

# PENGETAHUAN DAN PRILAKU MAHASISWA UNIVERSITAS KLABAT TERHADAP PASIEN DENGAN HIV/AIDS

UNIVERSITAS KLABAT NURSING STUDENT'S KNOWLEDGE AND ATTITUDES  
TOWARD PATIENTS LIVING WITH HIV/AIDS

**Baithesda Suba\***

Fakultas Ilmu Keperawatan, Universitas Klabat

\*E-mail: baithesda@gmail.com

## **ABSTRACT**

**Introduction:** Improving nurses and nursing student's knowledge and attitudes toward patients with HIV/AIDS is vital for providing quality care to each patients. The purpose of this study is to identify the knowledge and the attitudes of nursing students toward patients living with HIV/AIDS. **Methods:** This descriptive cross-sectional study was conducted at Faculty of Nursing, Universitas Klabat (Unklab), Airmadidi. The inclusion criteria for the nursing students were as follows: being at least 18 years of age; being a fourth-year in course and as a nurse profession program nursing student; and having consent to participate in the research. The sample comprised of 90 nursing students. The study used two data collection tools: (1) the HIV/AIDS Knowledge Questionnaire and (2) the HIV/AIDS Attitude Questionnaire. **Results:** Participant's knowledge were moderate or good, but they generally have negative attitude towards patients with HIV/AIDS. On the result of statistic test, there was no statistically significant relation between nursing students' knowledge level and attitude scale toward patients with HIV/AIDS,  $p = 0.804$  ( $p > 0,05$ ). **Conclusions. Discussion:** The current results reveal that nursing students have good knowledge of HIV/AIDS, but they have a negative attitude. Therefore their attitudes need to be improved.

*Keyword: HIV/AIDS, knowledge, attitudes, nursing student*

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## INTRODUCTION

HIV (Human Immunodeficiency Virus) and AIDS (Acquired Immunodeficiency Syndrome) caused by this virus is one of the most widespread diseases of the world. In many countries today studies to find new and effective cures for HIV/AIDS are being conducted, and necessary medical interventions are suggested to improve and increase the life span of patients with HIV/AIDS. People with HIV/AIDS have gradually grown out of the label “waiting for the death”, and started to be named as persons “living with HIV/AIDS”.

Globally there were an estimated 34 million people [31.6 million – 35.2 million] living with HIV in 2010, and since 2005, AIDS-related deaths decreased from 2.2 million [2.1 million – 2.5 million] to 1.8 million [1.6 million – 1.9 million] in 2010 (UNAIDS, 2012). First cases of HIV/AIDS in Indonesia were reported in 1987. The cumulative number of HIV/AIDS cases which was 5 in 1987 has increased over the years, to 150.296 in September 2014. (Ditjen PP&PL Kemenkes RI, 2014).

HIV infection is a growing public health problem with complex social and behavioral issues related to protection, prevention of transmission and support of nursing and midwifery personnel caring for people living with HIV and AIDS (International Council of Nurses (ICN), 2000). Nurses and nursing students as health care providers have critically important roles in HIV/AIDS treatment and educational programs (Pickles, King and Belan, 2009). Nursing personnel who care for people living with HIV/AIDS may have misconceptions regarding HIV/ (ICN 2006). In general, nurses and nursing students, exposed to an occupational risk of HIV infection due to direct contact with blood and bodily fluids during clinical practice attitudes, have been reported to tend to have negative attitudes towards patients with HIV (Bektas & Kulakac, 2007). Nurses maybe afraid of contact with HIV-positive patients or be reluctant to care for these patients due to insufficient knowledge of HIV/AIDS. Nurses and nursing students may develop negative attitudes towards people living with

HIV/AIDS: stigmatizing them, isolating them and discriminating against them (WHO 2000). Lack of knowledge, misconceptions and negative attitudes relating to HIV/AIDS can interfere with nurses' ability to provide quality care (ICN 2006).

