



Description of Knowledge About Human Immunodeficiency Virus on Adolescents in SMAN 17 Garut

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ARTICLE INFO

Article history:

Received December 11, 2020
Accepted January 30, 2020
Published April 25, 2020

Keyword:

HIV
Knowledge
Adolescents

ABSTRACT

Most cases of HIV in Indonesia occur during adolescents. HIV prevention can be done by changing good behavior. Currently, efforts to prevent the occurrence of HIV are not carried out optimally, one of the causes is a lack of knowledge about HIV. The research objective was to describe knowledge about HIV in adolescents. This research used a quantitative descriptive design with a cross-sectional approach. The variable in this research was knowledge of HIV. The population in this research was all students of SMAN 17 Garut. Sampling using the Stratified Random Sampling technique with a sample size of 277 people. Data analysis used univariate analysis with frequency distribution and presented as a percentage. The research was conducted from March to April 2020. The results showed as many as 5 respondents (1.8%) were in a good category, as many as 105 respondents (37.9%) were in the sufficient category, and 167 respondents (60.3%) were in a good category. in the unfavorable category. The conclusion of this research is that most adolescents have poor knowledge of HIV, almost half of the adolescents are in the sufficient category, and a small proportion of adolescents are in the good category. To overcome this, it is necessary to collaborate between teachers and health workers such as nurses to convey information in the form of counseling either directly or through social media, so that prevention efforts can be carried out optimally.

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Deskripsi Pengetahuan Tentang Human Immunodeficiency Virus pada Remaja di SMAN 17 Garut

ABSTRAK

Kasus HIV di Indonesia banyak terjadi pada usia remaja. Pencegahan HIV dapat dilakukan dengan perubahan perilaku yang baik. Saat ini upaya pencegahan terjadinya HIV tidak dilakukan dengan optimal, salah satu penyebabnya karena kurangnya pengetahuan tentang HIV. Tujuan dari penelitian ini adalah untuk mengetahui gambaran pengetahuan tentang HIV pada remaja. Penelitian ini menggunakan rancangan deskriptif kuantitatif dengan pendekatan cross-sectional. Variabel pada penelitian ini adalah pengetahuan tentang HIV. Populasi pada penelitian ini adalah seluruh siswa-siswi SMAN 17 Garut. Pengambilan sampel menggunakan teknik Stratified Random Sampling dengan jumlah sampel yaitu 277 orang. Analisis data menggunakan analisis univariat dengan distribusi frekuensi dan disajikan dalam bentuk persentase. Penelitian dilakukan pada bulan Maret sampai April 2020. Hasil penelitian menunjukkan sebanyak 5 responden (1,8%) berada pada kategori baik, sebanyak 105 responden (37,9%) berada di kategori cukup, dan 167 responden (60,3%) berada pada kategori kurang baik. Simpulan penelitian ini adalah sebagian besar remaja memiliki pengetahuan yang kurang baik tentang HIV, hampir setengahnya remaja berada pada kategori cukup, dan sebagian kecil remaja berada pada kategori baik. Untuk mengatasi hal ini, perlu dilakukan kolaborasi antara

Kata kunci:

HIV
Pengetahuan
Remaja

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DOI: <https://doi.org/10.30604/jika.v6i1.425>

guru dan tenaga kesehatan seperti perawat untuk menyampaikan informasi berupa penyuluhan baik secara langsung maupun melalui media sosial, sehingga upaya pencegahan dapat dilakukan dengan optimal.

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INTRODUCTION

Human Immunodeficiency Virus is a virus that attacks the human immune system (CD4) and weakens the function of the body's ability to fight diseases that attack the body (Green & Chirs, 2016). In the world, in 2018 there were 37.9 million people living with HIV, 1.7 million people were registered as new sufferers. Of the total recorded cases, 36.2 million people with HIV were suffered by adults and 1.7 million people under 15 years of age. Approximately 79% of people living with HIV know their status and about 8.1 million people do not know that they are living with HIV (*United Nations Program on HIV and AIDS* [UNAIDS], 2018).

