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# The Relationship between Self-Efficacy and HIV/AIDS Prevention Behavior in Adolescents at SMAN 5 Jambi City

**Lusi Oktavia Siahaan[1)*], Kamariyah[2)], Riska Amalya Nasution[3)], Rts. Netisa Martawinarti[4)], Lisa Anita Sari[5)]**
[1,2,3,4,5)] Nursing Study Program, Faculty of Medicine and Health Sciences, University of Jambi

*Corresponding Author
Email : lusioktaviaa83@gmail.com

***Abstract***

*HIV/AIDS remains a global public health problem and has a significant impact on adolescents. During this phase, adolescents are vulnerable to risky behaviors that can increase the chance of HIV/AIDS transmission. One psychosocial factor that plays a crucial role in shaping preventive behavior is self-efficacy, which is an individual's belief in their ability to consistently take preventive measures. Low self-efficacy can hinder adolescents from optimally adopting HIV/AIDS preventive behaviors. Therefore, this study aims to analyze the relationship between self-efficacy and HIV/AIDS preventive behaviors among adolescents at SMAN 5, Jambi City.This study used a correlational design with a cross-sectional approach. A sample of 98 respondents was obtained through total sampling. Data collection was conducted using the Self-Efficacy Assessment in HIV Risk Behavior Prevention (EDP2B-HIV) questionnaire and the Sexual Behavioral Abstinence HIV/AIDS Questionnaire (SBAHAQ). Bivariate data analysis was performed using the Gamma correlation test to determine the relationship between self-efficacy and HIV/AIDS preventive behaviors. Univariate analysis showed that the majority of respondents had moderate levels of self-efficacy (71 respondents (71.4%), and moderate levels of HIV/AIDS prevention behavior (48 respondents (48.0%). Bivariate analysis showed a significant relationship between self-efficacy and HIV/AIDS prevention behavior in adolescents (p-value = 0.003; r = 0.551). This finding indicates that the higher the level of self-efficacy in adolescents, the better the HIV/AIDS prevention behavior they implement.Self-efficacy plays a crucial role in shaping and enhancing HIV/AIDS prevention behavior in adolescents. Adolescents with higher levels of self-efficacy tend to demonstrate better and more consistent prevention behavior.*

***Keywords: Adolescents, HIV/AIDS, Knowledge, Prevention Behavior, Self-Efficacy.***

## INTRODUCTION

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) remains one of the most complex global public health problems with wide-ranging impacts to this day. Since the beginning of the epidemic, millions of people worldwide have been infected with HIV, and mortality due to AIDS remains relatively high. According to the World Health Organization (2024), since the start of the epidemic an estimated 88.4 million people globally have been infected with HIV, and approximately 42.3 million of them have died from complications related to the disease. In 2023 alone, around 630,000 deaths were reported to be associated with HIV/AIDS, while 39.9 million people were living with the virus worldwide (World Health Organization, 2024). These conditions indicate that HIV/AIDS transmission is still ongoing and continues to pose a global challenge that has not yet been fully resolved.

In Indonesia, HIV/AIDS is also a health issue that requires serious attention. HIV/AIDS cases are often described as an “iceberg phenomenon,” in which the number of officially recorded cases does not reflect the actual situation in the community (Wahyuni, 2023). Stigma, discrimination, and various misconceptions about HIV/AIDS cause many individuals to be reluctant to undergo testing or disclose their health status (Kusuma, 2017). Based on the 2023 report of the HIV and AIDS Information System (SIHA) of the Indonesian Ministry of Health, of 6,142,136 individuals who underwent HIV testing, 57,299 were confirmed positive, with the highest proportion occurring in the 25–49 age group at 64% (Setiawan, 2024). These data indicate that HIV transmission remains dominant among the productive-age population, suggesting limitations in the effectiveness of existing HIV/AIDS education and prevention efforts in the community.

An increasing trend in HIV cases has also been observed in Jambi Province. A report by the Jambi Provincial Health Office in 2022 showed an increase in HIV cases from 125 cases in 2018 to

227 cases in 2022, with the majority of people living with HIV being male (78%) (Kusnadi, 2023). Although the number of AIDS cases decreased from 94 to 25 cases, most cases still occurred in the 25–49 age group, and cases were also found among children under four years of age, indicating mother-to-child transmission. These conditions demonstrate that HIV/AIDS transmission has expanded into the general population and requires more effective prevention strategies.

