

The Relationship Between Knowledge Of The Dangers Of Smoking And Stress Levels In Adolescent Boys At SMK Negeri 3 Medan In 2023.

Muslimah Pase

Universitas Haji Sumatera Utara

Article Info

Keywords:

Stress,
Dangers of Smoking,
Adolescents

ABSTRACT

Stress is a normal reaction, so everyone will experience it, both adults, teenagers, and even children. The stress used by each individual varies, among others, with vacations, meditation, yoga and smoking. Smoking is one example of an ineffective but widely favored management strategy. According to World Health Organization (WHO) data, it is found that every 6 seconds there is one death caused by tobacco worldwide. This study aims to determine whether there is a relationship between knowledge of the dangers of smoking and stress levels in male adolescents at SMK Negeri 3 Medan in 2023. The research design is a quantitative study using a correlation description, with cross sectional. the population in this study were male students with a total of 351 people. The sampling technique in this study used a purposive sampling technique with the slovin formula by fulfilling the inclusion criteria, namely 78 people. Methods of data collection using a questionnaire. The statistical test used is the Spearman Rho with an α value of 0.05. The results of the research on the knowledge of the dangers of smoking, that the majority of the dangers of smoking are the majority are not good, amounting to 62 people (79.5%), the stress level is the majority of the weight, amounting to 62 people (79.5%). stress level with a p-value of 0.000 (<0.05). The conclusion of the study shows that there is a relationship between knowledge of the dangers of smoking and stress levels in adolescent boys at SMK Negeri 3 Medan in 2023. It is hoped that respondents will be educated about the importance of increasing knowledge of the dangers of smoking by reducing stress levels, especially for students at school.

This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license



Corresponding Author:

Muslimah Pase
Universitas Haji Sumatera Utara
Jl. Selamat No.73t, Sitirejo III, Kec. Medan Amplas, Kota Medan,
Sumatera Utara 20226
pasemuslimah77@gmail.com

INTRODUCTION

Stress is a normal reaction, so everyone will definitely experience it, both adults, teenagers, and even children. The stress used by each individual varies, including vacations, meditation, yoga and smoking. Smoking is one example of an ineffective but widely loved management strategy. The number of smokers is increasing and the age of smokers is getting younger

because smokers believe that cigarettes have a sedative function when they are anxious and stressed (D.A and Hendrawati 2018)

Stress will affect both physiologically and physically on a person, to overcome this stress a person will cope with this stress a person will cope in various ways such as sudden mood changes, lack of enthusiasm in carrying out activities, and the presence of smoking behavior (Johnson et al. 2014).

Stress is not only experienced by adults, but also in adolescents. There are many challenges that adolescents must face that are no less severe than adults. In addition, adolescents must adjust to physical growth and changes, adolescents must take various school tests and exams, conflicts with parents and also peer pressure. All of this makes teenagers sometimes experience more pressure or stress than adults. So many people use cigarettes, including teenagers, to reduce negative feelings such as anxiety which can be called the initial cause of stress. Because smoking itself is considered an alternative solution to reduce anxiety as an early sign of stressors (Usiana, Hana, and Ayu 2020)

The level of stress experienced by adolescents usually has different levels, including mild stress, which usually only occurs in a few minutes or a few hours. Moderate stress Moderate stress lasts longer, from a few hours to a few days. Severe stress Severe stress is chronic stress that occurs for several weeks to several years.

According to World Health Organization (WHO (World Health Organization) 2017 data, every 6 seconds there is one death caused by tobacco worldwide. In 2005, 5.4 million people died from tobacco and during the 20th century there were 100 million deaths from tobacco. If this is left unchecked, by 2030 there will be 8 million deaths and it is estimated that during the 21st century there will be as many as 1 billion deaths due to tobacco. The phenomenon of smoking in Indonesia is indeed very concerning and now it is increasing the number of school children.

