



ORIGINAL ARTICLE

## Perceived Vulnerability and Perceived Seriousness of HIV-AIDS Among Adolescents in The Pangkajene and Island Districts of South Sulawesi

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ARTICLE INFO	ABSTRACT
Received: Sept 01, 2024 Accepted: Dec 18, 2024	Pangkajene and island districts, a region where understanding and perception of HIV-AIDS among adolescents is critical due to the increasing number of cases, the urgency of addressing HIV in Pangkep is underscored by the fact that a large proportion of the population, especially adolescents, do not have adequate information about HIV-AIDS. Approximately 41.1% according to the South Sulawesi Health Office Profile of adolescents have never received information about HIV-AIDS, and misconceptions about the disease are prevalent, the urgency is further highlighted by the fact that a significant percentage of AIDS cases in South Sulawesi occur among young people aged 15-24 years, accounting for 35% of total cases. Objective: to see the perception of vulnerability and perception of seriousness of adolescents about HIV-AIDS. Design: this study used a descriptive cross sectional design. Results: For the variable Perception of vulnerability the results showed that the mean value and standard deviation of each variable in the pre-post category, for the variable Perception of vulnerability the mean value was Pre 11.73, Post 17.94, and the standard deviation value was Pre 1.35, Post 1.27. As for the perceived seriousness variable, the average value Pre 11.65, Post 18.07, and the standard deviation value Pre 1.00 and Post 1.22. As for the perceived seriousness variable, the results showed that the mean value and standard deviation of each variable in the pre-post category, for the perceived vulnerability variable, the mean value was Pre 10.85, Post 16.24, and the standard deviation value was Pre 1.25, Post 1.02. As for the perceived seriousness variable, the average value Pre 10.94, Post 16.59, and the standard deviation value Pre 0.95 and Post 1.39. Conclusion: This study shows that health literacy interventions are more effective than video media in increasing adolescents' awareness of HIV/AIDS vulnerability and severity, promoting preventive behavior. The intervention group showed greater improvements in both variables. Technology support, media accessibility, and intervention sustainability enhance the effectiveness.
<b>Keywords</b> Perceived Seriousness, Vulnerability, Health Beliefs Model, HIV-AIDS Disease	
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## INTRODUCTION

HIV-AIDS (Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome) is one of the serious global health problems, with a significant impact especially on adolescent and young age groups. Adolescents are one of the groups that are vulnerable to HIV transmission because they are often involved in risky behaviors, such as unprotected sexual intercourse, shared injecting drug use, and lack of knowledge about HIV-AIDS prevention (Bossonario et al., 2015). (Bossonario et al., 2022)..

According to data from the World Health Organization (WHO), by the end of 2022, approximately 39.0 million people worldwide are living with HIV. It is estimated that about 0.7% of the adult population aged 15-49 years worldwide is living with HIV. However, the burden of the HIV-AIDS epidemic still varies widely between countries and regions. The WHO African region remains the most affected, with nearly 1 in every 25 adults (3.2%) living with HIV and accounting for more than two-thirds of people living with HIV worldwide (UNAIDS, 2023).

HIV-AIDS prevalence in Indonesia remains an important health issue. According to data from the Indonesian Ministry of Health, in 2020, there were more than 700,000 registered HIV-AIDS cases in Indonesia. The number of registered HIV-AIDS cases continues to increase from year to year, with infection rates still high in some areas, especially on large islands such as Java and Sumatra.

The development of HIV-AIDS cases in South Sulawesi Province over the past three years has increased. In 2020, 1210 HIV cases increased to 1490 cases in 2021 and increased to 2069 cases in 2022. Likewise, in AIDS cases where in 2020 there were 307 cases, it increased to 391 cases in 2021 and to 506 cases in 2022 and sadly cases in adolescents aged 15-24 years were 35% of the total cases in South Sulawesi. (Profile of South Sulawesi Health Office, 2023).

Adolescents often have high levels of sexual arousal, this is due to biological and psychological changes that lead to increased androgen production leading to increased sexual behavior, and this can contribute to the onset of early sexual activity (Arruda et al., 2020). (Arruda et al., 2020) coupled with the abundant availability of nightlife venues. This combination can cause adolescents to feel attracted to try new things, including unprotected sexual intercourse (McAloney, 2015). (McAloney, 2015). When there is no adequate sex education or access to adequate health services, the risk of spreading sexually transmitted diseases, including HIV-AIDS, increases significantly.

