

A CROSS-SECTIONAL SURVEY OF KNOWLEDGE AND ATTITUDE TOWARDS HIV/AIDS PATIENTS AMONG NURSING STUDENTS IN TEACHING HOSPITAL

Hamidah Binti Othman^{1*}, Noor Azizah binti Mohd Ali²

¹Lecturer, School of Nursing Science, Faculty of Medicine, Universiti Sultan Zainal Abidin (UniSZA), Campus Gong Badak, Malaysia.

²Lecturer, Critical Care Nursing Department, Kulliyah of Nursing, International Islamic University Malaysia (IIUM), Malaysia.

*Corresponding Author Email: hamidah@unisza.edu.my, hamidahothman78@gmail.com

ABSTRACT

HIV/AIDS is a matter of concern and has become a pandemic disease that threatens the world population. It has remained one of the priorities in global public health challenges. Caring for people with HIV/AIDS requires clinical expertise as well as high-quality skills for health care providers. The purpose of the study was to examine knowledge and attitude on HIV/AIDS patients among nursing students. A cross-sectional study was conducted in Public University at West Coast Malaysia. The 126 respondents of nursing students agreed to participate in the study using a self-administered questionnaire that was designed and modified after reading and referring to articles, books, and journals. The results of the research revealed that nursing students, in general, have a satisfactory knowledge (mean score 30.71), but had a moderate attitude toward HIV/AIDS patient with total mean score 2.34. Most of the students (89.3%) get the knowledge regarding HIV/AIDS through the internet. The majority of the students knew that blood transfusion (99.4%) and sharing needles/syringe (99%) were the higher sources HIV/AIDS modes of transmission. Most of the students agreed that people with HIV/AIDS should be treated in society with support from the community (97.0%). Although the knowledge level of nursing students seems to be satisfactory, but they still showed the moderate attitude towards HIV/AIDS patients. Thus, structured education programmes should be conducted by nursing faculty to ensure that nursing students gain the necessary accurate knowledge and an appropriate attitude towards the care of HIV/AIDS patients.

Keywords: *Moderate attitude towards HIV/AIDS patients, Human Immunodeficiency Virus, disease fighting T cells.*

INTRODUCTION

AIDS (Acquired Immuno Deficiency Syndrome) begins with exposure to the Human Immunodeficiency Virus (HIV). This virus is an acquired infection, with an estimated 42 million people infected globally (Green, 2007). A person with HIV/AIDS can be infected for many years and not show any symptoms (American Pharmaceutical Companies, 1997). A person infected with Human Immunodeficiency Virus (HIV) can cause progressive deterioration and dysfunction in cell-mediated immunity and its most severe stages in the disease call AIDS (Monahan *et al.*, 1994). It means that AIDS occurs when an HIV-infected person develops a

life-threatening condition (e.g. Cancer, infections) or when the number of disease-fighting T cells becomes dangerously low.

The total of 34.0 million numbers of people living with HIV, 2.7 million people are newly infected with HIV and 1.8 million deaths due to AIDS (Global summary of HIV/AIDS epidemic, 2010). In Malaysia, the first three cases of HIV were detected in 1986. As of December 2009, after more than 20 years into the HIV epidemic in Malaysia, the country has recorded a total of 87710 persons with HIV. An estimated 105, 439 people are currently living with HIV. In addition to that, a total of 13394 AIDS-related deaths has been reported as of

2009. The HIV epidemic in Malaysia is mainly driven by injecting drug use and heterosexual transmission (MOH and WHO, 2009).

Among the health care providers, nurses have the most frequent and direct physical contact with patients of all diagnostic categories and are commonly assigned to hospital units in which they cannot easily remove themselves from patients. Stigmatization to the AIDS had occurred among nurses and other health care providers; this may also probably influence the quality of the care they provide (Evian, 2000). Up to the present, studies focusing on Nurses' experiences of caring for patients with HIV/AIDS have been done in numerous countries, but there is little nursing research relating to HIV or AIDS in Malaysia. Therefore, it is the correct time to focus again on knowledge and attitude towards the care of HIV/AIDS patients among nursing students.