There are many factors associated with negative HIV related attitudes, such as a low knowledge level, fear of the possibility of becoming infected and death (Pickles, King and Belan, 2009). In some studies, it was found that fear was one of the major causes of negative attitudes among nursing students (Bektas & Kulakac, 2007). Madumo and Peu (2006) found that South African nursing students were fearful of contracting HIV from patients in hospitals. Similarly in a German study, half of the nursing students were afraid of contacting HIV from nursing people with HIV/AIDS (Lohrmann, Valimaki, Suominan, et al (2000). In Turkey, fear of being infected, feelings of pity and empathy were the feelings most commonly indicated by the students (Bektas & Kulakac, 2007). Researches has suggested that nurses' attitudes towards AIDS patients have a significant influence on AIDS patients. (Thompson, Emrich, and Moore, 2003). It is a generally accepted concept that knowledge based nursing practice could lead to more positive outcomes (Li, Scott and Li, 2008).

It is important for undergraduate nursing curricula to adequately address the care of patients with blood-borne diseases. Improved nursing curricula may contribute to better knowledge and more desirable attitudes regarding HIV/AIDS. Preparing nursing students

## METHODS

This descriptive cross-sectional study was conducted at Faculty Of Nursing, Klabat University (Unklab) located in Airmadidi. Data were collected over the course of two weeks.

Participants were selected through convenience sampling. The inclusion

criteria for the nursing students were as follows: (1) being at least 18 years of age; (2) being a fourth-year and as a nurse profession nursing students; and (3) having consent to participate in the research. Of the 175 students who were eligible for the study, the study sample comprised of 90 students (45 a fourth-year nursing students and 45 a nurse profession nursing students)

This study was approved by the faculty of nursing review board and faculty administration. The purpose of the study and the time required to complete the questionnaire (approximately 15 minutes) were explained to eligible students in writing when they were invited to participate in the study. Students were instructed as to how to complete the survey and were permitted to remain anonymous, with researchers guaranteeing anonymity.

The study used two data collection tools, all of which were prepared by the researchers: (1) the HIV/AIDS Knowledge Questionnaire and (2) the HIV/AIDS Attitude Questionnaire. The HIV/AIDS Knowledge Questionnaire has 38 questions, divided into three subscales. The first section had nine questions testing general knowledge of AIDS and HIV infection (general knowledge of HIV/AIDS subscale). The second section had 17 questions about transmission routes for HIV (HIV transmission routes subscale). The third section consisted of 12 questions about control and prevention of AIDS and HIV infection (HIV prevention subscale). Participants were asked to respond to each

statement as either 'true' or 'false'. The correct answers was calculated by giving 1 point for each correct answer and 0 points for each wrong answer, with section scores calculated separately. Knowledge score = (correct answers/38) x 100%. Knowledge level divided into (1) Poor knowledge (knowledge score < 65), (2) moderate or good knowledge (knowledge score 65-78) and (3) fairly good knowledge (knowledge score > 78). The HIV/AIDS Attitude Questionnaire has 10 items designed to assess students' personal attitudes and beliefs towards HIV-positive people and people living with AIDS. Nursing students were asked to identify the degree to which they agreed with each item on a 5-point Likert scale, ranging from 1 (strongly disagree)–5 (strongly agree). The Items 2, 8 and 10 were reverse-scored. Attitude score = total answer : 10. Attitudes level divided into negative (attitudes score < median) and positive (attitudes score ≥ median).

Data analysis were performed using SPSS, version 13.0 Descriptive statistics such as frequency distribution, mean, median, standard deviation, and percentage were used to describe the knowledge and attitude of students. The relationship of knowledge and attitude were analyzed using Pearson's chi square test.

