

# Nursing Students` Knowledge and Attitude Regarding HIV/AIDS

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## Abstract

**Background:** There have been many cases of HIV/AIDS in Kurdistan Region-Iraq as mentioned by ministry of health in Kurdistan region-Iraq, and it is increasing every year. The HIV/AIDS Training is not involved formally in the program of the university. This investigation evaluated the knowledge and attitudes of nursing students` regarding HIV/AIDS in Erbil city.

**Aim:** To assess nursing students` knowledge about HIV/AIDS, who are future nurses, and to identify their attitudes toward HIV/AIDS.

**Methods:** A cross-sectional descriptive study was conducted with 217 Erbil medical technical nursing students both stages both genders in Erbil city-Iraq during the 2021-2022 academic year, they participated voluntarily to fill a questionnaire sheet knowledge and AIDS Attitude Scale (AAS) developed by the investigator.

**Results:** A total of 217 nursing students participated in the survey. Their age ranges from (19-28 years) with mean age  $21.69 \pm 4.6$  years, only 25 participants (11.5%) were having high knowledge regarding HIV/AIDS, and only 3 of participants (1.4%) had high attitudes toward HIV/AIDS.

**Discussion:** The majority of nursing students had medium knowledge of HIV/AIDS. Almost all of them have negative attitude toward HIV/AIDS. Though, for the high proportion (65.9%) of low attitudes and (32.7%) with medium attitudes of nursing students, a review of the recent instructive element on HIV/AIDS is essential. Minority of the nursing students have superior level of knowledge in regards to HIV/AIDS and disappointed number had positive attitudes in regards to HIV/AIDS.

**Conclusion:** Improving basic knowledge of nursing students regarding HIV/AIDS is essential, nonetheless also fighting against HIV/AIDS misconception. The current research illustrated that nursing students must learn more regarding HIV/AIDS. And the negative conception of HIV/AIDS by the upcoming nurses should be addressed to advance the quality of nursing care.

**Keywords:** HIV/AIDS, Knowledge, Attitude, Students, nursing, nursing students

## 1. BACKGROUND

Human Immunodeficiency Virus (HIV) remain as a public health problem. According to the WHO around 1.8 million people are infected in the glob newly, more than 36.5 million people are living with HIV, and around 1.6 million of them die annually 1,2.

Knowledge and attitudes regarding HIV/AIDS are parts of the main points in the fight against this syndrome 3,4. Education and training on HIV/AIDS increase the knowledge of prospective nurses and qualifies them to progress a positive attitude towards persons living with HIV/AIDS 5.

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### Access this article online

#### Quick Response Code:



**Website:**  
www.pnrjournal.com

**DOI:**  
10.47750/pnr.2022.13.04.008

Received date: 18 August 2022

Accepted: 17 September, 2022

Published: 10 October, 2022

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**How to cite this article:** Qadir H K, Nursing Students` Knowledge and Attitude Regarding HIV/AIDS, J Pharm Negative Results 2022;13(4):70-77.

Several prevention programs often emphasize on increasing knowledge regarding the transmission of HIV, ignoring other educational features 6,7,8,9 This eventually rises stigmatization of society living with HIV/AIDS 10,11.

Stigma is a negative and bad attitude towards persons presented with HIV; stigmatizing attitudes linked with misconception regarding the transmission of HIV 8,9,10. It is necessary to evaluate the attitudes and knowledge nursing students in regards to HIV/AIDS. This assessment will tolerate the establishment of suitable training regarding HIV/AIDS. Theses specific program will improve the performance of nursing students to better deal with persons with HIV positive.

Numerous researches have assessed information and attitudes of students about HIV/AIDS 12,13,14,15. Few studies were conducted in the developing countries to evaluate the familiarity and attitudes of medical undergraduate students regarding HIV/AIDS; Uganda 16, South Africa 17 and Botswana 18.

Research by Whalen et al. stated that medical students refused to deal with HIV/AIDS patients [19]. This refusal is an unacceptable attitude for future medical staff which demonstrates the extreme distress that HIV/AIDS increases. Recent studies have examined medical staffs' knowledge, fears, beliefs and attitudes regarding HIV/AIDS. Other researches have investigated the willingness of medical staffs to care for persons with HIV/AIDS 20,21. These investigations amply reveal the importance of develop educational programs on HIV/AIDS and the necessary to educate medical and nursing students in the care of people presented with HIV/AIDS 22.