Adolescents are a group that is particularly vulnerable to HIV/AIDS transmission because they are in a developmental phase characterized by high curiosity, identity exploration, and strong influence from the social environment (Handoyo A, 2009). UNICEF data from 2024 recorded that of approximately 40 million people living with HIV worldwide, about 2.38 million were children aged 0–19 years, with around 685 new infections and 250 AIDS-related deaths occurring every day (UNICEF Data, 2024). In Indonesia, it is estimated that there are around 27,000 new HIV/AIDS cases each year, with nearly 50% occurring among adolescents and young adults (Muhawarman, 2024). These findings underscore the importance of strengthening HIV/AIDS prevention efforts among adolescents, particularly through school-based interventions. This situation indicates that the spread of HIV/AIDS has reached school-age groups, including students at the senior high school level, thus requiring special attention to HIV/AIDS preventive behaviors among adolescents (Hendriati A, 2006).

Preventive behaviors related to HIV/AIDS among adolescents are influenced by various factors, one of which is self-efficacy. Self-efficacy refers to an individual's belief in their ability to control actions, cope with pressure, and make healthy decisions in risky situations (Bandura, 1977). Adolescents with high self-efficacy tend to be better able to refuse potentially harmful invitations, maintain safe behaviors, and consistently apply HIV/AIDS preventive measures. Conversely, low self-efficacy can increase adolescents' vulnerability to risky behaviors associated with HIV/AIDS transmission (Laily N & Wahyuni DU, 2018).

Research findings indicate that adolescents with high levels of self-efficacy are more likely to avoid risky sexual behaviors (Nurhidayah, 2012). However, other findings reveal that most adolescents remain in the moderate self-efficacy category, reflecting the need for interventions to strengthen adolescents' confidence in making healthy decisions (Friyanti et al., 2021). In addition, a study by Wilandika et al. (2023) found a positive relationship between knowledge levels and self-efficacy, indicating that increased knowledge plays a role in strengthening adolescents' self-efficacy in preventing risky behaviors.

The novelty of this study lies in its focus on examining the relationship between self-efficacy and HIV/AIDS preventive behaviors among adolescents at SMA Negeri 5 Kota Jambi. Unlike previous studies that focused on major cities or the general population, this research is oriented toward the local context and the population of senior high school adolescents in Jambi. The focus of this study is to analyze the association between self-efficacy and HIV/AIDS preventive behaviors among adolescents at SMA Negeri 5 Kota Jambi. The objective is to obtain a comprehensive picture of self-efficacy and patterns of HIV/AIDS preventive behaviors, so that the results can serve as a basis for designing effective health education programs within the school environment.

## RESEARCH METHODS

This study used a quantitative method with a *cross-sectional approach* to determine the relationship between self-efficacy and HIV/AIDS prevention behavior among adolescents at SMA Negeri 5 Jambi City. The research location was selected based on the results of a preliminary study that showed students' low understanding of HIV/AIDS, and the study was conducted from February to December 2025. The study population included 792 students in grades XI and XII, with the sample determined using the Slovin formula, resulting in 98 respondents drawn through a total sampling technique. The instruments used included the EDP2B-HIV for self-efficacy and the SBAHAQ for prevention behavior, all of which have been tested for validity and reliability in previous research (Adiputra et al., 2021) . Data were collected through questionnaires and analyzed using the Gamma

correlation test with a significance level of 0.05 to examine the relationship between variables. The entire research process was carried out with due regard for the ethical principles of research, namely *respect for persons, beneficence, non-maleficence* , and *justice.* (Iriani et al., 2022) .

## RESULTS AND DISCUSSION

### Univariate Analysis Results

**Table 1. Respondent characteristics based on age**

| N | Mean | Median | Mode | Minimum Age | Maximum Age |
|---|---|---|---|---|---|
| 98 | 16.51 | 16 | 16 | 16 | 18 |

Based on Table 1, the respondents' ages show a homogeneous distribution, with a mean of 16.51 years. The same median and mode values, at 16 years, indicate a symmetrical distribution. The narrow age range, 16–18 years, indicates that the respondents are in a relatively uniform age group.

**Table 2. Respondent characteristics based on gender and class**

| ıriables | Number (n) | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Man | 31 | 31.6% |
| Woman | 67 | 68.4% |
| **Total** | **98** | **100%** |
| **Class** | | |
| XI | 53 | 54.1% |
| XII | 45 | 45.9% |
| **Total** | **98** | **100%** |

Based on Table 2, it can be seen that of the 98 students who were the subjects of the study, the majority were female with a percentage of 68.4% (67 respondents). When viewed by grade level, respondents from grade XI were the largest group with a total of 54.1% (53 respondents), while grade XII students comprised 45.9% (45 respondents).