## RESULT

### Knowledge of AIDS and HIV infection

Students Knowledge of HIV/AIDS are listed in Table 1

**Table 1.** Frequency distribution of Students Knowledge of HIV/AIDS

HIV/AIDS knowledge questionnaire items	Correct (%)	Incorrect(%)
<b>General knowledge of HIV/AIDS subscale</b>		
1. HIV/AIDS is a disease of the immune system	98.9	1.1
2. AIDS is a chronic disease caused by virus	98.9	1.1
3. Nurses or midwives working with HIV positive/AIDS patients are among high risk groups	84.4	15.6
4. It may take several months after HIV infection for the anti-body response	36.7	63.3
5. Kaposi sarcoma develops in people who are infected with HIV	71.1	28.9
6. A person infected with HIV (that is, who is HIV-positive) does not necessarily have AIDS	52.2	46.7
7. Incubation period of AIDS is 10 years or longer	81.1	18.9

8. Most people develop detectable antibodies approximately 30 days after infection	62.2	37.8
9. People with positive HIV antibody results can stay symptom-free for long time	86.7	13.3
<b>HIV transmission routes subscale</b>		
10. HIV can spread through all transmission routes	74.4	25.6
11. HIV-positive women can breast feed their babies	76.7	23.3
12. HIV can be transmitted through unprotected anal intercourse	90.0	10.0
13. HIV can spread through sexual intercourse	100	-
14. The risk to healthcare workers being exposed to HIV is extremely higher than other risk groups	41.1	58.9
15. Kissing is a very high risk activity in terms of HIV transmission	58.9	41.1
16. Hand shaking is not a route of IV transmission	77.8	22.2
17. HIV can spread through food or clothes of HIV positive people	75.6	24.4
18. HIV can be transmitted via the toilet seat or bathrooms	80.0	20.0
19. HIV can transmit in swimming pool water	77.8	22.2
20. The risk of HIV infection from a needle-stick injury is <1%	68.9	31.1
21. HIV cannot be transmitted by insects	54.4	45.6
22. HIV/AIDS itself is transmitted by the airborne route	91.1	8.9
23. It is important to use gloves when taking a condom off after sexual intercourse with HIV positive person	32.2	67.8
24. Needles used to inject drugs can transmit HIV when they are used by more than one person	87.8	12.2
25. The HIV transmission risk is high during providing caring for HIV positive patients with incontinence	44.4	55.6
26. HIV is transmitted from male to female much more easily than from female to male	50.0	50.0
27. HIV positive patients should avoid raw and cooked food should be avoided in order to avoid opportunistic infections	70.0	30.0
28. HIV positive people should not consume uncooked and raw food	56.7	43.3
<b>HIV prevention subscale</b>		
29. Immunization against hepatitis B is prevent HIV infection	52.2	46.8
30. There is not currently an effective vaccine to prevent HIV infection	74.4	25.6
31. Sodium hypochlorite is a very effective chemical compound against HIV	50.0	50.0
32. Using a condom did not decrease the risk of HIV transmission	52.2	47.8
33. Using latex condom during sexual intercourse is highly effective in preventing the sexual transmission of HIV	68.9	31.1
34. AIDS patients should be treated in isolated rooms in wards in order to protect other patients from possibility of HIV contamination	86.7	13.3
35. The cap of the needles used on AIDS/HIV positive patients should not be placed in order to prevent needle stick-related injuries	78.9	21.1
36. Standard precaution measures are implemented only for HIV/AIDS patients	72.2	27.8
37. There is no need to use physical barriers (protective goggles, face masks and aprons) if splashes and spills of any body fluids (secretions and excretions) are likely (e.g., cleaning instruments and other items), in order to prevent any transmission with blood or body secretions	71.7	28.9
38. There is currently no cure for HIV infection	78.9	21.1

In the HIV/AIDS first subscale questions, 98.9% of participants got Item 1 right, 98.9% of participants got Item 2 right and 84.4% of participants got the Item 3 right. However, students struggled with Item 4 (63.3% answered incorrectly) and Item 6 (46.7% answered incorrectly) in the general knowledge of HIV/AIDS subscale. These questions pertained to the HIV antibody response and antibody test. The items on which students scored correctly on the HIV transmission routes subscale of questions showed that they knew that HIV could spread through sexual intercourse (100% correct) and unprotected anal intercourse (90% correct) and that it could not spread via hand shaking (77.8% correct). The items on which students scored incorrectly on the HIV transmission routes subscale of the questionnaire showed that they did not

know the risk of infection from a needle stick injury (31.1% incorrect), did not know that HIV transmission risk was heightened when providing caring for HIV-positive patients with incontinence (55.6% incorrect) and did not know that HIV infection cannot be transmitted by insects (45.6% incorrect) and kissing (41.1%). In the HIV/AIDS prevention subscale questions, most of students knew all item about effective in preventing the transmission of HIV. Interestingly, 46.8% of students believed that immunization against hepatitis B also prevented HIV infection.