Perceptions of vulnerability regarding HIV-AIDS can significantly influence individuals' behaviors and attitudes towards prevention, testing, and the treatment options available to them. The importance of a proper understanding of this vulnerability can encourage individuals to take proactive measures in protecting themselves and others from transmission of the virus. These perceptions can also contribute to the reduction of social stigma that often surrounds the disease, allowing more people to seek information and support without fear or shame. Understanding the seriousness of HIV-AIDS is equally important, as it shapes how individuals perceive their risk and the urgency of seeking prevention measures and treatment options. (Green et al., 2020)

Perceived seriousness about HIV-AIDS based on the results of the study, showed that individuals who have a deep understanding of the impact of the virus tend to be more active in participating in prevention and treatment programs. this study highlights the need for effective health education to raise awareness and change people's attitudes towards the disease. thorough and continuous education can help create an environment where individuals feel more comfortable to share their experiences, as well as encourage open dialogue about HIV-AIDS within the community. thus, efforts to reduce the stigma and discrimination that often accompany the disease become very important in creating the necessary social support for affected individuals (Alwazzeh et al., 2023), 2023).

Several previous studies have conducted research using educational videos and assessed knowledge, attitudes and behavior after the intervention. (Ekasari & Multazam, 2020; Ismayati et al., 2023; Pertiwi et al., 2020; Prihanti et al., 2020; Tanof et al., 2021)..

Adolescents as the next generation of the nation are the spearhead of the nation's progress in the future so that the increase in HIV-AIDS cases in adolescents is a serious concern. Based on the Pangkep District Health Profile in 2021, it shows that in 2019 there were 65 new HIV cases and 18 AIDS cases, then in 2021 HIV cases increased again. Based on the Pangkep Regency Health Profile Data in 2021, it shows that the most cases of HIV are in the 25-49 age group with 110 cases and the 20-24 age group with 14 cases. Male HIV cases are more than 2 times the number of female cases so that services to men must be improved. (Pangkep Health Office Profile, 2021)..

Attention to the increasing problem of HIV-AIDS in adolescents needs immediate action in the field. Several previous studies have explained that HIV-AIDS education through videos can improve the knowledge, behavior and attitudes of adolescents.(Ismayati et al., 2023; Prihanti et al., 2020; Tanof et al., 2021)..

Knowledge about HIV can reduce the risk of transmission by providing correct information about how the virus is transmitted. Comprehensive sexual education can equip individuals with knowledge about condom use, sexual hygiene, and other risk reduction strategies. In addition, understanding the importance of HIV testing and counseling can encourage routine testing behavior, enabling individuals to manage risks and engage in safer sexual practices. Thus, knowledge is not only a tool for understanding, but also for shaping behaviors that can reduce the risk of HIV transmission.(Medley et al., 2009; Threats et al., 2021)..

Based on an initial study conducted in Pangkep district in five sub-districts, namely Ballocci sub-district, Minasa Tene sub-district, Marang sub-district and Mandalle sub-district in the age range of 17-19 years, it was found that there were still about 41.1% of adolescents who had never received information about HIV-AIDS, 31.3% said they did not know whether this was an infectious disease and there were about 51.5% who thought that HIV-AIDS was a hereditary disease and as many as 48.5% who did not know that this disease was the result of decreased immunity (PBL FKM Unhas, 2023). Increasing the literacy of adolescents' understanding of HIV-AIDS is faced with being able to reduce or suppress HIV-AIDS cases. Therefore, researchers are interested in seeing how perceptions of vulnerability and perceived seriousness about HIV-AIDS prevention among adolescents in the Pangkajene and Island Districts of South Sulawesi.

## **MATERIALS AND METHODS**

This research design uses Descriptive Cross Sectional. This research was conducted from June 13 to July 13, 2024, in two schools in Pangkep district, namely SMK Negeri 2 Pangkep and SMK Negeri 5 Pangkep. The selection of the research location is based on the consideration that SMK Negeri 5 Pangkep has a location adjacent to Night Entertainment Places (THM) under the guise of Karaoke and massage parlors.

