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The Effectiveness of Iaic (I'm Aware I Care) Method Education Based on the Health Belief Model on HIV/AIDS Prevention Behavior in Adolescents At SMA Negeri 1 Telaga

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ABSTRACT

Adolescents are a vulnerable group to HIV/AIDS transmission due to risky behaviors and lack of proper knowledge and understanding of HIV/AIDS prevention. One of the prevention efforts that can be done is through health education using audiovisual media. This study aims to determine the differences in HIV/AIDS prevention behavior in adolescents before and after being educated with the IAIC (I'm Aware I Care) method at SMA Negeri 1 Telaga.

This study uses a quasi-experimental design with a one group pretest-posttest design. The research sample amounted to 186 respondents who were taken using random sampling techniques. Data analysis was carried out using the Paired Sample t-test.

The results of the study showed an increase in HIV/AIDS prevention behavior in adolescents after being educated on the IAIC method. The results of the statistical test obtained a p-value of 0.000 ($p < 0.05$), which shows that the education of the IAIC (I'm Aware I Care) method based on the Health Belief Model is effective in HIV/AIDS prevention behavior in adolescents at SMA Negeri 1 Telaga. It is recommended that students are expected to increase knowledge, awareness and positive attitudes on HIV/AIDS prevention by utilizing audiovisual media and applying it in daily life.

INTRODUCTION

AIDS (Acquired Immunodeficiency Syndrome) is a set of symptoms of a disease that arises as a result of a retroviral infection that attacks the body's defense system. Damage to the immune system causes infected individuals to become more susceptible to various other diseases that can lead to a serious condition, known as opportunistic infections. The onset of this condition is related to a decrease in immune function that does not occur directly, but develops within about 5 to 10 years after a person is infected with HIV (Irwan, 2021).

HIV/AIDS is an infectious disease that can be transmitted through certain body fluids, such as sperm, vaginal fluids, blood, and from mother to baby. Transmission occurs through the exchange of bodily fluids from infected individuals, including blood, breast milk, semen, and vaginal fluids. In addition, this virus can also be transmitted from mother to child during pregnancy and childbirth. Transmission does not occur through everyday interactions, such as kissing, hugging, shaking hands, or sharing personal items, food, and drinks. The greatest risk of AIDS transmission comes from heterosexual (70%) and homosexual (22%) relationships (Ministry of Health of the Republic of Indonesia, 2020). HIV is often associated with sexually transmitted diseases because its spread is often associated with unsafe sexual behaviors, such as changing partners (Utami, 2024).

Adolescence is a transitional phase from childhood to adulthood characterized by physical changes as well as psychosocial development. *World Health Organization* sets the age range of adolescents between 10 to 19 years, while the National Population and Family Planning Agency groups adolescents at the age of 10 to 24 years. At this

stage, individuals are trying to find their identity and often face influence from peers and the media. Without strong moral values and adequate health information, adolescents are more at risk of engaging in exploratory behaviors that can harm health, including increasing the likelihood of HIV exposure (Avia et al., 2025).

HIV/AIDS is a global health problem whose number of cases continues to increase in various parts of the world. *World Health Organization* in 2024 it is reported that around 40.8 million people are living with HIV/AIDS. In the same year, there were an estimated 1.3 million new infections and about 630,000 deaths due to HIV. The Sub-Saharan African region is the region with the highest HIV rates globally, with countries such as Eswatini, South Africa, and Lesotho recording high prevalence. In 2024, Eswatini has the highest prevalence of around 23.4% (WHO, 2025)**.** Meanwhile, based on UNAIDS data in 2024, Indonesia occupies the fourth position with the highest number of HIV cases in the Asia Pacific region, after Timor Leste, Thailand, and Cambodia (Wardani et al., 2025)

In 2024, the condition of HIV/AIDS in Indonesia will still show a worrying trend. Based on the 2024 Indonesian Health Profile, the number of HIV cases detected and reported throughout the year reached 63,707 cases, while AIDS cases were recorded at 21,536 cases, which shows an increase compared to the previous period. Most cases occur in men, about 74% of the total, while women account for approximately 28%. When viewed from the age group, the spread of HIV and AIDS is dominated by the productive age of 20–49 years. This is related to the high involvement of this age group in risky behaviors, such as unsafe sexual intercourse and injection drug use. In addition, there are still cases in children aged 1–4 years, which indicates the transmission of HIV from mother to child (Indonesia, 2024).