If the knowledge' level of nursing students, future nurses regarding HIV/AIDS is insufficient, integrating this educational program into the curriculum in the faculty of nursing is essential. Improving knowledge of nurses will cause more positive attitudes and decrease stigma HIV/AIDS association 23.

HIV/AIDS knowledge amongst students of medical proficiency as seen in the literature, were identified as good or high level 20,23,24, and proper attitude toward HIV/AIDS 20,23,25,26. Other literatures in contrast have showed low knowledge of medical students regarding HIV/AIDS. 27,28,29,30,31,32.

To date no study have been conducted with nursing students in Erbil City /Kurdistan Region-Iraq. In this study, we aimed at evaluating the level of knowledge about HIV/AIDS and attitudes towards people living with HIV/AIDS among nursing students in Erbil City/ Kurdistan Region-Iraq.

## 2. METHODS

### 2.1. Design of study

A cross-sectional descriptive study design carried out to evaluate knowledge of nursing students regarding

## HIV/AIDS

### 2.2. Study instruments

modified questionnaire have been used for data collection, consisted of three parts:

Part one: include the demographic characteristics of the participate Students': {age, gender, residency (rural or urban), marital status, stage}

Part two: Questionnaire has consisted of (18) multiple-choice questions to evaluate knowledge of nursing students about HIV/AIDS and the answers were (True, False, and uncertain).

Part three: consisted of AIDS Attitudes Scale (AAS) which composed of (20) multiple-choice questions to assess the level of nursing students' attitudes towards HIV/AIDS and the answers were (Strongly disagree, Moderately disagree, Slightly disagree, Slightly agree, Moderately agree, and Strongly agree).

The questionnaire used for this research was created on obtainable literature 13,33, 34,35,36,37. Participants were asked not to discuss questions with their colleagues. If they had requests, they were encouraged to ask the investigator.

### 2.3. Data collection Method:

Data have been collected with the use of questionnaire plan by investigator through spreading questionnaire form copies to the participants using both English and Kurdish languages. The data were collected in Jan. 2022 to measure knowledge and attitudes of the attendance regarding HIV/AIDS.

All contributors were informed of the objective of the study and the involvement was anonymous and voluntary. Participants were asked to take their time around 30 minutes to answer the questionnaire completely. Prior to the start of the evaluation, the participants were informed of the technique of answering the questionnaire each part in detail to complete the form. Participants were asked After completion the investigator collected the answered sheets and then the data were entered to SPSS program for analyzing the data.

### 2.4. Sample of study

Convenient sampling method has been used to gather data from 265 out of 350 nursing students both genders were participated in this study which reveals more than 75% of the total population, 217 participants were filled the form completely and the others were excluded.

### 2.5. Setting of study

The study was conducted at Nursing department of Erbil Technical Medical Institute/Erbil polytechnic university/Erbil City/Kurdistan Region-Iraq.

## 2.6. Ethical considerations

Ethical attentions were a focal principle of data collection as the researcher obtained ethical consent from all participants individually before collecting information for this study.

## 2.7. Inclusion and exclusion criteria

Inclusion criteria: all students both genders and both stages of nursing department/ Erbil Technical Medical Institute/ Erbil Polytechnic University who accept to participate in this study.

Exclusion criteria: students who refuses to participate, and non-completed answers of the questionnaire have been excluded.

## 2.8. Statistical analyses

The questionnaire forms have been collected by the researcher and analyzed according to the research objectives. Within the knowledge part; a score '1' given for each correct respond, whereas the (don't know and incorrect) answers were assembled with '0' score; while within the attitude part, the scores of (1-6) were given for the choices as '1' reveals the lowest attitude and '6' indicates the highest attitude. Total marks were used to abundant the degrees of both attitudes and knowledges, then qualitative analysis was conducted to abundant (Good, Medium and Low scores). Consequently, the supreme probable score was 18 for the knowledge part and 120 for the attitude part in occasion of responding all the requests perfectly. Percentile of scores were determined, and for the knowledge scores < 60% (< 12) considered as (Low knowledge), the scores of (12-14) considered as (Medium knowledge) and scores  $\geq$  80% ( $\geq$  15) were measured as (High knowledge); while for

the attitude scores < 60% (< 72) considered as (Low attitudes), the scores of (72-95) considered as (Medium attitudes) and scores  $\geq$  80% ( $\geq$  96) were measured (High attitudes). The inclusive knowledge and attitudes of the investigation contributors were measured through the means of the overall score of each result adjusted on Bloom's cut-off point (60-80 percent). Measurement degree higher than the cut of point was considered as having high level of knowledge, and respectable attitude 38, 39, 40, 41. Inferential and descriptive statistics used with data base of Microsoft Excel conjointly with Statistical Package for Social Sciences (SPSS, Version 25) to find out the frequency and percentages of the demographic characteristics. Chi-square test were used to find out the association between the variables.

