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Effect of Animated Health Education on Adolescents' Knowledge and Attitudes Toward Sexual Violence: A Time Series Study

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A R T I C L E I N F O

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A B S T R A C T

Introduction: Adolescents are vulnerable to sexual violence. Violence affecting adolescents includes sexual violence in personal relationships, such as dating, and sexual violence against children, with perpetrators often being close family members. Additionally, community violence can occur between friends or in public locations. Health counseling on sexual violence can prevent this violence by enhancing adolescents' knowledge and attitudes about sexual violence. The study aims to determine the effect of health education on adolescents' knowledge and attitudes about sexual violence. This research is *a quasi-experiment (pseudo-experiment*) with a *time series design*. The sample was 32 students at SMPN 1 Sakra, which was determined by *cluster random sampling,* so class VIIIB was chosen as the research sample. Health counseling on sexual violence was provided with animated video media. Data processing with a paired t-test has tested the validity and reliability of instruments to measure adolescents' knowledge and attitudes about sexual violence. This study's results showed there is an effect of health education on adolescents' knowledge and attitudes about sexual violence, with a p-value of 0.000 each, where there is an increase in adolescents' knowledge about sexual violence after being given education, with the difference between pretest and posttest being 2.72. After receiving education, adolescents' attitudes about sexual violence increase, showing a difference between the pretest and posttest of 3.75. The conclusion is that there is an effect of health education on adolescents' knowledge and attitudes about sexual violence through animated video media.

INTRODUCTION

Cases of sexual violence against women are still prevalent, especially in childhood. Throughout their lives, 1 in 3 women, which is around 736 million, are victims of sexual violence, and this violence starts early at the age of 15-24 years (1). Sexual violence is defined as any sexual act, attempt to obtain a sexual act, unwanted sexual remarks, or acts for trade that are directed against a person's sexuality using coercion by anyone, regardless of their relationship to the victim, in any setting, at any time, or anywhere (2). Simply said, any coerced or non-consensual sexual behavior that involves physical violence or psychological compulsion is considered sexual violence. Any person, regardless of age, gender identity, race, sexual orientation, or ethnicity, can become a victim of non-consensual sexual activity such as sexual harassment, child sexual abuse, and sexual assault, which are all included under the umbrella term "sexual violence" (3).

The occurrence of child sexual abuse (CSA) in Indonesia is not a new phenomenon. Based on data from the Indonesian Child Protection Commission, in 2024, 265 cases of sexual violence against children were reported, and 53 of them have been handled further. Seven of these cases occurred in institutions or alternative care institutions (4). The head of BP3AP2KB reported more than 1000 cases of sexual violence against children between 2017 and 2021. According to the records, the cases increased to 1060 in 2021 from 845 in 2020. The district that reported the most cases of sexual violence in West Nusa Tenggara Province was the East Lombok district, with 390 cases (5). Based on data obtained at the East Lombok Social Service in 2020 and 2021, 18 children experienced sexual violence, and from 2022 until July, 19 children experienced sexual violence (5).

Adolescent children are a vulnerable group to sexual violence because adolescents are considered innocent and do not understand sex education. Child sexual violence is an extremely harmful type of violence with devastating consequences for individuals and societies that impacts children's mental, physical, and social outcomes. Child sexual violence was related to sexual, health, and psychological problems. Many serious short and long-term consequences have been confirmed in meta-analytic reviews, including posttraumatic stress disorder, suicide, depression, problematic sexual behavior, poor academic performance, and poor long-term

physical health (6).

Sexual violence against children, especially adolescents, can happen to anyone, anytime, and anywhere. In addition, anyone can be a perpetrator of sexual violence against children. Psychologically, many impacts will be felt by children, so efforts to prevent adolescent sexual behavior are needed by providing information to increase knowledge and attitudes about sexual behavior and the negative impacts that occur due to these sexual behaviors. Knowledge is the result of understanding something after a person processes a thing or object, and positive or negative knowledge can shape a person's attitude. The better a person's understanding, the more positive aspects arise, so as to foster a positive attitude towards sexual violence.

Health information must be easily accessible, understandable, and relevant to the needs of health education goals. The target in this study is adolescents. Adolescents tend to like health education media that are interactive, visually appealing, and easily accessible. One medium that suits teenagers is animated videos. Animated videos allow for short, engaging, and easy-to-understand information, as opposed to providing information with long, boring material.

While video media often contains too much educational material with an ordinary appearance, animated videos allow a vivid representation of health education content that systematically informs us about sexual violence with an attractive appearance for adolescents. Using animated videos as educational media can also reduce the workload of health workers in providing health education. It is expected that an attractive animated video with easy-to-understand language can increase adolescents' knowledge and attitudes about sexual violence, which in turn can reduce cases of sexual violence in adolescents. This study aims to determine the effect of health education on adolescents' knowledge and attitudes about sexual violence through animated video media.