According to the Indonesian Ministry of Health, in 2018, a smoker has a 2 to 4 times higher risk of coronary heart disease and has a higher risk of developing lung cancer and other non-communicable diseases. Riskesdas 2018 shows that the prevalence of non-communicable diseases (NCDs) has increased when compared to Riskesdas 2013, namely the prevalence of cancer increased from 1.4% to 1.8%, stroke from 7.0% to 10.9%, chronic kidney disease increased from 2% to 3.8%. The increase in the prevalence of non-communicable diseases is related to lifestyle, one of which is smoking (Ministry of Health, 2018). According to the Indonesian Cancer Foundation (2018).

Based on (Riskesdas 2018) currently Indonesia is facing a serious threat, Indonesia is one of the countries with the highest number of male smokers in the world and it is predicted that more than 97 million Indonesians are exposed to cigarette smoke. The prevalence of smokers in Indonesia has a trend that tends to increase from year to year, the tendency to increase the prevalence of smoking is seen to be greater in the group of children and adolescents, in 2013 as much as 7.2% increased to 9.1% in 2018 Indonesian children smoked. If there is no effort to stop smoking in children, the figure is expected to be 15.95% by 2030 (Bappenas data 2018). Bali Province has 9 districts, the proportion of smoking in the

population aged ≥ 10 years according to the Regency/City of North Sumatra Province, namely Medan City which occupies the highest percentage of smokers (22.56%).

The phenomenon of smoking in Indonesia is indeed very concerning and now it has penetrated to school children. In a number of places, a group of students in uniform (SLTA) are often found smoking (Mughtar, 2012). Based on Basic Health Research (Risksdas) 2013 The number of smokers under the age of < 10 years is 687,755 children. At least 25,000 deaths in Indonesia occurred due to other people's cigarette smoke. Data from the Madiun City Health Office (Dinkes) noted that the results of mass "screening" from as many as 10,973 high school students at the same level, obtained around 1,618 students or 14.6 percent admitted to being active smokers.

The results of a preliminary study (preliminary survey) conducted on March 16, 2023 at SMK Negeri 3 Medan as a result of interviews with a total of 20 people, 14 people stated that smoking some said at first they tried it and became addicted, some experienced learning difficulties so they switched to smoking, and some also joined friends because of association/style, while 6 people did not smoke, From the data that smoked, 10 people experienced severe stress due to the emergence of problems with activities or learning processes at school that were very boring and the absence of friends for discussion. Other data found that students who experience stress make smoking as an outlet when students experience stress at school caused by the many assignments and personal problems experienced by the students themselves at SMK Negeri 3 Medan.

METHODS

The hypothesis in this study is the relationship between knowledge of the dangers of smoking and stress levels in adolescent boys at SMK Negeri 3 Medan. The research design used in this research is correlation description, which is the study or study of the relationship between two variables in a situation or a group of subjects. This is done to see the relationship between one symptom and another, or another variable (Natoatmodjo, 2014)

The approach used is cross sectional, which is a type of research that emphasizes the time to measure the observation of independent and dependent variable data only once at a time. The population in this study is 351 male students. The sample in this study is students at SMK Negeri 3 Medan with the number of samples in this study using the Slovin formula (Moleong 2017) as many as 78 people. The sampling technique in this study uses a purposive sampling technique. The reason for using this purposive sampling technique is because it is suitable for use for quantitative research, or studies that do not generalize according to Sugiyono, (2016). With the inclusion criteria as follows:

- a. Be willing to be a responder
- b. High school students in grades 1, 2 and 3
- c. Being stressed
- d. Active smokers

With the following exclusion criteria:

- a. Those who are not willing to be respondents
- b. Active smokers

The researcher's steps in collecting the data:

- a. Requesting a permit from the Faculty of Nursing, Haji University of North Sumatra as a research recommendation letter.
- b. Apply for a permit and get a research permit from SMK Negeri 3 Medan
- c. The researcher then explained the purpose of the study and assured the respondents that the study was voluntary and would be kept confidential.
- d. Data collection was carried out by giving a questionnaire sheet to the respondents where previously the respondents had to sign a letter of approval to become a respondent.
- e. Then the researcher explained how to fill out the questionnaire, then the researcher distributed the questionnaire and the respondents were asked to fill in the data on the questionnaire sheet, then the researcher helped fill out the questionnaire through an interview and was assisted by an assistant.
- f. After the data is obtained, it will be tabulated and interpreted through a computer program.