In 2018, in Indonesia there were 640,000 people living with HIV. In 2017, there was a decrease in the total number of new HIV sufferers in Indonesia, which was 48,000 people and in 2018, there were 46,000 people. As many as 51% of people with HIV know their status. People with HIV are temporarily off treatment, only 17% of people with HIV are on treatment (UNAIDS, 2018). In 2017, there were 28,964 HIV sufferers in West Java (Ministry of Health of the Republic of Indonesia, 2018). There was an increase in the number of HIV sufferers in 2018 to 37,000 people (West Java Health Office, 2018). There were 458 HIV sufferers in Garut in 2017, an increase in 2018 to 550 people (Central Statistics Agency of Garut Regency, 2018). According to Budiman, cases of new HIV sufferers in Garut Regency in 2018 reached 81 people. It can be estimated that starting to be infected with the virus from the age of 15 to 20 years (Hanapi, 2019). The increase in HIV sufferers is due to a lack of understanding of HIV, coping methods and deviant behavior (Indonesian Ministry of Health, 2009).

One of the high rates of increase in HIV sufferers is due to the lack of public knowledge about HIV which causes individuals to behave in ways that lead to HIV. Factors that influence knowledge include age, experience, education, environmental factors, and media information (Wawan & Dewi, 2010).

WHO (World Health Organization) collected data showing that adolescents between the ages of 15 and 24 are one of the most vulnerable to HIV infection. Until now, in the increasing number of HIV there is no vaccine to prevent it. Efforts to prevent or reduce the risk of HIV infection through behavior change begin with an understanding of stopping risky behavior (Carey, Morrison-Beedy, & Johnson, 1997).

According to the models of Catania et al., (1990) and Fisher & Fisher (1992), this model identifies knowledge (information) as an important determinant of behavior change. One of the efforts to prevent the increase in the number of HIV sufferers is that adolescents need to be equipped with good knowledge about HIV through health education as stated by Kimani, Kara, and Nyala (2012), that health education about HIV can provide good results or effects on adolescents in prevent disease until adolescents know and understand about HIV. Increasing knowledge of adolescents is one of the preventive measures that can be taken by health workers to prevent an increase in the number of HIV sufferers.

Based on the results of an interview conducted on October 29, 2019, to the counseling teacher at SMAN 17 Garut, it was found that there had been some students who did not continue their studies due to premarital pregnancy. The results of an interview conducted with one of the teachers at SMAN 17 Garut, stated that students had received counseling about HIV during the initial period of admission of new students. The results of interviews conducted with students, students got information about HIV through Biology subjects, television, and social media, almost all respondents had been dating, and had kissed. Some people said that there was a friend who had premarital sex since junior high school. Researchers are interested in conducting research at SMAN 17 Garut because until now there has been no evaluation related to information dissemination activities about HIV.

METHOD

The design in this research is descriptive quantitative with a cross-sectional approach, namely research with the aim of seeing a description of the phenomenon in a population and used in an assessment of a condition in the present which is then used for the preparation of improvement planning (Notoatmodjo, 2012).

The population in this study were students of SMAN 17 Garut, with a total of 897 students. The sample size in this study used the Slovin formula with a degree of confidence of 95% and an error rate of 5% (Nursalam, 2013) obtained 277 students. Sampling in this study was taken using the Stratified Random Sampling technique, obtained by class X respondents as many as 87 students, class XI as many as 100 students, and class XII as many as 90 students. The selection of respondents used a random technique by randomizing the absent numbers in each class based on the number needed through a random application on google.

HIV knowledge was measured using the Indonesian version of the HIV Knowledge Questionnaire (HIV-KQ 45) instrument with $r = 0.683$ and consistency with the ANOVA test showed a high consistency value over a span of two weeks. The HIV-KQ 45 instrument contains 45 questions including 11 general knowledge questions, 19 transmission mode questions, 12 prevention questions, and 3 HIV test questions.

