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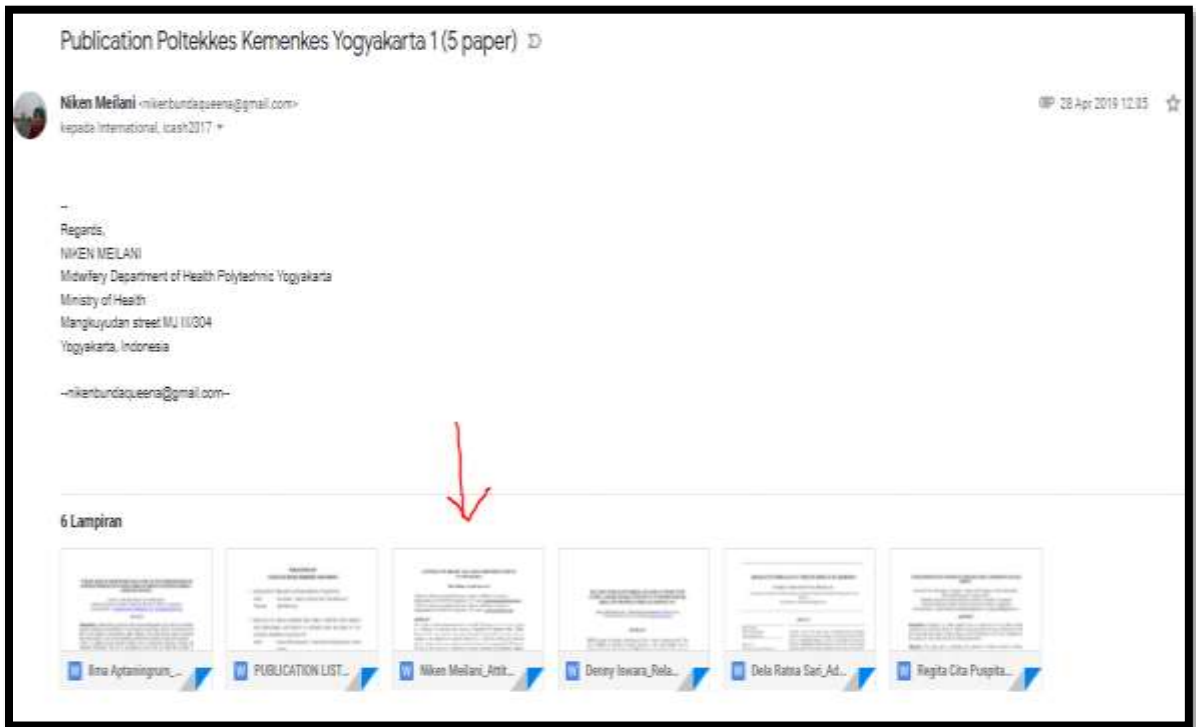
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ATTITUDES TOWARDS HIV AIDS AMONG MIDWIFERY STUDENTS IN YOGYAKARTA

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ABSTRACT

The incidence of Human Immunodeficiency Virus (HIV) Infection in the world was still high as a challenge in achieving some targets in Sustainable Development Goals (SDGs). Midwives have a very important role in preventing HIV among mother to child transmission. Attitude is one indicator of a person's behavior or is often also called close behavior. Negative attitude could causes stigma and would influence for managing HIV AIDS patient. The aim of this study was to determine the factors associated with midwifery student's attitude towards HIV AIDS. This was a descriptive cross-sectional study conducted among 130 midwifery students in Yogyakarta. Quantitative data was analyzed by computer software and involved univariate and multivariate analysis. The significant determinants of midwifery student's attitude towards HIV/AIDS were the source HIV information from Lecturer (p=0.006), from clinical instructor (p=0.046), Experience managing HIV patient (p=0.017) and level of knowledge (p = 0.006). Multivariate analysis showed that those respondents with poor knowledge were 2.26 times more likely to have a negative attitude towards HIV/AIDS than those who had a good knowledge.

Keywords: Knowledge, Attitudes, midwife, HIV/AIDS

INTRODUCTION

Human immunodeficiency virus (HIV) was a type of virus that attacks / infects white blood cells which causes a decrease in human immunity. Acquired Immune Deficiency Syndrome (AIDS) was a set of symptoms of a disease that arises because of the immune system caused by HIV infection.² HIV / AIDS was a major problem in achieving the Sustainable Development Goals. Specifically the purpose of point 3 of the SDGs was to achieve health and well-being for all people To achieve these holistic goals, one of the targets is to end the AIDS epidemic as a public health threat by 2030. The target of ending the AIDS epidemic by 2030 also applies in Indonesia.

An issue of HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. In 2017, 940 000 people are died from HIV-related causes globally.³ There were approximately 36.9 million people living with HIV at the end of 2017 with 1.8 million people newly infected in 2017 globally.³ 59% of adults and 52% of children living with HIV were receiving lifelong antiretroviral therapy (ART) in 2017.³ Global ART coverage for women and breastfeeding women living with HIV is high at 80%.³

HIV cases in Indonesia has increased. The reported cases until 2017 there were 48,300 HIV positive people and 9,280 AIDS people.⁴ people with HIV AIDS (PLWHA) in Indonesia are dominated by men (62%).⁴ The largest age group with HIV is 25-49 years (69.3%). The Special

Region of Yogyakarta is one of the provinces contributing HIV in Indonesia. In 2017 there were 723 people with HIV.⁴

The highest method of transmission of HIV through sexual intercourse is 63.5%, the next method of transmission through IDU is 24.8%, IDU + sexual is 6.3%, and perinatal is 3.2%.⁵ Perinatal transmission occurs in the baby mother. The risk of HIV transmission from mother to baby without PMTCT intervention occurs during pregnancy (5-10%), labor (10-20%), breastfeeding (10-15%).⁶ HIV incidence in children who get infection from their mothers occurs more than 90% and since 2012 until 2016 the prevalence of cases of HIV transmission from mother to child continues to increase, which is 0.38% to 0.49%.⁷ Vertical transmission can be prevented by Prevention of Mother To Child Transmission of HIV (PMTCT). Midwife as a leader PMTCT. Midwives can assist mothers with HIV during pregnancy, childbirth and breastfeeding. With proper PMTCT care will reduce HIV transmission from mother to baby. Midwifery student as part of the success of the PMTCT program. When the learning process for midwifery students has begun to interact with HIV patients. After graduating and becoming their midwives who will carry out the PMTCT program.

