Intention to Use Voluntary Counseling and Testing Services among College Students

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ABSTRACT

***Background**: HIV is a health problem of global concern. A large number of HIV cases in Surakarta is due to various factors such as the characteristics of adolescents, knowledge, attitudes, and beliefs to reduce HIV prevention through the use of VCT services. This study aims to analyze the relationship between age, gender, type of study program, information exposure, organizational participation, knowledge, attitudes, and beliefs in using VCT to use Voluntary Counseling and Testing (VCT) services for college students.*
***Method**: This research was a quantitative study with a cross-sectional approach. The study population was all students at one university in Surakarta in the 2016-2017 class as many as 12,457 students, while the research sample was 500 students who were taken using a proportional random sampling technique. Data analysis using chi-square test and logistic regression.*
***Results**: The results of the multivariate analysis showed that students' knowledge of HIV / AIDS and VCT affected the intention to use VCT services with an OR = 1.776 (CI = 1.170-2.695). The bivariate test results showed that there was a relationship between information exposure (p-value = 0.001), knowledge (p-value = 0.007), attitude (p-value = 0.006) and belief (p-value = 0.013) with the intention to use VCT services. Meanwhile, there was no relationship between age (p-value = 0.118), gender (p-value = 0.579), type of study program (p-value = 1,000), organizational participation (p-value = 0.352) with the intention of using VCT services. Students' knowledge of HIV / AIDS and VCT was the most dominant VCT intention. Therefore, providing information about VCT to students is necessary to increase students' knowledge and confidence in using VCT services.*

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INTRODUCTION

HIV / AIDS case is shown above only appears small, while the conditions under the bigger one are undetectable. Since it was first discovered in 1987 to December 2017, HIV-AIDS cases have been reported are 421 (81.9%) cases from 51 districts/cities in all provinces in Indonesia. The cumulative number of HIV infections reported until December 2017 was 280,623 cases.[1] The cumulative number of AIDS cases reported from 1987 to December 2017 was 102,667 cases. The highest percentage of HIV cases was in the province of DKI Jakarta at 18.52%, followed by East Java 14.12%, Papua 10.36%, West Java 10.32%, and Central Java at 7.94%. HIV / AIDS cases in Indonesia based on the age group 15-19 years (early adolescent category) have a percentage of HIV infection of 4%. Age 20-24 years (late adolescence category) have an HIV percentage of 16.7%. The percentage of HIV in the age group 20-24 years is the second-highest after age 25-49 years at 69.2%.[1]

The percentage of new HIV cases in 2017 in Central Java was 6.74%, higher than in 2016, which was 4.52%. Most cases of HIV based on age groups were as follows: 25-49 years old at 69.34%, then 20-24 years old at 14.97%. The age group 20-24 years is the most productive late adolescents and the age group 15-19 years (4.05%) is included in the early adolescent age group which in the 15-19 year age group adolescents need special HIV prevention because they are included in the category susceptible group.[2] HIV / AIDS cases in Surakarta until June 2018 occupied the fourth position in Central Java. The highest cases were in Central Java, respectively, Semarang (20.59%), Banyumas (13.52%), Grobogan (12.27%), and Surakarta (12.04%). There are still many HIV cases, so the government is trying various activities to combat HIV / AIDS.[3]

HIV / AIDS prevention is carried out through five activities: health promotion, prevention of HIV / AIDS transmission, examination of HIV / AIDS diagnosis,

treatment, care and support, and rehabilitation. VCT as an effort to combat HIV / AIDS. VCT is included in five HIV / AIDS prevention activities, including HIV / AIDS transmission and examination of HIV / AIDS diagnosis.[4] VCT services refer to the five basic principles that have become a reference for Indonesia to be developed nationally regarding the global handling of HIV, namely: informed consent, confidentiality, counseling, correct test results, and connections to care, treatment, and prevention services.[5] Therefore, it can be said that HIV testing is useful for reducing the spread of HIV transmission.[6]

