Analysis of Determinants of Smoking Behavior

Apir[1*], Agustin Widyowati[2]
Universitas STRADA Indonesia
[*]**Corresponding author:** apiramk932@gmail.com

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ABSTRACT

Nearly 9 out of 10 adults first smoke at age 18. 1600 teenagers smoke for the first time every day in the U.S. (CDC, 2022) Unprevented smoking behavior will certainly have an impact on health, economy, stunting, and even the environment. The study aims to identify determinants of smoking behavior in Lowokwaru District, Malang City. The research method is a quantitative method with a cross-sectional study design carried out in November 2024. Data were collected through the Assessment and Questionnaire website with a sample of 338 people. Data analysis using univariate tests. The results of the study stated that the majority of respondents were aged <45 years at 93.6%, then the majority were male at 94.4%. then the majority of their marital status was married at 59.2%, then the majority of BMI was obese at 59.8%, then the majority of blood pressure was normal at 95.6%, and the majority of triglyceride levels were 55%. It is expected that the government through the Ministry of Finance can consistently increase cigarette prices and immediately make a policy prohibiting retail cigarette sales. In addition, health agencies can make health promotion efforts for adolescents and conduct comprehensive smoke-free area supervision in schools.

I. Introduction

Smoking behavior is a health problem encountered in almost every country in the world. Every year almost more than 8 million people die due to tobacco use, of which 7 million are active smokers and 1.2 million are passive smokers (WHO, 2019). Although dangerous, the prevalence rate of smokers in the world continues to increase, in 2019 the prevalence of smokers in the world was 19.6% (WHO Atlas, 2022). As many as 26% or a quarter of the world's smoking population is in the SouthEast Asia Regional (SEAR) or Southeast Asia Region. In addition, the Southeast Asia Region is the largest tobacco-producing region in the world (WHO, 2020b). Indonesia is a region in Southeast Asia that has not yet established the WHO-Framework Convention on Tobacco Control (WHO FCTC). This is supported by the high prevalence of smokers in Indonesia at 33.8% with a prevalence of young smokers at 12.8%. After China and India, Indonesia ranks third in the world with a prevalence of.

Based on the results of Basic Health Research (Riskesdas) in 2018, the prevalence of smoking over 15 years old is 28.8%. Meanwhile, the prevalence of smokers in the age group of 10-18 years has increased every year from 7.2% in 2013 to 9.1% in 2018. The prevalence of smokers in Indonesia is predicted to continue to increase to 90 million people or 45% of the total population until 2025 (WHO, 2019). Bappenas estimates that the prevalence of young smokers aged 10-18 years in Indonesia will also continue to increase to 16% or 6.8 million adolescent smokers by 2030 (IAKMI, 2020). This resulted in a decrease in young smokers aged 10-18 to 5.4% in the 2020-2024 RPJMN target, which is further from expectations.The trend of smoking behavior in adolescents is increasing every year. The findings of the 2019 Global Youth Tobacco Survey noted that the prevalence of student

smokers aged 13-15 in the last 5 years jumped significantly from 18.3% in 2014 to 19.2% in 2019. In addition, as many as 39.6% of adolescents in Indonesia have smoked (GYTS, 2019). The age of 15-19 years is the highest age of first-time smoking, which is 52.1%. Strengthened by other findings, adolescents have smoked since elementary school and junior high school, even as many as 2.5% have smoked since the age of 5-9 years. Referring to this data, Indonesia is dubbed as Baby Smokers Countries because of the large number of young smokers (TCSC-IAKMI, 2020). Currently, not only conventional smokers are increasing, the prevalence of e-cigarettes aged 10-18 years has also increased by almost 10%, from 1.2% in 2016 to 10.9% in 2018. When compared to the prevalence of e-cigarettes in the (Kemenkes RI, 2019).

Smoking behavior in adolescents is influenced by multiple factors, where smoking behavior can be caused from within the individual or environmental factors (Manafe et al., 2019). Research by Jannah & Yamin (2021) states that smoking behavior in adolescents is related to knowledge, attitudes, and ease of access to cigarettes. Meanwhile, the findings of Fransiska & Firdaus (2019) show that the determinants that affect smoking behavior are knowledge, attitudes, ease of obtaining cigarettes, factors influencing peers, smokers' families, and cigarette advertising promotions. The rise of smoking behavior in adolescents is associated with the transition period to adulthood, where adolescents are in the stage of finding their identity and are interested in trying new things. Even teenage smokers are considered to look more masculine, mature, and can attract the attention of the opposite sex.