With the growing incidence of HIV/AIDS, nurses and other healthcare professionals in this country must be increasingly caring for patients with HIV/AIDS. This raises questions about how knowledgeable nurses are in relation to information related to HIV/AIDS and what are their attitudes towards patients with this syndrome.

METHODOLOGY

Study Design

A cross-sectional study was conducted at a school of the nursing teaching hospital, Kuala Lumpur, Malaysia with the target group of diploma nursing students from March until June 2012. The aims of this study were to determine nursing students' knowledge and attitudes towards HIV/AIDS patients. The sample size was calculated using Krejcie and Morgan 1970 and total 169 of nursing students were participating in this study.

Study Instrument

The data were collected using a self-administered questionnaire. The questionnaire was designed and modified after reading and referring to articles, books and journals and to assess the level of knowledge and explore attitude of nursing students regarding HIV/AIDS patient. The questionnaire consists 3 sections: section 1 is demographic data (age, gender, ethnicity, educational level and current semester), section 2 is HIV/AIDS knowledge which divided into 5 questions and each question contains sub-question except question number 2 using the option "Good/ Yes/ True", "Some/Not sure" and "Nothing/No/False". A

total score for knowledge was obtained by adding the points given for each answer started from question number 3. For each correct answer was given a score of 1 while an incorrect answer was score 0. The minimum and maximum scores for total knowledge score were 0 and 42 respectively. The higher score indicated a satisfactory level of knowledge. Section 3 composed of question-related to attitude toward HIV/AIDS patients. The question was divided into 5 main questions and also contains a sub - question. Total score on attitude is 1.0 to 3.0 in which higher score indicated good attitude. The questionnaire was pre-tested among 10 of diploma nursing students and after analyzing the data the Cronbach's alpha coefficient was calculated to assess the internal consistency of the questionnaire ($\alpha = 0.74$).

DATA ANALYSIS

Data was analyzed using Social Package Statistical Software (SPSS) version 16. The data were evaluated by percentage, frequency, and Chi-square test.

RESULT

A total of 169 diploma nursing student has returned the questionnaires with a 100% response rate. The demographic characteristics of the respondents are listed in Table 1. A total of 169 respondents was sampled, with the majority of the respondents were female (92.3%) and 89.9% of the respondents were Malays with mean age 20.64 (SD=1.66) of years old. Most of the respondents' education levels were SPM (79.3%). 51.5% of respondents were from semester 3 while the remaining 48.5% were from semester 5.

Table 1. Demographic characteristics of respondent (N=169)

	Frequency	Percent (%)	Mean (±SD)
Gender			
Male	13	7.7	
Female	156	92.3	
Ethnicity			
Malay	152	89.9	
Others	17	10.1	
Education level			
SPM	134	79.3	
STPM	29	17.2	
Certificate	4	2.4	
Diploma	2	1.2	
Current semester			
3	87	51.5	
5	82	48.5	
Age			20.64 (1.66)

Table 2 showed the internet was the major sources of information for students to get knowledge regarding HIV/AIDS (89.3%), followed by government information (79.3%), newspaper (74.0%), and television (72.2%).

Statement of HIV/AIDS information

As listed in table 3 the students believed that the HIV virus can pass to someone during sexual intercourse (97.6%), HIV/AIDS is caused by a virus (97.0%), HIV/AIDS can reduce the body's protection (95.3%), HIV/AIDS leads to death (94.1%), a pregnant woman with HIV virus can be transmit the virus to her baby (90.5%) and there is no cure for HIV/AIDS (80.5%). However, still students demonstrated inadequate knowledge regarding HIV/AIDS information, with 16.6% of the students mentioned that a vaccine is available to public for HIV/AIDS protection, 32.5% of students believed that a person can be infected with the HIV virus but not have the AIDS

disease and 3.6% of a student's mentioned that HIV/AIDS can be cured.