Stigma and discrimination of HIV sufferers causes a major obstacle for sufferers who want to access treatment, care, education, and information to prevent HIV transmission.⁸

The most dominant attitude of the health care providers toward HIV / AIDS patients was related to fear (42.42%).⁹ The negative stigma of midwives in providing services influences their willingness to provide services to HIV patients. ⁹ A midwife student gets information about HIV from various sources. The level of knowledge about HIV that has a variety. In this study we will explain Attitudes Towards HIV Among Midwifery AIDS Students in Yogyakarta.

METHODS

This study used cross-sectional design. The independent variables include source of HIV information, experience managing HIV patient and level the knowledge. The dependent variable was attitude towards HIV AIDS. Population was applied science (Diploma 4) midwifery students in Yogyakarta. The inclusion criteria were the highest grade or last year midwifery student who are willing to become respondents known by signing *the informed consent* and having television and smartphone. The calculation of sample size used Lemeshow for hypothesis two proportion. Sample size of this study was 130 respondents. This study used the theoretical framework approach of Precede-Procede model (Lawrence Green). Independent variables consists of source of HIV information as a enabling factors, experience managing HIV patient as a reinforcing factor and level the knowledge as a predisposing factor. A self administered structured questionnaire that had previously been pretested. Midwifery students' knowledge was measured by true statements were scored as 1 and false statements were scored as 0. We then classified the scores into three categories to characterize the level of knowledge: good >80%. Likert scale to measure attitudes. Attitude was mentioned as positive and negative based on the mean. Descriptive statistics using frequencies and percentage was used to describe findings. *Chi square test* or *Fisher exact test* to determine the relationship between the dependent and independent variables was applied. Logistic regression was done for all variables with *p* less than 0.25 and to explain independent variables. Ethical clearance was obtained from Ethical Committee Poltekkes Kemenkes Yogyakarta Number: LB.01.01/KE-01/XII/2018.

RESULT

This study conducted on 130 applied science (Diploma 4) midwifery students from Universitas Gadjah Mada, Universitas Respati Yogyakarta and Poltekkes Kemenkes Yogyakarta. The univariat analysis of the respondent showed in table 1.

Table 1: Univariat analysis

Variables		n= (130)	%
Age	≥21 y.o	106	81.5
	<21 y.o	24	18.5
HIV Information from Television	No	7	5.4
	Yes	123	94.6
HIV Information from Lecturer	No	10	7.7
	Yes	120	92.3
HIV Information from Clinical Instructure	No	35	26.9
	Yes	95	73.1
Expericence in managing HIV AIDS patient	No	14	10.8
	Yes	116	89.2
Midwifery student knowledge about HIV AIDS	Good	53	40.8
	Poor	77	59.2
Midwifery student attitude towards HIV AIDS	Positif	67	51.5
	Negative (stigma)	63	48.5
	Total	130	100.0

Table 1 showed from 130 Midwifery students, most of whom had age ≥ 21 years (81.5%). Most had gotten HIV information from television (94.6). Gotten HIV Information from Lecturer (92.3%). Gotten HIV Information from Clinical Instructure (73%). Expericence in managing HIV AIDS patients (89.2%). But it had HIV knowledge a low (59.2%) and Midwifery student positive attitude towards HIV-AIDS (51.5%)

Bivariate analysis was used to analyze association between independent and dependent variables. The relationship between independent and dependent variables are showed in table2.

Table 2. The correlation between HIV Information, experience managing HIV and knowledge level with midwifery students' attitude towards HIV AIDS

Variable	Attitude towards HIV AIDS						p-value
	Positive		Negative		Total		
	n=42	%	n=38	%	n=80	%	
HIV information from Television							
No	5	71.4	2	28.2	7	100.0	0.279*
Yes	62	50.4	61	49.6	123	100.0	
HIV information from lecturer							
No	1	10	9	90	10	100.0	0.006
Yes	66	55	54	45	120	100.0	
HIV information from clinical instructor							
No	13	37.1	22	62.9	35	100.0	0.046
Yes	54	56.8	46	43.2	95	100.0	
Experience in managing HIV AIDS patient							
No	3	21.4	11	78.6	14	100.0	0.017
Yes	64	55.2	52	44.8	116	100.0	
Knowledge level							
Good	35	66	18	34	53	100.0	0.016
Poor	32	41.6	45	58.7	77	100.0	

*fisher exact test

Table 2 showed that the p-value of HIV Information from lecturer the attitude towards HIV-AIDS was 0.006 <0.005, HIV Information from clinical instructor to the attitude towards HIV-AIDS was 0.046 > 0.05, experience managing HIV patients to the attitude towards HIV-AIDS was 0.017 and p-value of knowledge level to attitude towards HIV AIDS was 0.016 <0.05. This means that HIV information from lecturer, clinical instructors, experience managing HIV patients and knowledge level has a significant relationship with the attitude towards HIV AIDS.

Multivariate analysis were done to independent variables that have p <0.250 together. The result of multivariate analysis is shown in table 3.

Table 3: Multivariate Analysis

Variable	p-value	Exp-B	CI
HIV Poor Knowledge towards negative attitude	0.032	2.256	1.073-4.753

Table 3 showed that the level of knowledge was the most significant factor influencing attitude towards HIV AIDS with p=0.032, OR=2.256 with CI=1.073-4.7533.

DISCUSSION

Result of 130 applied science midwife students from Gadjah Mada University, Respati University Yogyakarta and Health Polytechnic Yogyakarta showed age > 21 years (81.5%) and a small portion <21 years (18.5%). Midwifery students who get HIV information from television have a positive attitude towards HIV sufferers (50.4%) and negative attitude or have a stigma (49.6%). For students who were not informed about HIV from their television they had a positive attitude (71.4%) and a negative attitude (28.6%). HIV information from Television is not significant towards Attitude towards HIV AIDS with p-value = 0.279. This is in accordance with previous studies that explain the exposure of mass media not related to the negative attitude or stigma of HIV.¹⁰ However in other studies the media is effective for increasing knowledge of HIV.^{11,12}

For students who get HIV information from their lecturers they have a positive attitude (55%) and negative attitude (45%). While students who did not get HIV information from their lecturers had a positive attitude (10%) and negative attitude or stigma (90%). HIV information from lecturer was significant towards attitude towards HIV AIDS with p-value = 0.006. This was accordance with previous research which mentions the influence of the role of teachers on HIV stigma among students.^{13, 14, 15} From this result and previous study HIV AIDS need to improve in cuccicula of midwifery student to prevent the stigma and preparing the midwife to manage HIV patient as well.