VCT is an important effort in the prevention of HIV, but the number of VCT visits in Surakarta City from January to June 2018 was 10,291 people, and the highest was the high-risk group for HIV. VCT visits also included a population of 6,544 pregnant women, 1,044 MSM (men sex with men), and 719 Tuberculosis (TB) patients. However, no data specifically categorizes the use of VCT services in the general population and adolescent age groups.[3] There were 27 positive HIV / AIDS sufferers in the 15-19 age group, 214 in 20-24 years old, and 1812 in 25-49 years old.[3] Student is adolescents with ages ranging from 18-25 years. Age 18-25 years is the second-highest age group after age 25-49 with 123 cases of HIV. There were more HIV cases than AIDS cases, namely 91 cases.[3,7] Therefore, the age group of students needs to get special attention in the HIV / AIDS prevention program.

The government has intensively carried out efforts to prevent HIV / AIDS among adolescents. This effort is necessary considering the percentage of male adolescents accepting sexual relations before marriage is higher (7%) than that of women (2%).[8] Lack of understanding of sexual behavior in adolescents is very detrimental because adolescents experience essential developments, namely cognitive, emotional, social, and sexual.[9] The need for education and understanding of HIV / AIDS in adolescents/students to avoid activities that trigger HIV disease. VCT can help increase knowledge about HIV / AIDS prevention and treatment and can help reduce stigma and discrimination against people living with HIV / AIDS.[8]

Several factors influence the use of VCT services. The driving factors for the use of VCT services include age, gender, and occupation.[10] There was a relationship between age and VCT planning. The higher a person's age, the better their attitude towards VCT. The age of 19 years is an age that is ripe or old enough to think and make decisions. The elder enough, the level of maturity and strength of a person will be more mature in thinking and working.[11]

Another factor associated with VCT services is gender. Male students tend to take advantage of VCT. It is because boys are usually more sexually active than girls, and 62% of males are infected with HIV based on reported HIV cases.[12] Other than that, men who have sex with men (MSM) are at high risk of HIV transmission.[13] But it turns out that males and females with higher secondary education tend to do the VCT test.[14]

The type of study program where students take education and information exposure can be related to a person's intention to behave. Exposure to information is directly related to a person's intention to seek VCT services. The health information that individuals get from schools or other media can affect a person's knowledge about VCT so that it is also indirectly related to the intention to use VCT services.[15]

Knowledge is one factor that also influences a person to do VCT. Knowledge about HIV / AIDS and the use of VCT had a positive relationship. Students with knowledge of HIV were 3.69 times more likely to use VCT services than those with no knowledge of HIV.[16] This can be explained by the fact that knowledgeable students could be more aware of the benefits of testing and prevention in reducing the transmission of HIV infection. The results of other studies also indicate that 81.7% of well-informed respondents who have positive attitudes towards VCT and positive attitudes towards VCT are also indicated by the respondent's plan to do VCT as much as 52.5%.[11] Knowledge about HIV can be obtained from various sources, both formal and informal. It is also hoped that a person's participation in the organization will increase one's access to information about HIV / AIDS and VCT.

Another factor is attitude. Attitudes are among the factors that influence the use of VCT services. Students with a positive attitude towards VCT were more likely to take an HIV test than those with a negative attitude. It is because students who have a positive attitude understand better about HIV prevention.[17] However, another research in Jember shows no relationship between attitude and intention (intention) to use VCT services in adolescents.[18]

Based on the Theory of Planned Behavior (TPB), beliefs are related to a person's behavior, such as doing VCT, but research in Jember Indonesia showed no relationship between beliefs and attitudes using VCT services.[18] Other studies have also stated that students are less confident about the VCT test. Students are afraid of the perceived consequences of a positive HIV result, fear of losing everything, and everything changes.[19] Beliefs about the spread of HIV and preventive behavior including intentional measures in the prevention of HIV.[20]

This study is different from previous studies. Previous research for students discussed the assessment of factors related to VCT services but did not discuss the beliefs, knowledge, attitude, and respondent characteristics with intentions of using VCT services. Therefore, the

purpose of this study is to analyze the relationship between age, type of study program, information exposure, organizational participation, gender, knowledge, attitudes, beliefs about the use of VCT, and the intention to use Voluntary Counseling and Testing (VCT) services. The results of this study are expected to provide input to students in the use of VCT services as an effort to prevent HIV / AIDS early.