According to data from the Gorontalo Provincial AIDS Control Commission in 2025, the cumulative number of HIV/AIDS cases in Gorontalo Province from 2001 to June 2025 reached 1,360 cases. Especially in 2024, 242 new cases were recorded, consisting of 194 cases of HIV and 48 cases of AIDS. Based on the regional distribution, the highest number of cases is found in Gorontalo Regency with 388 cases, followed by Gorontalo City with 347 cases, Bone Bolango Regency with 169 cases, Pohuwato Regency with 162 cases, Boalemo Regency with 128 cases, and North Gorontalo Regency with 105 cases, while 61 other cases come from outside the region. When viewed by age group, the highest number is in the range of 25-49 years with a total of 857 cases, followed by the age group of 15-24 years with 451 cases. Meanwhile, cases in children aged 1-14 years were recorded at 13 cases, 5 cases were recorded in infants under 1 year old, and the age group over 50 years was 34 cases. This data indicates that the majority of cases occur in productive age, especially adolescents and young adults, so more focused educational efforts and preventive interventions are needed for these groups.

Adolescents' attitudes toward HIV/AIDS prevention efforts illustrate the extent to which they have views that support such preventive measures. HIV/AIDS prevention behavior refers to an individual's ability to take actions such as delaying or not having sexual intercourse, avoiding changing partners, using condoms, and not using injectable drugs. These attitudes and behaviors act as protective factors that affect the decision-making process of adolescents in acting. Therefore, strengthening these protective factors is important to reduce the risk of HIV/AIDS in adolescents through increasing knowledge, attitudes, and preventive behaviors (Ratnawati et al., 2024).

According to (Boskey, 2019) the Health Belief Model is an approach used by researchers to estimate and understand health behavior. This model is useful in explaining and predicting changes in health behavior in individuals. The Health Belief Model is also able to describe the possibility of a person taking preventive measures based on his beliefs. This theoretical framework consists of six main elements, namely *perceived susceptibility* , *perceived seriousness* , *perceived benefits* , *perceived barriers* , *cues to action* , and *self-efficacy* .

One of the educational methods that is considered appropriate to be applied to adolescents is *the IAIC (I'm Aware I Care) approach*. This approach is in the form of a learning video entitled *I'm Aware I Care* which raises the topic of HIV/AIDS prevention. This method combines increasing knowledge with the formation of care, self-awareness, and the ability of adolescents to take preventive measures through an interactive learning process, such as group discussions, storytelling, two-way communication, and reflection. This approach is considered effective in encouraging preventive behavior because it involves cognitive, affective, and action aspects in an integrated manner.

SMA Negeri 1 Telaga is one of the secondary education institutions with a relatively large number of students and is located in an environment with a high level of social interaction. Based on the results of initial observations conducted on October 30, 2025 on 10 students, consisting of 7 women and 3 men, it was found that 6 students did not have an adequate understanding of HIV/AIDS. In addition, there are also misconceptions about how it is transmitted, such as the assumption that HIV can be spread through touch or simply communicating with people with HIV/AIDS.

A number of previous studies have used educational video media to measure the level of knowledge, attitudes, and behaviors after being given an intervention. The results of the study show that the use of video in health education has an influence on the improvement of adolescents' knowledge and attitudes. In addition, adolescents tend to be more interested in using videos as a means of obtaining information about HIV/AIDS prevention (Ismayati. N, 2023; Haseza et al., 2024; Sabhita et al., 2022);

METHODS

This research is a research with *a Quasi Experimental* design. The sampling procedure used the slovin formula with a total sample of 186 students. The sample was measured with a pre-test questionnaire, an educational intervention with *the IAIC* method and a post-test questionnaire. The sampling technique in this study is using random sampling techniques. The variables in this study consist of two, namely: the independent variable of Education with *the IAIC Method (I'm Aware I Care),* and the dependent variable (HIV/AIDS prevention behavior). The type of data used in this study is primary data, namely the method of data collection obtained from interviews conducted directly with respondents, observations using questionnaires and documentation as evidence in conducting research while secondary data is data obtained or collected by researchers from various existing sources, including data obtained from the Gorontalo Provincial AIDS Control Commission (KPA) and from State High School 1 Telaga.

RESULTS AND DISCUSSION

SMAN 1 Telaga is a public high school located in Mongolato Village, Telaga District, Gorontalo Regency. This school was originally established as a private school founded by the 2 Mei Foundation in 1979 under the name SMU Private 2 Mei Telaga. The first principal was Mr. Drs. Dahlan Naeo. Along with its development and contribution in the world of education, in 1982 this school changed its status to a public school under the name SMA Negeri 1 Telaga. Since then, SMA Negeri 1 Telaga has continued to develop into one of the secondary education institutions that plays an important role in producing a quality young generation in the Gorontalo Regency area.