Midwifery students who get HIV information from Clinical Instructure have a positive attitude towards HIV sufferers (56.8%) and negative attitude (43.2%). For students who were not informed about HIV from Clinical Instructors they had a positive attitude (37.1%) and negative stigma (62.9%). HIV information from clinical instructure is significant towards attitudes towards HIV AIDS p-value = 0.047. This is consistent with previous research which explains that there is a significant relationship between HIV information from mentors to stigma.^{14,16}

Midwifery students who have interacted with HIV patients have a positive attitude towards HIV sufferers (55.2%) and negative attitude (44.8%). For students who have never interacted with HIV patients they have a positive attitude (21.4%) and negative attitude or still have a stigma (78.6%). The experience in managing HIV AIDS patients was significant towards attitude towards HIV AIDS with p-value = 0.017. This was consistent with previous studies which explain that learning with cases and interactions with PLWHA are related to HIV stigma.^{16,17}

Midwifery students whose knowledge about HIV has a positive stigma towards people with HIV (66) and negative stigma (34). For students whose knowledge about HIV is not good they have a positive stigma (41.6) and a negative stigma (58.4). The level of knowledge of midwifery students is significant towards Attitude towards HIV AIDS with p-value = 0, 016. As the results of previous studies that the level of knowledge affects the stigma of HIV.^{17,18}

The level of knowledge was the most significant factor influencing attitude towards HIV AIDS with p = 0.032, OR = 2.256 with CI = 1,073-4.7533. With good knowledge midwifery students have a positive stigma towards HIV patients.^{18,19,20,21} With the positive stigma of midwifery students able to provide appropriate care for PLHIV patients and participate in the success of PMTCT.

Negative attitudes was important thing that have to discussed because it could cause negative interpersonal interactions between midwife and patient, which encompassed verbal abuse or inappropriate communication, and physical abuse which manifested as deficiencies in

availability of services, lack of privacy during patient care and unwillingness of providers to accommodate the patient. And It could make the failure of the PMTCT program.²²

CONCLUSION

Respondent joined this study were mostly aged >21 year old. Variables has a significant relationship with student attitude about HIV is information from lecturer, Clinical instructor, experience managing HIV patients and the level of student knowledge about HIV AIDS. Level the knowledge was the most significant factor influencing attitude towards HIV AIDS with $p = 0.032$, OR = 2.256 with CI = 1,073-4.7533.

RECOMENDATION

To optimize the knowledge of midwifery students about HIV AIDS so as not to have a negative attitudes towards HIV sufferers and be able to participate in the success of PMTCT. Need to improve the HIV in curricula of midwifery education.

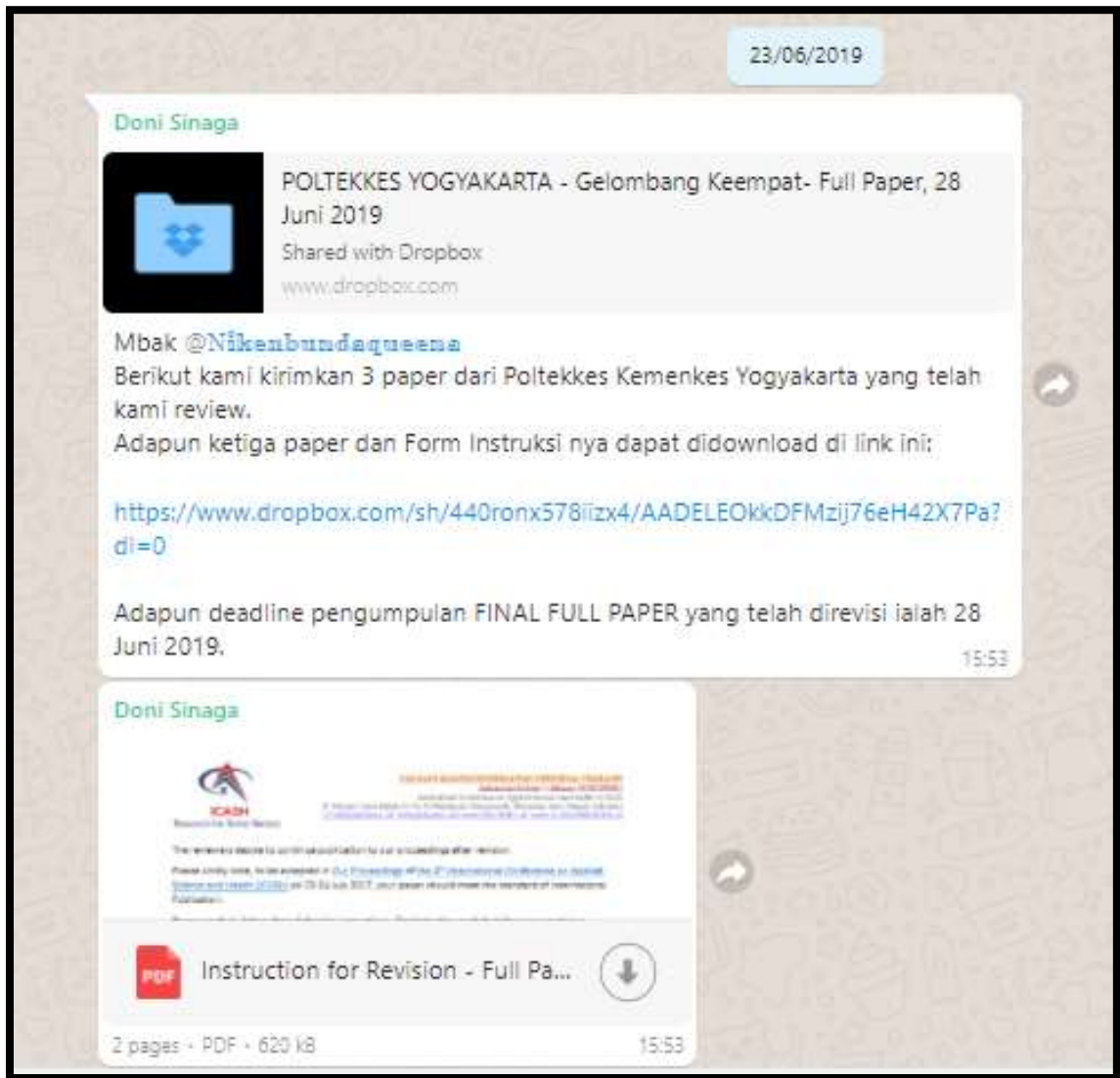
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2. Pengiriman hasil review (23 Juni 2019)
a. Pengumuman revisi



b. Hasil Review (23 Juni 2019)