P-value were used to identify the relationship between the variables as followings:

P-value more than 0.05 indicates non-significant statistically relationship.

P-value equals or less than 0.05 indicates significant statistically relationship.

P-value equals or less than 0.01 indicates highly significant statistically relationship.

## 3. RESULTS

### 3.1. Demographic features of the participants:

The study data retrieval recognized 217 nursing students as the mean age of participants was 21.69 years  $\pm$  4.6 (range 19-28), 71% of participants were their age of 22 years or younger, 73.3% of them were male, 51.6 % were in there first class, and 82.5% were single. Table 1 precises the demographic features of the respondents.

**Table 1:** this table demonstrates the demographic characteristics of the nursing student participants.

Demographic characteristic	Frequency	%
Age groups		
19-22 years old	154	71
23 years and older	63	29
Total	217	100
Gender		
Male	159	73.3
Female	58	26.7
Total	217	100
Stage		
First stage	112	51.6
Second stage	105	48.4
Total	217	100
Marital status		
Married	38	17.5
Single	179	82.5
Total	217	100

### 3.2. Knowledge regarding HIV/AIDS among nursing student participants:

The current study represented only 25 nursing students 11.5% of the participants have high level of knowledge in

regards to HIV/AIDS, while 54.8% of them have moderate knowledge and 33.6% were presented with low knowledge as shown in table 2.

**Table 2:** this table demonstrates the frequency of the nursing student's knowledge regarding HIV/AIDS.

Total knowledge		
Scale	Frequency	%
Low knowledge	73	33.6
Medium knowledge	119	54.8
High knowledge	25	11.5
Total	217	100.0

### 3.3. Attitudes regarding HIV/AIDS among nursing student participants:

This research illustrates that almost none (3 nursing students 1.4%) of the participants have high attitudes toward patients

with HIV/AIDS, while most of them (143 nursing students 65.9%) were in low attitudes toward the HIV/AIDS patients as presented in table 3.

**Table 3:** this table presented the frequency and percentages of the participants attitudes toward HIV/AIDS.

Total attitudes		
Scale	Frequency	%
High attitudes	3	1.4
Medium attitudes	71	32.7
Low attitudes	143	65.9
Total	217	100.0

### 3.4. This investigation studied the relationship between the total knowledge and the demographic characteristics of the nursing student participants:

There was no significant statistical relationship between parts of demographical data (age groups, gender, and marital

status) and total knowledge of the nursing students regarding HIV/AIDS as P-value is mor than 0.05; while there was significant statistical relationship between the stage of the participants with their total knowledge on HIV/AIDS, as P-value was less than 0.05, see table 4.

**Table 4:** the association between participants` demographical data and their total knowledge regarding HIV/AIDS.

Age groups	Total knowledge			Total	P-value
	Low knowledge	Medium knowledge	High knowledge		
19-22 Years	52	87	15	154	0.422
23 or older	21	32	10	63	
Total	73	119	25	217	
Gender	Total knowledge			Total	P-value
	Low knowledge	Medium knowledge	High knowledge		
Male	56	81	22	159	0.08
Female	17	38	3	58	
Total	73	119	25	217	
Stage	Total knowledge			Total	P-value
	Low knowledge	Medium knowledge	High knowledge		
1st stage	43	64	5	112	0.03
2nd stage	30	55	20	105	
Total	73	119	25	217	
Marital status	Total knowledge			Total	P-value
	Low knowledge	Medium knowledge	High knowledge		
Married	11	20	7	38	0.325
Single	62	99	18	179	
Total	73	119	25	217	

### 3.5. this research investigated the relationship between the total attitudes of the nursing student participants and their demographic characteristics:

There was no significant statistical relationship between (age groups, and stage) of participants and their total attitudes

toward HIV/AIDS as P-value is mor than 0.05; however, there was significant statistical relationship between the (gender, and marital status) of the participants and the nursing students' attitudes toward HIV/AIDS, as P-value is less than 0.05, see table 5.

