



## CORRELATION BETWEEN THE LEVEL OF KNOWLEDGE AND THE STIGMA TOWARD PEOPLE LIVING WITH HIV/AIDS

**Amalia Salma Anindya, Sri Indra Kurnia\***

Faculty of Health Sciences, University Muhammadiyah Surakarta, Jl. A. Yani, Mendungan, Pabelan, Kartasura, Sukoharjo, Jawa Tengah 57162, Indonesia

\*[si.kurnia@ums.ac.id](mailto:si.kurnia@ums.ac.id)

### ABSTRACT

The trend of HIV/AIDS cases in Indonesia is gradually increasing with Central Java province having the highest number of cases. The lack of knowledge about HIV will trigger the emergence of stigma against PLHIV. The stigma of society makes people with HIV/AIDS become closed and isolated so that a person sees himself as useless. As well as the high stigma towards PLHIV among students, this study aims to determine the relationship between the level of knowledge and stigma towards PLHIV in students of Universitas Muhammadiyah Surakarta. The type of research used was descriptive correlation with a cross sectional approach. The sampling technique used in this study was accidental sampling with a population of all students enrolled in the class of 2019 to 2022 and a sample of 394 students was obtained. The data were then analyzed using the Spearman Rank Correlation test. The results showed that there was a relationship between the level of HIV/AIDS knowledge and stigma towards PLHIV with a p value of 0.000, the strength of the relationship was very strong ( $r = 0.809$ ) and negatively patterned, meaning that the higher the level of knowledge, the lower the stigma given.

Keywords: hiv/aids; level of knowledge; plhiv; stigma

### INTRODUCTION

Acquired Immuno Deficiency Syndrome (AIDS) is a chronic, progressive disease caused by the Human Immunodeficiency Virus (HIV) (Qing et al., 2022). One of the 17 Sustainable Development Goals (SDGs) is health and a prosperous life, as stated in the third goal, the main goal of which is to end the AIDS epidemic by 2030 (Kusumaningrum et al., 2022; YAMIN, 2023). In an effort to achieve the goal of ending AIDS epidemic, member countries of the United Nations (UN) have signed an agreement known as Fast Track Commitments. That agreement targeted rapid approaches which includes reducing the number of new HIV infections, reducing the number of AIDS-related deaths, and eliminating AIDS-related stigma and discrimination (Tristante et al., 2022).

According to data from the World Health Organization (WHO), in 2021, HIV/AIDS has claimed around 40.1 million lives, and has infected around 38.4 million people globally. In the same year, about 650,000 deaths were caused by HIV/AIDS, making HIV/AIDS the deadliest infectious disease in the world after ARI (World Health Organization, 2023). Meanwhile, Indonesia is the country with the highest number of people living with HIV in Southeast Asia, which is around 540,000 people and 7,036 AIDS patients in 2021 (Panma, 2022; Suantari, 2021; UNAIDS & AIDSinfo, 2021). The trend of HIV/AIDS cases in Indonesia is increasing gradually with the province of Central Java as the region with the most cases (Kemenkes RI, 2022). For Sukoharjo regency itself, the number of HIV/AIDS case findings from 2020 to July 2023 was reported as many as 284 cases, if not immediately addressed, there will be more new cases (Mooss et al., 2013; PRABOWO, 2021). According to the Indonesian Ministry of Health, the most vulnerable group to HIV is adolescents aged 15-24 years. One of the risk factors for HIV/AIDS transmission among adolescents is low level of knowledge (Panma, 2022).

Low knowledge about HIV is associated with significant misconceptions about HIV transmission. Misconceptions about HIV can be influenced by area of residence, education level, employment level, health knowledge and socioeconomic status (Sholekhah et al., 2021; Suantari, 2021). Fear of infection and rejection of people living with HIV/AIDS (PLHIV) is often due to misconceptions or lack of knowledge about HIV/AIDS. Lack of knowledge about HIV also leads to stigmatization of PLHIV (Fauk et al., 2021a). In Indonesia, eight out of ten married women and men discriminate against PLHIV. This discriminatory attitude towards PLHIV is linked to a lack of understanding of the mechanisms by which HIV is transmitted (Mooss et al., 2013).