ATTITUDES TOWARDS HIV AIDS AMONG MIDWIFERY STUDENTS IN YOGYAKARTA

ABSTRACT

The incidence of Human Immunodeficiency Virus (HIV) Infection in the world was still high as a challenge in achieving some targets in Sustainable Development Goals (SDGs). Midwives have a very important role in preventing HIV among mother to child transmission. Attitude was one indicator of a person's behavior or often also called close behavior. Negative attitude could lead stigma and discrimination for managing HIV AIDS patient. The aim of this study was to determine the factors related midwifery student's attitude towards HIV AIDS such as source of HIV information, experience managing HIV patient and level the knowledge. This was a cross-sectional study conducted among 130 applied science midwifery students in Yogyakarta selected by proportional sampling. A self-administered questionnaire was used in this study. Knowledge was measured through true and false statement questions and attitude towards HIV measured through likert scale. Data was analyzed by computer software and involved univariate, bivariat and multivariate analysis. The related factors among midwifery student's attitude towards HIV/AIDS were the source HIV information from lecturer ($p=0.006$), HIV information from clinical instructors ($p=0.046$), experience managing HIV patient ($p=0.017$) and level of knowledge ($p=0.006$). Multivariate analysis showed that those respondents with poor knowledge were 2.26 times more likely to have a negative attitude towards HIV/AIDS than those who had a good knowledge. Recommendation of this study was need to optimize the knowledge of midwifery students about HIV AIDS, to had a positive attitude towards people with HIV and could participate in the success of PMTCT. Most information about HIV AIDS was from lecturers, so HIV material needs to be given more specifically in the midwifery education curricula.

Keywords: Knowledge, attitudes, midwives, HIV/AIDS

INTODUCTION

The incidence of Human Immunodeficiency Virus (HIV) Infection in the world was still high. HIV AIDS was a major problem in achieving the Sustainable Development Goals. Specifically the purpose of point 3 of the SDGs was to achieve health and well-being for all people To achieve these holistic goals, one of the targets is to end the AIDS epidemic as a public health threat by 2030. The target of ending the AIDS epidemic by 2030 also applies in Indonesia.¹ Human immunodeficiency virus (HIV) was a type of virus that attacks / infects white blood cells which causes a decrease in human immunity. Acquired Immune Deficiency Syndrome (AIDS) was a set of symptoms of a disease that arises because of the immune system caused by HIV infection.²

An issue of HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. In 2017, 940 000 people are edited from HIV-related causes globally.³ There were approximately 36.9 million people living with HIV at the end of 2017 with 1.8 million people newly infected in 2017 globally.³ 59% of adults and 52% of children living with HIV were receiving lifelong antiretroviral therapy (ART) in 2017.³ Global ART coverage for women and breastfeeding women living with HIV is high at 80%.³

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HIV cases in Indonesia has increased. The reported cases until 2017 there were 48,300 HIV positive people and 9,280 AIDS people.⁴ people with HIV AIDS (PLWHA) in Indonesia are dominated by men (62%).⁴ The largest age group with HIV is 25-49 years (69.3%). The Special Region of Yogyakarta is one of the provinces contributing HIV in Indonesia. In 2017 there were 723 people with HIV.⁴

The highest method of transmission of HIV through sexual intercourse is 63.5%, the next method of transmission through IDU is 24.8%, IDU + sexual is 6.3%, and perinatal is 3.2%.⁵ Perinatal transmission occurs in the baby mother. The risk of HIV transmission from mother to baby without PMTCT intervention occurs during pregnancy (5-10%), labor (10-20%), breastfeeding (10-15%).⁶ HIV incidence in children who get infection from their mothers occurs more than 90% and since 2012 until 2016 the prevalence of cases of HIV transmission from mother to child continues to increase, which is 0.38% to 0.49. **The actual cases estimated were reaching 270,000 people and in Yogyakarta, the incidence of HIV continues to increase like in annually.**⁷

Vertical transmission can be prevented by Prevention of Mother To Child Transmission of HIV (PMTCT). Midwife as a leader PMTCT. Midwives can assist mothers with HIV during pregnancy, childbirth and breastfeeding. With proper PMTCT care will reduce HIV transmission from mother to baby. Midwery student as part of the success of the PMTCT program. When the learning process for midwifery students has begun to interact with HIV patients. After graduating and becoming their midwives who will carry out the PMTCT program. **Previous research showed that there were found midwifery students in Yogyakarta who had a negative stigma towards PLWHA. The experience managing PLWHA has significant to reduce the stigma of students.**⁸

Stigma and discrimination of HIV causes a major obstacle for PLWHA who want to access treatment, care, education, and information to prevent HIV transmission.⁹ Previous study showed that the most dominant attitude of the health care providers toward HIV / AIDS patients was related from fear (42.42%). Other research also showed that stigma could be reduced by the experience providing care for PLWHA.¹⁰ Stigma of midwives in providing services influences their willingness to provide services to HIV patients.¹⁰ Midwifery student gets information about HIV from various sources. The level of knowledge about HIV that has a variety. In this study we will explain Attitudes Towards HIV AIDS among applied science midwifery Students in Yogyakarta. **The aim of this study was to determine the factors related midwifery student's attitude towards HIV AIDS such as source of HIV information, experience managing HIV patient and level the knowledge**

METHODS

This study used cross-sectional design. The independent variables include source of HIV information, experience managing HIV patient and level the knowledge. The dependent variable was attitude towards HIV/AIDS. Population was applied science (Diploma 4) midwifery students in Yogyakarta. The inclusion criteria were the highest grade or last year midwifery student who are willing to become respondents known by signing *the informed consent* and having television and smartphone. The calculation of sample size used Lemeshow for two proportion hypothesis. Sample size of this study was 130 respondents. This study used the theoretical framework approach of Precede-Procede model (Lawrence Green). Independent variables consists of source of HIV information as a enabling factors, experience managing HIV patient as a reinforcing factor and level the knowledge as a predisposing factor.

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Commented [WU13]: Elaborate how authors measured the level of knowledge!

Second paragraph

Commented [WU14]: Explain in detail how you define positive/negative attitude? By scoring? Participants were given questionnaire? What information you request from each of them?

