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THE RELATIONSHIP OF KNOWLEDGE AND HIV/AIDS PREVENTION  
BEHAVIORS IN LEVEL IV STUDENTS OF X STUDY PROGRAM X  
FACULTY X UNIVERSITY X YEAR 2023

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**Abstract**

**Introduction:** The high rate of HIV/AIDS cases in late adulthood needs to be anticipated with prevention at an earlier age, namely in late adolescence to reduce the incidence of HIV/AIDS in late adulthood and late adolescence. This research was conducted with the aim of knowing the relationship between knowledge and HIV/AIDS prevention behavior in students. **Methodology:** The Cross-sectional analytic survey design used a total sampling technique with a total sample of 146 respondents. Collecting data using a questionnaire with primary data taken directly from the respondents. Univariate and bivariate analyses were performed using the Chi-square test. **Research Findings:** The results showed that 102 out of 122 (83.6%) respondents had good knowledge and good behavior. While 11 out of 24 (45.8%) respondents had less knowledge and less behavior. The results of the Chi-Square test showed that there was a relationship between knowledge and HIV/AIDS prevention behavior with a P value of  $0.003 < 0.05$ . **Conclusions:** This study is that there is a relationship between Knowledge and HIV/AIDS Prevention Behavior in students. Suggestions for institutions, It is hoped that they can make routine policies/programs regarding fostering sex education, oblige students to take part in student activities, and conduct screening for HIV/AIDS.

**Keywords:** HIV/AIDS, Preventive Behavior, Knowledge.

**1. Introductions**

The most rapid spread and development of HIV/AIDS cases occurs especially in third world countries. In these countries, people still struggle with educational underdevelopment, difficult economic conditions, and especially limited access to adequate or affordable health services. Limited

education and troubling economic conditions mean that people tend not to undergo regular health checks, which in the end can contribute to the emergence of various diseases, including HIV/AIDS<sup>(1)</sup>.

According to data from the World Health Organization (2021), there are around 38.4 million individuals

worldwide living with HIV. Of this number, around 1.5 million people were newly infected with HIV and around 650,000 cases of AIDS deaths were recorded<sup>(2)</sup>. Data from Unaid (2021) reveals that the largest HIV-infected population is on the African continent (around 25.7 million people), followed by Southeast Asia (around 3.8 million), America (around 3.5 million), and the West Pacific (around 1.9 million people). The high number of people infected with HIV in the Southeast Asia region means that Indonesia needs to increase its awareness of the spread and transmission of this virus.

Based on the Indonesian Ministry of Health's Data and Information Center in 2021, there are five provinces with the highest number of HIV cases. West Java ranks 3rd, West Java with 6,066, where in 2017 the largest number of HIV cases were also owned by these five provinces. In 2021, in West Java Province there are 3 cities/districts that have the highest HIV/AIDS cases, namely Bogor Regency, Bekasi City and Cimahi<sup>(3)</sup>. According to data from the Cimahi City Health Service in 2021, there were 342 HIV/AIDS cases recorded. When compared with 2020, HIV/AIDS cases have decreased, with 361 HIV/AIDS cases recorded in 2020. HIV/AIDS cases in Cimahi City in 2021

occurred in the 15-19 year age group with 1 case, 148 cases in the 20-24 year age group, 170 cases in the 25-49 year age group and 170 cases in the 20-24 year age group. as many as 23 cases<sup>(4)</sup>.

The 25-49 year age group is the group most affected by HIV/AIDS. Ironically, according to Setiani et al, (2014), this disease has a window period of around 5-10 years. This means that exposure to HIV/AIDS usually occurs during late adolescence or young adulthood, namely in the age range of 18-24 years<sup>(5)</sup>. The high number of HIV/AIDS cases in adults must be anticipated with preventive measures focused on younger ages, namely late teens. This step aims to reduce the incidence of HIV/AIDS in late adulthood and late adolescence<sup>(6)</sup>.