METHODS

This type of research is *Quasi-Experimental*, with *a Time Series Design*. Sampling was carried out by cluster random sampling, where the sample was determined based on the cluster (class group), so that the selected class was class VIIIB with a location at SMPN 1 Sakra. The number of samples in this study is 32 students. The sample criteria for this study are junior high school students in Class VIIIB SMPN 1 Sakra who are willing to become respondents, as well as enter during the pretest, receive education, and participate during the posttest.

Health education on sexual violence was carried out through animated video media adopted from *the Institute for Criminal Justice Reform (ICJR),* with a duration of 6 minutes and 45 seconds. This animated video is titled "This Is What You Should Do If You Are Experiencing Sexual Violence". This animated video is about: 1) the definition of sexual violence; 2) sexual violence that often occurs in society; 3) forms of sexual violence; 4) the explanation that sexual violence can happen to anyone, regardless of time, location, proximity to the perpetrator, regardless of age, regardless of how to dress, can be experienced by men or women but the most at risk are children and women; 5) the impact of sexual violence (psychological impact, social impact, and economic impact), 6) the law on the perpetrator of sexual violence; 7) the rights of victims of sexual violence; 8) how to become a victim of sexual violence or find a victim of sexual violence.

Before being given health education through animated videos, knowledge about sexual violence was measured 3 times (pretest). The first pretest is given 3 days before the education, the second pretest is given 2 days before the education, and the third pretest is given the day before the education. Then the day after, the research subjects were given health education through animated video media, and the next day the students' knowledge and attitudes about sexual violence were measured again 3 times (posttest). The first posttest is done on the first day after education, the second posttest is done 2 days after, and the third posttest is done after the second posttest day.

The knowledge questionnaire consists of 10 multiple-choice questions, while the attitude questionnaire consists of 10 statements with a choice of answers: Strongly Agree, Agree, Disagree, and Strongly Disagree. These two questionnaires have been tested for validity and reliability, with the results of r calculated > r table (>0.361) and Cronbach alpha 0.986 (knowledge questionnaire) and Cronbach alpha 0.994 (attitude questionnaire).

RESULT AND DISCUSSION

RESULT

Respondent Characteristics

Table 1: Distribution of respondent characteristics

No	Age	Frequency	Percentage
1	14	26	81%
2	15	6	19%
Total		32	100%
No	Gender	Frequency	Percentage
1	Male	18	56%
2	Female	14	44%
Total		32	100%

Based on Table 1 above, it is found that the characteristics of respondents based on the highest age are as many as 26 people (81%) at the age of 14, and the lowest at the age of 15, as many as 6 people (19%). Meanwhile, based on the gender of students and schoolgirls, most are male, 18 people (56%), and female, as many as 14 people (44%).

Table 2. Frequency distribution of knowledge before and after receiving Health Education using animated video media

Knowledge variable	Mean	Standard Deviation	Mean	
			Min.	Max.
Pretest 1	4.13	1,314	2	6
Pretest 2	4.25	1,391	2	7
Pretest 3	4.25	1,391	2	7
Posttest 1	6.84	2,065	2	10
Posttest 2	6.97	1,892	3	10
Posttest 3	6.97	1,892	3	10

Based on the table above, the results show that the mean value of 32 respondents during pretests 2 and 3 reached the highest score, 4.25, with a minimum value of 2 and a maximum value of 7. The lowest mean value was in pretest 1, at 4.13, with a minimum value of 2 and a maximum value of 6.

Table 3. Frequency distribution of attitudes before and after receiving Health Education using animated video media

Attitude variable	Mean	Standard Deviation	Mean	
			Min.	Max.
Pretest 1	29.19	3,623	21	35
Pretest 2	29.25	4,479	20	38
Pretest 3	29.25	4,479	20	38
Posttest 1	32.84	3,768	23	39
Posttest 2	33.00	3,698	23	39
Posttest 3	33.00	3,698	23	39

Based on the table above, the results show that the mean value of 32 respondents during pretests 2 and 3 reached the highest score, 29.25, with a minimum value of 20 and a maximum value of 38. The lowest mean value was in pretest 1, which was 29.19, with a minimum value of 21 and a maximum value of 35.

Table 4. Normality test of knowledge and attitude using *the Shapiro-Wilk Wilk*

Variable	*P value*	Description
Knowledge		
Pretest	0.051	Normal
Posttest	0.186	Normal
Attitude		
Pretest	0.672	Normal

Posttest	0.209	Normal

A normality test is conducted to determine the test performed. The results of the normality test showed that all data were normally distributed.

