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Research Article

Determinants of High School Student Knowledge of HIV/AIDS

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ABSTRACT

Introduction: The number of people living with HIV/AIDS in Indonesia has increased. Because adolescents are the age group that experiences the most rapid social change, they are among the most likely to be infected with HIV or AIDS. This study aimed to determine the determinants of knowledge of SMA 6 Bandar Lampung students about HIV/AIDS. **Methods:** An observational study with a cross-sectional design is the approach that this research method takes. Students enrolled in the 12th grade at SMA Negeri 6 Bandar Lampung made up both the population and the sample for this study. **Results:** According to the findings of this study, the majority of students are female (62.7 %), with the majority also being over the age of 17 (97.1 %), and 89.2 % being Muslim. Only 24.5 % of respondents get their health information from health workers, despite the fact that 81.4 % of students are aware of HIV/AIDS. Gender and previous lead exposure are both factors that affect a student's level of knowledge. **Conclusion:** Schools need to increase the amount of information about HIV/AIDS that students are exposed to in a variety of different ways in order to increase students' knowledge about HIV/AIDS. These ways include incorporating material about adolescent reproductive health into the school curriculum, creating peer study groups, and increasing education and information through the media.

Keywords: *Adolescents, High School Students, HIV/AIDS, Knowledge*

Introduction

The number of people living with HIV/AIDS in Indonesia has increased. As of June 2022, there were 519,158 people living with HIV/AIDS, with men constituting the majority of those infected. According to information provided by the Indonesian Doctors Association (IDAI), adolescents between the ages of 15 and 19 make up the age group that has the highest prevalence of HIV infection, with a total of 741 infected adolescents (3.3 %) [1].

Because adolescents are the demographic with the highest social mobility, they have a greater number of opportunities to be exposed to a variety of social, cultural, physical, and psychological shifts than any other age group . As a result, adolescents are a group that is at risk for the transmission of HIV/AIDS. These shifts make adolescents more susceptible to contracting a wide variety of diseases, including HIV/AIDS, which increases their overall risk [2]. In addition, adolescents typically have a

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robust sexual drive, despite the fact that the risks associated with sexual activity that lead to sexual encounters are not completely understood [3,4].

Premarital sexual behavior and drug abuse, both of which can increase the risk of HIV/AIDS transmission, are one of the leading causes of concern when it comes to the health of adolescents [5]. Direct contact between the mucous layers of the skin or the bloodstream with body fluids containing HIV, such as blood, sperm, vaginal fluids, or any other body fluids, is the most common method by which HIV is transmitted. The stages of the infection that can be passed on to other people can take up to or even more than ten years to complete [6].

It is possible to prevent the spread of HIV/AIDS in a number of different ways. Some of these methods include abstaining from drug use, avoiding the use of unsterile needles and ear piercing tools, limiting sexual activity to a single partner, and avoiding blood transfusions from people who have HIV/AIDS [6]. In addition to their roles as adults, adolescents play an important part in assisting in the fight against and prevention of HIV/AIDS-related issues. As a result, young people need accurate and comprehensive information about HIV/AIDS as a preventative measure to avoid engaging in HIV/AIDS-risky behavior that is not desired [5].

Based on this background, this study aims to determine the determinants of knowledge of SMA 6 Bandar Lampung students about HIV/AIDS.

Materials and Methods

The current investigation is an observational study that takes a cross-sectional approach to its design. Students enrolled in the 12th grade at SMA Negeri 6 Bandar Lampung made up both the population and the sample for this study. This study was carried out in the month of January in 2022. The method of total sampling was utilized throughout the process of sample selection for this study. This study included and excluded certain subjects based on predetermined criteria. The inclusion criteria that were utilized were state high schools located within the Panjang sub-district and high school students who were in class 12 and were willing to participate as respondents. The students who were absent during the data collection process were not considered for inclusion in the study.

Instrument

For the purpose of gathering information about the respondents, including their backgrounds and the extent of their familiarity with HIV/AIDS, a questionnaire was used to conduct the research. The HIV Knowledge Questionnaire-18 was used as a model for this questionnaire, which was adapted from the Indonesian version (HIV-KQ-18) [7]. We altered some of the questions in order to improve the students' comprehension. In conclusion, the HIV/AIDS knowledge questionnaire consisted of fifteen questions, and respondents were categorized as having high knowledge if their scores were higher than the mean or as having low knowledge if their scores were lower than the mean [8].

