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Determinants Of Electric Smoking Behavior Of State Vocational School Students In Jambi City

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ABSTRACT
E-cigarette use continues to increase globally among adults and adolescents. This situation is increasingly urgent and concerning considering its impact on health. This research was conducted to determine the factors related to e-smoking behavior among State Vocational School students in Jambi City. Method: This research uses a quantitative design with a cross-sectional approach. The population of this study were State Vocational School students in Jambi City with a sample size of 277 respondents. The sampling technique uses non-probability sampling in the form of accidental sampling. The variables in this study are advertising, family economics, and history of conventional cigarettes. Primary data collection was carried out by interviews with questionnaires. Data were analyzed using the chi square test. Results: E-smoking behavior among State Vocational School students in Jambi City was 50.18. There was a relationship between advertising (OR = 3.50; 95% CI = 1.96-6.24), and history of conventional cigarettes (OR = 2.05; 95 % CI=1.30-3.24) with e-smoking behavior. There was no relationship between family economics (OR = 7.78; 95% CI = 4.08-14.83) with e-smoking behavior. Conclusion: Factors related to smoking behavior are the influence of advertising and a history of conventional smoking. Schools can provide regular education and warnings about the dangers of smoking, both electric and conventional, to students and provide motivation about the importance of quitting smoking.

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INTRODUCTION

E-cigarette use continues to increase globally among adults and adolescents. This situation is increasingly urgent and concerning considering its impact on the health of the nation's future generations. Between 2015 and 2018, rates of e-cigarette use among the public ranged from 0.02% in India to 3.5% in Russia, while youth prevalence ranged from 0.7% in Japan in 2017 to 23.4%. in Poland in 2016. In Indonesia, the number of e-cigarettes increased 10-fold in 10 years, from 0.3% in 2011 to 3.0% in 2021. In line with the results of the 2018 Riskesdas data showing an increase in smoking prevalence in population aged 10-12 years became 9.1% from 7.2% in 2013 and 20% of them used e-cigarettes. Jambi Province, based on data from the National Socio-Economic Survey (SUSENAS) of the Central Statistics Agency (BPS) in 2022, shows that Jambi is ranked 12th, as one of the provinces with a percentage of smokers aged ≥15 years, namely 28.62%. Meanwhile, sources from the Jambi

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Provincial Health Services Strategic Plan for 2021-2026 show that the prevalence of smokers aged over 10 years in Jambi City is one of the highest districts/cities, namely 21.7%.

Easy availability, attractive advertising, various liquid flavors, as well as the belief that these liquids are safer than cigarettes make teenagers increasingly interested in consuming them6. Several studies regarding trends in the use of e-cigarettes in Indonesia can be concluded that the risk factors for the use of e-cigarettes in adolescents are influenced by several factors including: affordability of buying liquids, affordability of e-cigarettes, peer support, the economy, respondent attitudes, respondent motivation, respondent environment and group support Another factor that influences the behavior of using e-cigarettes is as an effort or alternative to abandon conventional cigarettes (tobacco). This also provides the reason that the use of e-cigarettes is an alternative to quitting smoking.

METHODS

The type of research used in this research is quantitative with a cross sectional study design. The population in this study was all State Vocational School students in Jambi City, totaling 8,200 students, with a sample of 277 students. The sampling technique used in this research is non-probability sampling in the form of accidental sampling. The independent variables in this study are peers, exposure to advertising, family economics, and history of using conventional cigarettes, while the dependent variable is e-smoking behavior. This research instrument uses a questionnaire that has been tested for validity and reliability. Data were analyzed using the chi square test.