**Table 3. Description of Self-Efficacy of Students of SMAN 5 Jambi City**

| Self-Efficacy | Frequency (f) | Percentage (%) |
|---|---|---|
| Low | 11 | 11.2% |
| Currently | 71 | 71.4% |
| Tall | 17 | 17.3% |
| **Total** | **98** | **100%** |

Table 3 shows that the majority of the 98 students at SMAN 5 Jambi City had moderate self-efficacy, namely 71 students (71.4%). This indicates that the majority of students have a fairly good level of self-confidence in dealing with situations related to HIV/AIDS prevention.

**Table 4. Description of Preventive Behavior Patterns of Students at SMAN 5 Jambi City**

| Self-Efficacy | Frequency (f) | Percentage (%) |
|---|---|---|
| Low | 12 | 12.2% |
| Currently | 48 | 48.0% |
| Tall | 39 | 39.8% |
| **Total** | **98** | **100%** |

Based on the results in Table 4, it can be seen that 48 students (48.0%) out of 98 students at SMAN 5 Jambi City demonstrated moderate behavior. This finding indicates that nearly half of the students exhibited fairly good HIV/AIDS prevention behavior.

**Bivariate Analysis Results**

Bivariate analysis was used to determine the relationship or correlation between self-efficacy variables and HIV/AIDS prevention behavior. Testing was conducted using *the Gamma Correlation test* , with the stipulation that the two variables were declared significantly related if the *p-value* <0.05.

**Table 5. Relationship between Self-Efficacy and HIV/AIDS Prevention Behavior in Students of SMAN 5 Jambi City**

| Self-Efficacy | Behavior | | | | | | Total | | r | *p-value* |
|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Currently | | Tall | | | | | |
| | N | % | N | % | N | % | N | % | | |
| Low | 6 | 6.1 | 2 | 2 | 3 | 3.1 | 11 | 11.2 | | |
| Currently | 6 | 6.1 | 39 | 39.8 | 25 | 25.5 | 70 | 71.4 | **0.551** | **0.003** |
| Tall | 0 | 0 | 6 | 6.1 | 11 | 11.2 | 17 | 17.3 | | |
| Total | 12 | 12.2 | 47 | 48 | 39 | 39.8 | 98 | 100 | | |

Based on Table 5 , the results of *the Gamma Correlation test* show that the *p-value* = 0.003 < 0.05, so it can be stated that there is a significant relationship between self-efficacy and HIV/AIDS prevention behavior in students. In addition, the correlation coefficient value obtained r = 0.551 with a positive direction means that the higher the self-efficacy of students, the better the HIV/AIDS prevention behavior carried out. The correlation is in the moderate category, so it can be said that self-efficacy is a fairly strong variable in encouraging prevention behavior.

**Discussion**

**Respondent Characteristics**

Respondent characteristics show that the majority of students aged 16 years, as many as 52 respondents (53.1%), are classified as *middle adolescents* (15–17 years) who experience rapid cognitive and emotional development, and begin to show interest in the opposite sex and behavior influenced by sexual urges (Sulaeman et al., 2022) . At this stage, adolescents begin to be able to assess risks and control behavior, so that the knowledge gained is more easily internalized into preventive actions (Bandura, 1977). The class distribution is dominated by grade XI students as many as 53 respondents (54.1%), in line with the larger proportion of the school population at that level and a similar study at SMKN 1 Cirinten which also reported a dominance of grade XI respondents at 54.6% (Hidayat et al., 2022) . Based on gender, the majority of respondents were female (68.4%), consistent with the *2024 Jambi City Gender Profile data* which recorded a higher School Participation Rate (APS) for females than males (Community Empowerment Agency, P. and PAKJ, 2024) . Biologically and socially, adolescent girls are more vulnerable to HIV/AIDS due to limited access to reproductive health information and bargaining power in interpersonal relationships, which can reduce self-efficacy (Bandura, 1977). These results are also in line with research showing a significant relationship between gender and HIV/AIDS risk behavior, where adolescent girls have a greater chance of engaging in risky behavior (Azizi & Sartika, 2022) .

