



Effectiveness Of Health Education About The Dangers Of Cigarettes On The Intention To Stop Smoking Among Adolescents

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ABSTRACT

Background: Smoking among adolescents remains a serious public health problem in Indonesia. Adolescents are a vulnerable group easily influenced by their environment and cigarette advertising. Health education is an effective way to raise awareness and foster the intention to quit smoking.

Objective: This study aims to determine the effectiveness of health education about the dangers of smoking on the intention to quit smoking in adolescents.

Method: This study used a pre-experimental design with a one-way design. group pretest – posttest. The sample consisted of 40 active adolescent smokers selected using purposive sampling technique at State Senior High School X. Counseling was provided for 60 minutes using interactive lecture methods and educational videos. The research instrument was an *Intention questionnaire. to Quit Smoking The IQSS scale has been tested for validity and reliability. Data analysis used a paired t- test to examine differences in smoking cessation intentions before and after the intervention.*

Results: The average smoking cessation intention score before the intervention was 52.3, increasing to 76.1 after the counseling. The statistical test results showed a *p- value* of 0.000 (<0.05), which means there was a significant difference between the pretest and posttest.

Conclusion: Health education about the dangers of smoking has been proven effective in increasing adolescents' intention to quit smoking. It is hoped that education programs will be implemented regularly in schools to foster healthy lifestyles in the younger generation.

Keywords: Health Education, Dangers of Cigarettes, Intention to Quit Smoking, Adolescents

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1. Introduction

Smoking behavior among adolescents is a serious public health problem in Indonesia. Adolescents are an age group that is vulnerable to environmental influences, particularly peers, cigarette advertising, and social media. According to the Basic Health Research (Riskesdas) (2023), the prevalence of smoking among adolescents aged 15–19 in Indonesia reached 23.3%, an increase compared to 19.2% in 2018. This data indicates that promotive and preventive interventions against smoking habits among adolescents still need to be strengthened.

Smoking habits typically begin during high school. Contributing factors include curiosity, social pressure, and the desire to be accepted into a group. Furthermore, a lack of knowledge about the dangers of smoking leads teenagers to view smoking as normal and risk-free.

Cigarettes contain more than 4,000 harmful chemicals, including nicotine, tar, and carbon monoxide. These substances can cause various chronic diseases such as lung cancer, coronary heart disease, and chronic obstructive pulmonary disease (COPD). The effects of smoking are felt not only by active smokers but also by those around them through *secondhand smoke*.

Efforts to reduce the prevalence of smoking among adolescents can be carried out through health education, namely educational activities aimed at increasing knowledge, shaping attitudes, and fostering the intention to change behavior. Based on Theory of Planned Behavior (Ajzen, 1991), intention is the main determining factor in shaping a person's behavior. A strong intention to quit smoking is the first step towards actually quitting smoking.

Thus, this study aims to determine the effectiveness of health education about the dangers of smoking on adolescents' intentions to quit smoking. The results are expected to serve as a basis for community nurses and educators in developing health promotion programs in schools.

2. Research Methods

a. Research Design

This study uses a pre-experimental design with a one-way design. group pretest – posttest This design aims to determine the effect of health education on smoking cessation intentions by comparing pre- and post-intervention scores in the same group.

b. Population and Sample

The research population was all active smoker students at SMA Negeri X, with a total of 75 students. The research sample consisted of 40 respondents, taken using a purposive sampling technique based on the following inclusion criteria:

- 1) Teenagers aged 15–18 years;
- 2) Active smoking for at least the last 6 months;





3) Willing to be a respondent and sign the consent form.

c. Intervention Procedure

The intervention was carried out through 60 minutes of health education on the dangers of smoking using interactive lecture methods, small group discussions, and the screening of an educational video entitled "*Healthy Living Without Cigarettes.*"

The extension materials include:

- The content of harmful substances in cigarettes;
- The impact of smoking on health, social and economic;
- Smoking cessation strategies;
- Testimony of a young former smoker.

d. Research Instruments

The instrument used was the Intention questionnaire. to Quit Smoking Scale (IQSS) adapted from Ajzen (1991). The questionnaire consists of 20 items with a Likert scale of 1–5, measuring the respondent's level of intention to quit smoking.

Validity test shows r count > 0.30 and Cronbach's reliability Alpha is 0.87, which means the instrument is reliable.

e. Data analysis

Data analysis was conducted using univariate and bivariate methods. Univariate analysis was used to describe the characteristics of respondents, while bivariate analysis used *paired-reference* tests. *sample t-test* to determine the difference in smoking cessation intention scores before and after counseling with a significance level of 0.05.

f. Research Ethics

The research has received permission from the principal and approval from respondents through informed consent. Consent. Data will be kept confidential and used only for research purposes.