In the final teenage stage, students experience maturity in various aspects such as social values, morals, intelligence, emotions and sexuality. Sexual development in late adolescence, which is a transition period to adulthood, includes sexual drive, emotional dimensions, and feelings of affection. Hormonal changes that occur at this stage can increase sexual drive. Information spread through mass media can also increase the possibility of sexual behavior that

violates norms or has the potential to be deviant. Interactions between male and female individuals at this age also risk increasing the chances of sexual behavior that is not in accordance with social norms.

Knowledge about HIV/AIDS is considered an important and fundamental aspect, so providing information about this matter needs to be done comprehensively, both in junior high schools, high schools and among students. Students are considered a group that has high intellectual capacity, and they are at the peak stage of education<sup>(7)</sup>.

The majority of students are in the final phase of adolescence, which is known as a period that is vulnerable to the risk of transmission, due to a lack of understanding of the threat of HIV/AIDS. This can be overcome by providing basic knowledge about the sexually transmitted disease HIV/AIDS to teenagers. However, it is important to remember that having adequate knowledge does not necessarily lead to appropriate behavior. This is because individual awareness of the need for efforts to prevent this disease is also an important factor<sup>(8)</sup>.

Efforts to prevent HIV/AIDS transmission are the responsibility of each individual, and this is influenced

by several factors, including knowledge. In accordance with the views of Siwy (2013), individuals who have a deep understanding of HIV/AIDS tend to have more positive attitudes and behavior in the context of HIV/AIDS prevention<sup>(9)</sup>. Therefore, students are expected to have a comprehensive understanding of HIV/AIDS and be committed to protecting themselves from this serious disease. Therefore, students should have a strong understanding of HIV/AIDS and try hard to prevent its spread. Having a basic understanding of HIV/AIDS can help them to fully realize how big a threat HIV/AIDS poses. This in turn will help adolescents develop attitudes and behavior that support healthy HIV/AIDS prevention efforts<sup>(10)</sup>.

In Indonesia, the HIV/AIDS prevention strategy currently implemented still focuses on groups deemed to have potential risks, such as sex workers, sex worker users, homosexual individuals, narcotics users, and the like. However, this prevention approach does not yet embrace parties who are not clearly identified as groups with risky behavior. Conditions like this indicate that expanding the scope of prevention programs has not yet reached all

individuals who have the potential to engage in risky behavior. In this context, students should also be considered as relevant targets for HIV/AIDS prevention programs. This is due to the need to educate and form the right attitudes from an early age. Through cultivating knowledge and developing the right attitudes, students can influence their behavior patterns. Therefore, including students as targets in prevention programs can have a positive impact on HIV/AIDS prevention efforts<sup>(11)</sup>.

## 2. Methods

### 2.1 Design Research

This type of quantitative research with a *Cross Sectional* analytical survey design. The population in this study were level IV students Program X Study Faculty X, University of X with a total of 146 respondents. The sampling technique uses *non-probability sampling* with *total sampling*. Data collection uses a questionnaire with primary data taken directly from respondents.

### 2.2 Data Analysis

The data obtained were analyzed univariately and bivariately with the *Chi-square test*.

## 3. Result

The research was conducted on 146 student respondents with the

results of the frequency distribution of knowledge and behavior towards HIV/AIDS as shown in Table 1 and Table 2.

Table 1. Frequency Distribution of HIV/AIDS Knowledge for level IV students

Study program X Faculty			
No	Knowledge	Frequency	Percentage (%)
1	Good	122	83.6
2	Not enough	24	16.4
Total		146	100

The description of the results of this research shows that of the 146 respondents, 122 respondents (83.6%) had good knowledge. This shows that respondents already know about HIV/AIDS. Knowledge is closely related to education, the higher the education, the broader a person's knowledge. Based on the results of the researcher's analysis, the majority of respondents had good knowledge, this was because respondents had studied material regarding HIV/AIDS, as evidenced by the results of data analysis in the good category of knowledge of 83.6% and the poor category of 16.4%. This is proven by the results of the questionnaire filled out by respondents who received positive scores as seen in several components of the question, namely regarding the definition, method of transmission and

prevention of HIV/AIDS. Respondents gave the right answers. Meanwhile, respondents who have less knowledge may be influenced by several factors. This is supported by theory Notoatmodjo (2014) which explains that knowledge is influenced by internal and external factors. One of the factors that has a big influence in influencing knowledge is external factors (social and cultural), as we know, even though someone is in the health sector, it is possible that they do not have sufficient knowledge because in the current generation social and cultural life is very lacking. good, and based on observations in the field that there is not yet a program that facilitates students to receive guidance regarding sex education<sup>(12)</sup>.