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A self-administered structured questionnaire that had previously been pretested. Midwifery students' knowledge was measured by true and false statements were scored as 1 and false statements were scored as 0. We then classified the scores into two categories to characterize the level of knowledge: good >80% and poor <80%. Likert scale to measure attitudes. Attitude was mentioned as positive and negative based on the mean. Descriptive statistics using frequencies and percentage was used to describe findings. *Chi square* test or *Fisher exact test* to determine the relationship between the dependent and independent variables was applied. Logistic regression was done for all variables with *p* less than 0.25 and to explain the most related factors independent variables to the dependent variable. Ethical clearance was obtained from Ethical Committee Poltekkes Kemenkes Yogyakarta Number: LB.01.01/KE-01/XII/2018.

RESULT

This study conducted on 130 applied science (Diploma 4) midwifery students from Universitas Gadjah Mada, Universitas Respati Yogyakarta and Poltekkes Kemenkes Yogyakarta. Proportion of midwifery students who were not correctly answered the indicators were the health indicators of PLWHA through CD4 counts (51.2%), when starting ARV treatment for pregnant women (76.2%), the risk of transmission from mother to fetus (58.8%) and delivery process for pregnant women with HIV (57.7%). It is very beneficial to informs and improve respondent knowledge.

ATTITUDE

The univariat analysis of the respondent showed in table 1.

Table 1: Univariat analysis

Variables		n= (130)	%
Age	≥21 y.o	106	81.5
	<21 y.o	24	18.5
HIV Information from Television	No	7	5.4
	Yes	123	94.6
HIV Information from Lecturer	No	10	7.7
	Yes	120	92.3
HIV Information from Clinical Instructure	No	35	26.9
	Yes	95	73.1
Expericence in managing HIV AIDS patient	No	14	10.8
	Yes	116	89.2
Midwifery student knowledge about HIV AIDS	Good	53	40.8
	Poor	77	59.2

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Midwifery student attitude towards HIV AIDS	Positive	67	51.5
	Negative (stigma)	63	48.5
	Total	130	100.0

Table 1 showed from 130 Midwifery students, most of them had age ≥ 21 years (81.5%). Most had HIV information from television (94.6), from lecturers (92.3%), clinical instructors (73%). Experience in managing HIV AIDS patients (89.2%). Majority had low HIV knowledge (59.2%) and had positive attitude towards HIV-AIDS (51.5%)

Bivariate analysis was used to analyze association between independent and dependent variables. The relationship between independent and dependent variables are showed in table2.

Table 2. The correlation between HIV Information, experience managing HIV and knowledge level with midwifery students' attitude towards HIV AIDS

Variable	Attitude towards HIV AIDS						p-value
	Positive		Negative		Total		
	n	%	n	%	n	%	
HIV information from Television							
No	5	71.4	2	28.2	7	100.0	0.279*
Yes	62	50.4	61	49.6	123	100.0	
HIV information from lecturer							
No	1	10	9	90	10	100.0	0.006
Yes	66	55	54	45	120	100.0	
HIV information from clinical instructors							
No	13	37.1	22	62.9	35	100.0	0.046
Yes	54	56.8	46	43.2	95	100.0	
Experience in managing HIV AIDS patient							
No	3	21.4	11	78.6	14	100.0	0.017
Yes	64	55.2	52	44.8	116	100.0	
Knowledge level							
Good	35	66	18	34	53	100.0	0.016
Poor	32	41.6	45	58.7	77	100.0	

*fisher exact test

Table 2 showed that the p-value of HIV Information from lecturer the attitude towards HIV-AIDS p value was 0.006, HIV Information from clinical instructors to the attitude towards HIV-AIDS was 0.046 > 0.05, experience managing HIV patients to the attitude towards HIV-AIDS was 0.017 and p-value of knowledge level to attitude towards HIV AIDS was 0.016 < 0.05. This means that HIV information from lecturer, clinical instructors, experience

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managing HIV patients and knowledge level has a significant relationship with the attitude towards HIV AIDS.

Multivariate analysis were done to independent variables that have $p < 0.250$ together. The result of multivariate analysis is shown in table 3. **Table 3 showed that the level of knowledge was the most significant factor influencing attitude towards HIV AIDS with $p=0.032$, $OR=2.256$ with $CI=1.073-4.7533$.**

Table 3: Multivariat Analysis

Variables	p value	OR	Confident Interval	
			Lower	Upper
HIV Information from clinical instructors	.286	1.594	.677	3.752
Expericence in managing HIV AIDS patient	.267	2.256	.537	9.478
HIV information from lecturer	.058	7.750	.929	64.635
Knowledge level	.032	2.258	1.073	4.753

DISCUSSION

Result of 130 applied science midwife students form Gadjah Mada University, Respati University Yogyakarta and Health Polytechnic Yogyakarta showed age > 21 years (81.5%) and a small portion < 21 years (18.5%). Midwifery students who get HIV information from television have a positive attitude towards HIV sufferers (50.4%) and negative attitude or have a stigma (49.6%). for students who were not informed about HIV from their television they had a positive attitude (71.4%) and a negative attitude (28.6%). HIV information from Television is not significant towards Attitude towards HIV AIDS with p -value = 0.279. This is in accordance with previous studies that explain the exposure of mass media not related to the negative attitude or stigma of HIV.¹⁰ However in other studies the media is effective for increasing knowledge of HIV.^{12,13}

For students who get HIV information from their lecturers they have a positive attitude (55%) and negative attitude (45%). While students who did not get HIV information from their lecturers had a positive attitude (10%) and negative attitude or stigma (90%). HIV information from lecturer was significant towards attitude towards HIV AIDS with p -value = 0.006. This was accordance with previous research which mentions the influence of the role of teachers on HIV stigma among students.^{14,15,16} From this result and previous study HIV AIDS need to improve in cuccicula of midwifery student to prevent the stigma and preparing the midwife to manage HIV patient as well. **From this study showed that the lecturers had the most proportion in providing information about HIV AIDS to midwifery students compared to other sources of information. Therefore it is necessary to optimize the ability of lecturers to teach reproductive health, especially about HIV AIDS through either courses or training. Now, HIV AIDS is in the subject of reproductive health and family planning and HIV AIDS material is only given one time in a class in a part of sexually transmitted infections. So the most important to improve the curriculum on HIV AIDS in midwifery education.**

Midwifery students who get HIV information from **clinical instructors** have a positive attitude towards HIV sufferers (56.8%) and negative attitude (43.2%). For students who were not informed about HIV from clinical instructors they had a positive attitude (37.1%) and negative stigma (62.9%). HIV information from clinical instructure is significant towards attitudes towards HIV AIDS p -value = 0.047. This is consistent with previous research which

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¹⁸ The level of knowledge was the most significant factor influencing attitude towards HIV AIDS with $p = 0.032$, $OR = 2.256$ with $CI = 1.073-4.7533$.