METHOD

This type of research is analytic quantitative with a cross-sectional approach. This research was conducted in 2019. The population in this study were all students at one of the universities in Surakarta, which has a student organization engaged in HIV prevention, especially the 2016-2017 class, totaling 12,457 students. The sampling technique in this study used a proportional random sampling technique. The sample in this study was calculated using the Lemeshow minimum sample formula. The number of samples in the study was 500 students who had never visited a VCT service.

Age, gender, the field of study, exposure to information about HIV and VCT, organizational participation, knowledge, attitudes, and behavioral beliefs are independent variables in the study with the intention for VCT as the dependent variable. The independent variables in the study, namely age, were categorized into 18-19 years, and 20-25 years, sex was categorized into female and male. Other variables, namely exposure to information related to HIV and VCT, were categorized as having had information before and never. Then the fields of study are categorized into health and non-health. In addition, there are organizational participation variables that are categorized as joining organizations and not joining organizations on campus. There was also a knowledge variable in the study: a student's understanding of HIV / AIDS and VCT, which was categorized as low knowledge if less than mean and good if ≥ mean (8.69). In addition to knowledge, students' attitudes towards VCT were also independent variables in the study with a negative attitude if <mean, and a positive attitude if ≥ mean (11.64). Then, belief in the use of VCT is categorized into low behavioral trust if <mean and high behavioral belief if ≥ mean (6.04). The dependent variable categorizes students' intention to use VCT services as intending to do VCT if students intend to use VCT services to seek HIV information, HIV testing, and HIV test counseling within the next month. At the same time, it is stated that they do not intend to use VCT services if students do not want to take advantage of these services in the next month.

Researchers collected data by distributing questionnaires to students of each faculty with the criteria and number of respondents that had been determined by involving enumerators who had previously explained about the data collection process. The time needed to collect research data was three weeks (18 March 2019 - 6 April 2019). This study used instruments that have been tested for validity and reliability in Sukoharjo. The results of the knowledge variable reliability test were 0.7311, attitudes were 0.7498, and behavioral beliefs were 0.7011. Invalid question items were not used in this study. After the data is obtained, then data analysis is carried out. Data analysis was used to determine the relationship between the independent variables with the dependent variable, namely the intention to use VCT services using chi-square statistical analysis and the Contingency Coefficient test used to determine the closeness of the relationship between the independent variable and the dependent variable. Meanwhile, the multivariate analysis in this study used a logistic regression test. Moreover, at last, this research was declared to have passed ethics by the Health Research Ethics Commission (KEPK) Medical School Universitas Muhammadiyah Surakarta No. 2156/B.1/KEPK-FKUMS/V/2019.

RESULT AND DISCUSSION

The results of the distribution of respondent characteristics can be seen in Table 1. In Table 1, the age of the respondents describes that the majority are 20 years old, as many as 212 students (42.4%). More than half of the respondents were female, namely 265 students (53%). The year of entry of respondents describes that the most respondents are students of class 2017, as many as 255 students (51%). In the aspect of exposure to information on HIV / AIDS, most respondents had received information on HIV as many as 401 students (80.2%). Meanwhile, in the aspect of participation in campus organizations, most respondents participated in organizations on campus, namely 395 students (79%). Other information, namely regarding the origin of the study program to the respondents, most research respondents took education in non-health study programs, namely 426 (85.2%).

Table 2-4 describes students' knowledge, attitude, and behavior belief to use VCT. Students who have good knowledge are 270 respondents (54%) more than students who have less knowledge. In the attitude variable about HIV / AIDS and VCT, students had more positive attitudes than 306 respondents (61.2%). Students who have high behavior belief in VCT services are 313 (62.6%). The majority of students did not intend to do VCT of 331 students (66.2%). The students do not want to seek information and test HIV in VCT services in the next month. Information about the knowledge of students can be seen in Table 2.