Univariate

Table 1 Frequency Distribution of Respondents by Age

Age	Quantity	
	n	%
15-18	185	99,5
19-21	1	5
Total	186	100

Source: Primary Data 2026

Table 2 Frequency Distribution of Respondents by Gender

Gender	Quantity	
	N	%
Male	87	46.8
Women	99	53.2
Total	186	100

Source: Primary Data 2026

Table 3 Frequency Distribution of HIV/AIDS Prevention Behaviors Based on Perceived Vulnerability Before and After Treatment

Perception of Vulnerability	Before		After	
	N	%	n	%
Height	20	10.8	106	57.0
Low	166	89.2	80	43.0
Total	186	100.0	186	100.0

Source: Primary Data 2026

Table 4 Distribution of Frequency of HIV/AIDS Prevention Behaviors Based on Perceived Severity Before and After Treatment

Perception of Severity	Before		After	
	n	%	n	%
Height	29	15.6	115	61.8
Low	157	84.4	71	38.2
Total	186	100.0	186	100.0

Source: Primary Data 2026

Table 5 Distribution of Frequency of HIV/AIDS Prevention Behaviors Based on Perceived Benefits Before and After Treatment

Perception of Benefits	Before		After	
	n	%	n	%
Height	18	9.7	119	64.0
Low	168	90.3	67	36.0
Total	186	100.0	186	100.0

Source: Primary Data 2026

Table 6 Frequency Distribution of HIV/AIDS Prevention Behaviors Based on Perceived Barriers Before and After Treatment

Perception of Barriers	Before		After	
	n	%	n	%
Height	69	37.1	135	72.6
Low	117	62.9	51	27.4
Total	186	100.0	186	100.0

Source: Primary Data 2026

Table 7 Frequency Distribution of HIV/AIDS Prevention Behaviors Based on Perception of Action Signals Before and After Treatment

Perception Action Signals	Before		After	
	n	%	n	%
Height	17	9.1	124	66.7
Low	169	90.9	62	33.3
Total	186	100.0	186	100.0

Source: Primary Data 2026

Table 8 Frequency Distribution of HIV/AIDS Prevention Behaviors Based on Perception of Self-Efficacy Before and After Treatment

Perception of Self-Efficacy	Before		After	
	n	%	n	%
Height	15	8.1	127	68.3
Low	171	91.9	59	31.7
Total	186	100.0	186	100.0

Source: Primary Data 2026

Bivariate

Table 9 Overview of Improved HIV/AIDS Prevention Behaviors in Adolescents Before and After Treatment

HIV/AIDS Prevention Behaviors		N	Red	P Value
Perception of Vulnerability	Before	186	10,15	0,000
	After	186	13,24	
Perception of Severity	Before	186	8,01	
	After	186	10,88	
Perception of Benefits	Before	186	11,53	

HIV/AIDS Prevention Behaviors		N	Red	P Value
	After	186	16,08	
Perception of Barriers	Before	186	18,10	
	After	186	21,65	
Perception of Action Signals	Before	186	7,41	
	After	186	10,69	
Perception of Self-Efficacy	Before	186	11,55	
	After	186	16,23	

Based on the results of the research before the educational intervention was carried out, the level of respondents' perceived vulnerability to HIV/AIDS was still in the low category, where only 20 people (10.8%) were included in the category of high vulnerability perception. This condition indicates that the majority of adolescents do not have awareness that they have the potential to be exposed to HIV/AIDS. This low level of perception may be influenced by a lack of knowledge about the risk factors for transmission and the erroneous perception that HIV/AIDS is only experienced by certain groups. As a result, teens tend to overlook the importance of vigilance and aren't encouraged to keep behaviors safe. After being educated using *the IAIC method,* there was a significant increase in the perception of vulnerability, where the number of respondents in the high category increased to 106 people (57.0%). This shows that the education provided has succeeded in increasing adolescents' understanding that every individual is at risk of contracting HIV/AIDS if they do not implement healthy living behaviors. Through this educational process, adolescents become more aware that HIV/AIDS can affect anyone without age restrictions, and understand the importance of maintaining behavior as a form of self-protection.