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explains that there is a significant relationship between HIV information from clinical instructors to stigma.^{15,17}

Midwifery students who have interacted with HIV patients have a positive attitude towards HIV sufferers (55.2%) and negative attitude (44.8%). For students who have never interacted with HIV patients they have a positive attitude (21.4%) and negative attitude or still have a stigma (78.6%). The experience in managing HIV AIDS patients was significant towards attitude towards HIV AIDS with p-value = 0.017. This was consistent with previous studies which explain that learning with cases and interactions with PLWHA are related to HIV stigma.^{8,17,18}

Midwifery students whose knowledge about HIV has a positive stigma towards people with HIV (66) and negative stigma (34). For students whose knowledge about HIV is not good they have a positive stigma (41.6) and a negative stigma (58.4). The level of knowledge of midwifery students is significant towards Attitude towards HIV AIDS with p-value = 0, 016. As the results of previous studies that the level of knowledge affects the stigma of HIV.^{18,19} The level of knowledge was the most significant factor influencing attitude towards HIV AIDS with p = 0.032, OR = 2.256 with CI = 1,073-4.7533. With good knowledge midwifery students have a positive attitude towards HIV patients.¹⁹⁻²² With the positive attitude midwifery students able to provide appropriate care for PLWHA patients and participate in the success of PMTCT program in the future.

Negative attitudes was important thing had to discussed because it could cause negative interpersonal interactions between midwife and patient, which encompassed verbal abuse or inappropriate communication, and physical abuse which manifested as deficiencies in availability of services, lack of privacy during patient care and unwillingness of providers to accommodate the patient. And It could make the failure of the PMTCT program.²³

Most information about HIV AIDS for midwifery students was from lectures compared to clinical mentor, so need to increase the ability of lecturers through course or training about HIV AIDS, also HIV material needs to be given more specifically in the midwifery education curricula.

CONCLUSION

Respondent joined this study were mostly aged >21 year old. Variables has a significant relationship with student attitude about HIV was information from lecturer (as most information source of HIV AIDS of midwifery student), clinical mentor, experience managing HIV patients and the level of student knowledge about HIV AIDS. Level the knowledge was the most significant factor influencing attitude towards HIV AIDS with p = 0.032, OR = 2.256 with CI = 1,073-4.7533. Based on the conclusion need to optimize the knowledge of midwifery students about HIV AIDS, to had a positive attitude towards people with HIV and could participate in the success of PMTCT. Most information about HIV AIDS was from lecturers, so HIV material needs to be given more specifically in the midwifery education curricula.

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3. Pengiriman revisi (28 Juni 2019)

ATTITUDES TOWARDS HIV AIDS AMONG MIDWIFERY STUDENTS IN YOGYAKARTA

ABSTRACT

The incidence of Human Immunodeficiency Virus (HIV) Infection in the world was still high as a challenge in achieving some targets in Sustainable Development Goals (SDGs). Midwifery student as a midwives candidate have a very important role in preventing HIV among mother to child transmission. Attitude was one indicator of a person's behavior or often also called close behavior. Negative attitude could lead stigma and discrimination for managing HIV AIDS patient. The aim of this study was to determine the factors related midwifery student's attitude towards HIV AIDS such as source of HIV information, experience managing HIV patient and level the knowledge. This was a cross-sectional study conducted among 130 applied science midwifery students in Yogyakarta selected by proportional sampling. A self-administered questionnaire was used in this study. Knowledge was measured through true and false statement questions and attitude towards HIV measured through likert scale. Data was analyzed by computer software and involved univariate, bivariat and multivariate analysis. The related factors among midwifery student's attitude towards HIV/AIDS were the source HIV information from lecturer ($p=0.006$), HIV information from clinical instructors ($p=0.046$), experience managing HIV patient ($p=0.017$) and level of knowledge ($p=0.006$). Multivariate analysis showed that those respondents with poor knowledge were 2.26 times more likely to have a negative attitude towards HIV/AIDS than those who had a good knowledge. Recommendation of this study was need to optimize the knowledge of midwifery students about HIV AIDS, to had a positive attitude towards people with HIV and could participate in the success of PMTCT. Most information about HIV AIDS was from lecturers, so HIV material needs to be given more specifically in the midwifery education curricula.

Keywords: Knowledge, attitudes, midwives, HIV/AIDS

INTRODUCTION

The incidence of Human Immunodeficiency Virus (HIV) Infection in the world was still high. HIV AIDS was a major problem in achieving the Sustainable Development Goals. Specifically the purpose of point 3 of the SDGs was to achieve health and well-being for all people To achieve these holistic goals, one of the targets is to end the AIDS epidemic as a public health threat by 2030. The target of ending the AIDS epidemic by 2030 also applies in Indonesia.¹ Human immunodeficiency virus (HIV) was a type of virus that attacks / infects white blood cells which causes a decrease in human immunity. Acquired Immune Deficiency Syndrome (AIDS) was a set of symptoms of a disease that arises because of the immune system caused by HIV infection.²

An issue of HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. In 2017, 940 000 people are edited from HIV-related causes globally.³ There were approximately 36.9 million people living with HIV at the end of 2017 with 1.8 million people newly infected in 2017 globally.³ 59% of adults and 52% of

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children living with HIV were receiving lifelong antiretroviral therapy (ART) in 2017.³ Global ART coverage for women and breastfeeding women living with HIV is high at 80%.³

HIV cases in Indonesia has increased. The reported cases until 2017 there were 48,300 HIV positive people and 9,280 AIDS people.⁴ people with HIV AIDS (PLWHA) in Indonesia are dominated by men (62%).⁴ The largest age group with HIV is 25-49 years (69.3%). The Special Region of Yogyakarta is one of the provinces contributing HIV in Indonesia. In 2017 there were 723 people with HIV.⁴

The highest method of transmission of HIV through sexual intercourse is 63.5%, the next method of transmission through IDU is 24.8%, IDU + sexual is 6.3%, and perinatal is 3.2%.⁵ Perinatal transmission occurs in the baby mother. The risk of HIV transmission from mother to baby without PMTCT intervention occurs during pregnancy (5-10%), labor (10-20%), breastfeeding (10-15%).⁶ HIV incidence in children who get infection from their mothers occurs more than 90% and since 2012 until 2016 the prevalence of cases of HIV transmission from mother to child continues to increase, which is 0.38% to 0.49. **The actual cases estimated were reaching 270,000 people and in Yogyakarta, the incidence of HIV continues to increase like in annually.**⁷