RESULTS AND DISCUSSION

Table 1. Distribution of Respondent Characteristics

Variable	F	%
Age (years)		
14	1	0,36
15	69	24,91
16	112	40,43
17	70	25,27
18	24	8,66
19	1	0,36
Which School Are You From		
State Vocational School 1 Jambi City	59	21,30
State Vocational School 2 Jambi City	82	29,60
State Vocational School 3 Jambi City	54	19,49
State Vocational School 4 Jambi City	42	15,16
State Vocational School 5 Jambi City	17	6,14
State Vocational School 6 Jambi City	23	8,30
Father's Education		
Not Completed In SD	14	5,05
Finished SD/MI/Equivalent	31	11,19

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Variable	F	%
Finished SLTP/MTs/Equivalent	32	11,55
Finished SLTA/MA/Equivalent	143	51,62
Finished D1/D2/D3	30	10,83
Finished S1/S2/S3	27	9,75
Mother's Education		
Not Completed In SD	5	1,81
Finished SD/MI/Equivalent	32	11,55
Finished SLTP/MTs/Equivalent	41	14,80
Finished SLTA/MA/Equivalent	159	57,40
Finished D1/D2/D3	19	6,86
Finished S1/S2/S3	21	7,58
Father's Occupation		
Doesn't work	1	0,36
Farmers/laborers/traders	165	59,57
PNS/TNI/POLRI/BUMN/BUMD	27	9,75
Private	68	24,55
Other	16	5,78
Mother's Occupation		
Doesn't work	182	65,70
Farmers/laborers/traders	61	22,02
PNS/TNI/POLRI/BUMN/BUMD	7	2,53
Private	23	8,30
Other	4	1,44

Source: Processed Primary Data, 2024

Based on table 1, more State Vocational School students in Jambi City use e-cigarettes at 50.18%. The influence of peers on smoking behavior among State Vocational School students in Jambi City is quite influential at 69.68%. The effect of exposure to advertising is that more people are exposed to it by 73.29%. The majority of families of State Vocational School students in Jambi City come from the low category at 70.76%. The history of conventional smoking among State Vocational School students in Jambi City admitted that they had never smoked at 71.48%.

Table 2. Distribution of E-Smoking Behavior

Variable	F	%
Electric Smoking		
Yes	139	50,18
No	138	49,82
Advertisement		
Exposed	203	73,29
Not Exposed	74	26,71
Family Economics		

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Variable	F	%
Tall	81	29,24
Low	196	70,76
Conventional Smoker History		
Once	79	28,52
Never	198	71,48

Source: Processed Primary Data, 2024

Table 3. Distribution of Factor Analysis Results Associated with E-Smoking Behavior

Variables And Categories	E-Smoking Behavior				OR (95% CI)	P-Value
	Yes		No			
	f	%	f	%		
Advertisement						
Exposed	118	58,1	85	41,9	3,50 (1,96 - 6,24)	0.000*
Not Exposed	21	28,4	53	71,6		
Family Economics						
Tall	39	48,1	42	51,9	0,89 (0,53 - 1,49)	0.762
Low	100	51.0	96	49.0		
Conventional Smoker History						
Once	65	82,3	14	17,7	7,78 (4,08 - 14,83)	0.000*
Never	74	37,4	124	62,6		

Source: Processed Primary Data, 2024

The results of this study showed that advertising exposure was associated with e-smoking behavior of 3.50 times higher than students who were not exposed to advertising (OR=3.50; 95% CI=1.96 - 6.24). The results of statistical tests also show that there is a relationship between advertising exposure and e-smoking behavior among State Vocational School students throughout Jambi City.

Advertising is a very effective promotional medium in shaping public opinion, in this case the image of cigarette products. Advertising is a medium for conveying information to the public about a product and advertising has the function of conveying information, persuading, or reminding the public about cigarette products. Electronic cigarette advertising can stimulate someone to start, can discourage users who want to stop or reduce the use of e-cigarettes, can stimulate users to use more, and motivate users to choose certain types and brands. Incessant cigarette advertising in various media has increased the habit of e-smoking among teenagers.

