

The Influence of TikTok Media on the Knowledge of the Dangers of E-Cigarettes Among Junior High School 7 Students in Jambi City

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Abstract. *E-cigarettes are now a lifestyle for teenagers in Indonesia. The popularity of e-cigarettes is increasing because many consider e-cigarettes safer to use than conventional cigarettes. With the aim of influencing tiktok media on knowledge of the dangers of e-cigarettes in SMPN 7 Jambi City students. Method: The type of research used in this study is quantitative with a quasi-experimental research design of the one group pretest-posttest type with a minimum sample of 30 with Purposive Sampling technique. The analysis used is univariate analysis and bivariate analysis with the Wilcoxon test Results: statistical tests obtained a mean difference in knowledge before (8.07) and knowledge after (16.43), so that the difference value was obtained (8.36), the results obtained (P-Value = 0.000), which shows that it has a significant increase in knowledge. Conclusion: In this study, it was found that there was an effect of increasing knowledge of the dangers of e-cigarettes in SMPN 7 students in Jambi City with Tiktok media.*

Keywords: *E-cigarettes, Knowledge, Media, TikTok*

1. INTRODUCTION

One of the bad habits of society is smoking, this is evidenced by the many studies of smoking habits that increase the risk of diseases such as vascular disorders, heart disease, high blood pressure, fetal defects and others. Indonesia is the second largest consumer in the world, while ASEAN, Indonesia is the country with the largest quantity of cigarettes, namely 65.19 million which is equivalent to 34% of Indonesia's population. In Indonesia, this policy is strengthened by government regulations, such as Government Regulation Number 109 of 2012 and the same applies to the City of Jambi, in Jambi City Regional Regulation Number 3 of 2017 it is explained that the No Smoking Area as referred to in article 7 paragraph (1). Smoking behavior among adolescents has experienced a significant increase in trends. Based on the 2020 Indonesian Health Profile, there was an increase in the prevalence of smokers from 1994 to 2013, from 27% to 36.3%. The inhibiting factors include lack of socialization, absence of operational regulatory support, and limited resources for supervision.

When adolescents have tried cigarettes, they will be addicted to trying and this will disturb the health of a person with chronic diseases⁴. Smoking behavior is caused by internal or external factors such as family, peers or cigarette advertisements. The popularity of e-cigarettes is increasing because it has become a lifestyle for teenagers at this time. As many as 75% consider e-cigarettes safer to use than conventional cigarettes. One of the main factors driving e-cigarette smoking behavior is the massive advertising exposure in various media. electronic-based media will influence adolescents to imitate and implement subliminal

messages so as to create the perception that smoking is a good product and ignore the content of health hazards contained in the cigarette itself. There is a significant correlation between cigarette advertising promotion and smoking behavior in adolescents, because people who are exposed to cigarette advertisements have a 3.667 higher risk of smoking behavior compared to people who are not exposed to cigarette advertisements. The rapid development of social media applications has become an integral element of daily life, which has led to the emergence of global phenomena and the gaining of popularity. The presence of TikTok media has led Gen-Z, most of whom are currently school students or students. TikTok is not only a medium for sharing and finding information, but can also be used as an interactive learning medium.

Based on the results of observations made by researchers at Junior High School 7 Jambi City, information was obtained that 6 out of 10 students had smoked and used e-cigarettes and all were male. So the problem formulation in this study is “How does Tiktok Media affect the knowledge of the dangers of e-cigarettes in junior high school students 7 Jambi City?”.

The general objectives of this study were to determine the effect of tiktok media on knowledge of the dangers of e-cigarettes in Junior High School Students 7 Jambi City, as well as to determine the effect of tiktok media on knowledge of the dangers of e-cigarettes in Junior High School Students 7 Jambi City.