RESULTS AND DISCUSSION

State Vocational High School 3 Medan is the only Vocational High School that provides special education for the Chemistry Expertise Program, namely: Industrial Chemistry and Analytical Chemistry in the North Sumatra Province area.

Table 1. Demographic Data on Knowledge of the Dangers of Smoking with Stress Levels

No	Demographic Data	Frequency	Percentage (%)
1	Age		
	16 Years	54	69,2
	17 Years	24	30,8
	Amount	78	100%
2	Class		
	Class 2	54	69,2
	Grade 3	24	30,8
	Amount	78	100%

Berdasarkan data demografi diatas dari 78 responden menunjukkan bahwa mayoritas umur yang menjadi sampel penelitian adalah umur 16 tahun berjumlah 54 dengan persentasi 69,2%. Mayoritas kelas 2 berjumlah 54 orang dengan persentasi 69,2%.

Tabel 2. Data Demografi Pengetahuan Bahaya Merokok

No	Knowledge of the Dangers of Smoking	Frequency	Percentage (%)
1	Bad	62	79,5
2	Good	16	20,5
	Amount	78	100

From the above data, it can be concluded that the knowledge of the dangers of smoking is not good, amounting to 62 percent (79.5%), then good amounting to 16 percent (20.5%).

Table 3. Stress Level Demographic Data

No	Stress Levels	Frequency	Percentage (%)
1	Light	0	0
2	Keep	16	20,5
3	Heavy	62	79,5
	Amount	78	100

From the data above, it can be concluded that the stress level is the majority of people who are overweight amounting to 62 percent (79.5%), then moderate to 16 people percent (20.5%)

Results of the Knowledge Test on the Dangers of Smoking with Stress Levels

Tabel 4. Crosstabulation

		Stress levels		
		Keep	Heavy	Total
Knowledge of the Dangers of Smoking	Bad	0	62	62
	Good	16	0	16
	Total	16	62	78

Dari hasil tabel diatas pengetahuan bahaya merokok yang tidak baik lebih banyak mengalami tingkat stres berat dengan jumlah 62 orang sedangkan pengetahuan bahaya merokok yang baik memiliki tingkat stres yang sedang dengan jumlah 16 orang.

Table 5. Spearman Rho Test

		Correlations		
		Knowledge of the dangers of smoking	Stress Levels	
Spearman's rho	Smoking knowledge	Correlation	1.000	-1.000**
		Coefficient		
		Sig. (2-tailed)	.000	.
	Stress	N	78	78
		Correlation	-1.000**	1.000
		Coefficient		
	Sig. (2-tailed)	.	.000	
	N	78	78	

Based on the output above, the significance value or sig. (2-tailed) of $0.000 < 0.05$ which means that there is a relationship between knowledge of the dangers of smoking and stress levels. And the correlation coefficient number has a positive value of 1,000 which means that there is a strength of the relationship between the two variables.

Discussion

Knowledge of the Dangers of Smoking in Adolescent Boys at SMK Negeri 3 Medan

From the above data, it can be concluded that the knowledge of the dangers of smoking is not good, amounting to 62 percent (79.5%), then good amounting to 16 percent (20.5%).

According to Notoatmodjo in his book *Public Health Science and Art* (2017), knowledge is the result of knowledge and this happens after people sense a certain object. Sensing occurs through the five human senses, namely sight, hearing, smell, taste and touch. Most of human knowledge is acquired through the eyes and ears. Students' knowledge of the dangers of smoking is likely influenced by information and education. Information obtained from various sources will affect a person's level of knowledge. If a person obtains a lot of information, then he tends to have a wider knowledge, and vice versa. School is a place for children to learn after studying at home.

