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The Effect of Video Media Use on Increasing Students Knowledge and Attitudes Regarding The Smoke-Free Area Policy at MTs Waru Sukoharjo

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Abstract

The high prevalence of smoking in Indonesia, especially among adolescents aged 15 and above, remains a public health problem. Schools, as educational institutions, play a crucial role in shaping student behavior, including preventing smoking. This community service program aims to examine the impact of video-assisted education on students' knowledge and attitudes toward the Smoke-Free Area (KTR) policy at MTs Waru Sukoharjo. The study employed a quasi-experimental design with pre-test and post-test methods, and video as an intervention tool. Forty-five students participated in the study. The results, analyzed using the Wilcoxon test, showed a significant increase in students' knowledge (from a mean score of 5.40 to 6.11; p=0.002) and attitudes (from 10.06 to 11.60; p=0.004) after the education. These findings demonstrate that video media is effective in increasing students' awareness and support for the KTR policy at school. This initiative supports the broader goal of improving health and preventing early smoking among adolescents. The recommended follow-up is to monitor the implementation of policies in the school environment.

1. Introduction

More than 8 million people worldwide die each year from tobacco-related causes. Of this total, more than 7 million die from direct tobacco use, and approximately 1.2 million non-smokers die from tobacco use. According to the Indonesian Ministry of Health, approximately 300,000 people will die annually in Indonesia by 2025 due to direct smoking or exposure to secondhand smoke. Therefore, Indonesia is known as the third-largest smoking country in the world after China and India. The latest data from The Tobacco Atlas in 2022 recorded that approximately 72.8% of men aged 15 and over had started smoking.

Based on these figures, Indonesia ranks first in the world for the number of male smokers aged 15 and over. The prevalence of smoking in Indonesia continues to increase annually (Riski, 2017).

The Indonesian government has established policies to address the number of smokers in Indonesia. According to Law Number 36 of 2009, which states, "Regional governments are obliged to establish Smoke-Free Areas in their regions in 7 settings." What is meant by a Smoke-Free Area (KTR) is an area or room declared prohibited for smoking activities, production, sale, advertising, and/or promotion of tobacco products (Rahajeng, 2015). According to Government Regulation Number 109 of 2012, the seven settings in question are required to implement Smoke-Free Areas, namely health facilities, teaching and learning places, children's playgrounds, places of worship, public transportation, workplaces, and public places. By establishing regulations on Smoke-Free Areas, passive smokers can help breathe cleaner and healthier air. In addition, it can also support active smokers to be able to restrain and delay their habit of smoking in public places and can be one way for them to quit smoking (Tarigan & Yulianti, 2019).

According to the Indonesian Ministry of Health, 449 of Indonesia's 514 districts/cities have established Smoke-Free Zone (SNO) regulations. Given that data shows that adolescents over the age of 15 are already smoking, it is crucial to implement a Smoke-Free Zone (SNO) policy in schools. According to the Ministry of Education and Culture (2012), a good school environment is one that protects the school community from accidents and illnesses, and is free from cigarette smoke. Implementing SNO in schools is one way to promote health among adolescents (Marchel et al., 2019). However, the implementation of the SNO policy in schools is arguably not optimal, as only 24.1% of schools have implemented the policy, while the remaining 48.3% have not (Marchel et al., 2019). To implement the SNO policy in schools, schools need to form a committee, often referred to as a working group. The formation of this committee aims to assist schools in formulating KTR policies and conducting monitoring and evaluation related to the implementation of KTR policies that have been carried out (Kahendra et al, 2023).

As in Australia, staff and students have been very supportive of the implementation of the KTR policy. International research has shown that implementing KTR policies can

significantly reduce smoking rates. A meta-analysis published in 2015 showed that KTR policies can reduce smoking rates by 14.7% after one year and by 8.3% after three years (Sendall et al., 2020).