Table 2. Distribution of respondents according to Sources Contributed to Knowledge of HIV/AIDS (N=169)

Sources contributed	Good n (%)	Some n (%)	Nothing n (%)
Internet	151(89.3)	18(10.7)	0
Government Information	134(79.3)	35(20.7)	0
Newspaper	125(74.0)	44(26.0)	0
Television	122(72.2)	45(26.6)	2(1.2)
School-Secondary or Primary	45(26.6)	102(60.4)	22(13.0)
Radio	43(25.4)	103(60.9)	23(13.6)
Friends	37(21.9)	113(66.9)	19(11.2)
Family	29(17.2)	104(61.5)	36(21.3)

Table 3. Distribution of respondents according to Statement of HIV/AIDS information (N =169)

Statement	Correct answer	True n (%)	Not Sure n (%)	False n (%)
HIV/AIDS virus can pass to someone during sexual intercourse	True	165(97.6)	4(2.4)	0
HIV/AIDS caused by a virus	True	164(97.0)	2(1.2)	3(1.8)
HIV/AIDS can reduce the body's natural protection against disease	True	161(95.3)	5(3.0)	3(1.8)
HIV/AIDS leads to death	True	159(94.1)	6(3.6)	4(2.4)
Pregnant women with HIV virus can be transmitted the virus to her baby	True	153(90.5)	9(5.3)	7(4.1)
No cure for HIV/AIDS	True	136(80.5)	27(16.0)	6(3.6)
Condom are effective means of reducing HIV transmission	True	93(55.0)	49(29.0)	27(16.0)
A person with HIV virus can look healthy and well	True	99(58.6)	32(18.9)	38(22.5)
A person can be infected with HIV virus but not have the AIDS disease	True	60(35.5)	54(32.0)	55(32.5)
A vaccine available to public for HIV/AIDS protection	False	28(16.6)	46(27.2)	95(56.2)
Spermicidal jelly, foam & cream are effective in reducing HIV transmission	False	11(6.5)	46(27.2)	112(66.3)

Respondents' attitude towards people with HIV/AIDS

As shown in Table 4, the majority of the students agreed that people with HIV/AIDS should be treated in society by supporting in the community (97.0%) and should carry AIDS cards (71.0%). However, they

disagreed with the fact that people with HIV/AIDS must be treated by prohibiting from a certain job (53.3%) quarantine (69.2%), complete removal from society (87.0%) and remove AIDS children from school (87.6%).

Table 4. Distribution of respondents according to attitude towards people with HIV/AIDS(N=169)

Statement	Correct answer	Agree n (%)	Neither n (%)	Disagree n (%)
Supported in the community	Agree	164 (97.0)	1 (0.6)	4 (2.4)
Should carry AIDS cards	Agree	120 (71.0)	18 (10.7)	31 (18.3)
Hospitalized	Disagree	80 (47.3)	36 (21.3)	53 (31.4)
Treated no differently than other disease sufferers	Agree	81 (47.9)	32 (18.9)	56 (33.1)
Prohibited from certain job	Agree	43 (25.4)	36 (21.3)	90 (53.3)
Quarantine	Disagree	36 (21.3)	16 (9.5)	117 (69.2)
Complete removal from society	Disagree	14 (8.3)	8 (4.7)	147 (87.0)
Remove AIDS children from school	Disagree	10 (5.9)	11 (6.5)	148 (87.6)

Table 5 showed no statistically significant difference between the level of knowledge with demographic

characteristics-gender ($p=0.55$), ethnicity ($p=0.36$), education level ($p=0.39$) and current semester ($p=0.88$)

Table 5. The association level of knowledge score with demographic characteristics (N=169)