2. METHODS

The type of research used is quantitative, using a quasi-experimental design of the one group pretest-posttest type. The research was conducted at Junior High School 7 Jambi City in October - December 2024. With purposive sampling technique to 30 respondents at Junior High School 7 Jambi City who met the inclusion criteria. Data collection using primary data obtained directly from respondents through questionnaires from instruments related to e-cigarettes on social media tiktok with a Guttman scale. So that data analysis will be carried out using univariate analysis and bivariate analysis using paired t-test with the condition that the data is tested for normality, if the data is normally distributed, then use the Paired Sample T-test, if the data is not normally distributed, then the alternative is to use the Wilcoxon signed test.

3. RESULTS AND DISCUSSION

Table 1 Frequency Distribution of Gender and Age of Respondents at Junior High School 7 Jambi City

Respondent Characteristics	N	%
Gender		
Male	14	46,7 %
Female	16	53,3 %
Total	30	100 %
Age		
14 Years Old	16	53,3 %
15 Years Old	14	46,7 %
Total	30	100 %

Source: Primary Data Processed (2024)

Table 1 shows that the characteristics of respondents based on gender at Junior High School 7 Jambi City, totaling 30 respondents, were 14 respondents or (46.7%) male and 16 respondents (53.3%) female. The results of the data show that the characteristics of respondents based on age at SMPN 7 Jambi City, totaling 30 respondents, were 16 respondents or (53.3%) aged 14 years and 14 respondents or (46.7%) aged 15 years.

Table 2 Frequency Distribution of Knowledge Before and After Education Through Tiktok Media Regarding Electronic Cigarettes

Variable	Treatment	Mean	Sdt. Deviation	Min-Max
Knowledge	Pre-test	8,07	2,132	5-14
	Post-test	16,43	1,749	14-20

Source: Primary Data Processed (2024)

Based on table 2, it shows that the average value obtained is an increase in knowledge before and after education through tiktok media related to e-cigarettes. The results show that the average value of the pre-test results is (8.07) and the post-test is (16.43) which has an increase difference of (8.36) or more than 2 times the pre-test results. From these results, it shows that there is a difference in knowledge related to tiktok education in Jambi City Junior High School 7 students.

Table 3 Normality Test Results of Knowledge Related to E-cigarettes Based on Pre-Test and Post-Test

Variable	Kolmogorov Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<i>Pre-Test</i>	0,164	30	0,038	0,915	30	0,020
<i>Post-Test</i>	0,124	30	0,200*	0,929	30	0,045

Source: Primary Data Processed (2024)

Since the number of respondents is less than 50, the Shaphiro wilk statistical test will be used. Based on table 3, it shows a significant value on knowledge about the dangers of e-cigarettes at the time of the pre-test and post-test, where the pre-test value is 0.020 (<0.05) and the post-test value is 0.045 (<0.05). This means that the data on knowledge about e-cigarettes during the pre-test and post-test are not normally distributed. Therefore, further analysis using Wilcoxon Test analysis.

Table 4 Wilcoxon Test Results Knowledge Related to E-cigarettes Based on Pre-Test and Post-Test

	Variable	N	Mean Rank	Sum of Rank	Nilai P- value
Post-Test	Negative Ranks	0 ^a	0.00	0.00	0,000
	Positive Ranks	30 ^b	15.50	465.00	
Pre-Test	Ties	0 ^c			
	Total	30			

Source: Primary Data Processed (2024)

From the data results, it shows that the results of data on junior high school students7 Jambi City, the value of negative rank or selish (negative) between the results of the influence of health education with smart diabetes spinner to increase their knowledge about e-cigarettes for both pre-test and post-test is 0. The value of 0 indicates that there is no decrease or reduction in knowledge from the pre-test value to the post-test value. Meanwhile, in the results of the positive rank data or the difference (positive) between the results of the effect of education with tiktok media on knowledge of e-cigarettes in students and female students at Junior High School 7 Jambi City for both pre-test and post-test. Positive (N), which means that 30 respondents experienced an increase in knowledge about e-cigarettes in students and female students, both for pre-test and post-test scores. Mean Rank or an average increase of 465.00 in knowledge. While the Ties value shows a value of 0, so it can be said that there are no equal values between the pre-test and post-test. Based on table 4, the results of the Wilcoxon Sign Rank Test calculation, the Z result is -4.799 with a p-value of 0.000 (<0.05), which shows that the hypothesis (Ha) is accepted, which means that there is an influence or relationship on exposure to knowledge provided in tiktok for students of Junior High School 7 Jambi City.

