



THE RELATIONSHIP OF TEENAGER KNOWLEDGE LEVEL ABOUT HIV/AIDS WITH HIV/AIDS PREVENTION BEHAVIOR DURING THE COVID-19 PANDEMIC AT SMA KARTINI, BATAM CITY

by

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ABSTRACT

HIV continues to be a major global public health problem. A person infected with HIV will experience a gradual decline in immunity and will develop AIDS. The highest rates of HIV-infected cases were reported in the age groups of 25-49 years and 20-24 years. However, there is a surprising fact about the 15-19 year old group which is a group of teenagers. The risk of HIV infection in teenagers is caused by several factors. One of these factors is the level of knowledge. Teenager knowledge about free sex and HIV/AIDS transmission is still low. Based on data obtained from the P2P Division report of the Batam City Health Office, HIV cases has decreased compared to 2020 as many as 541 cases to 484 cases in 2021 with the largest distribution of cases in the Lubuk Baja District area with 245 HIV sufferers. The Covid-19 pandemic has hampered efforts to control disease, including controlling HIV/AIDS, especially in Batam City, including educational activities related to HIV/AIDS, which have stalled due to restrictions on mobility. The purpose of this study was to determine the relationship between the level of knowledge of teenagers about HIV/AIDS with HIV/AIDS preventive behavior during the Covid-19 pandemic at SMAS Kartini, Batam City. This type of correlation research with cross sectional approach. Data were obtained from distributing questionnaires to students of SMA Kartini City, Batam aged 15-18 years, totaling 74 samples. The results showed that 36 respondents with good knowledge had good behavior in preventing HIV/AIDS transmission, 35 respondents (97.2%) and 1 respondent (2.8%). There are 29 respondents with sufficient knowledge, namely 28 respondents (96.5%) who behave well in preventing HIV/AIDS transmission and 1 respondent (3.5%). Lack of knowledge of 9 respondents, namely those who behave well in preventing the transmission of HIV/AIDS. There is no significant relationship between the level of knowledge and prevention behavior ($p=1,000$). In conclusion, there is no relationship between the level of knowledge of teenagers about HIV/AIDS with HIV/AIDS prevention behavior during the COVID-19 pandemic at SMAS Kartini, Batam City, in the 2021-2022 academic year.

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1. INTRODUCTION

HIV (*Human Immunodeficiency Virus*) is a type of virus that attacks the immune system and weakens a person's immunity to infection. This virus destroys and impairs the function of white blood cells that maintain the immune system. A person infected with HIV will experience a gradual decline in immunity. The advanced stage of HIV infection is AIDS (Acquired Immunodeficiency Syndrome) which can develop for years if it is not treated. AIDS is defined as the development of infection or severe long-term clinical manifestations of a person infected with HIV (WHO, 2021).

HIV continues to be a major global public health problem. By the end of 2020 there are an estimated 37.7 million people infected with HIV globally, most of them are two-thirds of people in Africa. Around 680,000 people die from HIV-related causes and 1.5 million people are HIV positive (WHO, 2021). The incidence of HIV cases in adults in Southeast Asia is low at 0.3% and an estimated 3.7 million cases are infected. The five countries that contributed to the highest number of HIV cases were India, Indonesia, Myanmar, Nepal, and Thailand. In 2019, 160,000 new cases of HIV infection and 110,000 AIDS-related deaths were reported in the Southeast Asia region (WHO South-East Asia, 2021).

The number of people with HIV infection in Indonesia in 2020 was reported to be 543,100 people. The number of reported cases of HIV infection from year to year tends to increase. However, the number of HIV cases in Indonesia fell by 16.5% from 50,282 cases in 2019 to 41,987 in 2020. On the other hand, AIDS cases increased by 22.78% from 7,036 in 2019 to 8,639 in 2020. In HIV/AIDS positive cases, the proportion the male group is about twice as large as the female group (Kemenkes RI, 2021).

Meanwhile, the number of HIV/AIDS sufferers in Kepulauan Riau reported by the Kepulauan Riau Provincial Health Office during the period January to August 2020 reached 563 people spread across five districts. Batam City became the area with the highest contributor to HIV cases as many as 460 people (Nursalikah, 2020).