Adolescent smoking behavior, if not prevented, can cause dependence that will continue into adulthood. The impact of cigarettes on adolescents includes disruption of study concentration, decreased achievement, and health problems. Not only that, the increasing prevalence of smokers poses a burden of threatening non-communicable diseases in Indonesia (Jatmika et al., 2018). As a result, smoking behavior poses a high cost burden of cigarette-related diseases in Indonesia, which ranges from 17.9 to 27.7 trillion (Meilissa et al., 2021). In addition, smoking inhibits the growth and development of toddlers which in the long term will have an impact on stunting (Ayu et al., 2020). Not only does it have an impact on health, the cigarette industry produces two tons of solid waste that pollutes the environment (Rahmatina et al., 2020).

II. Methods

This study is a type of quantitative research with a cross-sectional study design. The research was carried out in November 2024. Sampling technique with total sampling. The data collection method is through research instruments in the form of questionnaires. The research questionnaire used an Assessment and Questionnaire consisting of questions that included demographic data, and research variables: Address, age, gender, occupation, smoking status, triglyceride levels, cholesterol levels, BMI, blood pressure and the like. The data that has been collected is then analyzed univariate to describe the characteristics of each variable.

III. Results and Discussion

Results

The results of the frequency distribution from the analysis of the factors that determine smoking behavior will be described as follows:

Table 1. Results of Frequency of Respondent Characteristics, Predisposing Factors, Enabling Factors, and Reinforcing Factors External(N=338)

No	Variable	Sum	Frequency
		N	%
1	Age		
	< 45 Year	334	93,6
	> 45 Yaer	4	6,4
2	Gender		
	Male	319	94.4
	Women	19	5.6
3	Smoking behavior		
	Smoking	120	36,4
	No Smoking	210	63,6
4	Marital status		
	Marry	200	59,2
	Single	138	40,8
5	BMI		
	Less	5	1,5
	Ideal	131	38,8
	Obesity	202	59,8
7	Blood Pressure		
	Normal	112	33,1
	Tall	226	66,9
8	Cholesterol		
	Abnormal	15	4,4
	Normal	323	95,6
9	Triglycerides		
	Abnormal	152	45,0
	Normal	186	55,0

Source: Primary data from Assessment and Questionnaire sites in 2024

Univariate results based on Table 1 show that the majority of respondents are < 45 years old at 93.6%, then the majority are male at 94.4%. Then the majority of their marital status is married as much as 59.2%, then the majority BMI is obesity at 59.8%, then the majority of blood pressure is normal at 95.6%, and the majority of triglyceride levels are 55%.

Discussion

Knowledge and attitude are predisposing factors in individuals that are the basis for adolescent smoking behavior. The results of the study stated that knowledge and attitude were significantly related to smoking behavior with a p-value of 0.000. Adolescents with less knowledge and attitudes had a 2,676 times higher risk of smoking than adolescents with good knowledge and attitudes (OR: 2,676, 95% CI: 1,612-4,441). This is in line with a study in Yogyakarta stating a similar thing, that smoking behavior in adolescents is significantly related to knowledge and attitudes with a p-value of 0.000 (Wibowo et al., 2019). Findings in African countries also state similarly, that knowledge and attitudes significantly influence smoking behavior (Tezera & Endalamaw, 2019).

Knowledge and attitude are the most important domains that shape a person's behavior. According to Notoatmodjo (2014), knowledge is defined as the result of the process of knowing or the result of human sensing of something through its senses. Meanwhile, according to Campbell in Notoatmodjo (2014), attitude is defined as a set of responses to stimuli or objects. Studies in India show that knowledge about the health harms of tobacco contributes to reducing the risk of continuing smoking behaviors by 30-40%. The majority of smokers already understand the negative impact of smoking behavior on health, but they continue to smoke because of the addictive effects caused by cigarettes (Maretalinia et al., 2021).

