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## **The impact of smoking risk counseling on the elementary school student knowledge**

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**Abstract**

The research aims to determine the effect of counseling on the dangers of smoking on increasing the knowledge of elementary level students in "Y" Village. The Quasi-experimental research design was used with Pretest-Posttest One Group Design. The results of the statistical test using the Wilcoxon test show there are 21 students who increase the knowledge about the risks of smoking after receive the counseling. The conclusion of the study shows that there is an effect of counseling on the risks of smoking on increasing the knowledge about the risks of smoking of elementary school students in Y Village, Gresik District.

**Keywords:** Counseling, Elementary school students, Smoking.

## El impacto del asesoramiento sobre el riesgo de fumar en el conocimiento de los estudiantes de primaria

**Resumen**

La investigación tiene como objetivo determinar el efecto del asesoramiento sobre los peligros del tabaquismo en el aumento del conocimiento de los estudiantes de nivel primario en la aldea "Y". El diseño de investigación cuasiexperimental se utilizó con Pretest-Posttest One Group Design. Los resultados de la prueba estadística con la prueba de Wilcoxon muestran que hay 21 estudiantes que aumentan el conocimiento sobre los riesgos de fumar después de recibir el asesoramiento. La conclusión del estudio muestra que la consejería

tiene un efecto sobre los riesgos de fumar al aumentar el conocimiento sobre los riesgos de fumar de los estudiantes de primaria en Y Village, distrito de Gresik.

**Palabras clave:** Orientación, Estudiantes de primaria, Tabaquismo.

## 1. INTRODUCTION

Education is an important factor in the development and nurtures quality resources such as knowledge, attitudes, skills, and experience which are important for individuals as a guideline for living a good life. One important branch of education is health education. Health is an important aspect of creating a good life cycle. Childhood and adolescence are the stages where the initial formation of healthy living behaviors take place. Health at school age is part of sustainable development targets. Healthy living behavior from an early age is one of the important efforts in forging productive and quality human resources for the future. One of the risky behaviors in adolescence is the smoking habit.

According to the Regulation of the Republic of Indonesia Government No. 109 of 2012 on Prohibition to Material Containing Tobacco Product Addictive Substance for Health article 1 paragraph 3, cigarettes are one of the tobacco products that is intended to be lit and smoked and for its smoke to be inhaled, including clove cigarettes, white cigarettes, cigars or other form produced with the *Nicotiana tabacum*, *Nicotiana rustica* plant, and other species or its synthetic

whose smoke contains nicotine and tar, with or without addictive substances.

Based on research conducted by KURNIAWAN (2017), in tobacco there are 2,500 chemicals that have been identified, around 1,100 components are directly reduced to smoke components. Smoke contains 4,800 identified chemical components. Hazardous chemical components in cigarettes that have been identified are Tar, Nicotine, CO, and NO which are derived from tobacco. Hazardous substances formed during planting, processing, and serving in trade are fertilizer and pesticide residues, tobacco-specific nitrosamine (TSNA), benzo-a-pyrene (B-a-P), and non-tobacco related material (NTRM).

Smoking is an activity that has a bad impact on health and can even cause death. According to the Ministry of Health of the Republic of Indonesia, there are several diseases lurking when a person becomes an active smoker or a passive smoker. Lung disease occurs because cigarette smoke is inhaled and enters the lungs can cause inflammation of the lungs, bronchitis, pneumonia. The substance nicotine can cause damage to cells in the lung organs which can be fatal, namely lung cancer, impotence and reproductive organ impairments (KEMENTERIAN, 2018).

The content of toxic chemicals can reduce sperm production in men and cancer can occur in the testes. In women who smoke, the effects of smoking can also reduce women's fertility. The gastric disease occurs when muscle activity under the esophagus increases

when a person smokes. Muscles around the lower respiratory tract slowly weaken so that the digestion process is inhibited. The danger of smoking to health can also be felt up to the stomach because cigarette smoke entering the digestive system will cause increased stomach acid. If it happens continuously it will become a chronic disease such as an ulcer that is more difficult to treat. Stroke is another risk of smoking since smoking can weaken blood vessels (PEMERINTAH, 2012). When the weakening occurs and obstructs the activity of blood vessels, it may result in encephalitis. It can even happen without the person having hypertension or other stroke-causing diseases as the underlying factor. The cause of the stroke comes from dangerous chemicals such as nicotine, tar, carbon monoxide and oxidant gas contained in cigarettes.