**Table 5:** the relationship between nursing students` demographical data and their total attitudes toward HIV/AIDS

Age groups	Total attitudes			Total	P-value
	High attitudes	Medium attitudes	Low attitudes		
19-22 Years	2	47	105	154	0.540
23 or older	1	24	38	63	
Total	3	71	143	217	
Gender	Total attitudes			Total	P-value
	High attitudes	Medium attitudes	Low attitudes		
Male	2	60	97	159	0.03
Female	1	11	46	58	
Total	3	71	143	217	
Stage	Total attitudes			Total	P-value
	High attitudes	Medium attitudes	Low attitudes		
1st stage	1	29	82	112	0.061
2nd stage	2	42	61	105	
Total	3	71	143	217	
Marital status	Total attitudes			Total	P-value
	High attitudes	Medium attitudes	Low attitudes		
Married	2	16	20	38	0.024
Single	1	55	123	179	
Total	3	71	143	217	

#### 4. DISCUSSION

Nursing students in Erbil polytechnic university measured as future nursing staffs must have satisfactory knowledge regarding HIV/AIDS infection. HIV knowledge is a very valuable instrument for any suspected cases of HIV, to assess the scope to which the patients living with HIV required to be concerned for.

Nursing students` knowledge on HIV could play a main role in the Iraqi system of health care. They represent the upcoming nurses of the country.

The current study showed none encouraging outcomes: it showed only 11.5% of high knowledge,

This research indicated that only 1.4 % of the participants showed high attitudes toward susceptible patients with HIV/AIDS. Whereas other surveys measured more optimistic attitudes towards patients alive with HIV/AIDS 2. Al-Rabeei et al, indicated that around 64% of students stated that they are willing to work with HIV positive patients 42. The negative attitude is mainly coming from the fear of being infected with the virus 24. The nursing students` training but also the continuous medical and nursing training of all health professionals is important to improve their attitudes and knowledge toward HIV/AIDS society. The results of our students indicate lack information about HIV/AIDS; nursing students should develop their knowledge regarding HIV/AIDS and also improve their attitudes toward HIV/AIDS society.

With the deprived presentation of correct responds to many questions by nursing students, lecturers and education leaders need to involve in setting up teaching units on HIV/AIDS transmission. This is significance for any upgrading of nursing departments` teaching programs and the education and attention of HIV/AIDS society.

Most of participants had medium knowledge regarding HIV/AIDS, but there were remained students who have a negative attitude regarding HIV/AIDS. Almost all of the nursing students assumed that the patients with HIV/AIDS deserve what they complain from and they have no rites as other patients in sense of respect and receiving medical helps. Other investigations have shown students with positive attitudes regarding HIV/AIDS 31,43.

The current study found that minority of nursing students have believe of mother-to-child transmission of HIV could take place and could transmitted by feces, urine, and through oral contact. These answers confirm low knowledge among nursing students regarding the pathway of HIV transmission. This result supported by other study done in Uganda 2, and contrasted with Rickels et al. which found that more than 70% of their students answered HIV can be transmitted through fluids like urine 44. Our students are lack information regarding the danger of HIV transmission.

## 5. Limitations of the Study

Some student communication with each other and trying to exchange answers was one of researchers' limitation during data collection. Many of the answer sheets were eliminated because of cheating in order to have more accurate data within this review. The questionnaire considered somehow long by the participants. Some of the students got tired after answering some questions and didn't answer the remaining questions. The researcher ignored the none-completed answer sheets and removed it from this review in order to have accurate and completed response within this research.

## 6. CONCLUSION

Unfortunately, nursing students' knowledge about HIV/AIDS were very disappointed only a small number of the participants has high level of knowledge on HIV/AIDS, many have medium knowledge and some have low knowledge. There is a significant need to set up a training course on HIV/AIDS, not only to increase their knowledge but also to change the behavior of future nurses with respect toward HIV/AIDS. Adequate training and workshops would progress the weak points of bad attitudes and misconception of the syndrome.

## 7. RECOMMENDATIONS

According to the current results, it is obvious that nursing students should concluded with trainings and sections on HIV/AIDS in regards to knowledge and also behaviors. In training or courses of HIV/AIDS for nursing students, they must be assisted to overwhelmed preconceptions and rise their responsiveness toward HIV/AIDS.

In order to reduce the idea of discrimination toward HIV/AIDS population among the health professional society, participation in special courses dedicated to the HIV/AIDS transmission and syndrome promotion of global precautions in relates to HIV/AIDS.

### Compliance with Ethical Standards statements

Ethical approval: Erbil Polytechnic University certifies the ethical approval, Funding details (In case of Funding): I am responsible for paying the financing, Conflict of interest: There is no conflict of interest, Informed Consent: Department of Research and Studies, Erbil Polytechnic University Agreed

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