Smoking behavior among adolescents can be caused by a family member smoking at home. It can also be caused by their teachers smoking at school. Parents and teachers play a crucial role in preventing young children from trying to smoke. Schools are a strategic place to shape students' smoking habits (Suhartini et al., 2019). In addition to family and teacher influences, smoking behavior among adolescents is also influenced by cigarette advertising. According to a 2019 study by Lubis, 98.2% of smokers are influenced by cigarette advertising. Seeing cigarette advertisements in both mass and electronic media can encourage someone to smoke. These advertisements also illustrate that smoking is a symbol of masculinity, leading adolescents to want to imitate what is presented in the advertisements (Munir, 2019).

As seen at Mts Waru Sukoharjo, a smoke-free area policy has not yet been implemented. Based on existing data, a large number of smokers are teenagers aged 15 and above. Therefore, schools, especially MTs Waru Sukoharjo, are required to implement a smoke-free area policy to prevent students from smoking at a young age. One way to prevent this is through community service activities at MTs Waru Sukoharjo. These activities involve education that conveys material about the dangers of smoking for adolescent health, the importance of the smoke-free area policy in schools, and the negative impacts of smoking at a young age. This education is delivered using video media. The use of video media is important to implement in schools because it serves as an aid that presents audio and visuals containing material about cigarettes, the dangers of smoking for health, and policies that discuss smoke-free areas. Video media can also help students understand learning materials. It is hoped that by using this video media, students will find it easier to absorb learning materials and be able to understand and apply what they have learned from the material. (Gumania & Dari, 2018). In addition, this activity aims to determine whether using video media can have an impact on increasing students' knowledge and attitudes regarding the implementation of the Smoke-Free Area Policy in the school environment.

2. Methods of Implementation

A community service activity to improve knowledge and attitudes towards the Smoke-Free Area Policy in schools conducted by a group of students and lecturers for Junior High School (SMP) students was held on Tuesday, September 24, 2024, at MTs Waru Sukoharjo from 10:00 – 12:00 WIB. The activity went well and smoothly. This activity was delivered in the form of education about the KTR Policy in schools using video media. The video shown contained the ingredients contained in cigarettes, the negative impacts of cigarettes on health and policies that discuss Smoke-Free Areas. The video was shown for approximately 5 minutes.

This study employed a quantitative approach with a group pretest-posttest design. The instrument used was a questionnaire to assess students' knowledge and attitudes before and after the video media intervention. A normality test was conducted on the data, and the results indicated that the data were not normally distributed. Therefore, to test for differences between pretest and posttest scores, the Wilcoxon test, a non-parametric test, was used. This study involved a population of 250 students from grades VII, VIII, and IX. However, the sample used in this study was 45 students selected using a purposive sampling technique.

The sample consisted of students from grades VII and VIII, selected based on inclusion and exclusion criteria. The inclusion criteria in this study were students who actively participated in teaching and learning activities, were willing to be respondents, and were present during the research until the end of the event. Meanwhile, those included in the exclusion criteria were students who could not participate in the entire research implementation. Grade IX students were excluded from the study because during the intervention, they had to take a practical exam held by the school, making it impossible for them to participate in the research until its completion.

3. Results and Discussion

Table1. Respondent Characteristics (n=45)

Variables	Category	Frequency (n)	Percentage (%)
Gender	Man	29	64
	Woman	16	35
Age	12	4	8
	13	19	42
	14	15	33
	15	6	13
	16	1	2

Sumber: primary data, 2025

The frequency distribution of respondents according to gender is male, totaling 29 people with a percentage of 64%, female, totaling 16 people with a percentage of 35% and the frequency distribution of respondents according to age with the largest number being 13 years old, totaling 19 people with a percentage of 42%, the smallest number being 16 years old, totaling 1 person with a percentage of 2%.

Table2. Frequency Distribution Based on Differences in Respondents' Knowledge Before and After Education

Knowledge	n	Mean	Elementary School	*p-value*
Before education (pre-test)	45	5.40	1.97	0.002
After education (post-test)	45	6.11	1.98	

Sumber: primary data, 2025

Based on the table above, the average score of students' knowledge before the education was 5.40, and after the education, the average score of students' knowledge increased by 6.11. The results of the data analysis showed an increase with a p-value of 0.002 (<0.05). From these results, it can be concluded that the education provided was effective in increasing students' knowledge.