On one hand, smoking is the right of every person. However, smokers seem to constantly ignore the fact that people around them, family and children, require clean air free of smoke, which is a right that needs to be respected. The right to clean air, non-disturbing and endangering behavior have been regulated in the Regulation of the Republic of Indonesia Government Number 109 of 2012 on Prohibition to Material Containing Tobacco Product Addictive Substance for Health article 2 paragraph 1, the enforcement of the prohibition of the use of materials containing Addictive Substances in the form Tobacco products for health are directed so as not to disturb and endanger the health of individuals, families, communities and the environment (KEMENTERIAN, 2014).

According to Gresik District Regulation No. 4/2015 on Non-Smoking Zones (KTR) and cigarette-restricted zones article 1 paragraph 11, Non-Smoking Zones hereinafter referred to as KTR, are rooms or areas that are declared prohibited from smoking or producing, selling, advertising and/or promoting tobacco products. And in article 1 paragraph 12, Cigarette Restricted Areas, hereinafter abbreviated as KTR, are places or areas that are part of KTR and/or not part of KTR where smoking activities may only be carried out in the special place provided. Also stated is the location or area where smoking prohibited such as a place for teaching and learning, health care facilities, children's playgrounds, places of worship, in public transportation (ships, buses, taxis, public transportation, etc.), including workplaces such as government and private offices, gas stations, workshops, industry or companies except the cigarette industry. The regulation also mentions the prohibition of producing, selling and advertising cigarettes is to keep non-smokers from exposure to secondhand smoke (PERATURAN, 2015).

The government through the health department unceasingly calls for warnings of the dangers of smoking to the public, but there is no significant change in attitude. This is due to the lack of information that is understood by the public about the dangers of smoking and because there are nicotine chemicals in tobacco leaves which make smokers become addicts who find it difficult to quit smoking. Based on research conducted by GRASSI, CHRISTIAN, BARALDO, CULASSO, FERKETICH, RAUPACH (2012), it shows that some teenagers do not know that smoking is a major cause of illness and

death. Teenagers do not know the impact of deaths due to smoking due to the lack of information they get about the dangers of smoking.

The government through the health department unceasingly calls for warnings of the dangers of smoking to the public with little to no significant change in attitude. This is due to the lack of information that is understood by the public about the dangers of smoking and because there are nicotine chemicals in tobacco leaves which make smokers become addicts and find it difficult to quit smoking. Based on research conducted by GRASSI ET AL., some teenagers do not know that smoking is a major cause of illness and death. Teenagers do not know the risk of deaths due to smoking due to the lack of information they receive about the dangers of smoking. The number of active smokers in Indonesia is the third highest in the world after China and India. Based on data from the 2018 basic health research, the number of smokers over 15 years was 33.8%. Of these, 62.9% were male smokers and 4.8% were female smokers (MUZVIDZIWA, 2015).

Based on the Southeast Asia Tobacco Control Alliance (SEATCA) report titled The Tobacco Control Atlas, the ASEAN Region shows that Indonesia is the country with the highest number of smokers in ASEAN with 65.19 million people. This figure equals 34% of the total population of Indonesia in 2016. Based on research conducted by Komasari in 2000, there are several causes of smoking behavior in adolescents where smoking behavior is the subject activity associated with smoking behavior, as measured by the intensity of smoking, smoking areas, smoking time, and smoking function in daily



life expressed through the Smoking Behavior Scale. The permissive attitude of parents towards adolescent smoking behavior is how the reception from the family regarding smoking behavior (NOTOATMODJO, 2010). The peer environment is the extent to which the subject has friends or peer groups who smoke and have positive reception of smoking behavior. Psychological satisfaction is the result or effect obtained from smoking in the form of beliefs and pleasant feelings, which are felt by the subject (KEMENTERIAN, 2015).

The need for campaign in the health sector about the dangers of smoking is expected to be an effort to increase prevention and motivate them so that they do not try smoking despite many external influences such as invitation to smoke either from friends, family or parent habits, and the mass media by emphasizing dangers of smoking in terms of health, economy, and social. Therefore, we conducted research on the effect of smoking risk counseling on increasing the knowledge of elementary school students in Y Village, Gresik District. Through increased knowledge, it becomes the initial principal to change or guard individuals against behaviors or habits that are detrimental to health (KUSUMAWARDANI, 2016).