Vertical transmission can be prevented by Prevention of Mother To Child Transmission of HIV (PMTCT). Midwife as a leader PMTCT. Midwives can assist mothers with HIV during pregnancy, childbirth and breastfeeding. With proper PMTCT care will reduce HIV transmission from mother to baby. **Midwery student as part of the success of the PMTCT program. When the learning process for midwifery students has begun to interact with HIV patients. After graduating and becoming their midwives who will carry out the PMTCT program. Previous research showed that there were found midwifery students in Yogyakarta who had a negative stigma towards PLWHA. The experience managing PLWHA has significant to reduce the stigma of students.**⁸

Stigma and discrimination of HIV causes a major obstacle for PLWHA who want to access treatment, care, education, and information to prevent HIV transmission.⁹ Previous study showed that the most dominant attitude of the health care providers toward HIV / AIDS patients was related from fear (42.42%). Other research also showed that stigma could be reduced by the experience providing care for PLWHA.¹⁰ Stigma of midwives in providing services influences their willingness to provide services to HIV patients.¹⁰ Midwifery student gets information about HIV from various sources. The level of knowledge about HIV that has a variety. In this study we will explain Attitudes Towards HIV AIDS among applied science midwifery Students in Yogyakarta. **The aim of this study was to determine the factors related midwifery student's attitude towards HIV AIDS such as source of HIV information, experience managing HIV patient and level the knowledge**

METHODS

This study used cross-sectional design. The independent variables include source of HIV information, experience managing HIV patient and level the knowledge. The dependent variable was attitude towards HIV/AIDS. Population was applied science (Diploma 4) midwifery students in Yogyakarta. The inclusion criteria were the highest grade or last year midwifery student who are willing to become respondents known by signing *the informed consent* and having television and smartphone. The calculation of sample size used Lemeshow for two proportion hypothesis. Sample size of this study was 130 respondents. This study used the theoretical framework approach of Precede-Procede model (Lawrence Green). Independent variables consists of source of HIV information as a enabling factors,

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experience managing HIV patient as a reinforcing factor and level the knowledge as a predisposing factor.

A self-administered structured questionnaire that had previously been pretested. Midwifery students' knowledge was measured by true and false statements were scored as 1 and false statements were scored as 0. We then classified the scores into two categories to characterize the level of knowledge: good >80% and poor <80%. Likert scale to measure attitudes. Attitude was mentioned as positive and negative based on the mean. Descriptive statistics using frequencies and percentage was used to describe findings. *Chi square* test or *Fisher exact test* to determine the relationship between the dependent and independent variables was applied. Logistic regression was done for all variables with *p* less than 0.25 and to explain the most related factors independent variables to the dependent variable. Ethical clearance was obtained from Ethical Committee Poltekkes Kemenkes Yogyakarta Number: LB.01.01/KE-01/XII/2018.

RESULT

This study conducted on 130 applied science (Diploma 4) midwifery students from three institution in Yogyakarta with minimum B accredited. The univariat analysis of the respondent showed in table 1.

Table 1: Univariat analysis

Variables		n= (130)	%
Age	≥21 y.o	106	81.5
	<21 y.o	24	18.5
HIV Information from Television	No	7	5.4
	Yes	123	94.6
HIV Information from Lecturer	No	10	7.7
	Yes	120	92.3
HIV Information from Clinical Instructure	No	35	26.9
	Yes	95	73.1
Expericence in managing HIV AIDS patient	No	14	10.8
	Yes	116	89.2
Midwifery student knowledge about HIV AIDS	Good	53	40.8
	Poor	77	59.2
Midwifery student attitude towards HIV AIDS	Positive	67	51.5
	Negative (stigma)	63	48.5
	Total	130	100.0

Commented [WU17]: Explain what?

done

Commented [EP18]: I suggest to use enter model. It is important to show the effects of other variables too.

Done in the result

Commented [EP19]: In descriptive statistics, it is better to mention indicators/questions used to measure knowledge and attitude, as well as, the proportion of students who correctly answered the indicators. It is very beneficial to informs what aspects of knowledge and attitude that need to improve.

done

Table 1 showed from 130 Midwifery students, most of them had age ≥ 21 years (81.5%). Most had HIV information from television (94.6), from lecturers (92.3%), clinical instructors (73%). Experience in managing HIV AIDS patients (89.2%). Majority had low HIV knowledge (59.2%) and had positive attitude towards HIV-AIDS (51.5%). Proportion of midwifery students who were not correctly answered the indicators were HIV transmission (75.4%), the health indicators of PLWHA through CD4 counts (51.2%), ARV treatment (69.2%), when starting ARV treatment for pregnant women (76.2%), the risk of transmission from mother to fetus (58.8%) and delivery process for pregnant women with HIV (57.7%). It was very beneficial to inform and improve respondent knowledge. Most of the respondents' negative attitudes were about stopping breastfeeding for infants with HIV / AIDS, for more self-protection compared to other patients, the separation of babies from HIV mothers with other babies, stigma about the causes of HIV is unsafe sexual behavior.

Bivariate analysis was used to analyze association between independent and dependent variables. The relationship between independent and dependent variables are showed in table2.

Table 2. The correlation between HIV Information, experience managing HIV and knowledge level with midwifery students' attitude towards HIV AIDS

Variable	Attitude towards HIV AIDS						p-value
	Positive		Negative		Total		
	n	%	n	%	n	%	
HIV information from Television							
No	5	71.4	2	28.2	7	100.0	0.279*
Yes	62	50.4	61	49.6	123	100.0	
HIV information from lecturer							
No	1	10	9	90	10	100.0	0.006
Yes	66	55	54	45	120	100.0	
HIV information from clinical instructors							
No	13	37.1	22	62.9	35	100.0	0.046
Yes	54	56.8	46	43.2	95	100.0	
Experience in managing HIV AIDS patient							
No	3	21.4	11	78.6	14	100.0	0.017
Yes	64	55.2	52	44.8	116	100.0	
Knowledge level							
Good	35	66	18	34	53	100.0	0.016
Poor	32	41.6	45	58.7	77	100.0	

*fisher exact test

Table 2 showed that the p-value of HIV Information from lecturer the attitude towards HIV-AIDS p value was 0,006, HIV Information from clinical instructors to the attitude towards HIV-AIDS was 0.046 > 0.05, experience managing HIV patients to the attitude towards HIV-AIDS was 0.017 and p-value of knowledge level to attitude towards HIV AIDS was 0.016 < 0.05. This means that HIV information from lecturer, clinical instructors, experience

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Commented [EP21]: Please revise this one!