Analysis of the data in this study used the Guttman scale (true - false), then calculated as a whole by percentage, then categorized into the good category if the value is 76% - 100%, sufficient if the value is 56% - 75%, and less if the value is $\leq 55\%$ (Arikunto, 2013).

RESULTS AND DISCUSSION

Of the 277 respondents, the age range in this study was almost half of them at the age of 17 years. The number of respondents in this study was 31% class X, 36% class XI, and

33% class XII, most of the respondents were female as much as 80%, besides that almost all respondents had received

information about HIV as much as 97%.

Table 1
Characteristics of adolescents at SMAN 17 Garut in April 2020

Characteristics	N	(%)	Mean (\pm SD)
Age (year)			
14	1	0	16,61 \pm 0,94
15	33	12	
16	91	33	
17	104	38	
18	45	16	
19	3	1	
Grade			
X	87	31	
XI	100	36	
XII	90	33	
Gender			
Male	55	20	
Female	222	80	
Address			
Village	255	92	
City	22	8	
Ever get the information of HIV			
Yes	272	98	
No	5	2	
Information sources			
Book	116	42	
Seminar/counseling	68	25	
Television	117	42	
Radio	12	4	
Internet	193	70	
Health personnel (doctor/nurse)	65	23	
Friends	83	30	
Teacher in the School	129	47	
Lesson	98	35	

Table 2
Description of Knowledge about HIV on adolescents in SMAN 17 Garut

Description of Knowledge about HIV	Frequency (f)	Percentage (%)
Good	5	1,8
Enough	105	37,9
Dissatisfactory	167	60,3

In table 2, the results of this study show that most of the respondents were in the unfavorable category, namely 167 respondents (60.3%), almost half were in the sufficient

category, namely 105 respondents (37.9%), and a small proportion were in the good category. namely as many as 5 respondents (1.8%).

Table 3
Knowledge table about HIV by domain on adolescents in SMAN 17 Garut

Domain	Knowledge Domain about HIV			Total
	Good	Enough	Dissatisfactory	
	Percentage (%)	Percentage (%)	Percentage (%)	
General Knowledge	6,1	25,3	68,6	100%
Contagion	13,7	57,4	28,9	100%
Prevention	4	22	74	100%
HIV Test	2,5	11,2	86,3	100%

In table 3, the general knowledge domain is mostly in the unfavorable category, namely 68.6%, in the transmission domain most of which are 57.4% in the sufficient category, in the prevention domain most of it is 74% in the poor category, and in the HIV test domain almost all were in the unfavorable category, namely as much as 86.3%.

Based on the results of the frequency distribution and the percentage of knowledge about HIV listed in table 2, it shows that knowledge about HIV in adolescents at SMAN 17 Garut is in the poor category, namely as much as 60.3%. The results of research by Yuliantini (2012) and Indramotko (2013), show that the majority of adolescent knowledge about HIV is

in the good category. This is because previous researchers conducted research in urban areas that had more affordable access to information than those in rural areas. The results of the analysis of this study are similar to the results of previous studies that adolescents who live in urban areas have better knowledge than those in rural areas with a difference of 2.9% in the good category. Other factors that influenced knowledge about HIV in this study included age, gender, place of residence, and information.

The age range in this study was from the age of 16 years to 19 years with an average age of 17 years as much as 38%. Ages 18 years and 19 who belong to class XI and XII are the ages with the largest percentage in the unfavorable category, namely 66.7%. According to Wawan and Dewi (2010), one of the factors that influence knowledge is age. The results of the research by Fibriana (2012) state that there is a relationship between age and level of knowledge, because it is caused by experience. The more a person has a lot of experience, either obtained from his experience or from the experiences of others, the more knowledge he has (Fibriana, 2012).