Table 2. Frequency Distribution of HIV/AIDS Prevention Behavior among College Students Level IV Study Program X Faculty X University

No	Behavior	Frequency	Percentage (%)
1	Good	115	78.8
2	Not enough	31	21.2
Total		146	100

The description of the results of this study shows that of the 146 respondents, 115 respondents (78.8%) had good HIV/AIDS prevention behavior. This shows that respondents already have good HIV/AIDS

prevention behavior. Behavior is part of the function of an organism involved in an action. Behavior is a response or reaction to a stimulus (stimulus from outside)<sup>(13)</sup>. Behavior is influenced by 2 factors, namely internal and external factors. Internal factors include the characteristics of the individual concerned such as gender and age.

Based on the researcher's analysis, respondents had good HIV/AIDS prevention behavior, this is supported by the results of analysis on good prevention behavior of 78.8% (115 people) and poor prevention behavior of 21.2% (31 people). This can be seen from the results of filling out the questionnaire by respondents in the question component which leads to the act of transmitting HIV/AIDS such as never having had sex as many as 131 people (89.7%), in the question regarding the use of drugs with injection needles by respondents. 144 people (98.6%) answered never, while 15 people (10.2%) of respondents who had less preventive behavior could be seen in the results of the questionnaire components that led to the act of transmitting HIV/AIDS, such as having had sex. Apart from that, it is in line with the theory according to Irwan (2017) Pakpahan, (2021) that behavior can be



influenced by external factors (environment)<sup>(13)</sup>.

Apart from that, the lack of parental supervision regarding the activities carried out by respondents can be a factor that influences a person's behavior, which is supported by the results of the questionnaire regarding where they live. As many as 86 people (58.9%) live in boarding houses so they are far from parental supervision.

Table 3. Relationship between Knowledge and HIV/AIDS Prevention Behavior on IV student of X Study Program, X Faculty, X University

Knowledge	Behavior						P Value
	Not enough		Good		Total		
	N	%	N	%	N	%	
Not enough	11	45.8	13	54.2	24	100	0.003
Good	20	16.4	102	83.6	122	100	
Total	31	21.2	115	78.8	146	100	

Based on the results of the research analysis, it can be seen that 11 of the 146 respondents had insufficient knowledge in the poor behavior category (45.8%) and 13 people (54.2%) in the good behavior category. The results of respondents who had good knowledge in the poor behavior category were 20 people (16.4%) and in the good behavior category 102 (83.6%). Based on the results of statistical tests on the relationship between knowledge and HIV/AIDS prevention behavior in students, it was found that  $p=0.003$  ( $p \leq \alpha$ ) meaning  $H_0$

was rejected, so there was a relationship between knowledge and HIV/AIDS prevention behavior in students.

#### 4. Discussion

Knowledge has a close relationship with education. The hope is that through higher education, a person's knowledge will expand. This will result in broader knowledge about various positive aspects and different objects. As a result, a positive attitude will emerge towards certain objects.

The results of the analysis by the researchers show that solid knowledge can have a positive impact on individual behavior. This finding is strengthened by the results of the questionnaire filled out by the respondents. Questions about HIV/AIDS, especially regarding its transmission, were answered correctly by the respondents. Therefore, the results of the questionnaire regarding preventive behavior show positive value. This shows that knowledge is an important cognitive basis in shaping individual behavior. In addition, good knowledge of HIV/AIDS allows respondents to understand the associated risks and ways to prevent them. This results in positive perceptions that can motivate them to adopt preventive measures. As a result, positive preventive behavior

and a commitment to take preventive steps against HIV/AIDS are formed.