In schools, there is a UKS (School Health Unit) program which is a teaching and learning vehicle to increase the growth and development of students in harmony and optimally, in order to become quality human resources (Ministry of Health of the Republic of Indonesia, 2006). UKS has 8 goals, namely the dangers of smoking, anemia, hepatitis, worms, premarital pregnancy, juvenile delinquency, HIV/AIDS, and drugs.

The dangers of cigarettes are the first goal in the UKS program, this shows that the dangers of cigarettes are the most important in health education in schools. The data from the study showed that students who had a knowledge level below average were 10 children. This can be caused by many factors why there are still students who have below-average knowledge, including information about the dangers of cigarettes is still minimal, health workers are still lacking in providing health education.

Stress Levels in Adolescent Boys at SMK Negeri 3 Medan

From the results of the study, it can be concluded that the stress level is the majority of weights amounting to 62 people (79.5%), followed by 16 people (20.5%). According to the results of Saefullah's research (2014), stress is not only experienced by adults, but also in adolescents. There are many challenges that adolescents must face that are no less severe than adults. In addition, adolescents must adjust to physical growth and changes, adolescents must take various tests and school exams, conflicts with parents, and also peer pressure. All of this makes teenagers sometimes experience more pressure or stress than adults. According to the theory of Titik Lestari (2014), Stress is a normal reaction, a disorder in the body and mind caused by changes and demands of life that are influenced by the environment and the appearance of individuals in the environment.

Based on the results of the above research, stress symptoms are caused by physical symptoms (In general, people's body conditions will be affected by stress, often experiencing headaches, easy tiredness, dry mouth, shortness of breath, difficulty sleeping well, impaired digestion, constipation, fast heartbeat, and cold sweats). Emotional Symptoms (Often feeling irritable and irritable, overly sensitive, restless and anxious, mood swings, sadness, and easy to cry). Intellectual Symptoms (Stressed people will easily forget, chaotic their thoughts. His memory decreases, he has difficulty concentrating, he likes to daydream, his mind is filled with shadows of worry, and excessive anxiety).

Based on the results of the above study, the factors that affect stress in adolescents are Daily hassle, Personal stressor, Appraisal. Stress affects everyone, even children, most of the stress in adolescence is related to the period of growth. Teenagers are worried about changes

in their bodies and searching for their identity. Stress in adolescents can also be caused by demands from parents, parents usually demand their children to get good grades in school.

The Relationship Between Knowledge of the Dangers of Smoking and Stress Levels

Based on the output above, the significance value or sig. (2-tailed) of $0.000 < 0.05$ which means that there is a relationship between knowledge of the dangers of smoking and stress levels. And the correlation coefficient number has a positive value of 1,000 which means that there is a strength of the relationship between the two variables. According to Sivan Tomkis' research in the hall (2018), smoking behavior in adolescents is largely the result of a cognitive process that they have anticipation of consequences related to their behaviors. Their smoking behavior is determined by their belief in these behaviors, including social appreciation and health risks or benefits from smoking from friends.

Smoking behavior in adolescents is largely the result of the cognitive process that they have anticipation of the consequences associated with their behaviors. Their smoking behavior is determined by their belief in these behaviors, including social appreciation and health risks or benefits from smoking from friends. From the results of the study, most of the samples of smoking behavior in adolescents are very high. According to the results of Cleary et al. (2019). states that 85%-90% of people smoke regularly which indirectly means that smoking experiments in adolescents will encourage them to smoke as adults.

Research Limitations

In this study, the researcher experienced limitations in the data collection process due to the condition of many school activities, which made the researcher unable to explore the sample more deeply and limited time in providing education during the intervention process. Another limitation of the study is that the number of samples that can be conducted is small because the teaching and learning activities and processes in schools that hinder this research get more samples.