Table 1. Description of respondent characteristics

Characteristics	n	%	Mean	SD
Age				
18	12	2.4		
19	108	21.6		
20	212	42.4	20.14	0.928
21	136	27.2		
22	28	5.6		
23	4	0.8		
Gender				
Female	265	53		
Male	235	47		
Year of study				
2016	245	49		
2017	255	51		
Get HIV Information				
No	99	19.8		
Yes	401	80.2		
Join the Organization on Campus				
Don't join an	105	21		
organization	395	79		
Join organization				
Type of Study Program				
Health	74	14.8		
Non-health	426	85.2		
Knowledge				
Low	230	46	8.69	1.744
Good	270	54		
Attitude				
Negative	194	38.8	11.64	2.066
Positive	306	61.2		
Behavior Belief				
Low	187	37.4	6.04	1.559
High	313	62.6		
Intention				
No intention of VCT	331	66.2		
Intention of VCT	169	33.8		

Table 2. Students' Knowledge about HIV and VCT

Statement	True	%	False	%
HIV stands for Human Immunodeficiency Virus	100	20	400	80
HIV is a virus that attacks the human immune system	487	2.6	13	97.4
VCT is an HIV test that is only done by adolescents voluntarily	193	38.6	307	61.4
Kissing is at risk of transmitting the HIV/AIDS virus	298	59.6	202	40.4
HIV is only found in vaginal fluids and semen	300	60	200	40
Having sex just once will not risk transmitting the HIV	402	80.4	98	19.6
The HIV takes 1-5 years to show symptoms	125	25	375	75
When suffering from HIV, you are susceptible to fungal, inflammatory disease in the mouth	368	73.6	132	26.4
The VCT (HIV Test) service is only a place used for HIV/AIDS testing	116	23.2	384	76.8
HIV/AIDS testing in VCT services is carried out by health workers	454	90.8	46	9.2
VCT plays an important role as a strategy to find out HIV status so that it can reduce the spread of HIV/AIDS transmission	76	15.2	424	84.4
VCT is carried out in populations at high risk of transmitting HIV/AIDS, such as commercial sex workers (CSWs)	380	76	120	24
VCT by adolescents is a strategy to reduce the incidence of HIV/AIDS	477	95.4	23	4.6
VCT services can be used for adolescents to find out the results of their friends or relatives' HIV tests	176	35.2	324	64.8
VCT carried out by adolescents is a strategy to prevent HIV/AIDS in adolescents	110	22	390	78

Table 3. Students' attitude about VCT

Statement	Agree	%	Disagree	%
I think that HIV testing is not important for teenagers because teenagers are not at risk of HIV/AIDS	445	89	55	11
I think people infected with HIV/AIDS after VCT should be quarantined	264	52.8	236	47.2
In my opinion, if my friend is infected with HIV/AIDS after VCT, it should be avoided so as not to contract the disease	403	80.6	97	19.4
If I've never done any HIV risky activities, I don't need to check for HIV/AIDS at the VCT service	394	78.8	106	21.2
If there are a lot of people living with HIV/AIDS where I live, then I need to check with the VCT service	435	87	65	13
I think checking into a VCT service will waste a lot of time because of the long examination	408	81.6	92	18.4
I think that the target of VCT services is not only Commercial Sex Workers but also all people who live in areas with a high incidence of HIV/AIDS	465	93	35	7
I think that HIV/AIDS counselling and HIV testing are important for teenagers because teenagers are vulnerable to HIV	459	91.8	41	8.2
I need to follow the VCT service counselling even though I am not at risk of HIV/AIDS	470	94	30	6
I will spread the information about VCT service to others	463	92.6	37	7.4
I don't need to take an HIV test because I don't have HIV/AIDS	441	88.2	59	11.8
In my opinion, before taking an HIV/AIDS test at VCT services, patients need to fill out an informed consent (consent sheet)	480	96	20	4
I think the results of the HIV test can be shared with the patient's relatives	195	39	305	61

Table 4. Students' behavioral belief about VCT

Statement	Agree	%	Disagree	%
By utilizing VCT services, I will:				
Only know my HIV/AIDS status	115	23	385	77
Not obtain information on pre-counselling	333	66.6	167	33.4
Not obtain information after VCT	478	95.6	22	4.4
Prevent HIV/AIDS transmission from an early age	462	92.4	38	7.6
Be taken to suffer HIV	313	62.6	187	37.4
Spend a lot of money	323	64.6	177	35.4
Reduce the risk of spreading HIV	432	86.4	68	13.6
Afraid because friends know my HIV status	347	69.4	153	30.6