## **2. METHODOLOGY**

This is a quasi-experimental study with a pretest-posttest with one group design. The population in this study is fifth and sixth-grade

students in Y Village with a total population of 114 students. The sample collection technique used was Purposive Sampling in which the researchers use their own judgment to choosing the population of the study. Subject groups were given treatment in the form of counseling about the danger of smoking with a measuring instrument in the form of a questionnaire that could be used to measure the effect of counseling on the dangers of smoking on increasing students' knowledge about the dangers of smoking. Questionnaires were given to students twice, before the experiment (Pretest) and after the experiment (Posttest). The questionnaire form used was in the form of five questions with multiple choice answers. The research design is illustrated with the following scheme:

Table 1: Research Design

<b>Pretest</b>	<b>Treatment</b>	<b>Posttest</b>
O1	X	O2

Where:

O1 is the pretest score or before the treatment

X is treatment

O2 is the posttest score or after the treatment

### 3. RESULTS AND DISCUSSION

The number of respondents in this study is 114 students consisting of fifth and sixth graders in an elementary school in Village Y with characteristics shown in Table 1.

Table 2: Characteristics of Respondents Based on Genders in Village Y in 2019

Genders	Frequency	%
Male	58	50.9
Female	56	49.1
Total	114	100

Based on Table 2, there are more male respondents with 58 people (50.9%) compared to female respondents with 56 (49.1%). Based on the basic research data (Risksdas) in 2018, there are more male smokers in Indonesia with 62.9% out of 33.8% of teens over 15 years old. Female smokers only account for 4.8%. The counseling is expected to suppress the increase in the number of smokers in Indonesia. The increase in the number of smokers is related to the increase in the number of sick people due to smoking which ultimately would affect the National health burden. In 2018, BPJS saw a deficit of 16.5 trillion due to a large number of sick participants.

The government, through health offices, incessantly communicates the dangers of smoking to the people albeit without significant effect. Through counseling on smoking risks, elementary

school students are expected to possess a good understanding and knowledge regarding smoking risks before they reach adolescence.

Table 3: Changes in Students’ Pretest and Posttest Knowledge Level on the Counselling of Smoking Risks in Village Y in 2019

<b>Pretest-Posttest</b>	<b>N</b>	<b>Mean rank</b>	<b>Sum of rank</b>
Negative rank	0	0.00	0.00
Positive rank	21	11.00	231.00
Ties	93		
Total	114		

Based on table 3, the negative rank or negative difference between the counseling results for the pretest and posttest is zero, both on the value of N, mean rank, and the sum of rank. A zero value indicates no decrease from the posttest value to the pretest value. In positive rank or positive difference between the results of counseling for pretest and posttest, there is positive data N which is 21, this shows there are 21 students experiencing an increase in the knowledge of the dangers of smoking from pretest to posttest. The mean rank or average of the increase is 11.00. The number of positive rankings or the sum of rank is 231.00. In data ties or the similarity of the N pretest and posttest scores were 93, showing that there were 93 students who had the same score between the pretest and posttest.

Table 4: The Comparison of Mean Value and Statistical Test Results of Students’ Pretest and Posttest Knowledge Level in the Elementary School in Village Y in 2019

<b>Knowledge</b>	<b>N</b>	<b>Mean</b>	<b>P-value</b>
Pretest	114	90.53	0.000
Posttest	114	94.21	

Based on table 4, the knowledge value at the time of the pretest was 90.53 then there is an increase in the knowledge value at the time of the posttest was 94.21. With the Wilcoxon test, a significant p-value = 0,000 ( $p \leq 0.005$ ) was obtained and it can be concluded that there is an effect of counseling on the dangers of smoking on increasing the knowledge of elementary school students in Y Village about the dangers of smoking. This is because in addition to providing counseling material, students are also shown motivational videos about the dangers of smoking and there are question and answer sessions that can increase student understanding through curiosity and from shared experiences.

#### **4. CONCLUSIONS**

Through this system, students will remember more information they receive. Increasing one's own knowledge is influenced by several factors, namely education, personal or other experience, mass media and the environment. Through counseling, students become more knowledgeable about dangerous material contained in cigarettes as well as danger if they become active smokers or passive smokers that can cause various diseases, including strokes, heart attacks, cervical cancer, miscarriages, lung cancer, chronic obstructive pulmonary disease, skin cancer, vision and hearing problems, more broken bones, infertility and impotence, hair loss, tooth decay, and bad breath.

It can be concluded that the results of this study indicate the impact of providing counseling about the dangers of smoking on increasing the knowledge of fifth and sixth graders in an elementary school in Village Y, Gresik District.

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