Thus, the method of education *IAIC* by using audiovisual media to increase adolescents' awareness of the risk of contracting HIV/AIDS. This is in line with the community service carried out by (Suminar et al., 2025) at SMAN 1 Jember, which reported a 70% increase in understanding after HIV/AIDS education was provided with audiovisual media. Method education *IAIC* given as an effort to raise such awareness through the *I'm Aware* that emphasizes self-understanding of risks, and *I Care* which fosters concern for health.

Based on the results of the research before the educational intervention was carried out, it was recorded that as many as 29 respondents (15.6%) had a high level of severity perception of HIV/AIDS. This indicates that some adolescents are already aware that HIV/AIDS is a dangerous disease, although there are still a number of respondents who do not fully understand the magnitude of the impact. This low perception of severity may be due to limited knowledge about long-term impacts, such as serious health problems, the emergence of complications, and the social and emotional consequences experienced by people with HIV/AIDS. After being educated, there was a marked increase, where the number of respondents with the category of perception of high severity increased to 115 people (61.8%). This shows that the education provided is effective in increasing adolescents' understanding of the severity of HIV/AIDS and its impact on health conditions and social life. Through this education, adolescents become more aware of the various risks that may occur if infected with HIV/AIDS, including their implications for the future. This research is in line with research conducted by (Natalia et al., 2024) which states that HIV/AIDS is a serious disease that has many impacts. Starting from the physical impact, psychological, social and spiritual impact.

With this increased understanding, it is hoped that adolescents will be more aware of the importance of taking preventive measures from an early age as an effort to protect and protect themselves. IAIC method education is provided as an effort to increase this understanding through *the I'm Aware* approach which emphasizes awareness of health conditions, and *I Care* which fosters concern for the impact of disease.

Based on the results of the research before the implementation of education, in the dimension of benefit perception, it was found that only 18 respondents (9.7%) were included in the high category. This indicates that the majority of adolescents do not have an optimal understanding of the benefits of HIV/AIDS prevention efforts. The low perception of these benefits can be caused by limited knowledge related to the importance of implementing healthy living behaviors as a protective measure against the risk of HIV/AIDS transmission. If adolescents are not aware that the implementation of a healthy lifestyle, understanding the transmission pathway, and avoidance of risky behaviors can protect themselves, then the urge to take preventive measures also tends to be weak. After being given education, there was a significant increase, where the number of respondents with the category of high benefit perception increased to 119 people (64.0%). This shows that the education provided is effective in increasing adolescents' understanding of the importance of HIV/AIDS prevention behavior. This research is in line with research (Apriliani, et al 2020) that the benefits felt by a person who are then able to change their behavior because of the benefits felt by them. The results of this study are also supported by research (Rahakbauw, 2016) The Health Belief Model is a theory that is described in an attempt to find a way to explain health-related behaviors. According to this theory, the likelihood that an individual will take precautions depends directly on the outcome of two health beliefs or assessments: perceived threat and illness or injury and considerations of advantages and disadvantages. Through the *IAIC*, adolescents get information about the importance of maintaining a healthy lifestyle, understanding the transmission process, and avoiding risky behaviors as a form of self-protection. With the increasing perception of these benefits, adolescents are becoming more aware that preventive efforts can provide protection for their health, both in the short and long term.

Based on the findings of research before the implementation of education, in the dimension of obstacle perception, it was recorded that as many as 69 respondents (37.1%) were in the high category. This indicates that some adolescents have realized various obstacles in carrying out HIV/AIDS prevention efforts. These obstacles can stem from psychological aspects or social environmental factors, such as feelings of embarrassment or fear to ask questions related to HIV/AIDS, hesitation in seeking information about reproductive health, and the view that the topic of HIV/AIDS is a sensitive or taboo thing to discuss. This is in line with research (Fathona et al., 2021) which states that the main factors that are obstacles for adolescents are shyness, fear of being judged negatively, and lack of educational media that is interesting and appropriate for the age of adolescents. In addition, the influence of the social environment, especially peers, is also an obstacle in HIV/AIDS prevention efforts. In addition, peer influence and limited insight can also be factors that hinder adolescents in understanding and implementing appropriate preventive behaviors. This research also in line with research (Munthe, 2022) that peer groups with adolescent knowledge in preventing HIV/AIDS transmission have a p value of 0.029 ($p<0.05$), meaning that there is a relationship between peer groups and adolescent knowledge in preventing HIV/AIDS transmission. After being given education, there was a significant increase, where the number of respondents with the category of high resistance perception increased to 135 people (72.6%). This shows that the education carried out is effective in increasing adolescent awareness to recognize various factors that can be obstacles in the prevention of HIV/AIDS. Through IAIC method education is provided as an effort to reduce these barriers through an approach *I'm Aware* that raise awareness of the importance of health information, and *I Care* which encourages self-care. The use of audiovisual media in this method helps convey information in a more open, interesting, and easy-to-understand manner, so that respondents are more comfortable in receiving material that was previously considered sensitive.

