.18	Moderate	0(0)	2.98	High	1(2)	2.90	Good	3(6)	2.72	Good
		Neutral	19(38)			1(2)			3(6)			8(16)		
		Agree	20(40)			49(98)			46(92)			39(78)		

	available to all nurses.													
7	It is preferable to provide individuals with HIV-related health education, which should include details on disease prevention.	**Disagree** **Neutral** **Agree**	11(22) 19(38) 20(40)	2.18	Moderate	0(0) 1(2) 49(98)	2.98	High	4(28) 28(56) 18(36)	2.28	Moderate	11(22) 19(38) 20(40)	2.18	Moderate
8	Education-related organizations and associations ought to distribute literature in the form of books, brochures, or posters that educate on HIV and preventive measures for nurses.	**Disagree** **Neutral** **Agree**	11(22) 19(38) 20(40)	2.18	Moderate	0(0) 2(4) 48(96)	2.96	High	4(28) 28(56) 18(36)	2.28	Moderate	4(28) 28(56) 18(36)	2.28	Moderate
9	I don't want to share a home with someone who has HIV.	**Agree** **Neutral** **Disagree**	29(58) 16(32) 5(10)	1.52	Low	12(24) 24(48) 14(28)	2.04	Moderate	11(22) 19(38) 20(40)	2.18	Moderate	11(22) 19(38) 20(40)	2.18	Moderate
10	I don't want to provide health care to someone with HIV in the workplace.	**Agree** **Neutral** **Disagree**	11(22) 19(38) 20(40)	2.18	Moderate	12(24) 24(48) 14(28)	2.04	Moderate	9(18) 21(42) 20(40)	2.22	Moderate	9(18) 21(42) 20(40)	2.22	Moderate
11	I would have no sympathy for someone with HIV.	**Agree** **Neutral** **Disagree**	4(28) 28(56) 18(36)	2.28	Moderate	0(0) 2(4) 48(96)	2.96	Good	18(36) 24(48) 8(16)	1.80	Moderate	18(36) 24(48) 8(16)	1.80	Moderate

Ass: Assessment, M: Mean, (Low=1 – 1.66, Moderate= 1.67 – 2.33, High= 2.34 – 3).

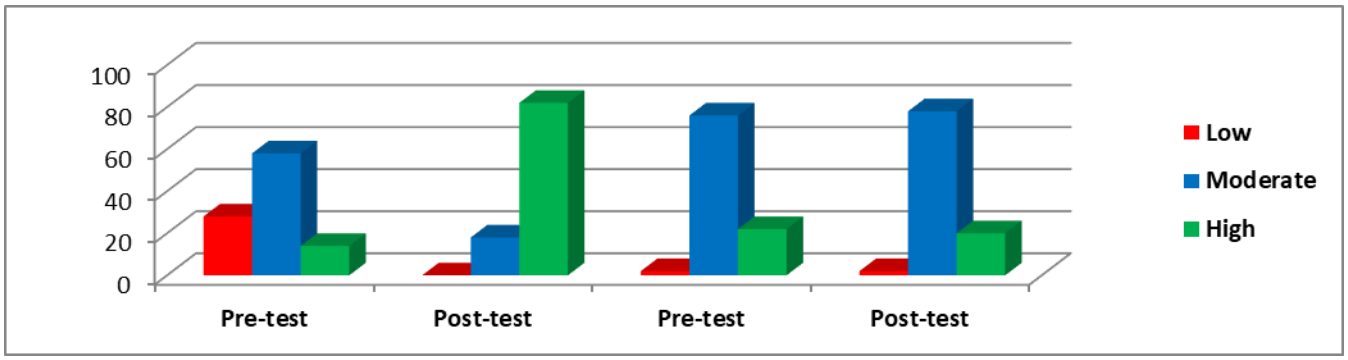
Table (4) presents the overall assessment of nurses' attitude toward human immunodeficiency virus; the findings reveals that nurses in the study group associated with moderate attitude (neutral) during the pretest (58%, M±SD= 22.80 ± 3.886) while they are associated with high attitude (positive) during the posttest (82%, M±SD= 28.10 ± 2.401) that indicate the significant changes in their attitude. The nurses in the control group are associated with moderate attitude (neutral) during the pretest (76%, M±SD= 26.40 ± 2.691) and posttest (78%, M±SD= 23.40 ± 2.619) that indicate no significant change in their attitude.

Table (4): Overall Assessment of Nurses' Attitude about Human Immunodeficiency Virus among Study and Control Group

	Study Group (N= 50)	**Control Group (N= 50)**

Levels of Attitudes	Pre-test				Post-test				Pre-test				Post-test			
	f	%	M	SD	f	%	M	SD	f	%	M	SD	f	%	M	SD
Low	14	28	22.80	3.886	0	0	28.10	2.401	1	2	26.40	2.691	1	2	23.40	2.619
Moderate	29	58			9	18			38	76			39	78		
High	7	14			41	82			11	22			10	20		
Total	***50***	***100***			***50***	***100***			***50***	***100***			***50***	***100***		

f: Frequency, %: Percentage, M: Mean of total score, SD Standard deviation
Low= 11 - 18.33, Moderate= 18.34 - 25.67, High= 25.68 - 33
This figure shows that nurses in the study group have moderate (neutral) attitude during the pretest (58%) that increased to high (positive) attitude during the posttest (82%), while those in control group show moderate (neutral) attitude during the pretest (76%) and posttest (78%).



Study group (N=50) Control group (N=50)

Figure (1): Levels of Nurses' Attitude toward Human Immunodeficiency Virus among Study and Control Group

Discussion

Table (1) show that the predominant age for nurses in the group refers to "23 to under 30" years.