Batam City is a secondary area that is very open because it is located in the border area and is the center of Indonesia's new growth so that the people of Batam City are very vulnerable to HIV/AIDS infection. Based on data obtained from the P2P Division report of the Batam City Health Office, HIV cases decreased compared to 2020 as many as 541 cases to 484 cases in 2021 with the largest distribution of cases in the Lubuk Baja District area with 245 HIV sufferers (City Health Office). Batam, 2021).

The highest rates of HIV-infected cases were reported in the age groups of 25-49 years and 20-24 years. However, there is a surprising fact about the 15-19 year old group which is a group of teenagers. The number of teenagers infected with HIV is increasing. This is very worrying because teenagers aged 15-19 years are the nation's next generation (Naully & Romlah, 2018). The number of cases of HIV/AIDS among teenagers forces us to re-monitor the pattern of teenager sexual behavior because cases of HIV/AIDS are dominated by sexually transmitted diseases. As is well known, adolescence is a transition period in which teenagers behave wanting to try new things, including trying premarital sex, which ultimately leads to risky sexual behavior (Afrityeni, Yanti, & Angrainy, 2018). The risk of HIV infection in teenagers is caused by several factors. One of these factors is the level of knowledge (Martilova, 2020). Adolescent knowledge about free sex and HIV/AIDS transmission is still low, characterized by an increasing number of unplanned pregnancies. Moreover, with the development of technological advances, it is easier to access information, especially for material related to pornography. For example, through the internet or cell phones, accompanied by promiscuity, will lead to more and more deviant behavior among teenagers (Akbar, Langingi, & Darmin, 2020).

At the end of 2019, precisely in December, the world was shocked by the news of the emergence of a pneumonia outbreak of unknown cause. WHO officially named this disease Covid-19. The spread of this virus is increasing and has spread to almost all countries in the world so that on March 11, 2020 WHO announced Covid-19 as a pandemic (Levani, Prastya, & Mawaddatunnadila, 2021). The Covid-19 pandemic has hampered disease control efforts, including controlling HIV/AIDS, especially in Batam City, said Pieter Pureklolong, Head of the Batam City AIDS Commission Secretariat. For the last 2 years educational activities related to HIV/AIDS have stalled due to restrictions on mobility. The treatment and detection of the virus has stalled due to the lack of health workers. This can be seen in the finding of new HIV cases in Batam City which has decreased dramatically in the last 2 years. In 2015-2019, an average of 700 new patients with HIV were found per year. However, in 2020 only 538 new patients were found (Wiyoga, 2021).

Based on the data obtained, health workers need to pay attention to providing knowledge about maintaining reproductive health in adolescents, especially during the Covid-19 pandemic. The author chose the research location because the geographical location of SMA Kartini in Batam City is located in Lubuk Baja District which is the area with the highest number of HIV cases in Batam City. So further research is needed to prove whether there is a relationship between the level of knowledge of Teenagers about HIV/AIDS with HIV/AIDS prevention behavior during the Covid-19 pandemic at SMAS Kartini, Batam City.

2. RESEARCH METHOD

This research is a correlation research that explains the relationship between variables. While the research design using cross sectional. The research instrument used was a questionnaire in the form of an online form. This questionnaire assesses the extent to which adolescents' knowledge of HIV/AIDS and behaviors to prevent transmission of HIV/AIDS are assessed. The sample in this study consisted of 74 people who met the inclusion criteria with a sampling technique using a non-probability sampling technique using random sampling. The inclusion



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 criteria are students of SMA Kartini Batam City aged 15-18 years, in class X and XI in the 2021/2022 academic year, willing to be respondents and signing informed consent.

The analysis consisted of univariate and bivariate analysis. Univariate analysis describes the level of knowledge and prevention behavior. Bivariate analysis was conducted to see the relationship between the level of knowledge and the behavior of preventing HIV/AIDS transmission.