Data Analysis

Both univariate and bivariate analysis were utilized in the process of analyzing the data. The frequency and percentage of each category were used in the univariate analysis that was carried out. Bivariate analysis with chi-square and fisher's exact tests, requiring a significance level of p-value less than 0.05.

Ethical Consideration

This investigation was carried out after receiving ethical clearance from the Institutional Review Board. The participants were provided with information regarding the study, which included both the risks and the potential benefits. Following the completion of the informed consent form, questionnaires were distributed. During the process of data collection, respondents have the option to refuse or withdraw.

Result and Discussion

Based on the results of primary data collection conducted on SMA Negeri 6 Bandar Lampung students, the data is presented in 2 categories, namely descriptive analysis and univariate analysis, to determine the distribution

of characteristics and determinants of high school students' knowledge about HIV/AIDS. Characteristic data is presented in Table 1 below.

Table 1. Characteristics of Respondents

Characteristics	Frequency	
	N	(%)
Gender		
Male	38	37.3
Female	64	62.7
Age		
< 17 years old	3	2.9
17-20 years old	99	97.1
Religion		
Islam	91	89.2
Non-Islam	11	10.8
Exposure to information about HIV/AIDS		
Yes	83	81.4
No	19	18.6
Source of Information		
Health workers	25	24.5
Non-Health Officer	77	75.5
Knowledge		
High	53	52
Low	49	48
Attitude		
Positive	60	58.8
Negative	42	41.2

In univariate analysis, table 1 illustrates that most class XII students at SMA Negeri 6 Bandar Lampung are women (62.7%), with the majority being over 17 years old (97.1%) and 89.2% being Muslim. Students who know about HIV/AIDS are 81.4%. Regarding health information sources, only 24.5% of respondents received health information from health workers, while 75.5% received information from non-health workers such as parents, social media, magazines, etc. Based on the survey results, respondents with high knowledge are slightly more than respondents with low knowledge, namely 52% for respondents with high knowledge and 48% for respondents with inadequate knowledge.

Table 2. Chi-Square and Fisher Exact Test Results on Independent Variables with Student Knowledge

Variable	Knowledge of Adolescents about HIV/AIDS				Total		P-value
	Low		High				
	n	%	N	%	n	%	
Gender							
Male	24	63.2	14	36.8	38	100	0,019
Female	25	39.1	39	60.9	64	100	
Age							
< 17 years old	1	33.3	2	66.7	3	100	1,000
17-20 years old	48	48.5	51	51.5	99	100	

Variable	Knowledge of Adolescents about HIV/AIDS				Total		P-value
	Low		High				
	n	%	N	%	n	%	
Religion							
Islam	45	49.5	46	50.5	91	100	0,412
Non-Islam	4	36.4	7	63.6	11	100	
Exposure to information about HIV/AIDS							
Yes	44	53.0	39	47.0	83	100	0,036
No	5	26.3	14	73.0	19	100	
Source of Information							
Health workers	12	48.0	13	52.0	25	100	0,996
Non-Health Officer	37	48.1	40	51.9	77	100	

According to the findings of the analysis, which are presented in Table 2, there are two factors that are connected to students' awareness of HIV/AIDS; these are the students' gender and their exposure to information regarding HIV/AIDS. The results of the chi-square test on the variables of sexual orientation and orientation to information about HIV/AIDS showed that the p-values were 0.019 and 0.036, respectively. There is no correlation between the students' knowledge of HIV/AIDS and other factors such as age, religious affiliation, or data sources. Because there were two cells with ages less than 5, the Fisher exact test was utilized in the analysis of the age variable. This finding demonstrates that the chi-square test on the gender variable on student knowledge obtained a p-value that was greater than, which leads one to the conclusion that there is no connection between gender and students' awareness of HIV/AIDS. The same thing is shown in the variables of religion and sources of information, where the p-values of 0.412 and 0.996 are more significant than the value of, which means that H0 is rejected because it cannot be supported by the data. It is possible to draw the conclusion that there is no connection between the students' knowledge of religion and the information sources. Due to the fact that the age variable's results from the Fisher Exact test show a p-value of 1,000 >, it is possible to draw the conclusion that there is no correlation between age and the level of HIV/AIDS knowledge possessed by the students.