This research is in line with research conducted by Marita and Yansyah (2023) that there is a difference in the proportion of exposure to advertising and e-smoking behavior of 74.1% compared to respondents who were not exposed to advertising, 10.0%, and there is a statistically significant relationship between exposure to advertising. with e-smoking behavior in West Koto Baru Village, Kota Baru Health Center Working Area, East Oku Regency. Another study conducted by Solihin et al (2023) showed that students who were

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exposed to cigarette advertising had an influence 2.01 times higher than students who were not exposed to smoking behavior. This was also proven to be statistically significant, which means there is a relationship between exposure to cigarette advertising and smoking behavior among teenagers at SMA 2 and SMK 8 Muhammadiyah Tanjung Sari, Medan Selayang District28. Furthermore, research conducted by Febriani et al related to factors related to smoking behavior in adolescents, the results showed that exposure to advertising or information media had an effect of 2.15 times higher than not being exposed, and was statistically related, meaning there was a relationship between exposure to advertising. with smoking behavior among teenagers during the COVID-19 pandemic in East Ujungbatu Village, Ujungbatu District, Rokan Hulu Regency in 2021 (p=0.005).

The advantage of advertising via electronic media is that it is broadcast repeatedly. Continuous exposure to advertising through electronic media will result in teenagers becoming familiar with the product and will influence teenagers' perceptions and attitudes so that after that they will decide whether to act or not. The image or image of masculinity, glamour, and creativity in the form of smoke created by advertisements for e-cigarettes or flavored liquid products, whether through the slogans of advertising stars who are idolized by teenagers, influence teenagers to engage in smoking behavior. Cigarette advertising via electronic media appears to be quite effective compared to advertising via print media in terms of influencing teenagers' knowledge about a product.

If in print media teenagers can only read, see pictures and imagine, then in electronic media teenagers not only read and see passive pictures but also see and hear. The more sensing of an object, the greater the influence of the object on the individual. Teenagers or students, in this case, spend almost all their time looking at social media, which is a market for electronic media advertising, and are a population that is very at risk. This is because apart from having a positive impact, it cannot be denied that electronic media also has a negative impact on teenagers' knowledge, especially regarding conventional cigarettes or e-cigarettes because advertising is designed to form positive consumer perceptions of a product or change a negative image to a positive one.

In line with this, from the results of in-depth questions to respondents, it was found that of the 203 respondents who claimed to have been exposed to electronic cigarette advertising, 91.2% included types of electronic media advertising including 8.4% from e-commerce, 4.4% from television. , 61.1% from social media, and 17.2% from the internet. In addition, 4% of respondents were exposed to having been offered directly by sellers or salespeople to try their products. Widiantari revealed that the influence of selling shops on advertising promotions or access to e-cigarette devices greatly influences cigarette use. More than a quarter of schools (28.3%) and universities (25.6%) had at least one vape shop within a 250 m radius, while 97.2% of shops were within 500 m of a cafe. Of the 107 vape shop retailers interviewed, nearly half (43.9%) reported selling vapes to youth under 18 or school age.

In this study, family economic factors in the high category were also a protective factor of 0.89 compared to low category family economic factors for smoking behavior (OR=0.89; 95% CI=0.53 - 1.49). In line with research conducted by Litasya et al (2023) with the results that the majority of teenagers with e-smoking behavior were in the medium and low

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categories at 84.2% compared to the high category at 15.8%. The results of this statistical test show that there is no correlation between economic status and e-smoking behavior among teenagers at Beejie Café and Andante Cafe. Another study conducted by Cleopatra et al (2018) found that the economic status of e-cigarette users was <Rp. 2,000,000 amounting to 18.0% and economic status ≥ Rp. 2,000,000 is 15.2, which means there is no difference in proportion. This was also not proven to be significant, which means there is no relationship between socio-economics and e-smoking behavior among teenagers in the West Pontianak District.

There was no relationship between family economics in this study, which could be because the researchers did not ask about ownership of the e-cigarette used, considering the price was quite high. In line with the research presented by Litasya that parents' economic conditions are not an obstacle for teenagers to smoke, there are many ways for teenagers to use e-cigarettes, such as saving and or borrowing from friends. When teenagers are not under parental supervision because they are playing with their friends, teenagers will be freer to do what they want, such as smoking or vaping. They can easily get these devices by borrowing them from their friends, especially when their friends voluntarily lend them. the e-cigarette to another teenager. According to Irwan, a teenager's behavior can be influenced by the economic status of their family.