3. RESULTS AND ANALYSIS

3.1. RESEARCH RESULT

3.1.1. Univariate Analysis Result

a. Knowledge Level

Frequency Distribution of Teenager Knowledge about HIV/AIDS at SMA Kartini Batam City in 2022

No	Knowledge	f(n)	Percentage(%)
1	Good	36	48,6%
2	Sufficient	29	39,2%
3	Deficient	9	12,2%
Total		74	100%

Based on the table above, it is concluded that the frequency of knowledge about HIV/AIDS in teenagers at SMA Kartini Batam City in 2022 which consists of 74 respondents, namely 36 respondents (48.6%) have good knowledge, 29 respondents (39.2%) have good knowledge sufficient, and 9 respondents (12.2%) have less knowledge.

b. Action

Frequency Distribution of HIV/AIDS Prevention Behavior in Teenagers at SMAS Kartini Batam City in 2022

No	Behavior	f(n)	Percentage(%)
1	Good	72	97,3%
2	Sufficient	2	2,7%
Total		74	100%

Based on the table above, it is concluded that the frequency of HIV/AIDS prevention behavior in adolescents at SMA Kartini Batam City in 2022 which consists of 74 respondents, namely 72 respondents (97.3%) have good behavior and 2 respondents (2.7%) have sufficient behavior.

3.1.2. Bivariat Analysis Result

The Relationship between Adolescent Knowledge Levels about HIV/AIDS and HIV/AIDS Prevention Behavior during the Covid-19 Pandemic at SMAS Kartini Batam City

No	Knowledge Independent variable	Behavior Dependent Variable				Total	p-value
		Good		Sufficient			
		F	%	f	%	N	%
1	Good	35	97,2	1	2,8	36	100
2	Sufficient	28	96,5	1	3,5	29	100
3	Deficient	9	100	0	0	9	100
Total		72		2		74	

Based on the table above, it can be concluded that from a total of 74 respondents studied, the results showed that 36 respondents who had good knowledge, namely those who behaved well in preventing HIV/AIDS transmission, were 35 respondents (97.2%) and had sufficient behavior in preventing transmission of HIV/AIDS. HIV/AIDS is 1 respondent (2.8%). There are 29 respondents with sufficient knowledge, namely 28 respondents (96.5%) who behave well in preventing HIV/AIDS transmission and 1 respondent (3.5%). Lack of knowledge of 9 respondents, namely those who behave well in preventing the transmission of HIV/AIDS.

The results of the Chi-Square analysis with degrees of freedom (df) 2 and a significance level (α) of 0.05, the results show that the p-value is 1,000 which means p-value > 0.05, so it can be concluded that there is no relationship between adolescent knowledge about HIV/AIDS with HIV/AIDS prevention behavior.

3.2. DISCUSSION

3.2.1. Univariate Analysis

a. Teenagers Knowledge About HIV/AIDS

The results of the study of 74 respondents were 36 respondents (48.6%) had good knowledge, 29 respondents (39.2%) had sufficient knowledge, and 9 respondents (12.2%) had less knowledge. From the results of the study, it can be concluded that most of the teenagers in SMA Kartini Batam City have good knowledge about HIV/AIDS.

This is in line with the results of a study conducted by Pangaribuan, Maulidanti, & Siringoringo (2021) which found that from 98 respondents, 60 teenagers (61.2%) had heard of HIV/AIDS, 52 teenagers (53.1%) had good knowledge and 46 adolescents (46.9%) have poor knowledge about HIV/AIDS transmission. This study also showed that 61 (62.2%) respondents had good knowledge and 37 adolescents (37.8%) had poor knowledge about HIV/AIDS prevention.

The results of the research conducted by Winangsih, et al (2020) showed that almost all 178 respondents were 160 respondents (89.9%) had good knowledge about HIV/AIDS, 10 respondents had sufficient knowledge (5.6%), and lacked knowledge. a total of 8 respondents (4.5%).

Based on the results of the research above, the researchers can conclude about the knowledge of adolescents about HIV/AIDS, namely they already understand about HIV/AIDS, this is because they are often exposed to information about HIV/AIDS early on because teenagers often follow appropriate and continuous education or counseling for adolescents. and HIV/AIDS. However, there are still teenagers who have sufficient knowledge and lack of knowledge about HIV/AIDS. Therefore, efforts that can be made to increase teenager knowledge should be schools providing facilities for teenagers to obtain information about HIV/AIDS in the form of providing literacy in libraries or posting posters about HIV/AIDS in school maddings to increase teenager knowledge. Schools can also form peer discussion groups because teenagers are more interested in discussing with groups so that teenagers get information about HIV/AIDS and how to prevent risky behaviors that are appropriate and correct.

b. HIV/AIDS Prevention Behavior in Adolescents

The results of the study from 74 respondents that as many as 72 respondents (97.3%) had good behavior, 2 respondents (2.7%) had sufficient behavior, and no respondent had poor behavior. From the results of the study, it can be concluded that most of the teenagers in SMA Kartini Batam City behave well in preventing the transmission of HIV/AIDS.