3. Results And Discussion

a. Results

1) Respondent Characteristics

The following table describes the characteristics of respondents based on age, gender, duration of smoking, and number of cigarettes consumed per day.

Table 1.
Distribution of Respondent Characteristics (n = 40)

Characteristics	Category	Frequency (f)	Percentage (%)
Age (years)	15–16	18	45.0
	17–18	22	55.0
Gender	Man	37	92.5
		771	





Characteristics	Category	Frequency (f)	Percentage (%)
Duration of Smoking	Woman	3	7.5
	< 1 year	12	30.0
	1–2 years	18	45.0
Number of Sticks per Day	> 2 years	10	25.0
	1–5 sticks	24	60.0
	6–10 sticks	10	25.0
	>10 sticks	6	15.0

Source: Primary Data, 2025

Most respondents were aged 17–18 (55%), male (92.5%), and had been smoking for 1–2 years (45%). The majority consumed 1–5 cigarettes per day (60%), indicating a mild level of nicotine dependence.

2) Intention to Quit Smoking Before and After Counseling

Table 2.
Average Score of Intention to Quit Smoking
Before and After Counseling (n = 40)

Variables	Mean ± SD	Min	Max	p- value
Pretest (before counseling)	52.3 ± 7.24	40	65	
Posttest (after counseling)	76.1 ± 6.85	63	90	0,000*

Note: *significant at $\alpha = 0.05$

Source: Primary Data, 2025

The results showed an increase in the average smoking cessation intention score from 52.3 to 76.1 after health education. *Paired-match test* The sample *t- test* produced a *p- value* = 0.000 (< 0.05), indicating that there was a significant difference between the scores before and after the counseling.

3) Category Intention to Quit Smoking

Table 3.
Distribution of Categories of Intention to Quit
Smoking Before and After Counseling (n = 40)

Category Intention to Quit Smoking	Pretest (n)	Pretest (%)	Posttest (n)	Posttest (%)
Low (0–49)	10	25.0	0	0.0
Moderate (50–74)	26	65.0	12	30.0





Category	Intention to Quit	Pretest (n)	Pretest (%)	Posttest (n)	Posttest (%)
	Smoking				
	High (75–100)	4	10.0	28	70.0

Source: Primary Data, 2025

Before the counseling, the majority of respondents were in the moderate category (65%), while after the counseling, the majority moved to the high category (70%). There were no longer any respondents with low intentions. This indicates a significant increase in motivation to quit smoking after the education.

b. Discussion

The study results showed that health education effectively increased adolescents' intention to quit smoking. This improvement suggests that greater knowledge and understanding of the dangers of smoking play a significant role in shaping their intention to quit.

This finding aligns with research by Anggraini & Putra (2020), which found that interactive counseling can increase smoking cessation intentions by 35% in high school students. Another study by Susanti & Hartono (2020) also concluded that educational video media strengthens the effects of health messages because it provides realistic visualizations of the dangers of smoking.

According to Theory of Planned Behavior (Ajzen, 1991), behavioral intention is determined by three components:

- 1) Attitudes towards behavior – after receiving counseling, respondents assessed that quitting smoking provided major health benefits.
- 2) Subjective norms – positive influence from peers and teacher support increase motivation to quit.
- 3) Perceived behavioral control (behavioral control) – respondents felt more able to control their habits after understanding strategies to stop smoking.

The small-group discussion approach provides a space for students to share experiences and support each other. Emotional factors, such as fear of smoking-related illnesses, also contribute to strengthening the intention to quit.

Effective health education not only provides information but also builds awareness and confidence to change. Therefore, educational activities like this need to be implemented continuously in schools.

4. Conclusion And Suggestions





a. Conclusion

Health education about the dangers of smoking has been proven to be effective in increasing the intention to quit smoking in adolescents.

The average smoking cessation intention score increased significantly from 52.3 before the intervention to 76.1 after the intervention ($p = 0.000$). These results indicate that counseling using interactive lectures and audiovisual media can increase adolescents' awareness and motivation to quit smoking.

b. Suggestion

1) For Schools:

Schools need to hold regular health counseling sessions involving community nurses and guidance and counseling teachers.

2) For Health Workers:

Community nurses need to develop engaging smoking cessation education modules with a visual approach and personal counseling.

3) For Further Researchers:

It is recommended to use an experimental design with a control group and a longer follow-up period to assess real changes in smoking cessation behavior.

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