The results of testing the hypothesis of the relationship between each variable of age, gender, type of study program, information exposure, organizational participation in campus, knowledge, and beliefs to use VCT services can be seen in Table 5. Table 5 shows that, on the information exposure variable (p-value = 0.001), attitude (p-value = 0.026), knowledge (p-value = 0.007) and behaviour belief (p-value = 0.039) so there is a relationship between information exposure, attitudes and beliefs with the intention to use VCT services to students. Variable age (p-value = 0.118), gender (p-value = 0.579), type of study program (p-value = 1,000), organizational participation (0.352), means they had no relationship with intention to use VCT services.

Based on the multivariate results in Table 6, it can be shown that the variables that affect students' intention to do VCT are information exposure, knowledge, attitudes, and beliefs in behavior. The independent variable that has the greatest influence on VCT intention in students is knowledge. This means that students who have good knowledge of HIV / AIDS and HIV testing services will have 1.776 times the opportunity to take advantage of VCT services.

Table 5. The relationship between age, gender, type of study program, information exposure, organizational participation, knowledge, attitudes, and behavior beliefs with student intention to use VCT services

Variable	Intention to VCT services						p-value	Contingency Coefficient
	No intention		Intention		Total			
	n	%	n	%	∑	%		
Age								
18-19 years	87	72.5	33	27.5	120	100	0.118	-
20-25 years	244	64.2	136	35.8	380	100		
Gender								
Female	172	64.9	93	35.1	265	100	0.579	-
Male	159	67.7	76	32.3	235	100		
Type of study program								
Health	49	66.2	25	33.8	74	100	1.000	-
Non-Health	282	66.2	144	33.8	426	100		
Information exposure								
Uninformed	81	81.8	18	18.2	99	100	0.001	0.162
Informed	250	62.3	151	37.7	401	100		
Join organization on campus								
No	266	67.3	129	32.7	395	100	0.352	-
Yes	65	61.9	40	38.1	105	100		
Knowledge about HIV/AIDS and VCT								
Low (<8.69)	147	63.9	83	36.1	230	100	0.007	-
Good (≥8.69)	184	68.1	86	31.9	270	100		
Attitude about HIV/AIDS and VCT								
Negative (<11.64)	143	73.3	51	26.3	194	100	0.026	0.125
Positive (≥11.64)	188	61.4	118	38.6	306	100		
Behavior Belief about the benefit of VCT								
Low (<6.04)	137	73.3	50	26.7	187	100	0.039	0.115
High (≥6.04)	194	62.0	119	38.0	313	100		

Table 6. Multivariate analysis results

Variable	B	S.E	Wald	df	Sig.	Exp(β)	95% CI For Exp(β)	
							Lower	Upper
Information exposure	-0.993	0.290	11.749	1	0.001	0.371	0.210	0.654
Knowledge	0.574	0.213	7.280	1	0.061	1.776	1.170	2.695
Attitude	-0.504	0.227	4.927	1	0.026	0.604	0.387	0.943
Behavior belief	-0.444	0.216	4.243	1	0.039	0.641	0.420	0.979

Knowledge is the most dominant variable influencing VCT intention in students. Students who have good knowledge of HIV / AIDS and VCT are more likely to intend to use VCT services 1.776 times than students with less knowledge of HIV / AIDS.[16] When analyzed from the answers to the questionnaire regarding knowledge, 66.6% of students already knew about HIV transmission. Students (97.4%) know that HIV is a virus that attacks the immune system. However, on the question about the use of VCT services to reduce the spread of HIV, only 15.2% of students knew about it. Therefore, it can be seen that students only know about HIV / AIDS but do not understand the definition of VCT and the use of VCT. Efforts are used to overcome this problem by providing detailed information about VCT services through social media or the student organization engaged in the health sector.