The population in this study were students at SMK Negeri 2 Pangkep (202 male students) and SMK Negeri 5 Pangkep (105 male students). Based on the results of the above calculations, it is known that the number of samples in this study was 171 people assuming a 15% dropout. The minimum sample size is  $171 + 15\% = 196.6$  which is rounded to 197, so that the sample size in the intervention group and control group is 197 students. The sampling technique was carried out by consecutive sampling where all members of the population who met the inclusion criteria were selected as research samples (Stang, 2018).

The sample in this study became 197 respondents where in the intervention group as many as 98 respondents and in the control group 98 respondents. In this study using a questionnaire with the Health belief model approach consists of 5 variables in which each variable consists of 4 questions related to HIV-AIDS. Where the questionnaire before being distributed to the research sample was first conducted validity test and reliability test.

## RESULTS

Respondents of this study were students of SMK Negeri 2 Pangkep and SMK Negeri 5 Pangkep totaling 196 students can be seen in the following table:

**Table 1.** Distribution of Respondents by Age and Gender

Respondent Characteristics	Group		Total (n:196)	*P Value	*P Value
	Intervention n (%)	Control n (%)			
Age					
16 Years	16 (16.3)	18 (37.5)	34	0.000	0.000
17 Years	22 (22.4)	20 (29.2)	42		
18 Years	60 (61.2)	60 (33.3)	120		

Table 1. shows the distribution of respondents by age and gender in the study on the effect of digital video-based health literacy development on adolescent HIV-AIDS prevention, using the Health Belief Model Theory approach in Pangkajene and Island Districts of South Sulawesi. Respondents were divided into two groups, namely the intervention group and the control group, with a total of 196 respondents who were all male.

Based on age, there were 16 respondents aged 16 years in the intervention group (16.3%) and 18 in the control group (37.5%), totaling 34 people. At the age of 17, the intervention group consisted of 22 people (22.4%) and the control group of 20 people (29.2%), totaling 42 people.

As for the age of 18 years, the intervention group had 60 respondents (61.2%), and the control group 60 people (33.3%), so the total respondents for the age of 18 years were 120 people.

In addition, all respondents in this study were male. A total of 98 people (100%) in the intervention group were male, as were 98 people (33.3%) in the control group. There were no females involved in the study, as indicated by 0 in all female gender categories in both groups.

The P-value on the variables of age and gender showed 0.000, which means there was a significant difference between the intervention group and the control group in the distribution of age and gender. This is an important foundation to study the effect of digital video-based health literacy intervention on HIV-AIDS prevention among male adolescents in the study area.

**Table 2.** Perceptions of perceived vulnerability and seriousness

Variables	Mean	Standard Deviation
Perception of vulnerability	Pretest	11,73
	Posttest	17,94
Perceived seriousness	Pretest	1,00
	Posttest	18,07

Based on Table 2. the results of the Intervention group research, it shows that the mean value and standard deviation of each variable in the pre-post category, for the variable Perception of vulnerability, the mean value is Pre 11.73, Post 17.94, and the standard deviation value is Pre 1.35, Post 1.27. As for the perceived seriousness variable, the average value Pre 11.65, Post 18.07, and the standard deviation value Pre 1.00 and Post 1.22.

**Table 3. Perceptions of perceived vulnerability and seriousness**

Variables		Mean	Standard Deviation
Perception of vulnerability	Pretest	10,85	1,25
	Posttest	16,24	1,02
Perceived seriousness	Pretest	10,94	0,95
	Posttest	16,59	1,39

Based on Table 3. The results of the Control group research, it shows that the mean value and standard deviation of each variable in the pre-post category, for the variable Perception of vulnerability, the mean value is Pre 10.85, Post 16.24, and the standard deviation value is Pre 1.25, Post 1.02. As for the perceived seriousness variable, the average value Pre 10.94, Post 16.59, and the standard deviation value Pre 0.95 and Post 1.39.