People living with HIV are often stigmatized, often engage in avoidant behaviors (such as refusing to share food, hold hands or sit next to each other), gossip and violence, and social rejection (such as ostracism, lack of respect and status). Many studies have reported that stigmatization of PLHIV is common in the family by parents, siblings, and in-laws. They may even experience discrimination from medical professionals (Fauk et al., 2021b). Lack of knowledge about HIV, fear of contracting HIV, personal values, religious beliefs, social norms and values, educational level and marital status are factors believed to be associated with stigma and discrimination. limits against PLHIV. Family members encourage PLHIV to keep quiet about their illness to avoid asking people (Yaya et al., 2019). A qualitative study conducted in Indonesia revealed that the stigma against PLHIV motivates them to hide their HIV infection from their loved ones and communities (Culbert et al., 2015). Stigma negatively affects the social and psychological well-being of PLHIV (Daniel et al., 2022).

To combat HIV-related stigma and discrimination, the United Nations Program on HIV and AIDS (UNAIDS) launched a policy adopted by the National AIDS Commission (NAC), called zero disease, zero death and zero discrimination (Arifin et al., 2022). The Indonesian government also issued Minister of Health Regulation No. 21 of 2013 on HIV and AIDS prevention, and one of its objectives is to eliminate discrimination against PLHIV (Kemenkes RI, 2013). Unfortunately, despite the plans and regulations, many reports show that many people continue to discriminate against PLHIV. As many as 56 percent of household heads showed prejudice against PLHIV. Almost half (49.7%) expressed negative attitudes towards people living with HIV. More than half (71.63%) of teenagers stigmatize PLHIV and teenagers are 1.19 times more likely to discriminate against PLHIV (Hati et al., 2017; Shaluhayah et al., 2015; Situmeang et al., 2017; Srithanaviboonchai et al., 2017).

Previous research with the same purpose found that students with low knowledge had a high level of stigma towards PLHIV (Kusuma et al., 2020). Supported by previous research conducted on Universitas Muhammadiyah Surakarta students, it shows that the majority of respondents have less access to HIV/AIDS information (Kusumaningrum & Sholekhah, 2019). Due to the high stigma of HIV/AIDS among students, the author is interested in examining the correlation between the level of knowledge of HIV/AIDS and the stigma towards PLWHA in students of Universitas Muhammadiyah Surakarta.

## **METHOD**

This research is a descriptive correlation study with a cross sectional approach. The population in this study were all students from 2019 to 2022, with the total of 27,461 students. The sampling technique used was an accidental sampling using the Yamane formula (Sugiyono, 2019) with a sampling error rate of 5% (0.05), and with an accuracy rate or Confidence Interval (CI) of 95%. Based on this technique, a total of 394 student samples were obtained at Universitas Muhammadiyah Surakarta. The ethical clearance of this study were fully approved

by the Health Research Ethics Committee Faculty of medicine of Universitas Muhammadiyah Surakarta, with reference number 4930/B.2/KEPK-FKUMS/IX/2023. This research conducted on May 6, 2023 - June 30, 2023.

The independent variable in this study was the level of knowledge of HIV-AIDS while the dependent variable was stigma towards PLHIV. The research instrument used was a questionnaire. The assessment questionnaire has been tested for validity and reliability. The question of knowledge level was tested as many as 20 questions with the results of the validity test (0.035-0.879) and reliability test ( $\alpha = 0.914$ ), obtained a questionnaire on the level of knowledge obtained 14 valid questions, while on the question of stigma, tested as many as 16 questions, with the results of the validity test (0.253-0.892) and reliability test ( $\alpha = 0.961$ ) obtained 14 valid questions. Data analysis was carried out univariate and bivariate using the Correlation Test, the cross tabulation analysis was conducted to test the relationship between variables. Furthermore, the Spearman Rank Correlation test was conducted to determine the level of relationship between the level of knowledge of HIV/AIDS and stigma towards PLHIV.