Students have a moderate or a good knowledge of the general knowledge of HIV/AIDS (n=51) or 56.7%. (Table 2).

**Table 2.** Students knowledge level of HIV/AIDS

Knowledge	N	Percentage
Poor	22	22.4
Moderate/good	51	56.7
Fairly good	17	18.9
Total	90	100.0

**Attitudes towards patients with HIV/AIDS**

HIV/AIDS Attitude Questionnaire results showed that nursing students had generally a negative attitude towards patients with AIDS and HIV with the median score was 3.90. However, they had some concerns and were hesitant about working with HIV

positive and AIDS patients. More of students not sure to work (47.8%) and prefer strongly agree with AIDS patients only 17.8%. The students also reported that their families were concerned when they cared for people with HIV or AIDS. (Table 3)

**Table 3.** Frequency Distribution of Student's attitudes towards patients with HIV/AIDS

The HIV/AIDS Attitude Questionnaire items	SD (%)	PD (%)	NS (%)	PA (%)	SA (%)
1. All patients have the right to receive safe and high quality health care	1.1	-	2.2	12.2	84.4
2. I would prefer not to work with AIDS patients	6.7	13.3	47.8	14.4	17.8
3. I like to help people with AIDS and HIV positive					
4. People with AIDS and HIV positive deserve respect and dignity like other people	1.1	3.3	20.0	51.1	24.4
5. Poor prognosis in people with AIDS makes me feel sad	-	-	6.7	27.8	65.6
6. Health care providers should always provide good service to HIV positive and AIDS patients	2.2	3.3	15.6	50.0	28.9
7. I feel very sad for children infected with HIV					
8. My family is concerned when I care for people with HIV and AIDS	-	-	4.4	36.7	58.9

9. In order to minimize the risk of transmission through infected blood transfusions, I believe that nurses have crucial responsibilities in blood transfusion process to ensure blood safety	-	-	4.4	40.0	55.6
10. HIV positive patients who contaminate the environment or cannot maintain appropriate hygiene should be placed in private rooms	1.1	1.1	4.4	40.0	53.3
	3.4	43.3	15.6	2.2	4.4

**SD=Strongly Disagree, PD=Partly Disagree, NS=Not Sure, PA=Partly Agree, SA=Strongly Agree**

Generally, students had a negative attitudes towards patients with HIV/AIDS (n=59) or 65.6%. (Table 4)

**Table 4.** Student’s attitudes scale towards patients with HIV/AIDS

Attitudes	N	Percentage
Negative	59	65.6
Positive	31	34.4
Total	90	100.0

**The relationship of the knowledge of and attitude towards patients living with HIV/AIDS**

There were 22 students with poor knowledge, they had 68.2% negative attitude. There were 51 students with moderate or good knowledge, they had 66.7% negative attitude. There were 17 students with fairly good knowledge, they had 58.8% negative attitude. There was no statistically significant relation between the knowledge level and attitude scale, p = 0.804 (p > 0.05) (Table 5).

**Table 5.** The relationship of the knowledge and attitude towards patient living with HIV/AIDS

Knowledge Scale	Attitude scale				Total		P value
	Negative		Positive		N	%	
	n	%	n	%			
Poor	15	68.2	7	31.8	22	100.0	0.804
Moderate/good	34	66.7	17	33.3	51	100.0	
Fairly good	10	58.8	7	41.2	17	100.0	
Total	59	65.6	31	34.4			