## DISCUSSION

### *Perceptions of adolescent vulnerability to HIV-AIDS*

Perceive susceptibility in this research is defined as the respondent's perception of his/her vulnerability to the possibility of experiencing HIV-AIDS. With the understanding that they are susceptible to HIV-AIDS, it is expected that respondents will try to manipulate their behavior to avoid the disease. A person who thinks that he has a low risk of getting a disease, tends to interact with poor health behavior. In addition, the existence of perceived vulnerability can be an evaluation for oneself, so that there is an urge to change their health behavior (Setyaningsih et al. 2022).

The results in this study indicate that on the variable of perception of vulnerability there are 4 question items in the Intervention group and the control group where it can be described that the question items on each variable can be described through the average value, the average value in the Pre intervention group variable is 11.73, and Post 17.94, while in the control group pre 10.85, and post 16.24. It can be concluded that there is a difference in the difference or delta Perception of vulnerability between the two groups, where the intervention group has a higher mean rank after being given treatment in the form of health literacy than the control group (video).

The results of this study indicate that the difference in the difference (delta) of the mean rank between the intervention group and the control group, where the intervention group has a higher mean rank than the control group. In line with previous research on negative or high-risk sexual behavior (Pringle et al. 2017; Shannon and Klausner 2018).. Therefore, providing health education is one of the right ways to increase the perceived seriousness of sexual behavior. (Hastuti & Fauziah, 2021 )and do not forget to consider the type of media used (Yuliansih et al. 2021; Suri et al. 2023) and preferred by adolescents such as media that use digital technology (Moreno et al., 2022). (Moreno et al., 2022). The process of providing health information that is not boring allows the targeted health information to be conveyed thoroughly and optimally to respondents.

### *The seriousness adolescents feel about HIV-AIDS*

Perceived seriousness is the seriousness of a disease as a result of certain behaviors (Sukeri et al., 2020). Increasing perceived seriousness in adolescents is very important because it is one of the key

factors that influence how adolescents respond to health-related information. Perceived seriousness is also an important component of HBM that is effective in adopting preventive behaviors (Orji, Vassileva, and Mandryk 2012; Khodaveisi et al. 2021).

The results in the study on the perceived seriousness variable there are 4 question items in the Intervention group and the control group where it can be described that the question items in each variable can be described through the average value, the average value in the Pre intervention group variable is 11.65, and Post 18.07, while in the control group pre 10.94, and post 16.59. It can be concluded that there is a difference in the difference or delta of perceived seriousness between the two groups, where the intervention group has a higher average rank after being given treatment in the form of health literacy than the control group (video). This is in line with research by Hastuti and Fauziah (2021) that one of the efforts to increase the perceived seriousness in adolescents is through health education, by providing correct and accurate health education related to reproductive health, it will be able to minimize unhealthy sexual behavior in adolescents.

This study showed that the intervention group had a greater understanding of the consequences of perceived seriousness than the control group. This difference may be influenced by the literacy or health education media used. The use of educational media is an important component of sexual health education in adolescents. (Scull et al., 2022). Research shows that the selection of appropriate health education media can improve learning outcomes and interest Yuliansih et al. 2021; Sibualamu et al. 2022) It can influence individuals' awareness of healthy living behaviors and disease prevention (Raghupathi & Raghupathi, 2020).

It is important to consider factors such as technological readiness, accessibility of video devices, and an understanding of how these digital technologies are used. In addition, support and follow-up after a health education experience using digital video is also important to ensure that the message and impact are sustained in the long term.

## **CONCLUSION**

This study shows that health literacy interventions are more effective than video media in increasing adolescents' perception of vulnerability and seriousness towards HIV/AIDS. In the vulnerability perception variable, the intervention group experienced an average increase from 11.73 to 17.94, while the control group increased from 10.85 to 16.24. In the severity variable, the average score of the intervention group increased from 11.65 to 18.07, while the control group increased from 10.94 to 16.59. This increase shows that health literacy is able to increase adolescents' awareness of HIV/AIDS risks and encourage preventive behavior. Technology support, media accessibility, and sustainability of interventions play an important role in strengthening the impact of health education.

## **ETHICAL CLEARANCE**

The research was carried out after passing the Research Ethics Committee of the Faculty of Public Health, Hasanuddin Makassar University, issuing research ethics permit number 942/UN4.14.1/TP.01.02/2024.

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