This social status is related to the income and occupation of the parents. Parental income is all income received by a person whether it comes from direct involvement in the production process or not, which can be measured in money and is used to meet the collective and individual needs of a family in one month. High parental income will influence children's behavior in using e-cigarettes. With a high income, parents will give money easily to their children without knowing how the money is used34. The availability of pocket money for teenagers influences e-smoking behavior, the higher the pocket money they have, the more likely they are to buy e-cigarettes, considering that the price of e-cigarettes or refillable liquids is quite expensive.

Handayani explained that high income will make it easier to buy e-cigarettes and buy e-cigarette refills. This is because the higher a person's income, the higher the price he can buy e-cigarettes, where the higher the purchase price, the better the shape and quality, the same is the case with e-cigarette refills, namely the higher the purchase price of e-cigarette refills, the taste produced. when smoking e-cigarettes is better.

In this study, a history of conventional smoking was associated with e-smoking behavior of 7.78 times higher than having a history of conventional smoking (OR=7.78; 95% CI=4.08 – 14.83). The results of statistical tests also show that there is a relationship between conventional smoking history and e-smoking behavior among State Vocational School students throughout Jambi City. In line with research conducted by Avelintina that there is an influence of the use of e-cigarettes on the history of conventional smoking, the results of her research show that e-smokers in the West Pontianak District area mostly have a history of conventional smoking, namely 84 people (87.5%).

Another study was conducted by I Gusti et al that there is a relationship between e-smoking and a history of using conventional cigarettes. The majority of e-smokers among

high school students in Denpasar City have had or have a history of using conventional cigarettes, 94.7%. The transition from using conventional cigarettes to e-cigarettes also assumes that their use can save compared to conventional cigarettes. Febrina said that 84.7% of e-smokers believe that e-cigarettes contain less harmful ingredients than conventional cigarettes. User economics regarding the behavior of e-cigarette users shows that the economic expenditure on e-cigarettes is not small at first, but compared to conventional cigarettes, informants feel that they are more economical than conventional cigarettes and as a result, informants feel that they are more economical in consuming e-cigarettes than conventional cigarettes.

As a new tobacco product innovation, this product is considered safer than conventional cigarettes because there is no danger warning label like conventional cigarettes in general. In addition, the emergence of the perception that the use of e-cigarettes can be used as a smoking cessation method has encouraged conventional cigarette users to switch to e-cigarettes36. This is in line with the proportion of e-cigarette users in I Gusti et al's research, which was higher among adolescents with a history of using conventional cigarettes than those who did not. Research conducted by Pepper et al reported that conventional smoking was a strong predictor of the desire to use e-cigarettes. In addition, the tendency of conventional smokers to be exposed to information and advertising on the use of e-cigarettes increases their desire to try e-cigarettes. One of the reasons for the shift towards electronic cigarettes among teenagers who use conventional cigarettes is the nature of teenagers who are curious and like to try new things, making them more susceptible to becoming new consumers of electronic cigarettes39. This also needs to be accompanied by socialization of the dangers of conventional cigarettes considering that conventional cigarettes are the gateway to the use of e-cigarettes. Apart from that, considering that electronic media is the largest source of information on e-cigarettes, the use of electronic media as a medium for socialization is an important thing that needs to be considered. Seeing advertisements on television and social media, teenagers are starting to get to know and try to use e-cigarettes, because of the incessant advertisements circulating in society, coupled with the image created by advertisements so that it looks as if people who use e-cigarettes are people who are cool with smoke. thick and can be created in various shapes.

CONCLUSION

Factors related to smoking behavior are the influence of advertising and a history of conventional smoking. Schools can provide regular warnings about the dangers of smoking, both electronic and conventional, to students and provide motivation about the importance of quitting smoking.

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