**Description of Self-Efficacy in HIV/AIDS Prevention in Grade XI and XII Students of SMAN 5 Jambi City**

The analysis results showed that most respondents had a moderate level of self-efficacy of 71 people (71.4%), while 17 respondents (17.3%) had high self-efficacy and 11 respondents (11.2%) were classified as low, indicating that the majority of students at SMA Negeri 5 Jambi City had fairly good confidence in preventing HIV/AIDS risk behavior. This finding is in line with Rahmawati's (2024) research which also found that most adolescents were in the moderate self-efficacy category of 65.9%. The most prominent aspect of self-efficacy was *generality* or scope of behavior, where 90.8% of students stated that they strongly agreed that they did not use drugs, reflecting broad self-confidence in maintaining healthy behavior (Bandura, 1977). In addition, 91.9% of respondents

admitted to being able to refuse invitations to have sexual relations before marriage, illustrating high self-control over social pressure, in accordance with the findings of Qariati et al. (2025) who mentioned self-efficacy as an important factor in *sexual rejection behavior* . However, students' low level of courage to discuss sexual or HIV issues with others indicates the existence of socio-cultural barriers that consider these topics taboo, as stated by Sabilah et al. (2024). Based on the *Health Belief Model theory* , self-efficacy is a major construct that influences preventive behavior, because the higher a person's self-confidence, the greater the likelihood that they will take protective action against the risk of HIV/AIDS.

**Description of HIV/AIDS Prevention Behavior Patterns in Grade XI and XII Students of SMAN 5 Jambi City**

The results of the study showed that HIV/AIDS prevention behavior among students at SMA Negeri 5 Jambi City was dominated by the moderate category with 48 respondents (48%), indicating that most students had made efforts to prevent HIV/AIDS transmission, although not consistently in all aspects. The majority of students showed a high commitment to avoiding risky sexual behavior, mainly because they were influenced by moral values and religious teachings which were the main protective factors against premarital sexual behavior (Ratnasari & Yusuf, 2023) . This finding is in line with research by Ardianti & Julianto (2024) which emphasized that religious and family norms are closely related to adolescent sexual behavior. From the perspective of *the Health Belief Model* , the high perceived benefit *is* seen in students' belief that refusing risky invitations provides protection against HIV/AIDS, where a strong perception of benefits encourages consistent preventive behavior. In addition, the behavioral intention aspect was *also* high, reflecting the awareness that avoiding sexual behavior is an important step in self-protection, which is strengthened by adolescents' self-efficacy in dealing with social pressure (Bandura, 1977). This phenomenon shows that preventive behavior is formed through the interaction between knowledge, moral values, environmental support, and self-confidence, so educational interventions need to be directed at strengthening all these aspects so that preventive behavior can be maintained consistently among students.

**The Relationship between Self-Efficacy and HIV/AIDS Prevention Behavior Patterns in Grade XI and XII Students of SMAN 5 Jambi City**

The results of this study indicate a significant relationship between self-efficacy and HIV/AIDS prevention behavior in students at SMA Negeri 5 Jambi City, with a *p -value* of 0.003 and a correlation of $r = 0.551$, indicating a moderate positive relationship. This means that the higher a student's self-efficacy, the greater their tendency to consistently take preventive measures. This finding aligns with Bandura's (1977) theory , which asserts that self-confidence determines individual behavior in facing risky situations. Students with high self-efficacy are able to reject negative invitations, control their behavior, and maintain appropriate health decisions. This study's results are also consistent with the findings of Febriyanti ( 2021) , which showed a significant relationship between self-efficacy and sexually transmitted disease prevention behavior. Furthermore, research by Sri & Yanni (2024) emphasized that peer influence is an important factor that can reduce self-efficacy, making adolescents with low self-efficacy more likely to engage in risky sexual behavior. Therefore, increasing self-efficacy must be accompanied by strengthening resistance to social pressure and training in decision-making skills. Overall, self-efficacy has been shown to be a major determinant in the formation of HIV/AIDS prevention behaviors in adolescents, making it a priority component in school health education programs.

## CONCLUSION

Childhood trauma is most often caused by repeated and prolonged adversity, especially in the context of interpersonal relationships with caregivers. Adolescents who experience complex trauma develop maladaptive coping mechanisms and disturbances in emotional regulation, leading to imbalances in the stress response system and cognitive information processing.

Childhood trauma is a significant risk factor for the development of psychotic disorders. Traumatic experiences result in complex neurobiological changes, including HPA axis dysregulation, brain structural changes, and neurotransmitter system disturbances. These changes cause emotional dysregulation, impaired reality perception, and the emergence of psychotic symptoms such as hallucinations and delusions through dopaminergic sensitization and traumatic memory fragmentation mechanisms.

Based on the reviewed literature, it can be concluded that there is a significant association between past trauma and an increased risk of psychotic disorders in adolescents. This association shows a dose-response pattern, where the more and more severe the trauma experienced, the higher the risk of developing psychotic symptoms, with protective factors such as social support and psychological resilience acting as moderators in this relationship.

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