**DISCUSSION**

HIV infection is a growing public health problem with complex social and behavioural issues related to protection, prevention of transmission and support of nursing and midwifery personnel caring for people living with HIV and AIDS (ICN, 2000). Nurses have many important roles and responsibilities in the prevention of HIV/AIDS, including improving the care of HIV-positive and AIDS patients and fighting against the stigmatization of and negative attitudes towards HIV/AIDS. There are an increasing number of studies on nurses’ and nursing students’ knowledge of HIV/AIDS. Studies have shown that nurses (Watkins & Gray 2006) and nursing students had moderate or good HIV/AIDS

knowledge, but that many nurses and nursing students lacked knowledge relating to transmission routes (Maswanya et al. 2000, Suominen et al. 2011). In a study conducted in Yemen, students at health institutes had a moderate level of HIV/AIDS knowledge, but had many misconceptions about how HIV is transmitted (Al-Rabeei et al. 2012). A sample of 279 Greek nursing students demonstrated fairly good knowledge of HIV and AIDS (Ouzouni & Nakakis 2012). In a study by Li et al. (2008), the majority of nursing students exhibited adequate knowledge of HIV transmission routes (Li et al. 2008). Some studies conducted in Turkish nursing students reported similar results to the current study (Bektas & Kulakac, 2007).

The current study found that the nursing students' level of knowledge was moderately good, and their knowledge was insufficient particularly on questions regarding HIV antibodies, risk of infection from a needle stick injury. Majority of the students responded correctly the statements about illness and transmission routes. This result suggested that the increase in the variety of sources for knowledge of HIV/AIDS in the last decade, therefore students can easily access such knowledge. The main sources of information about AIDS are school courses, television and the Internet (Hassan & Wahsheh 2011). Chan et al. (2012) found that third- and fourth-year nursing students had better knowledge of HIV/AIDS than first- and second-year ones. Like Bektas and Kulakac (2007), the current study found that final year and nurse program nursing students obtained higher HIV/AIDS knowledge scores. These findings suggest that increased clinical practice and more coursework about HIV/AIDS improve students' knowledge of HIV/AIDS. The more contact nursing personnel have with people living with HIV/AIDS, the greater their knowledge and the better their attitudes; they are less likely to stigmatize and discriminate against patients with HIV/AIDS (ICN, 2006).

Chan et al. (2012) found that nursing students who had experience caring for patients living with HIV/AIDS had higher knowledge scores relating to HIV/AIDS. Bektas and Kulakac (2007) reported that Turkish nursing students who had previous experience in caring for patients with AIDS were willing to care for people living with HIV. Having experience in caring for patients living with HIV/AIDS might influence students' attitudes and knowledge of HIV/AIDS. However, as was similar to the results of Pickles et al. (2012), the current study found no significant relationship between students' knowledge and attitudes and experience caring for patients living with HIV/AIDS.

Nurses have some fears and concerns about caring for HIV-positive/AIDS patients. In this study, there was a negative attitude towards HIV/AIDS. There was a

similarity between UK and Turkish samples (Pickles, King, Belan, 2009; Bektas & Kulakac, 2007). Bektas & Kulakac (2007) found that nursing students who had previous experience in caring for an AIDS patient and had known someone with HIV/AIDS were willing to care for people living with HIV. In contrast to these studies, in Germany, Lohrmann et al. (2000) found that nursing students generally had positive attitudes. Negative attitudes appear to have been shaped by knowledge shortcomings, personal values, and perceived risk of contracting HIV/AIDS from patients. It is also possible that negative attitudes might have resulted from messages in the media, which high risk, socially unacceptable behaviors, and from the fact that local or national's media put too much emphasis on risk of infection. Bektas, Kulakac (2007) found that one of the reasons for students' unwillingness to care for people living with HIV was linked to the fear of contracting HIV/AIDS. Madumo and Peu (2006) found that nursing students were fearful of contracting HIV from patients in hospitals.