Knowledge is a variable that affects the use of VCT services for students. The results of this study are in line with other studies in Ethiopia, which stated that knowledge about HIV / AIDS and the use of VCT had a positive relationship. Students with knowledge of HIV were 3.69 times more likely to use VCT services than those with no knowledge of HIV. Research from India also stated that education has a direct relationship with respondents' level of awareness about HIV transmission.[21] Another research conducted in Semarang Indonesia also stated that respondents with good knowledge of HIV / AIDS were less likely to engage in risky behavior.[22] This may indicate that students who have good knowledge can be more aware of the benefits of testing and prevention in reducing the transmission of HIV infection.[21] The results of other studies also indicate that 81.7% of respondents who have good knowledge and a positive attitude towards VCT will show an intention to do VCT as much as 52.5%. Almost all respondents who have good knowledge of HIV / AIDS know the modes of transmission of HIV / AIDS, so they better understand the risks of HIV.[11]

However, the results of this study are different from research from Nigeria stating that high knowledge of VCT is not always willing to do VCT, some students are worried about the money spent on VCT.[23] Student concerns about the cost of VCT are a matter of concern. Students need to get accurate information about VCT services, both the VCT flow, the benefits of VCT, the VCT process, and the costs incurred for VCT. In addition, there are still students who only know that VCT services are only for HIV testing without getting HIV information, namely 116 students (23.2%). At the same time, information about HIV AIDS can also be obtained in VCT.

In addition to knowledge, behavioral beliefs also affect VCT intentions in students. Students who have a high belief in VCT services tend not to intend to use VCT services 0.641 times than students with low beliefs. Students in this study believed that using VCT services would get information about HIV / AIDS. This study also found that 92.4% of students believed that going to VCT services could prevent HIV / AIDS transmission. However, the beliefs held by students may not necessarily make them intend to do VCT.

Based on the results of this study, it was found that 41.8% of students believed in the obligation to test HIV. Students know that HIV testing is mandatory. It can be said that students already know that VCT services can provide information but do not yet know that VCT is voluntary or not mandatory. Students only know basic HIV information and still lack information about HIV testing, so they do not understand VCT service procedures. Students' ignorance about the nature of VCT makes students reluctant to take advantage of VCT services. Students only know that VCT is compulsory even though VCT is voluntary. Everything done is forced to make someone think again about doing that.

This research is in line with research in Jember Indonesia stated that the respondents' confidence factors in using VCT services included being confident and being positive about using VCT services.[18] The results of this study indicate no relationship between beliefs and attitudes using VCT services. The students did not want to use VCT services because they were unsure about the issue of the confidentiality of their HIV test results. Students worry that counsellor may reveal their status to those who come for HIV testing and fear being ostracized by everyone.[17] This study also found the same thing. Students have negative beliefs about the behavior of using VCT services. Students think that visiting VCT services will make them

think that their peers have HIV / AIDS (62.6%). Students are also less sure of the confidentiality guaranteed by VCT services; students are sure that their friends will also know the results of their HIV test (69.4%). It is an inaccurate assumption because someone who does VCT is guaranteed confidentiality. Students also assumed that VCT services were only for HIV testing and were not given any information about HIV / AIDS (66.6%). It is also a belief in the behavioral benefits of using VCT services that are not appropriate. In VCT services, a person will be provided with basic HIV / AIDS information before VCT, and at the end of VCT, a person will also be given information about HIV / AIDS.

Based on the results of this research, it can be found that students still have negative behavioral beliefs about VCT. Students still believe that doing VCT does not get HIV information, and students are also less sure about the confidentiality of their HIV test results. Student beliefs were also harmful because the student thought about the label that would receive if someone tested for HIV. Students fear being mistaken for HIV / AIDS if they go to VCT services. It may occur because there is still community stigma against people with HIV / AIDS and those who go to VCT services. Therefore it is necessary to provide information to students about VCT procedures, especially on confidentiality when doing VCT. HIV and AIDS information needs to include the benefits of VCT to the risk people and community to reduce stigma if someone uses VCT services. Other efforts that can be made to increase student confidence are by providing education or understanding to build self-awareness to guard against risky sexual behavior, explaining HIV & VCT to the community so that people do not discriminate or stigmatize people living with HIV / AIDS.[24]