Table 3. Frequency Distribution Based on Differences in Respondents' Attitudes Before and After Education

Attitude	n	Mean	Elementary School	*p-value*
Before education (pre-test)	45	10.06	1.88	0.004
After education (post-test)	45	11.60	2.84	

Sumber: primary data, 2025

Based on the table above, the average student attitude score before the education was 10.06, and after the education, the average student attitude score increased by 11.60. The results of the data analysis showed an increase with a p-value of 0.004 (<0.05). From these results, it can be concluded that the education provided was effective in improving student attitudes.

Based on the analysis results, it was found that there was a significant difference between students' knowledge and attitudes before and after being given education using video media. This indicates that the educational program regarding the KTR Policy in the school environment has a positive influence on improving student understanding. The average student knowledge score increased from 5.40 before education to 6.11 after education and the average student attitude score increased from 10.06 before education to 11.60 after education, indicating a significant difference. However, from these results there is a possibility of limitations in the average score results due to the short time difference between the pretest and posttest. However, with this increase in the average score, it can have a real impact on students, namely a change in behavior regarding their understanding of cigarettes. So they are aware of the dangers of smoking and the negative impacts on health if they smoke at a young age.

Figure 1. Video media for students

Implementing KTR policy education in schools can increase students' awareness of the negative impacts of smoking, and can create a healthy school environment among teenagers. (Syatriani & Asri, 2022). Education about non-smoking areas (KTR) not only helps students understand the negative health impacts of smoking but also supports school programs by creating a healthy environment free from cigarette smoke. This education is also expected to encourage healthy behaviors among students, which can also reduce the prevalence of smoking among young people. Successful education about non-smoking areas (KTR) policies in schools can also have an impact on reducing the number of new smokers (Silfani et al., 2025). According to the Ministry of Health (2018), the number of novice smokers among teenagers continues to increase. The KTR Policy is expected to have a long-term effect in building a generation that cares about health.

This educational activity was delivered using video media, which discussed the dangers of smoking, the negative health effects of smoking, and policies regarding smoke-free areas. This video media can attract students' attention, helping them learn and understand the importance of smoke-free areas in the school environment (Nurfitriani & Kurniasari, 2023). The use of this media is effective because it can improve students' knowledge and attitudes. The video is delivered in audio and visual formats, making it easier for students to remember the material.

As research conducted by Asrina (2018) showed that the results of the pretest showed that no students had sufficient knowledge (0.0%) and 30 students (100%) had insufficient knowledge. Meanwhile, during the posttest, the number of students with sufficient knowledge increased after being given video media intervention by 28 people (93.3%) and only 2 students (6.7%) had insufficient knowledge after being given video media intervention. In addition, during the pretest, out of a total of 30 students, none had a positive attitude (0.0%) and 30 had a negative attitude (100%). After that, during the posttest, out of a total of 30 students, 27 had a positive attitude (90.0%) and only 3 had a negative attitude (10.0%) after being given video media intervention. This can be concluded that the use of video media can have an effect on increasing students' knowledge and attitudes about smoking behavior (Asrina, 2018).

Figure 2. Dokumentation of community service

4. Conclusion

After conducting education in community service activities carried out at MTs Waru Sukoharjo, it can be concluded that previously students did not know about the importance of the KTR Policy in schools. After providing education to students, there was an increase in students' knowledge and attitudes towards the importance of the KTR Policy in the school environment. This increase in knowledge and attitudes can be seen from the results of the pre-test and post-test. Suggestions for further community service activities are to follow up on the progress of the KTR Policy implementation so that it can be achieved in the school environment. This is useful for monitoring whether the implementation of the KTR Policy in schools can run well or not and whether there are changes in the habits of students, teachers and school employees from before the policy was established to after the KTR Policy was established in schools.

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