Research in China proves that adolescents who have a negative attitude towards smoking behavior show a tendency to start smoking at a young age. Positive attitudes and beliefs about tobacco use will also influence people to quit smoking (Bafunno et al., 2021). Therefore, health promotion efforts are needed that not only increase knowledge, but can also change adolescents' attitudes to positive smoking behavior. These efforts are expected to make teenagers have the determination not to smoke and even quit smoking. Educational institutions can include health education in school curricula and anti-smoking discussions in school events to improve adolescents' knowledge and attitudes.

The ease of access to cigarettes is supported by the findings of Ratih et al. (2021) which show that there are 1,940 cigarette sellers in Malang City and Regency ranging from hawkers, small stalls, convenience stores, and wholesale stores. Not only that, retailers sell cigarettes with an average price of Rp. 2,000 per cigarette. As a result, this condition can allow teens to access cigarettes easily. Based on Lawrence Green's theory of behavior, access to cigarette availability is included in the enabling factors that can affect smoking behavior. The ease of access to cigarettes among adolescents is related to the lack of knowledge and concern of cigarette sellers about the dangers of smoking for children. Of course, this is done to get profits only (Awaluddin & Fuad, 2019).

The ease of accessing cigarettes among teenagers is related to the price of cigarettes in Indonesia. In contrast to other ASEAN countries such as Malaysia, Myanmar, Singapore, and Brunei Darussalam, the price of cigarettes in Indonesia is only 1.6-1.9 USD, meaning that it is still fairly cheap and affordable (SEATCA, 2021). According to the GYTS survey (2019), 17% of adolescents buy cigarettes at a price of Rp1,000 – Rp1,500/cigarette and 71.3% of adolescents buy cigarettes at retail. The results of the findings in Indonesia show that the prevalence of adolescent smokers is decreasing, if the price of cigarettes is increasing (Dartanto et al., 2018). A study by Nurhasana et al. (2020) in Indonesia shows that as many as 74% of smokers will stop buying cigarettes if the price of cigarettes is Rp70,000 or 5 USD. Therefore, the government through the Ministry of Finance should be able to increase the price of cigarettes consistently so that cigarettes are not easily accessible to teenagers. In addition, the prohibition on selling cigarettes to children under the age of 18 was emphasized and the president of the.

In general, adolescents who are at high risk of delinquency participate in the same behaviors with a lower frequency. They are users of cigarettes, alcohol, and illegal drugs. The smoking attitude in adolescents on average continues to increase in accordance with the growth stage signaled by smoking, and this smoking attitude causes them to face nicotine dependence. Adolescence, which is often termed adolescence, is defined as a transitional growth period between childhood and adulthood that involves biological, cognitive, and socio-economic changes. In the life of young people, they tend to try new things without thinking about the consequences for themselves or other people and family. This is driven by a great curiosity but they only have a little experience and knowledge. teenagers have the motivation to carry out delinquency at the time.

The majority of respondents already have a no-smoking policy in their schools (98.2%), but adolescents still behave in smoking. Based on the author's assumptions, this is due to the Covid-19 pandemic when schools are closed so that teenagers spend more time at home. In addition, the school environment has not fully implemented the regulations on non-smoking areas in schools. In accordance with Malang City Regulation Number 2 of 2018 concerning KTR, the place where the teaching and learning process is located is a smoke-free area. Longitudinal studies in Europe state that a well-enforced policy of banning tobacco use in schools can help reduce smoking habits (Mélard et al., 2020). Another finding in Canada, obtained that smoking policies in schools are effective in reducing the number of passive smokers. In addition, school-based smoking behavior prevention programs using health promotion strategies have a significant effect on reducing the number of student smokers.

IV. Conclusion

It shows that the majority of respondents are < 45 years old at 93.6%, then the majority are male at 94.4%. Then the majority of their marital status is married as much as 59.2%, then the majority BMI is obesity at 59.8%, then the majority of blood pressure is normal at 95.6%, and the majority of triglyceride levels are 55%.

Smoking behavior in adolescents every year increases, this increase occurs because many things can affect smoking behavior including lifestyle factors, social environment factors and psychological characteristic factors, as well as the family environment also affects smoking behavior.

After analyzing the factors of smoking behavior, it is hoped that the public will be able to increase their awareness of their health so that they can avoid smoking, especially in promotive and preventive prevention. It is hoped that this research can further include and explain in detail the obstacles and obstacles experienced by smokers, so that it can be understood that this smoking behavior can be prevented and the incidence of cigarette-related diseases in Indonesia can be lowered.

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