Attitude is also a variable that affects students' intention to use VCT services. Students who have a positive attitude tend not to intend to use VCT services for 0.604 times. Another research also showed the same thing; there is no relationship between attitude and intention to use VCT services for high school adolescents in the Jember district.[18] People with negative attitudes towards VCT have misconceptions about the benefits of VCT services. They think the VCT service made them know their HIV status, which made them afraid. Students were afraid of knowing their HIV test results, and they thought that knowing their status meant knowing how quickly they would die.[19]

The results of different studies stated that students with a positive attitude towards VCT were more likely to take an HIV test than those with a negative attitude.[17] However, another study in Nigeria revealed that adolescents who were aware of VCT services did not necessarily do VCT for fear that the test results would be reactive or positive.[25] Adolescents are afraid of reactive results because they do not know the flow of VCT, care, support, and treatment services. They are also afraid of getting stigmatized if they are HIV positive.[26]

Based on the Theory of Planned Behavior, a person's attitude is influenced by belief in behavior.[27] Students still believe that VCT testing is not important for adolescents because adolescents are not at risk of HIV / AIDS (89%). This assumption is incorrect because the VCT test is intended for all age groups, and the VCT test is voluntary. In addition, students also do not know about the confidentiality of VCT test results. The students considered that the results of the HIV test could be shared with all relatives of the patients (39%). The results of the HIV test are confidential and will be kept confidential. This study found that students understand VCT, but students are afraid that if they use VCT services, the results will be known to others. The confidential nature of VCT needs to be emphasized to students so that students can have a positive attitude towards VCT.

In this study, it was also found that there were still negative views of students towards PLWHA, such as the question about HIV sufferers needing to be quarantined by 47.2%, so they thought that PLWHA needed a separate place and not with other healthy people. At the point of the question about students not wanting to share utensils with people with HIV, it was found that 75.8% did not want to share utensils with PLWHA. Therefore, it can be seen that the stigma of students is still high against PLWHA. The stigma that students have will influence their thinking about VCT. Students feel afraid of being mistaken for HIV if they go to VCT services.

A person's desire to use VCT services is usually associated with a sense of vulnerability, perceived barriers, and perceived benefits. If someone has high perceptions of vulnerability and obstacles, willingness to undergo VCT is low. On the other hand, someone with a high perceived benefit of VCT will also be highly willing to undergo VCT. VCT is sometimes considered a diagnostic service for severe illness, and stigma is also one of the barriers to accessing VCT services.[28] Therefore, efforts are needed to increase public knowledge about the VCT service flow.

Information exposure is also a variable that affects students' intention to use VCT services. Students who are more exposed to HIV / AIDS information will experience a decrease in the intention to use VCT services by 0.371 times compared to students with low exposure to HIV information. Students in this study who received HIV / AIDS information at college were 40 students (10.10%), 202 students (51.01%) at high school (51.01%), and 154 students (38.88%) at junior high school. The majority of students received HIV / AIDS information while in high school. At high school, adolescents received less detailed

information on HIV / AIDS. It follows the answers to the student's knowledge questionnaire. There are 80.4% of students stated that sexual intercourse once would not transmit HIV. HIV can be transmitted to someone if they have sexual risk.[29] This means that a person can get HIV if they engage in risky sexual behavior even once. Even though students have received information about HIV / AIDS continuously, the information received is incomplete, making students' knowledge about HIV / AIDS and VCT also incomplete so that it will affect their intention to use VCT services. The information that was less accessible to students was about the modes of transmission and prevention of HIV / AIDS.[30] It is necessary to have a direct approach to students to provide detailed information on HIV / AIDS and VCT so that it is expected that students will know complete information on HIV and VCT. Providing information about HIV / AIDS and VCT to students can collaborate with local health services to provide education to students. Providing information to students can also involve student organizations engaged in HIV / AIDS prevention through peer educators. Parents can also provide information about reproductive health, sexuality, and VCT to an adolescent with comprehensive reproductive health and sexuality information because information about VCT can increase adolescents' intention to do VCT.[31]

This study also found that age, gender, type of study program, and participation of organizations on campus were not related to the intention of using VCT services for students. In the age variable, the results showed that 33 students (27.5%) intend to use VCT services (18-19 years). Meanwhile, final year students (20-25 years) intend as many as 136 students (35.8%). There is no relationship between age and intention to use VCT services (p-value = 0.118). The statistical results show that more final year students intend to use VCT services than entry-level students.