	Level of knowledge score		χ^2	p
	12-24 (moderate)	>24 (high)		
Gender				
Male	1 (4.5%)	12 (8.2%)	0.35	0.55
Female	21 (95.5%)	135 (91.8%)		
Ethnicity				
Malay	21 (95.5%)	131 (91.8%)	0.85	0.36
Others	1 (4.5%)	16 (10.9%)		
Education level				
SPM	17 (77.3%)	117 (79.6%)	3.04	0.39
STPM	4 (18.2%)	25 (17.0%)		
Certificate	0 (0.0%)	4 (2.7%)		
Diploma	1 (4.5%)	1 (0.7%)		
Current semester				
3	11 (50.0%)	76 (51.7%)	0.02	0.88
5	11 (50.0%)	71 (48.3%)		

Table 6 also showed no statistically significant difference between the level of attitude with gender ($p=0.58$), ethnicity ($p=0.22$), education level ($p=0.39$)

and current semester ($p=0.39$). However, there a significant association between knowledge with information about HIV/AIDS ($p=0.01$).

Table 6. The association level of attitudes score with demographic characteristics (N=169)

	Level of Attitude score		χ^2	P
	Low	Moderate		
Gender				
Male	0 (0.0%)	10 (8.3%)	1.09	0.58
Female	9 (100%)	110 (91.7%)		
Ethnicity				
Malay	9 (100%)	107 (89.2%)	8.28	0.22
Others	0 (100%)	13 (10.8%)		
Education level				
SPM	8 (88.9%)	98 (81.7%)	3.04	0.39
STPM	1 (11.1%)	19 (15.8%)		
Certificate	0 (0.0%)	3 (2.5%)		
Diploma	0 (0.0%)	0 (0.0%)		
Current semester				
3	4 (44.4%)	63 (52.5%)	4.15	0.39
5	5 (55.6 %)	57 (47.5%)		

Table 7 shows that the respondents' had a good level of knowledge about HIV/AIDS with total means score

30.71 and the students had a moderate attitude towards HIV/AIDS patient with total mean score 2.34.

Table 7. Mean rank total score attitude and knowledge (N=169)

Total score	Mean	Std. Deviation
Knowledge	30.71	4.48
Attitude	2.34	0.21

DISCUSSION

Respondents' Knowledge about HIV/AIDS

The present study aimed to assess knowledge and attitudes towards HIV/AIDS among respondents' and the results of this study showed that they had a satisfactory level of knowledge about HIV/AIDS. Our finding is similar to another study conducted by

Lohrmann *et al.*, (2000) that found the nursing students had a rather high knowledge level concerning AIDS. From our study it is evident that our respondents had sufficient information towards concern about HIV/AIDS (79.9%). In contrast to a study done by (Christina and Konstantinos, 2012), which mentioned in their study that nursing students had inaccurate and insufficient knowledge on HIV/AIDS. The present

study conducted on nursing students indicated the majority of the respondents reported the internet, government information, newspaper and television as primary sources of information with respect to HIV/AIDS. This result is similar to some other studies related to this topic.

Statement of HIV/AIDS information

The majority of the participants expressed an interest in additional information and education as a way to result in improvements. Scientific books, seminars, colleagues, conferences, television programs and journals and newspapers were the most used by nurse students as information resources regarding HIV (Neriman *et al.*, 2012). Similar results were also found in Serlo and Aavarianne, (1999), study where they found most information concerning HIV/AIDS had been gained from TV and newspaper. In addition, the findings indicate that the majority of the respondents were aware of the nature of HIV/AIDS. More than half of the respondents believed that condom is an effective means of reducing HIV/AIDS transmission. A condom provides protection from HIV and sexually transmitted diseases as well as provided contraception method. One of the previous studies (Weller and Davis, 2002) found that overall effectiveness, the proportionate reduction in HIV seroconversion with condom use, is approximately 80%. Proper knowledge regarding possible routes of transmission is not crucial for decreasing the infection rate, but it is also important to dispel persistent myths as partial knowledge can further prolong the risk of infection (Babakian *et al.*, 2004). Overall, a majority of respondents in our study gave correct responses about the methods of transmission of HIV, especially regarding blood transfusion, sharing needles and syringes and heterosexual activity which agree with the findings of other studies (Hayyawi *et al.*, 2010). However, still few respondents believed that HIV could be contracted through biting insect, sharing bath towels, using a public toilet and kissing on the cheek, which is similar to another study (Christina and Konstantinos, 2012).