Because they are in the process of developing into adults, adolescents are a particularly vulnerable demographic in our society. Changes occur in adolescents' bodies, minds, and social lives during this phase of their development [9]. As a result, adolescents are more prone to the negative effects of the environment around them, including acts of violence, the use of drugs, and sexual activity without consent[10]. Free sexual activity poses a threat of HIV and AIDS [11].

The findings of this study indicate that there is a connection between adolescents' knowledge of HIV/AIDS and their gender. In addition, research carried out by Nito PJB et al. discovered that there was a significant connection between gender and the amount of Comprehensive Sexuality Education (CHE) knowledge possessed by college students[12]. It is possible for there to be a gap in the level of understanding between men and women due to the higher level of interest that women have in sexual education and the greater amount of exposure that women have to sexual education in comparison to men.

According to the findings of this research, the variable of age does not have any connection to the student's educational level. The reason for this result is that all of the respondents in this study are students in the same class in high school, specifically class XII, and all of the students in this class are between the ages of 16 and 18. According to Sarwono, students who responded to his survey fall into one of two categories depending on their age: middle adolescents or late adolescents. During this time,

adolescents have a propensity to have narcissistic tendencies, a strong interest in intellectual functioning, and similar experiences to those of other adolescents [13]. It has been found that the age of a student does not have any bearing on their level of knowledge regarding HIV/AIDS. This can be attributed to the fact that physical and psychological development in adolescents tends to be consistent with one another.

In this particular study, the variable of religious affiliation was not found to have any significant relationship with the amount of HIV/AIDS knowledge held by adolescents. The fact that the majority of students are Muslims is probably to blame for this result. Kristina Y.'s stated that there is a relationship between religion and the use of adolescent reproductive health services in the city of Jayapura, showed different results than what was expected. However, in Jayapura, officers, teenage needs, and residence status are the three factors that have the greatest impact on the utilization of adolescent reproductive health services [14].

There is a connection between the amount of information that students are exposed to about HIV/AIDS and their level of knowledge, according to an analysis of information exposure. This case is consistent with the findings of research carried out by Hardja, B, which indicates that the influence of the media on HIV/AIDS knowledge in women of childbearing age in North Sumatra Province has a p-value of 0.000 (OR 1,839) [15]. The level of student knowledge will increase proportionately to the frequency with which students are exposed to sexual education, including topics such as risky behaviors and HIV sexually transmitted diseases. It is possible to increase adolescents' knowledge by exposing them to this information through the provision of information or counseling by health workers who have been shown to increase adolescents' knowledge. The findings of a study that was carried out by Yuliasari et al. show that educating and counseling adolescents about anemia can effectively increase their level of knowledge about the condition [16].

There is no connection whatsoever between the student knowledge variable and the information source variable. The young people of today are members of the Z Generation, and as such, they have simple access to a wide variety of information sources related to the education of any subject. Everyone has easy access to different types of informational media, including print, electronic, physical, and social media. As a result, the availability of information sources is not a barrier for adolescents when it comes to gaining access to information about reproductive health. Iswarati conducted yet another study, which found that adolescents' knowledge of adolescent reproductive health (KRR) was still low. Concerning the origin of the information that they obtained is this particular matter. Schools, various media outlets, and government officials constituted the most important sources of information. In the meantime, sources of information from online communities and individuals are typically less reliable [17]. As a result, there is a significant demand for the role that schools play in increasing students' knowledge regarding adolescent reproductive health, including the infection rates of HIV/AIDS.

Conclusion

The knowledge of SMA Negeri 6 Bandar Lampung students about HIV/AIDS sexually transmitted diseases tends to be the same between those with high knowledge and those with low knowledge. In this study, the variables related to students' knowledge were gender and exposure to information. To increase students' knowledge about HIV/AIDS, schools need to increase students' exposure to information about HIV/AIDS in various ways, including Adolescent Reproductive Health material in the school curriculum, forming peer study groups, and increasing education and information through the media.

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