Based on the results of the research before the implementation of education, in the dimension of perception of gestures, it was recorded that only 17 respondents (9.1%) were in the high category. This indicates that most adolescents have not received adequate stimulation or encouragement to take HIV/AIDS prevention measures. This low perception may be influenced by limited access to information from various sources, such as the school, family, and media environment, as well as the lack of counseling activities that specifically address HIV/AIDS prevention. This condition causes adolescents to not have a strong motivation to increase awareness of the risk of the disease. After being educated with the IAIC method, there was a significant increase, where the number of respondents with the category of high-acting cue perception increased to 124 people (66.7%). This shows that the education provided is effective as a stimulus in encouraging adolescents to carry out preventive behaviors. This research is supported by (Wulandari et al., 2016) shows that there is an influence between the gesture to act and the behavior of HIV/AIDS prevention in prostitutes in Banjarsari Surakarta where the stronger the signal to act of a prostitute, the more likely it is to have healthy behavior in HIV/AIDS prevention. Through education *IAIC* adolescents gain a better understanding of the importance of maintaining health and avoiding risky behaviors. In addition, support from the school environment and exposure to health information also strengthen the motivation of adolescents to care more about their own health.

Based on the findings of research before the implementation of education, in the self-efficacy dimension, it was recorded that only 15 respondents (8.1%) were in the high category. This indicates that most adolescents do not have an adequate level of confidence in their ability to carry out HIV/AIDS prevention efforts. The low self-

efficacy may be caused by limited knowledge, experience, and skills in dealing with potentially risky situations. When adolescents are not sure to reject the invitation of friends that lead to unhealthy behaviors or do not believe in their ability to maintain a healthy lifestyle, then they tend to experience obstacles in implementing preventive behaviors consistently. After being educated, there was a significant increase, where the number of respondents with high self-efficacy categories increased to 127 people (68.3%). This shows that the education provided is effective in strengthening adolescents' confidence in their ability to prevent HIV/AIDS. The results of this study are in line with the research (Rahmawati, 2020) that good self-efficacy prevents adolescents from behaving riskily by influencing choices in behavior.

Through the IAIC method, adolescents gain knowledge and skills to maintain healthy living behaviors, dare to resist negative influences from the social environment, and be more active in seeking the right information about reproductive health. With this increase in self-efficacy, it is hoped that adolescents will be able to implement HIV/AIDS prevention behaviors independently and consistently in their daily lives.

Based on the results of data processing, the researcher first conducted a normality test using the Kolmogorov–Smirnov test, then followed by the Paired Samples Test to see the difference before and after the educational intervention. The results of the analysis showed that in all the variables studied, namely vulnerability perception, severity perception, benefit perception, obstacle perception, action cue perception, and self-efficacy perception, a p value (Asymp. Sig. 2-tailed) of 0.000 ($p < 0.005$) was obtained. In addition, there was an increase in the mean value of each variable after providing education, such as the perception of vulnerability which increased from 10.15 to 13.24, the perception of severity from 8.01 to 10.88, the perception of benefits from 11.53 to 16.08, the perception of resistance from 18.10 to 21.65, the perception of acting cues from 7.41 to 10.69, and the perception of self-efficacy from 11.55 to 16.23. These findings show a significant difference between the conditions before and after the educational intervention with the IAIC (I'm Aware I Care) method. Therefore, it can be concluded that the IAIC education method has a significant influence on improving all aspects of perception related to HIV/AIDS prevention behavior in adolescents, which is shown by a p-value of 0.000 and an increase in the average value in all variables analyzed.

CONCLUSION

There were differences in HIV/AIDS prevention behavior in adolescents between before and after being given educational interventions using the IAIC (I'm Aware I Care) method which refers to the Health Belief Model. This finding is strengthened by the results of a statistical test that showed a p-value of 0.000 ($p < 0.05$), which indicates that the IAIC educational method is effective in influencing HIV/AIDS prevention behavior in adolescents at SMA Negeri 1 Telaga. The provision of education is able to improve various components of adolescent perception, including the perception of vulnerability, severity, benefits, obstacles, cues to act, and self-efficacy, thereby encouraging the formation of more positive behaviors. Thus, the IAIC method has been proven to be able to increase awareness, confidence, and actions of adolescents in preventing HIV/AIDS.

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