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Commented [EP22]: Please revise this one!

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Done → clinical instructors

managing HIV patients and knowledge level has a significant relationship with the attitude towards HIV AIDS.

Multivariate analysis were done to independent variables that have $p < 0.250$ together. The result of multivariate analysis is shown in table 3. **Table 3 showed that the level of knowledge was the most significant factor influencing attitude towards HIV AIDS with $p=0.032$, $OR=2.256$ with $CI=1.073-4.7533$.**

Table 3: Multivariat Analysis

Variables	p value	OR	Confident Interval	
			Lower	Upper
HIV Information from clinical instructors	.286	1.594	.677	3.752
Expericence in managing HIV AIDS patient	.267	2.256	.537	9.478
HIV information from lecturer	.058	7.750	.929	64.635
Knowledge level	.032	2.258	1.073	4.753

DISCUSSION

Result of 130 applied science midwife students form Gadjah Mada University, Respati University Yogyakarta and Health Polytechnic Yogyakarta showed age > 21 years (81.5%) and a small portion < 21 years (18.5%). Midwifery students who get HIV information from television have a positive attitude towards HIV sufferers (50.4%) and negative attitude or have a stigma (49.6%). for students who were not informed about HIV from their television they had a positive attitude (71.4%) and a negative attitude (28.6%). HIV information from Television is not significant towards Attitude towards HIV AIDS with p -value = 0.279. This is in accordance with previous studies that explain the exposure of mass media not related to the negative attitude or stigma of HIV.¹⁰ However in other studies the media is effective for increasing knowledge of HIV.^{12,13}

For students who get HIV information from their lecturers they have a positive attitude (55%) and negative attitude (45%). While students who did not get HIV information from their lecturers had a positive attitude (10%) and negative attitude or stigma (90%). HIV information from lecturer was significant towards attitude towards HIV AIDS with p -value = 0.006. This was accordance with previous research which mentions the influence of the role of teachers on HIV stigma among students.^{14,15,16} From this result and previous study HIV AIDS need to improve in cuccicula of midwifery student to prevent the stigma and preparing the midwife to manage HIV patient as well. **From this study showed that the lecturers had the most proportion in providing information about HIV AIDS to midwifery students compared to other sources of information. Therefore it is necessary to optimize the ability of lecturers to teach reproductive health, especially about HIV AIDS through either courses or training. Now, HIV AIDS is in the subject of reproductive health and family planning and HIV AIDS material is only given one time in a class in a part of sexually transmitted infections. So the most important to improve the curriculum on HIV AIDS in midwifery education.**

Midwifery students who get HIV information from **clinical instructors** have a positive attitude towards HIV sufferers (56.8%) and negative attitude (43.2%). For students who were not informed about HIV from clinical instructors they had a positive attitude (37.1%) and negative stigma (62.9%). HIV information from clinical instructure is significant towards attitudes towards HIV AIDS p -value = 0.047. This is consistent with previous research which

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Since it is only one variable left in this model, it is not different with bivariate analysis.

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Commented [EP25]: Please also add the OR from other variables in this study. It is important to show the OR in order to conclude which one is the most influential factor!

done

¹⁸ The level of knowledge was the most significant factor influencing attitude towards HIV AIDS with $p = 0.032$, $OR = 2.256$ with $CI = 1.073-4.7533$.

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explains that there is a significant relationship between HIV information from clinical instructors to stigma.^{15,17}

Midwifery students who have interacted with HIV patients have a positive attitude towards HIV sufferers (55.2%) and negative attitude (44.8%). For students who have never interacted with HIV patients they have a positive attitude (21.4%) and negative attitude or still have a stigma (78.6%). The experience in managing HIV AIDS patients was significant towards attitude towards HIV AIDS with p-value = 0.017. This was consistent with previous studies which explain that learning with cases and interactions with PLWHA are related to HIV stigma.^{8,17,18}

Midwifery students whose knowledge about HIV has a positive stigma towards people with HIV (66) and negative stigma (34). For students whose knowledge about HIV is not good they have a positive stigma (41.6) and a negative stigma (58.4). The level of knowledge of midwifery students is significant towards Attitude towards HIV AIDS with p-value = 0, 016. As the results of previous studies that the level of knowledge affects the stigma of HIV.^{18,19} The level of knowledge was the most significant factor influencing attitude towards HIV AIDS with p = 0.032, OR = 2.256 with CI = 1,073-4.7533. With good knowledge midwifery students have a positive attitude towards HIV patients.¹⁹⁻²² With the positive attitude midwifery students able to provide appropriate care for PLWHA patients and participate in the success of PMTCT program in the future.

Negative attitudes was important thing had to discussed because it could cause negative interpersonal interactions between midwife and patient, which encompassed verbal abuse or inappropriate communication, and physical abuse which manifested as deficiencies in availability of services, lack of privacy during patient care and unwillingness of providers to accommodate the patient. And It could make the failure of the PMTCT program.²³

Most information about HIV AIDS for midwifery students was from lectures compared to clinical mentor, so need to increase the ability of lecturers through course or training about HIV AIDS, also HIV material needs to be given more specifically in the midwifery education curricula.

CONCLUSION

Respondent joined this study were mostly aged >21 year old. Variables has a significant relationship with student attitude about HIV was information from lecturer (as most information source of HIV AIDS of midwifery student), clinical mentor, experience managing HIV patients and the level of student knowledge about HIV AIDS. Level the knowledge was the most significant factor influencing attitude towards HIV AIDS with p = 0.032, OR = 2.256 with CI = 1,073-4.7533. Based on the conclusion need to optimize the knowledge of midwifery students about HIV AIDS, to had a positive attitude towards people with HIV and could participate in the success of PMTCT. Most information about HIV AIDS was from lecturers, so HIV material needs to be given more specifically in the midwifery education curricula.

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Commented [EP27]: Please add the implication of the study findings. What should university do to improve students' knowledge?

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Commented [WU28]: In conclusion, authors need to summarize the findings in one or two sentences. Then, provide the recommendations to help researchers in designing future studies and policy makers in designing policy recommendation.

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Commented [EP30]: What does it mean? Since 92.3% of students reported that they received information from lecturers, how was the information delivered by lecturers?

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