Based on students' answers to research questions about VCT, it was found that 88.3% of students knew that populations could carry out VCT at risk of HIV. They agree that those who do VCT are people at risk of HIV so that any age at risk will use VCT services. So they think age is not a problem if they are not at risk, so there is no relationship between age and intention to use VCT services. Respondents who felt a high risk of becoming infected with HIV were significantly associated with high-risk factors and were 17 times more likely to be infected with HIV than those who were judged to be at low risk.[32]

The results of other studies in Yogyakarta show no significant relationship between age and VCT behavior among housewives at Puskesmas Tegalrejo Yogyakarta.[33] But not in line with midwifery research, students showed a relationship between age and VCT planning.[11] The higher a person's age, the better their attitude towards VCT. Another research among high school students in Cameroon showed a relationship between age and VCT planning. The higher a person's age, the better their attitude towards VCT.[34] Although in Indonesia there are no guidelines that define the age range for taking an HIV test, the Centers for Disease Control and Prevention (CDC) recommends at least once that all people aged 13 to 64 are required to have an HIV test.[35]

Results of cross-tabulation of the gender with balanced VCT intentions. In the gender variable, the Chi-Square test results to use VCT services were p-value 0.579, women who intended to use VCT services were 93 students (35.1%). Moreover, 76 students (32.3%) intended to use VCT services. So that Ho is accepted, there is no relationship among gender to use VCT services for students. There is no significant difference between female students and male students who intend to use VCT services.

There were 84.5% of female students had received information about HIV / AIDS, and 75.3% of male students also stated that they had received information about HIV/AIDS. Most of the students received HIV information from junior and senior high school. So there is no relationship between gender and the intention to use VCT services because males and females both get information from school and the same age; they do not see their gender but who are at risk of contracting HIV who should be tested for HIV. However, female students tended to get more information from health seminars than men, so that they had a higher intention to use VCT services.

Another study explained that there was no significant difference between gender and the intention to use VCT services. Some of the students stated that they wanted to go for an HIV test with their partner because they would know their HIV status together.[19] However, based on a systematic review, it was stated that a person's perception of the social support which they received was not related to the intention to test for HIV.[36]

This study also found that the type of study program and student participation in organizations on campus were not related to the intention of using VCT services for students, namely a p-value of 1.000 for the type of study program and a p-value of 0.352 for organizational participation. These two variables are related to student access to information about HIV / AIDS. If a person takes education in a health-related department, they hope to be more exposed to HIV information. Likewise, the greater the link or access to information about HIV / AIDS if someone joins the organization. However, this study found that access to information and joining the organization was not related to the intention to

attend VCT services. Students will take advantage of VCT services if they know the VCT process, the principles of confidentiality of VCT, and are sure of the benefits obtained from VCT. Students will also take advantage of VCT services if the community stigma regarding HIV / AIDS decreases. Therefore, it is necessary to provide information about HIV / AIDS and VCT to the public. This information can be provided through Warga Peduli AIDS (WPA) and community associations in the community by involving health workers. For further research could investigate VCT intentions using the cohort method. It can be done to see whether students who intend VCT have used VCT services following the time they have conveyed during the research.

CONCLUSION

Respondents involved mainly were (76%) from final year students. The proportion between males and females was relatively similar (47% and 53%). The year of entry was 51% from the 2017 class and 49% from 2016. Most students have not received information about HIV / AIDS. The majority join organizations on campus (79%). Mostly from non-health faculties. Knowledge variable was significantly affected to the intention to use VCT services with an OR of 1.776 (CI = 1.170-2.695). Therefore, it is expected that students should be increased their knowledge about HIV / AIDS and VCT through seminars or other sources of information. Universities can also provide information services related to HIV/AIDS to students.

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