The results of this study show that interventions provided through the TikTok media platform have increased significantly with the development of advanced technology making information and education easier to obtain. Social media strongly influences the individual behavior of respondents who are exposed to advertising and social media are almost three times more likely to experience changes related to smoking. TikTok platform can be used as an educational media to increase knowledge in people with hypertension. providing effective education is an essential component in increasing public awareness and knowledge. The use of TikTok as a learning media has a positive impact on improving learning outcomes. Education using TikTok is more effective than other platforms, TikTok has great potential on social media as an innovative and relevant health education tool. With the use of tiktok, students are more confident and open to expression without fear of making mistakes. students who learn using TikTok-based content have a better understanding of concepts than students who only learn with Offline Learning methods.

TikTok on pregnant women which shows that 29 (97%) respondents have bad knowledge before watching animated videos and 30 (100%) respondents have good knowledge. health education with TikTok media can increase knowledge significantly with the development of science and technology. the importance of innovation in health education methods to reach younger generations who are more connected to technology. By using the power of social media in health education, we can address existing knowledge gaps and shape positive attitudes towards proper health practices. This is supported because TikTok is ranked number 1 in Indonesia and number 2 in the world. TikTok has advantages over other social media. Learning videos are a medium for transferring knowledge and can be used as part of the learning process. Innovative and technology-based educational approaches can be an effective strategy in increasing health awareness among adolescents. gain frame messages are more effective when delivered by informal experts, while loss frame messages are more effective when delivered by formal experts. A total of 76.7% of respondents stated that nicotine in e-cigarettes is low. The Indonesian Medical Association has stated that it strictly prohibits the use of e-cigarettes due to the danger that is considered the same as conventional cigarettes. Nicotine is known to have the most dominant role in affecting the workings of the cardiovascular system. Nicotine activates the sympathetic nervous system activation mechanism. Activation of the parasympathetic nervous system will result in an increase in heart rate frequency, blood pressure. as a result of the decrease in nicotine levels, e-cigarette users also consume tobacco cigarettes to compensate for unmet nicotine needs so that they are still exposed to toxic substances and carcinogens.

A total of 70% of respondents considered the vapor in e-cigarettes to be harmless to the lungs. E-cigarettes have a negative impact because e-liquid vapor contains several substances harmful to the body and can have an impact on the lungs through inflammatory, irritating and carcinogenic processes. heated e-liquid has an aroma that is not similar to regular smoking. nicotine in vapor still contributes to long-term lung damage, including inflammation and structural damage, Nicotine triggers the accumulation of inflammatory cells (such as lymphocytes) in bronchoalveolar fluid and lung tissue, showing a significant inflammatory response³¹ . And as many as 73.3% said “e-cigarettes do not contain harmful ingredients that can affect heart health” the negative impact of exposure to e-cigarette vapor on heart health. . The Indonesian Ministry of Health says that the use of e-cigarettes still has a negative impact on the body that can increase the risk of cardiovascular diseases, such as heart attacks and heart rhythm disorders. E-cigarette use leads to increased blood pressure, heart rate (HR), and heart rate variability (HRV) Propylene glycol (PG) and vegetable glycerin (VG), used as solvents,

contribute to the formation of reactive oxygen species (ROS)³². Many of these cardiovascular effects are due to nicotine, which stimulates the sympathetic nervous system and increases pressure on blood vessels.

5. CONCLUSION

TikTok media can influence the increase in knowledge among adolescents at Junior High School 7 Jambi City. Which TikTok can be a media intervention as a medium to prevent teenagers from becoming active or passive e-cigarette smokers.

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