Based on the results of statistical analysis, there were 83.6% (102 people) of respondents who showed good knowledge and good behavior. When someone has comprehensive knowledge, their tendency to behave well also increases. On the other hand, the results of statistical analysis show that 45.8% of respondents (11 people) have limited knowledge and inadequate behavior. Lack of awareness regarding the severity of HIV/AIDS and its impact on health may be the main cause of low levels of HIV/AIDS prevention knowledge and behavior. Individuals may feel that they are less susceptible to the disease, which in turn may result in less cautious behavior and increase the risk of transmission. The social environment and pressure from peers can also have a significant influence on individual behavior. These environmental factors play a dominant role in shaping a person's behavior.

According to Lawrance Green's theory quoted by Nisa, (2018), there are three elements that influence the development of individual behavior. First, there are predisposing factors such as knowledge, attitudes, beliefs, beliefs, social status and values. Second, there are supporting factors

(enabling factors) such as the availability of health facilities or health facilities, for example health centers, medicines and sanitation. Third, there are reinforcing factors which involve the attitudes and behavior of health workers and other individuals who become a reference for community behavior(14).

## **5. Result**

Based on the results of statistical tests, the results obtained were  $p \text{ value} = 0.003$  ( $p \leq \alpha$ ) means  $H_0$  is rejected, so there is a relationship between knowledge and HIV/AIDS prevention behavior in Level IV students of X Study Program, X Faculty, X University.

## **Reference:**

- [1.] Rahakbauw N. Dukungan Keluarga Terhadap Kelangsungan Hidup ODHA (Orang Dengan HIV/AIDS). 2016;3(2).
- [2.] WHO. The Global Health Observatory. 2021.
- [3.] Kemenkes RI. Infodatin HIV dan AIDS 2020 [Internet]. Kemenkes Go.Id. 2020. Available from: <https://www.kemkes.go.id/article/view/20120100004/infodatin-hiv-dan-aids-2020.html>
- [4.] Dinas Kesehatan Jawa Barat. ). Jumlah Kasus HIV Berdasarkan Kabupaten/Kota di Jawa Barat. 2021.
- [5.] Setiani S. Buku Ajar Ilmu Penyakit Dalam. Jakarta: Interna Publishing; 2014.
- [6.] Al Amin M, Juniati D. Klasifikasi Kelompok Umur Manusia Berdasarkan Analisis Dimensi Fraktal Box Counting Dari

Citra Wajah Dengan Deteksi Tepi Canny. J Ilm Mat. 2017;2(6).

[7.] Hidayat O. Tingkat Pengetahuan Mahasiswa Universitas Gadjah Mada Tentang Bahaya Penyakit Aids. J Bumi Indones. 2012;

[8.] Asni A, Fadraersada J, Rusli R. Pengaruh Pemberian Leaflet terhadap Pengetahuan Mahasiswa Universitas Mulawarman Terkait Penyakit HIV/AIDS. Proceeding Mulawarman Pharm Conf. 2018;8:294–300.

[9.] Siwi AS, Irawan D, Susanto A. Analisis Faktor-Faktor yang Memengaruhi Kejadian Hipertensi. J Bionursing. 2020 Nov 30;2(3):164–6.

[10.] Febriyanti E, Lestari Y. Analisis Faktor-Faktor Pencegahan Hiv/Aids Pada Mahasiswa Keperawatan Dengan Pendekatan Teori Health Belief Model. Juenal Kesehat. 2014;8(2).

[11.] Asshela M, Pratiwi S, Putri RM. Hubungan Antara Pengetahuan dan Sikap dengan Perilaku Pencegahan Penularan HIV/AIDS Pada Mahasiswa Fakultas Pertanian Universitas Tribhuwana Tunggadewi Malang. Nursing News. 2017;2(1).

[12.] Notoatmodjo S. Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta; 2018.

[13.] Pakpahan M. Promosi Kesehatan dan Perilaku Kesehatan. Yayasan Kita Menulis; 2021.

[14.] Nisa NK. Pengaruh Psikoedukasu dan Interactive Nursing Reminder Berbasis Short Message Service Dengan Lawrence Green Terhadap Peningkatan Kualitas Hidup Klien Turbekulosis. [THESIS]. [SURABAYA]: UNIVERSITAS AIRLANGGA; 2018.