Based on the results of research by Lestari, Hapitria, & Widiyanti (2021), the results were obtained from 86 respondents, namely most of the respondents had negative behavior in HIV/AIDS prevention, 46 respondents (53.5%) and positive attitudes, 40 respondents (46.5%). .

The results of the research conducted by Marni & Nita (2019) showed that 277 respondents behaved well, a total of 214 respondents (77.3%) while a total of 63 respondents (22.7%) behaved badly.

Based on the results of the study above, the researcher can conclude regarding the behavior of preventing HIV/AIDS in adolescents, namely that most of the respondents behave well in preventing HIV/AIDS transmission, this is supported by good knowledge. A person's ability to act is influenced by knowledge. Someone who has good knowledge will act effectively in everyday life. So that teenagers who have sufficient knowledge, especially in preventing HIV/AIDS transmission, can avoid behaviors that lead to HIV/AIDS transmission.

3.2.2. Bivariate Analysis

a. Relationship between Teenagers Knowledge Levels about HIV/AIDS and HIV/AIDS Prevention Behavior

The results of the study of 74 respondents who were studied found that 36 respondents who had good knowledge of good behavior in preventing HIV/AIDS transmission were 35 respondents (97.2%) and 1 respondent had sufficient behavior in preventing HIV/AIDS transmission (2,8%). There are 29 respondents with sufficient knowledge, namely 28 respondents (96.5%) who behave well in preventing HIV/AIDS transmission and 1 respondent (3.5%). Lack of knowledge of 9 respondents, namely those who behave well in preventing the transmission of HIV/AIDS. From the results of the Chi-Square statistical test, a p-value of 1,000 is obtained. This shows a p-value > 0.05 which means that there is no relationship between adolescent knowledge about HIV/AIDS and HIV/AIDS prevention behavior.

These results are in line with research conducted by Angela, Sianturi, & Supardi (2019) with a total of 139 respondents. The results showed that students with high knowledge who behaved well in HIV/AIDS prevention were 123 respondents (94.6%) and misbehaved 7 respondents (5.4%). There are 9 respondents (100%) with low



knowledge who behave well in preventing HIV/AIDS transmission. So it can be concluded that there is no relationship between knowledge and HIV/AIDS prevention behavior.

Research conducted by Marni & Nita (2019) on 277 respondents, namely most of the respondents have good knowledge about HIV disease and its prevention, namely 169 (61%) while those who have poor knowledge are 108 respondents or 39%. So it can be concluded that knowledge is not related to the risk behavior of contracting HIV/AIDS. This could be caused by other factors that have not been studied.

Based on the results of the research above, the researcher can conclude that the knowledge possessed by teenagers does not affect the behavior of preventing HIV/AIDS. This is due to factors that have not been studied so that further research is needed to determine the factors causing the risk behavior of HIV/AIDS transmission that are still carried out by adolescents, besides that it is necessary to increase the participation of all levels of society in jointly carrying out HIV/AIDS transmission prevention behaviors so that cases of HIV/AIDS positive can decrease.

4. CONCLUSION

Based on the results of research that has been done by the researcher regarding the Relationship between Teenager Knowledge Levels About HIV/AIDS with HIV/AIDS Prevention Behavior during the Covid-19 Pandemic Period at SMAS Kartini Batam City with a total sample of 74 people, the authors conclude that:

- a. Teenager knowledge about HIV/AIDS at SMAS Kartini Batam City was mostly good as many as 36 respondents (48.6%).
- b. The behavior of preventing the transmission of HIV/AIDS in teenagers at SMAS Kartini, Batam City, was mostly good as many as 72 respondents (97.3%).
- c. There is no relationship between the level of knowledge of teenagers about HIV/AIDS with HIV/AIDS prevention behavior at SMAS Kartini Batam City. This can be seen from the results of the Chi-Square test carried out and obtained $p\text{-value} = 1,000 > 0.05$.

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