Table 5. Effect of health education on adolescents' knowledge about sexual violence using the *Paired T-test*.

Knowledge variable	Difference	n	*p-value*
Pretest 1–posttest 1	2.71	32	0,000
Pretest 1 - posttest 2	2.84	32	0,000
Pretest 2–posttest 1	2.59	32	0,000
Pretest 2–posttest 2	2.72	32	0,000

Table 5 shows that the most significant difference in the knowledge variable is when measuring pretest 1 with posttest 2, with a difference of 2.84. Meanwhile, the paired t-test results indicate that all p-values are equal to 0.000, demonstrating the effect of health education through videos on adolescents' knowledge about sexual violence.

Table 6. Effect of health education on adolescents' attitudes about sexual violence using the *Paired T-test*.

Attitude variable	Difference	n	*p-value*
Pretest 1–posttest 1	3.65	32	0,000
Pretest 1 - posttest 2	3.81	32	0,000
Pretest 2–posttest 1	3.59	32	0,000
Pretest 2–posttest 2	3.75	32	0,000

Table 6 shows that the most significant difference in the attitude variable is when measuring pretest 1 with posttest 2, with a difference of 3.81. Meanwhile, based on the *paired t-test*, it was found that all p-*values* = 0.000, which shows the effect of health education through videos on adolescents' attitudes about sexual violence.

DISCUSSION

Researchers analyzed the results of the pretest and posttest by measuring knowledge and attitudes three times for each, specifically conducting three measurements during the pretest and three during the posttest. In the pretest, scores increased from the 1st to the 3rd pretest, and in the posttest, knowledge and attitudes increased from the 1st to the 3rd posttest. Then, the researchers analyzed the average pretest and the average of the posttest, where the results obtained from knowledge and attitudes before and after being given treatment using animated videos about sexual violence showed an increase in value. Coupled with a p-value of 0.000, it indicates that there is an effect of health education through animated video media on adolescents' knowledge and attitudes about sexual violence.

Information traditionally provided through written documents, such as pamphlets or leaflets distributed by health workers, or oral information often leads to poor understanding, resulting in potential distrust and confusion. Furthermore, a study has found a strong correlation between this type of information and health literacy levels (7).

The use of innovative tools to deliver information, such as animated videos, which combine verbal information and engaging images with a setting and flow tailored to the subject's characteristics, has been shown to improve learning outcomes, both in terms of the knowledge and attitudes of individuals with high and low health literacy (8). Animated videos present an effective strategy for promoting healthy behavior with a large and diverse target audience and can be rapidly disseminated through social media (9).

Animated videos have many advantages for health promotion compared to oral or paper-based education. Animated videos are more effective in increasing long-term knowledge (10). Animated videos can improve brain health (11). This is because colorful animated videos are interesting, understandable, and entertaining. The research on the use of animation in learning during the Covid-19 pandemic, research subjects gave positive statements describing animation, such as "very good," "fun," "very easy to understand," "easy to learn," and "fun and instructive" (12) This health education is in accordance with the *Health Belief Model* (HBM) concept framework, which explains a special approach that, in this study, the approach of using animated video media will help

adolescents better recognize sexual violence. Within the framework of HBM, adolescents who view the problem of sexual violence as a serious problem have a higher tendency to be involved in preventive or risk-reducing behaviors of sexual violence. Through this health education, adolescents will understand the benefits of risk understanding factors, self-confidence, and confidence in effectiveness, preventive measures, so that it is hoped that in the end, it will foster adolescent awareness in terms of avoiding sexual behavior that causes an increased risk of sexual violence.

Research examined the difference between education with animated videos and pamphlets in preventing *lower back pain* and found that subjects given pamphlets were superior in awareness scores and initial practices (13-21). Pamphlets have less impact on encouraging long-term change, whereas animated videos can improve knowledge, attitudes, and perspectives. The dynamic and engaging nature of animation contributes to sustainable change by creating a more positive learning experience.Although this study was carried out optimally, the researcher realized that its shortcomings were inseparable from its strengths, namely that it only used class VIIIB students as a research sample without using a control group.

CONCLUSION

There is an effect of health education on adolescents' knowledge and attitudes about sexual violence, with a p-value of 0.000 each, where there is an increase in adolescents' knowledge about sexual violence after being given education, with the difference between pretest and posttest (2.72). After receiving education, adolescents' attitudes about sexual violence increase, showing a difference between the pretest and posttest (3.75).

It is hoped that the school can provide ongoing health education about sexual violence through educational animated videos that are interesting and not boring for students. The community can also play an active role in supporting the prevention of sexual violence. As for the next research, it is hoped that animated video media can be developed using regional languages so that they can be used for research in remote areas.

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