The finding of the result of the study agree with a previous study that showed nurses, on average were 27.19 years with standard deviation (S.D.) (6.22)(29).

In regards to the gender refers to that females dominated both groups.

In agreement with the findings of the present study, In agreement with the findings of the present study, The majority of the nurses respondents were females (92%)(30).

In regards to the marital status, more nurses are married as reported in the more than half in the study group and more nurses are unmarried that less than half in the control group .

These results agree with a study in southeastern the United States with high HIV incidence and prevalence, who showed that (53%) of nurses get married(31). These results also disagree with the study since the majority of their 244 individuals (65.2%) were single(29).

Regarding where they lived most participants in percentage more than half from both groups came from urban areas.

These findings agree with a study done by El-Aty & Mahmoud who stated that most of the participants were lived in urban as permanent residency area in their study(32).

Table (2) show, in regarding of highest percentage regarding level of education in nursing refers to "bachelor degree" in more than half of nurses in the study group.

Regarding to the professional characteristics the results of this study agree with another previous study that showed nurses with Aged 26 to 40 years ,The majority of the respondents were females (92%),

attained a Bachelor's degree in Nursing (60.6%)(32).

In regards to the years of experience, in the both group in which more than half of them seen with "1 to 6" years of experience.

These findings are agree with a study done by Adel in Addis Ababa, Ethiopia. (36.2) of participants with experience in the health field ranged 3 months- 3 years(32).

Regarding to the development in knowledge, both groups showed a level of interest in knowledge development activities with 70% of the study group and 68% of the control group engaging in pursuits.

This finding agrees with a study done by El-Aty & Mahmoud who stated that most of the study sample were get information from peers in hospitals as a source of information in their study(32).

In regarding the training, disparity with 90% of participants in both groups having not taken part in any training sessions.

A study that was conducted in Nigeria discovered that none of the participants had gotten any training about the subject matter of the study other than what they had acquired in their fundamental nursing schools(33).

After the phase, the group being studied showed a mix of attitudes ranging from low to moderate toward statements regarding HIV. Particularly noteworthy was their agreement, with stigmatizing views, such as the belief that people with HIV should be banned from working and the fear of interaction with those infected. These attitudes raise concerns as they could lead to behaviors in healthcare settings as illustrated in Table (3).

Following the intervention there was a shift in the group's attitudes reflected by an increase in agreement with positive statements about individuals living with HIV. This included recognizing the need for support, treatment and care; as emphasizing the importance of HIV prevention education for all nurses. The average scores elevated to the 'High' level in statements indicating an enhancement in attitudes toward providing care and support to people affected by HIV.

In contrast for the control group who did not undergo the program, their attitudes remained largely unchanged. This indicates that without targeted interventions like education programs nurses' perceptions towards HIV might remain stagnant or even perpetuate forms of stigma, showing in table(4),figure(1).

The impact of the initiative on the study group highlights how such interventions are crucial in combating stigma and nurturing an environment, for healthcare professionals and patients alike. The rise, in perceptions of individuals with HIV may have effects on how patients are treated work relationships and public health as a whole.

This research supports the notion that education can play a role in shifting attitudes regarding HIV. It is consistent, with existing literature indicating that informed healthcare professionals tend to provide top-notch care for individuals affected by HIV.

Training healthcare workers as opinion leaders was effective in reducing avoidance intent and prejudicial attitudes and improving compliance with universal precautions, indicating a successful strategy for reducing HIV-related stigma in healthcare settings [21].

The "HIV-related stigma-reduction workshop" in India improved knowledge and attitudes among healthcare providers and students, showing a significant post-intervention improvement in attitudes across all groups [22]. A scoping review emphasized the effectiveness of professionally-assisted peer group interventions, modular interactive training, and empowerment in reducing HIV-related stigma [23]. A study analyzed the levels of stigma and judgment toward PLHIV among healthcare workers, revealing that higher education levels were associated with lower judgmental beliefs, while higher perceptions of coworker stigmatizing behaviors were associated with holding judgmental beliefs [25]. An intervention in Vietnam employed a multi-pronged facility-level approach to reduce stigma and

discrimination at health facilities, leveraging routine measurement, team-based learning, root cause analysis, and tests of change [26]. According to Tafere et al., 2024 [27], the majority of nurses possessed good knowledge and practices. On the other hand, a significant percentage of nurses lacked infection prevention knowledge and practice. Years of work experience and the level of infection prevention training were related to the knowledge and practices of the nurses. In addition, nurses' educational attainment was found to be a predictor of their knowledge [28].

4. Conclusion and future scope

Healthcare professionals should therefore follow national infection prevention guidelines when working in hospitals. To increase nurses' understanding and proficiency in this area, policy designers ought to train them in infection prevention. Further research should include a qualitative study in order to obtain more detailed information.

Recommendation

Institutions may enhance their knowledge of HIV care practices by conducting frequent training sessions for nursing staff, personalising instructional materials, gauging and reviewing attitude levels, encouraging peer learning, and expanding the scope of research. In order to provide effective HIV care, this will assist nurses in expanding their knowledge and adjusting their attitude.

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[33] These findings agree with a study done by El-Aty & Mahmoud (2021) who stated that the greater portion of the study sample were female in their study aimed to evaluate the effect of educational intervention on nurses' knowledge, practice, and attitudes regarding Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome.

[34] These results agree with the findings of Adel et al (2023) in their study aims to o investigate the knowledge, attitude, and practice of human immunodeficiency virus (HIV) post-exposure prophylaxis (PEP) among healthcare workers in government hospitals in Addis Ababa, Ethiopia. The respondents' ages ranged from 20-60 years, with a mean age of 29.66 years. The majority, 208 (66.7%), were 20-29 years old.

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