The results of Pranidhana's (2014) study stated that knowledge about HIV in adolescents at the college level was in a good category. This is due to the higher level of student knowledge compared to high school students. One factor in the high number of knowledge is education. The results of a survey conducted by Badru et al (2020), stated that knowledge of HIV among young adolescents is very low and education is proven to be a major factor in increasing knowledge. The results of this research are not in accordance with the theory and research results of Fibriana (2012), which states that age is a factor in the high level of knowledge. It can be seen in table 4.4 that 15 and 16 years of age have better knowledge than those of 17, 18, and 19 years. However, the results of this study are the same as the results of Pranidhana's (2014) research, which states that one of the factors for the high number of knowledge is education, because education has an influence on the formation of adolescent mindsets, the higher the level of education, the more adolescents will get information received. It can be concluded that older age does not mean more knowledgeable than younger age, but experience from education is a factor in the high level of knowledge.

The gender in this research the majority of respondents were women, as much as 80%. This is because the number of female students in each class is more than the number of male students. The results of the research by Nurwanti and Rusyidi (2018), state that the female gender hears more information about HIV than men. Women are said to have better knowledge than men because women are more attentive and aware of their health. Men tend not to go to health centers as often as possible to check their health and seek information compared to women (Boinaturally, 2010). The results of the cross tabulation of female sex with good categories were 5 people (2.3%), while adolescents with male gender who were in the good category were none. The results of this study are consistent with previous research and the theory that women have better knowledge than men because women are more curious about HIV than men.

The residences in this research were 92% of the population in the village and as much as 8% were residents of the city. The results of the cross tabulation of respondents who lived in the village had knowledge about HIV that was in the good category as much as 1.6%, the moderate category was 37.6%, and the poor category was as much as 60.8%, while the respondents who lived in the city were in the the good category was 4.5%, the moderate category was 40.9%, and the poor category was 54.5%. Based on the place of

residence in the city with the good category, it has a difference of 2.9% greater than the residence in the village. The results of the research by Sudikno, Simanungkalit, & Siswanto (2011) state that there is a significant relationship between the area where they live and the high level of knowledge about HIV. Respondents living in urban areas have better knowledge than respondents who live in rural areas, because people living in urban areas have an easier time accessing knowledge / knowledge to health services compared to people living in rural areas.

The results of research by Yuliantini (2012), show that knowledge about HIV in adolescents in the middle of the city shows good category results. This is shown because the respondents in their research had a lot of convenience in accessing information about HIV, such as the location of their residence and school in the middle of the city so that facilities such as computers, internet networks and bookstores were easily accessible to respondents. The results of previous studies with the results of this study show similar results that place of residence affects the high level of knowledge, because it is caused by several factors including accessing information in urban areas, which is easier than in villages, from facilities such as libraries that are rarely found in rural areas except for libraries in urban areas. school.

Apart from the place of residence, information also has a good effect on knowledge. Almost all respondents had received information about HIV, namely as much as 98% and as much as 2% had never received information about HIV. The source of information most accessed by respondents was the internet at 70%, television as much as 42% and books as much as 42%. The results of research by Vijayageetha, Narayanmurthy, Vidya, & Renuka (2016), show that 75% of books are the most common and main source of knowledge, followed by teachers and television. However, according to Byrnes (2015), television and mass media are the most common and effective sources of information in terms of increasing comprehensive knowledge. This is similar to the results of a study by Manus & Dhar (2008), showing that for teenagers the internet, the media, friends, books and magazines are the main sources of HIV information.

The results of the analysis of this study show that the research conducted by Vijayageetha, Narayanmurthy, Vidya, & Renuka (2016), is not in accordance with this study which states that books are the most common source of knowledge in increasing knowledge about HIV. However, the results of research from Manus & Dhar and theory according to Byrnes are in accordance with the results of this study which states that for adolescents the most common and effective sources of information about HIV are mass media and television. One of the efforts to increase the value of knowledge about HIV is by carrying out health promotion through internet networking sites such as Facebook.