Respondents' attitude towards People with HIV/AIDS

The positive attitude of health staff (especially nurses) regarding HIV/AIDS has an importance on the

quality of care provided for HIV/AIDS patients. In this study it is concluded that the attitude of a nursing student towards HIV/AIDS who participated in this research is positive. Similar results were found in other studies (Zeren *et al.*, 2012), where it was mentioned that nursing student, in general, has a positive attitude towards HIV/AIDS. In contrast, a study (Juan *et al.*, 2004) found that the attitude of nurses or nursing student towards HIV/AIDS was negative. Oyeyemi *et al.*, (2006) believed that the negative attitude of nurses results from their fear of HIV/AIDS and social implication. Surprisingly, nearly half of the respondents mentioned that they had their right not to nurse or care for HIV/AIDS patients and 30.8% of respondents refused to interact with a patient's family and friends. Pickles *et al.*, (2009) reported that the fear of contracting HIV/AIDS from people being cared for was the greatest concern for nursing students. This fear of contagion was the major factor behind the reluctance of some nursing students to care for people with HIV/AIDS. Those from the USA recommend increased HIV/AIDS education as a means of reducing the nursing students' fear of contracting HIV when giving nursing care (Earl and Penny, 2003; Petro-Nustas *et al.*, 2002).

According to the findings, majority of the respondents stated that they would be anxious about the HIV/AIDS care. This finding was similar to the findings of another study (Peate *et al.*, 2002). This research revealed that there is not a meaningful difference between demographic data with the level of knowledge and attitude of nursing students towards HIV/AIDS patients. Similar to a study conducted by Goldenberg and Laschinger, 1991 that stated no association between nursing students' age and attitude towards AIDS patients. A good knowledge should create a positive change in attitude towards nursing students. Otherwise, increase in theoretical knowledge is not sufficient without any practice. Further education programs on HIV/AIDS should be created or restructured by the nursing school or nursing faculty for their nursing students in order to prepare them to be a professional healthcare staff in the future. The sample size was relatively small and was limited which makes it impossible to generalize the study results outside of our institution. Further limitations of the study was that it was conducted on one group of ethnicity in one

university only, and thus the general ability of the findings is not possible.

CONCLUSION

HIV/AIDS has emerged as one of the most serious public health problems in the world. It has a considerable effect on the health care system and it is unlikely that the problems created by this disease will diminish. In fact, it is far more likely that they will increase. Nurses are the largest group in the health care

system, most frequently and directly is in physical contact with HIV/AIDS patients. In an effort to increase knowledge and improve attitudes towards and willingness to provide nursing care for patients with HIV/AIDS, the nursing school needs to restructure their nursing curriculum programs to ensure that nursing students gain the necessary accurate knowledge and an appropriate attitude towards the care of HIV/AIDS patients.