**RESULT**

Table 1.  
Frequency of Respondent Characteristics

Variable	f	%
Gender		
Male	141	35,8
Female	253	64,2
Class Year		
2019	111	28,2
2020	63	16
2021	135	34,3
2022	85	21,6

Respondents consisted of the class of 2019, 2020, 2021, and 2022, it was found that the majority respondents were from the class of 2021, namely 34.3% (135 people), while the least filling was from the class of 2020 as much as 16% (62 people), and the rest were from the class of 2019 and 2022. Female respondents are more dominant than male students, with a difference of 28.4% (112 respondents).

**Knowledge Level and Stigma**

Table 2.  
Frequency Distribution of Knowledge Level and Stigma

Variable	f	%
Knowledge		
Low	154	39,1
Fair	161	40,9
Stigma		
High	187	47,5
Medium	124	31,5
Low	83	21,1

The frequency distribution table 2, explains the level of knowledge of the respondents regarding the meaning, causes, modes of transmission, symptoms, and prevention of HIV/AIDS. The table below explains stigma which is then interpreted into several types of stigma, such as stereotyping, discrimination, separation, and labeling. Based on the data above, it is known that the level of knowledge that has the largest percentage is in the sufficient category, followed by a low level of knowledge and a good level of knowledge with 154 and 79 respondents respectively. Meanwhile, in the stigma variable, it is known that the most respondents have

high stigma as many as 187 respondents, followed by moderate stigma and low stigma with 124 and 83 respondents respectively.

**Relationship between Knowledge Level and Stigma towards PLHIV**

In this study, to see the relationship of each variable, both independent (attitude and knowledge) and dependent variables (stigma), cross tabulation analysis was conducted to test the relationship between variables. Furthermore, the Spearman Rank Correlation test was conducted to determine the level of relationship between the level of knowledge of HIV/AIDS and stigma towards PLHIV.

Table 3.  
Cross Tabulation Results and Spearman Rank Correlation Test between HIV/AIDS Knowledge Level and Stigma towards PLHIV

Student Knowledge	Low Stigma		Medium Stigma		High Stigma		Total		Correlation Coefficient (r)	p-value
	f	%	f	%	f	%	f	%		
Good	52	65,8	25	31,6	2	2,5	79	20,1	-0,809	0,000
Fair	28	17,4	82	50,9	51	31,7	161	40,8		
Low	3	1,9	17	11	134	87	154	39,1		
Total	83	21,1	124	31,5	187	47,5	394	100		

Based on the results of the cross tabulation analysis, it was found that most respondents gave high stigma to PLHIV, namely 187 (47.5%), at the level of knowledge showed that most respondents had a level of knowledge in the moderate category (40.9%) and low category (39.1%). The level of knowledge and stigma analyzed using the Spearman rank correlation test obtained a p value of 0,000 (p-value < 0,05). Based on the conclusion of the table above, the hypothesis of this study states that (HO is accepted) there is a relationship between the level of knowledge of HIV/AIDS and stigma towards PLHIV which has a degree or strength of a very strong/ perfectly linear relationship (r = 0,809) and a negative pattern, meaning that the higher the level of knowledge, the lower the stigma given.

**DISCUSSION**

**Knowledge**

Based on the results of the study, the level of knowledge of respondents was quite evenly distributed, namely, 39.1% had a low level of knowledge, 40.9% had a sufficient level of knowledge, and 20.1% had a good level of knowledge. The level of knowledge of students about HIV/AIDS was measured through 14 statements. The questionnaire began with a lighter statement, for example: "People with HIV/AIDS (PLHIV) can be cured", from the statement there were 231 (58.6%) respondents who agreed and 163 (41.3%) respondents did not agree. then the questionnaire continued with statements related to insights about HIV/AIDS transmission and prevention as follows.