Data from the IDHS (2018), informs that not all adolescents in Indonesia understand and know about HIV, presumably because this ignorance is one of the factors for the high rate of HIV. This needs to be considered again because it still needs improvement in the learning process by adding literature to the learning process. The smallest source of information besides radio is 23% of health workers. Judging from the role of nurses, according to Kyle & Carman (2015), it is stated that nurses are educators to provide information and increase behavior change towards HIV. In this case, health workers such as nurses or others can go directly to schools to convey information in the form of health education, especially HIV so that teenagers in SMA 17 Garut can understand more about HIV. The results of Rakhman's research (2019) state that socialization or

counseling activities are the most important first step in HIV prevention efforts, providing information related to early recognition, modes of transmission, and ways of avoiding HIV.

The domain of general knowledge about HIV in adolescents at SMAN 17 Garut was in the poor category, namely as much as 68.6%. Nearly all respondents, as much as 80%, answered that some drugs have been prepared for the treatment of AIDS. The research results of Yogyanto & Wardhana (2016) state that new antiretroviral drugs have been made and have smaller doses, better resistance profiles, and can be used for a long period of time compared to previous common antiretroviral drugs. Almost all respondents, as many as 77%, answered that people who have been infected with HIV quickly show signs of serious infection quickly. People who are infected with HIV do not show signs of infection quickly, but the course of HIV infection through three stages including the acute infection stage, clinical latency stage and AIDS (CDC, 2014). In question number 8, 72% of respondents answered that HIV cannot be killed with cleaning agents. After several laboratory tests, the HIV virus was proven to be killed by cleaning agents. This fact is not widely known by ordinary people. Cleaning syringes properly and correctly using fluids containing cleaning agents can suppress HIV transmission (CDC, 2004).

The analysis of this study shows that almost half of the respondents do not understand general knowledge about HIV. The results of Bahari & Prabandari's (2014) research show that the lack of knowledge about HIV among adolescents has a significant difference after the implementation of health promotion about HIV on internet networking sites such as Facebook. The source of information in this study is the largest from the internet as much as 70%. Therefore, one of the efforts to increase the value of knowledge about HIV is by carrying out health promotion through internet networking sites such as Facebook. The domain of the mode of transmission of HIV in adolescents at SMAN 17 Garut was in the quite good category, namely as much as 57.4%. Almost all respondents, as many as 93% in question number 33 stated that having sex with more than one partner can increase the chance of getting HIV, in question number 42 almost all respondents (92% answered that women can contract HIV after having sex through the vagina with men who are infected with HIV, and almost all respondents in question number 27, as many as 83% answered that someone can get HIV through blood donors.

According to UNAIDS (2011), sexual intercourse with someone infected with HIV, either anal or oral, is the largest transmission in the world, accounting for 80-90%. Blood donation will not spread HIV, however, if the blood product is infected with HIV, it can be transmitted to the person who received the blood. The results of Prhanidhana's (2014) study showed that knowledge of HIV in the transmission domain received the highest value compared to other domains. The analysis of the results of this study is similar to Prhanidhana's research in that knowledge related to transmission gets the highest value compared to other domains. Although this value is the largest among the other three domains, to better understand health information about HIV transmission, the most effective weapon for this is education (Kambu & Kuntarti, 2016).

In the prevention domain, adolescents at SMAN 17 Garut are in the poor category, namely as much as 74%. Almost all respondents in question number 14, namely 77% stated that consuming healthy food cannot prevent HIV transmission, in

question number 16 almost all respondents, namely 77% answered that when having sex using latex or rubber condoms can reduce a person's risk of contracting HIV, and most of the number 45 in question 75% stated that taking vitamins can prevent someone from contracting HIV. The results of Pranidhana's (2004) study stated that knowledge of HIV in the prevention domain was in the second lowest position after the testing domain. The results of Manurung's (2018) study stated that vitamins cannot prevent a person from contracting HIV. HIV prevention can be done by not having contact with sperm fluids, blood fluids, mother-to-baby breast milk, and oral or anal sex in HIV-infected individuals. The results of the research by Fauziyah, Shaluhiah, & Prabamurti (2011), stated that there was a man who was infected with HIV because he did not use a condom during sexual intercourse. During sexual intercourse, do not use a condom because it causes discomfort. According to Naully & Romlah (2018), it is stated that one of the factors that influence HIV infection is sexual intercourse.