CONCLUSION

The majority of smoking hazard knowledge at SMK Negeri 3 Medan is not good, amounting to 62, meaning that the knowledge of smoking hazards of students is mostly not good on average. The stress level at SMK Negeri 3 Medan is the majority of 62 people, which means that the stress level of students at school is mostly on average stressed. There is a relationship between knowledge of the dangers of smoking and stress levels in adolescent boys at SMK Negeri 3 Medan in 2023, meaning that the relationship between the two variables has interrelated strengths.

REFERENCE

- Bøg, Fie Krossdal, Martin Balslev Jørgensen, Zorana Jovanovic Andersen, and Merete Osler. 2017. "Electroconvulsive Therapy and Subsequent Epilepsy in Patients with Affective Disorders: A Register-Based Danish Cohort Study." *Brain Stimulation*.
- D.A, Iceu Amira, and Hendrawati Hendrawati. 2018. "Tingkat Stres Dengan Perilaku Merokok Pada Remaja Laki – Laki." *Media Informasi* 14(1):41–45. doi: 10.37160/bmi.v14i1.166.

- Irawati, Poppy, Imas Yoyoh, Elang Wibisana, and Warda Damiyati. 2021. "Hubungan Tingkat Stres Dengan Frekuensi Merokok Pada Mahasiswa Tingkat Akhir Program Studi Teknik Informatika Universitas Muhammadiyah Tangerang." *Jurnal JFKT: Universitas Muhammadiyah Tangerang* 6(2):97–108.
- Islamy, Aesthetica, and Farida Farida. 2019. "Faktor-Faktor Yang Mempengaruhi Siklus Menstruasi Pada Remaja Putri Tingkat Iii." *Jurnal Keperawatan Jiwa* 7(1):13. doi: 10.26714/jkj.7.1.2019.13-18.
- Johnson, Judith, Christopher Jones, Ashleigh Lin, Stephen Wood, Kareen Heinze, and Christopher Jackson. 2014. "Shame Amplifies the Association between Stressful Life Events and Paranoia amongst Young Adults Using Mental Health Services: Implications for Understanding Risk and Psychological Resilience." *Psychiatry Research*. doi: 10.1016/j.psychres.2014.07.022.
- Lontoh, Yanny J., Fransiskus X. B. Dotulong, and Meksy Y. Benidiktus. 2015. "Hubungan Stres Pada Remaja Laki-Laki Dengan Perilaku Merokok Di Akademi Keperawatan Gunung Maria Tomohon." *Akademi Keperawatan Gunung Maria Tomohon (February 2014)*:286–93.
- Moleong, Lj. 2017. "Metodelogi Penelitian Kualitatif." P. 410 in Bandung: PT Remaja Rosdakarya, edited by I. Taufik. BANDUNG: RR.PK0073-32-2017.
- Ramadan, M. Rizki, and Sri Sunarti. 2020. "Hubungan Tingkat Stress Dengan Perilaku Merokok Pada Remaja Di SMPN 029 Samarinda." *Borneo Student Research* 1(2):1261–67.
- Riskesdas, Kemenkes. 2018. "Hasil Utama Riset Kesehata Dasar (RISKESDAS)." *Journal of Physics A: Mathematical and Theoretical* 44(8):1–200. doi: 10.1088/1751-8113/44/8/085201.
- Tatsumi, Hiroshi, Shutaro Nakaaki, Masayuki Satoh, Masahiko Yamamoto, Naohito Chino, and Kazuo Hadano. 2016. "Relationships among Communication Self-Efficacy, Communication Burden, and the Mental Health of the Families of Persons with Aphasia." *Journal of Stroke and Cerebrovascular Diseases*. doi: 10.1016/j.jstrokecerebrovasdis.2015.09.018.
- Usiana, Wayan, Yundari Ns. AA. Istri Dalem Hana, and Mirayanti Ns. Ni Ketut Ayu. 2020. "Hubungan Tingkat Stres Dengan Perilaku Merokok Pada Remaja Laki-Laki Di SMK Rekayasa Denpasar." *SekolahTinggi Ilmu Kesehatan Wira Medika Bali*.
- WHO (World Health Organization). 2017. "Who Report On The Global Tobacco Epidemic."