**HIV/AIDS Transmission**

The level of knowledge of students regarding HIV/AIDS transmission in this study is represented through several statements, one of which is "HIV/AIDS can be transmitted through kissing" based on this study, 286 respondents (72.6%) did not know this. Then in another statement as many as 280 respondents (71.1%) did not know that "HIV/AIDS cannot be transmitted through saliva, tears, or sweat". Paryati et al, (2013) revealed that 40 to 50 percent of people believe that "HIV can be transmitted through sneezing or coughing, drinking from the same glass, and using public toilets", while 20% believe that "Kissing the cheek can transmit HIV". This is incorrect knowledge and shows the low knowledge of the community. Low

knowledge is one of the factors that can influence the emergence of stigma and threats against PLHIV (Paryati et al., 2013).

### ***Prevention of HIV/AIDS***

Based on the steps to prevent HIV/AIDS transmission according to the Centers for Disease Control and Prevention, it was not found that HIV/AIDS transmission can be prevented by washing the genitals after sex. Whereas in the results of this study there were 261 respondents (66.2%) did not know that washing the genitals after sex could not prevent HIV/AIDS transmission. Then more than half of the respondents (65%) did not know that "eating healthy food is not related to HIV/AIDS prevention". Based on 14 questions regarding respondents' knowledge of HIV/AIDS, there were 10 statements with a percentage of incorrect answers of more than 50%. While overall there were only 16 respondents who were able to answer the entire questionnaire correctly (4%). These results are higher than previous research conducted by Situmeang et al in 2017, with 8,316 respondents there were only 26 respondents who answered the entire questionnaire correctly (0.3%) (Situmeang et al., 2017).

This study is also in line with an article stating that there were (54.5%) respondents answered that HIV can be transmitted through insect bites, other studies also revealed, most respondents (41.7%) answered that HIV is transmitted through touching, kissing (29.1%), coughing and sneezing (31.5%) (Batra & Awan, 2020; Kemenkes RI, 2016). Paryati's research in 2013 also revealed that 40 to 50 percent of the community believed that HIV can be transmitted through sneezing or coughing droplets, drinking from the same glass, and using public toilets, while 20% believed that kissing the cheek could transmit HIV. This is incorrect knowledge and shows the low level of public knowledge (Susanti, 2019).

### ***Stigma***

According to the World Health Organization, social stigma in health is related to discrimination and getting different treatment because it is considered to have a certain disease (World Health Organization, 2023). In this study, stigma was grouped into 3, namely high, medium and low stigma. 47.5% had high stigma, 31.5% had moderate stigma, and 21.1% had low stigma. The high stigma indicates that the majority of respondents tend to have negative prejudice against people with HIV/AIDS. In this study, high and low stigma was measured through filling out a questionnaire which was then interpreted in several types of stigma, namely.

### ***Stereotype***

In this study, 230 respondents or more than half of the total respondents agreed that "it is mandatory for people with HIV/AIDS to be isolated". This shows that society often labels people with HIV/AIDS negatively, which leads to different treatment of these people (Mukarromah et al., 2023).

### ***Discrimination***

Discrimination against people with HIV/AIDS is social bullying that is often justified, as in this study, 166 (42%) respondents agreed with the statement that "expelling family members infected with HIV/AIDS for fear of infection". Then more than 39% of respondents agreed that "people with HIV/AIDS are not allowed to visit places of worship".

### ***Separation***

In this study, one of the statements related to separation, namely "telling the surrounding to stay away from HIV-infected people so as not to get infected", there were 184 (46.7%) respondents agreed, 79 (20.1%) respondents were doubtful, and 131 (33.2%) respondents disagreed. This is

a form of stigma that separates the group receiving stigma from other groups (Perempuan Bercadar Kemuslimahan et al., 2022).