REFERENCES

- American Pharmaceutical Companies (1997). HIV/AIDS. Washington DC.
- Babakian, T., Freier, M. C., Hopkins, G. L., Diclemante, R., McBride, D. & Riggs, M. (2004). An assessment of HIV/AIDS risk in higher education students in Yerevan, Armenia. *AIDS and behaviour*. 8(1), pp 47-61.
- Christina, O. & Konstantinos, N. (2012). HIV / AIDS knowledge, attitudes and behaviours of student nurses. *Health Science Journal*. 6(1), pp 129-150.
- Earl, C. E. & Penny, P. J. (2003). Rural nursing students' knowledge, attitudes, and beliefs about HIV/AIDS: a research brief. *Journal of The Association of Nurses in AIDS Care*. 14(4), pp 70–73.
- Evian, C. (2000). *Primary AIDS Care: A Practical Guide for Primary Health Care Personnel in the Clinical and Supportive Care of People with HIV/AIDS*. Jacana Education: South Africa.
- Goldenberg, D. & Laschinger, H. (1991). Attitudes and normative beliefs of nursing students as predictors of intended care behaviors with Aids patients: a test of the Ajzen-Fishbein theory of reasoned action. *Journal of Nursing Education*. 30(3), pp 119-26.
- Green, C. J. (2007). HIV infection and AIDS. In Phipps Medical-Surgical Nursing: Health and Illness Perspectives. 8th edition.
- Hayyawi, A. H., Al-Marayaty, A. Y., Salman, W. S. & Hamed, W. (2010). HIV AIDS knowledge, attitudes and beliefs among a group of Iraqis *EMHJ*. 16(1), pp 18-23.
- Juan, C. W., Siebers, R., Wu, F. F. S., Wu, C. J., Chang, Y. J. & Chao, C. (2004). The attitudes, concerns, gloving practices and knowledge of nurses in a Taiwanese hospital regarding AIDS and HIV. *International Journal of Nursing Practice*. 10(1), pp 32–38. 10(1), pp 32-38.
- Lohrmann, C., Välimäki, M., Suominen, T., Muinonen, U., Dassen, T. & Peate, I. (2000). German nursing students' knowledge of and attitudes to HIV and AIDS: two decades after first AIDS cases. *Journal of Advanced Nursing*. 31(3), pp 696-703.
- Ministry of Health and World Health Organisation (2009). National Consensus Workshop on Estimation and Projection of the Malaysian HIV Epidemic. Revised version 20th March 2010.
- Monahan, F. D., Drake, T. & Neighbors, M. (2010). *Nursing care of Adults 1994*. Philadelphia: W.B. Saunders Company. Global summary of the HIV/AIDS epidemic. Available at: http://www.who.int/hiv/data/2011_epi_core_en.png

- Neriman, A., Nursel, A., Aysel, O. & Okan, T. (2012). Effects of Planned HIV/AIDS Education on Attitudes towards AIDS in Beginning Level Nursing Students. *International Journal of Caring Sciences* . 5(1), pp 56-65.
- Oyeyemi, A., Oyeyemi, B. & Bello, I. (2006). Caring for patients living with AIDS: Knowledge, attitude and global level of comfort. *Journal of Advanced Nursing*. 53(2), pp 196–204.
- Peate, I., Suominen, T., Valimaki, M., Lohrmann, C. & Muinonen, U. (2002). HIV/AIDS and its impact on student nurses. *Nurse Education Today*. 22(6), pp 492–501.
- Petro-Nustas, W., Kulwicki A. & Zumout A. F. (2002). Students' knowledge, attitudes, and beliefs about AIDS: a cross-cultural study. *Journal of Transcultural Nursing*. 13(2), pp 118–125.
- Pickles, D., King, L., & Belan, I. (2009). Attitudes of nursing students towards caring for people with HIV/AIDS: thematic literature review. *Journal of Advanced Nursing*. 65(11), pp 2262-73
- Serlo, K. L. & Aavarianne, H. (1999). Attitudes of university students towards HIV/AIDS. *Journal of Advanced Nursing*. 29(2), pp 463-470.
- Weller, S. C. & Davis, B. K. (2002). Condom effectiveness in reducing heterosexual HIV transmission. *Cochrane Database of Systematic Reviews*. 1, CD003255.
- Zeren, S. G., Alici, D. & Ay, F. (2012). Nursing students' attitudes towards HIV/AIDS: Agri, Istanbul and Mersin samples from Turkey. *Education In Medicine Journal*. 4(1), pp e74-e81.