Campbell & Mbizvo (1994) argue that as many as 46% of the use of condoms is effective in preventing HIV transmission. This opinion is similar to that of the Ministry of Health (2005), that one of the efforts to prevent HIV transmission is to use condoms during sexual intercourse. The condoms that provide the best protection against HIV are rubber or goat skin condoms. The results of Amelia, Rahman, & Widitria's (2016) study showed that adolescent knowledge about HIV prevention was in the poor category, but after counseling about HIV prevention in adolescents the results were in the sufficient and good category. The results of research conducted by Kimani, Kara, and Nyala (2012), show that health education about HIV can provide good results or effects on adolescents in preventing disease.

The results of the analysis of this study are similar to research conducted by Pranidhana (2014), which states that the value of the prevention domain is in the second lowest position after the testing domain. Nearly half of the respondents did not understand how to prevent HIV-related problems. Condom use is the only preventive measure that can reduce the risk of infection and contribute to disease-free health outcomes (WHO, 2006). Respondents need to increase health knowledge about HIV prevention in an effort to minimize HIV infection. The results provide additional evidence that if respondents gain additional knowledge about HIV prevention, it will increase their knowledge of HIV prevention. As many as 92% of respondents in this study live in rural areas with inadequate facilities, so the role of the government in the Regulation of the Minister of Health of the Republic of Indonesia Number 21 of 2013 is that it is necessary to carry out HIV and AIDS prevention efforts in an integrated, comprehensive, and quality manner (Syamsudin, 2013).

In the domain of HIV testing, adolescents at SMAN 17 Garut are in the poor category, namely as much as 86.3%. Nearly all respondents to question number 39, as many as 87%, think that the institutions that carry out HIV testing need to tell all their partners if a patient has tested positive for HIV. In question number 34, most of the respondents, as much as 74%, taking an HIV test one week after sex will not show whether a person has HIV. The results of Pranidhana's (2014) research state that knowledge of HIV in the testing domain has the lowest value among the other 3 domains. This is because in Indonesia people with PLWHA cases still cover up and there are some who do not know their status as ODHA. The results of the research by Situmeang, Syarif, & Mahkota (2017), state that half of the respondents if they are

infected with HIV, namely 57.8% will keep their status a secret.

The results of this research are similar to Pranindhana's research which states that knowledge of HIV in the testing domain has the lowest value among the other 3 domains. Almost all respondents in this study about HIV testing did not understand about HIV testing. Indonesia has issued a Ministry of Health policy on guidelines for voluntary HIV testing and counseling services with No. 1507 / MENKES / SK / X / 2005. The purpose of this policy is so that someone can immediately find out early about their status with PLWHA or not. Counseling and testing services have also been provided by the government in several health services. (Ministry of Health, 2006).

CONCLUSIONS AND SUGGESTIONS

Based on the results of the research that has been done, it can be concluded that the description of knowledge about HIV on adolescents in SMAN 17 Garut, most adolescents have poor knowledge about HIV, almost half of adolescents are in the sufficient category, and a small proportion of adolescents are in the good category. Based on this research, to overcome the lack of knowledge it is necessary to collaborate between teachers and health workers such as nurses to convey information in the form of counseling either directly or through social media, so that prevention efforts can be carried out optimally.

Conflicting of Interests Statement

The authors declared that no potential conflicts of interests with respect to the authorship and publication of this article.

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