In this research found that knowledge was not the main reason for this attitudes. This result consistent with the results of Ngan, et al. (2000). They found that 48 % of the student sample was concerned that they might contract HIV when performing basic nursing tasks. Fear of contracting HIV/AIDS was cited as the main reason for this attitude. This finding is contradicts with the results of another study. These indicate that greater clinical experience and better knowledge are associated with more positive attitudes and lowered personal concerns in treating AIDS patients. Among nursing students in the United States of America and Canada, one of the major causes of fear, negative attitudes and reluctance to care for people with HIV/AIDS was identified as lack of education (Earl & Penny, 2003). These findings are supported by studies conducted in Turkey Pickles, King & Belan, 2009), South Africa ( Madumo & Peu, 2006), Germany Lohrmann et al, 2000), Jordan (Petro-Nustas, Kulwicki & Zumaot, 2002) and China (Li, Li, Zeng & Wu, 2011). In a study by Hassan and Wahsheh (2011), nurses expressed overwhelming fear of these

patients, and a majority of nurses refused to provide care to patients who tested positive for HIV/AIDS. Preston et al. (2000) found that nurses were willing to care for patients with AIDS; despite their fears related to caring for patients with AIDS, they held moderately tolerant attitudes towards AIDS-related nursing concerns. In a study conducted on a total of 922 nurses from Jordan, participants expressed negative attitudes towards patients with HIV/AIDS, and their level of HIV/AIDS knowledge was weak (Hassan & Wahsheh 2011). Some studies indicate that health sciences students still have some concerns and that their attitudes in this area need to be improved.

In a study conducted in Finland, the students had positive attitudes towards persons with HIV and AIDS and were willing to care for them (Suominen et al. 2011). In a study conducted in Yemen, students at health institutes stated that HIV-infected persons needed to be punished (65.5%) and isolated (41.0%); however, 86.8% were willing to care for an HIV-infected person (Al-Rabeei et al. 2012). Another study found that getting infected was one of the biggest fears of nursing students while caring for patients with AIDS (Akansel et al. 2012). A study reported that nearly three-quarters of nursing students had positive attitudes towards people who had AIDS or who were HIV positive (Ozdemir et al. 2006). The nursing student sample used in this study had generally positive attitudes towards patients with AIDS and HIV. However, more than half of the sample preferred not to work with patients with AIDS and 21.4% were not sure whether they wanted to work with HIV-positive/AIDS patients, and they had some concerns regarding the same. The students in this sample were generally compassionate towards these patients and genuinely liked helping people with AIDS and people who were HIV positive. Several studies have explored the relationship between knowledge of HIV/AIDS and positive attitudes towards people with AIDS. In several of these studies, university students' knowledge correlated positively with good attitudes towards HIV-positive people and patients with AIDS (Tavoosi et

al. 2004, Chan et al. 2012, Korhonen et al. 2012, Ouzouni & Nakakis 2012).

However, the current findings go against these results; there was no relation between the attitude level and mean scores on the attitude scale. Nevertheless, having moderately good knowledge of HIV/AIDS and displaying negative attitudes towards HIV infected or AIDS patients suggest that must be improving students' attitude to develop positive attitudes towards people living with HIV/AIDS. Nurse education should focus on routes of transmission and risk reduction methods. Educational programs should aim to achieve behavioral and attitudinal changes towards people living with HIV/AIDS.

The current results reveal that nursing students still have misconceptions and a lack of knowledge of HIV/AIDS and that their attitudes need to be improved. Relevance to clinical practice developing well-designed programs and strategies may improve nurses' attitudes and increase their willingness to care for patients with HIV/AIDS. Evidence-based educational programs will help nursing students to reduce their fears and uncertainties about caring for patients with HIV/AIDS, improve students' confidence and help them to overcome their negative attitudes. The education of healthcare workers should address their ethical and moral concerns and responsibilities related to caring for HIV/AIDS patients. This education should include risk assessment and risk reduction methods, as well as strategies to help them combat discrimination and negative attitudes towards patients living with HIV/AIDS.

### **Study limitations**

One of the limitations of the study was that it was conducted in Unklab nursing faculty, limiting the generalize of the sample. In addition, the sample was composed of final year student in academic program and nurse profession program. Therefore, the study results are limited with regard to lower level.

## CONCLUSION

In this research, the knowledge and attitudes of nursing students towards HIV/AIDS have been examined and it is concluded that these knowledge level have been generally moderate or good and these attitudes have been generally negative. The result of statistic test, there was no statistically significant relation between nursing students' knowledge level and attitude scale toward patients with HIV/AIDS ( $p > 0,05$ )

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