### ***Labeling***

This study contained 14 questions regarding the level of community stigma towards people with HIV/AIDS. Of the total respondents, 47.5% agreed with the negative labeling of people with HIV/AIDS. This is influenced by several assumptions such as, a disease that cannot be controlled, a disease caused by "immoral people", and a disease that is easily transmitted to others.

### **Correlation between knowledge level and respondents' stigma towards PLHIV**

The level of knowledge is included in the predisposing factors in the PRECED-PROCEED Model Theory in the independent variable section. The level of knowledge has a correlative relationship with the level of stigma. This is also supported in Nursalam's research which reveals that one of the factors associated with the occurrence of stigma is knowledge (Susanto & Pandin, 2021). Based on the results of research on the level of knowledge and stigma analyzed using the Spearman rank correlation test, the p-value is 0.000 ( $< 0.05$ ), so there is a significant relationship between the level of HIV/AIDS knowledge and stigma towards PLHIV. The SPSS output also obtained a correlation coefficient of -0.806 which means that the level of correlation is very strong and the direction of the variable correlation is negative so that the lower the level of knowledge, the higher the stigma given.

Then based on cross tabulation analysis, respondents with high knowledge levels tend to have low stigma, 57 respondents (65.8%), while respondents with low knowledge levels tend to have high stigma, namely 134 respondents (87%). This is in line with research with a larger sample size of 8,316, which found that respondents who had less knowledge about HIV/AIDS were 1.210 times more likely to have stigma towards PLHIV compared to respondent groups who had sufficient or high knowledge. These results are also in line with the research of Galuh Ismah et al (2020) with midwifery and nursing student respondents in Kebumen Regency who have high stigma towards PLHIV more students who have less knowledge (38.6%) than students who have good knowledge (15.6%) (Ismah et al., 2020) (Sen et al., 2021) (Febrianti et al., n.d.).

The statistical test results obtained a p value of 0.000, which means that there is a correlation between the level of student knowledge and stigma towards PLHIV. The results of this study are in line with several other studies which state that there is a significant correlation between HIV / AIDS knowledge and stigma towards PLHIV ( $p < 0.05$ ), and knowledge itself is a factor that is closely related to stigma (Febrianti et al., n.d.; Menggawanti et al., 2021; Sen et al., 2021). The results of this study are corroborated by the correlation coefficient test with the number obtained 0.806 which means that there is a very strong/perfect linear correlation between the level of HIV/AIDS knowledge and stigma towards PLHIV. Situmeang et al's research in 2019 revealed that respondents who had less knowledge about HIV/AIDS had a 1.216 times greater chance of having stigma towards PLHIV (Situmeang et al., 2017). Then in Putra et al's research in 2022, there was a negative correlation between HIV/AIDS knowledge and HIV/AIDS stigma where the higher the level of HIV/AIDS knowledge, the lower the HIV/AIDS stigma and vice versa (Wartana Putra et al., 2022). These results are reinforced by the opinion of psychologist Gregory M. Herek found in Makmur et al's research in 2022 which states that the fear of HIV transmission is largely a psychological factor based on prejudice and irrational beliefs (Makmur et al., 2022).

## CONCLUSION

The results showed that there was a significant correlation between the level of HIV/AIDS knowledge and stigma towards PLWHA with a p value of 0.000 ( $p < 0.05$ ). The direction of the correlation is negative, namely with a correlation coefficient of -0.826, which means that the higher the level of knowledge, the lower the level of stigma (2.5%) and the lower the level of knowledge, the higher the stigma (87%). The level of knowledge of respondents related to HIV/AIDS includes 79 (20.1%) in the good category, 161 (40.9%) in the moderate category, and 154 (39.1%) in the low category. While the level of stigma towards PLWHA is known that, students with high stigma are 187 (47.5%), moderate stigma 124 (31.5%) and low stigma 83 (21.1%).

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