Behavior of students in senior high school at Plimbang Aceh

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Abstract

Background. The Global Adult Tobacco Survey is an official agency that systematically monitors adult tobacco use and tracks key tobacco control indicators. This survey collects data on people aged 15 years and over. The purpose of this study was to analyze the socio-cultural, personality, and environmental relationship with smoking behavior.

Methods. This research uses a cross-sectional method. The population is all students of classes X and XI at Public Senior High School 1 Peulimbang, as many as 125 people, and the entire population is used as a sample. Data analysis consisted of univariate, multivariate, and bivariate analysis using Chi-square bivariate test and multivariate analysis using Poisson regression at α=0.05.

Results. The result variable bivariate associated with smoking is a social-cultural behavior with P<0.001; RP=7.819; CI 95%=4.358-14.028, personalized with P<0.001; RP=57.759; CI 95%=8.234-405.158, environment with P<0.001; RP=5.750; CI 95%=3.069-10.772.

Conclusion. The most dominant variable associated with smoking behavior in Public Senior High School 1 Peulimbang was statistically significant, (personal approach 0.05). The prevalence of smoking behavior with personal is RP=42.630; CI 95%=5.376-338.064; P=0.000.

Introduction

The Global Adult Tobacco Survey (GATS) is an official worldwide agency whose function is to systematically monitor adult tobacco use and track key tobacco control indicators. GATS 2021 is implemented by the Health2Research and Development Agency under the coordination of the Ministry of Health. Smoking behavior is not strange behavior around us. The age of smokers also varies greatly and is not dominated by men only. Smoking has been widely practiced both in highly-educated and low-educated environments and has become a complex problem involving psychological aspects and social phenomena. Smoking behavior among the younger generation at this time is a common phenomenon that we encounter all the time. Nowadays, also young women are included. We often encounter female students who smoke in public places, such as cafes, malls or shopping centers, recreational areas, and so on.1-3

Smoking is the leading cause of death in the world. The World Health Organization estimates that by 2030, 10 million people per year will die from smoking, 70% of which occur in developing countries, one of which is Indonesia. In the United States, 480,000 people die from smoking every year. While in Indonesia, 427,948 people die because of smoking every year.4,5

It is predicted that tobacco consumption practices and behaviors can cause 8.4 million deaths every year. It is said that tobacco consumption will kill everyone in 10 seconds. Second hand smoke (SHS) is estimated to cause six hundred thousand premature deaths every year in the world, with 31% of victims being children and 64% women. The prevalence of adolescent smokers (15-19 years) has increased from 12.6% in 2006 to 20.3% in 2009. A study says that most smokers start smoking between the ages of 15 to 19 years, and 85 to 95% of smokers start smoking before the age of 18 years.6-9

Based on data from Riskesdas in 2013, the number of Indonesian smokers was 29.3% of the total population. The number of smokers aged 15-24 years is always increasing. Riskesdas report that smokers between the ages of 15 and 24 made up 24.6% of the population in 2007, 26.7% in 2010, and 52.4% in 2013. Aceh province is one of the provinces that have the highest number of smokers in Indonesia. According to Riskesdas 2013 data, the proportion of smokers in Aceh Province is 43.1%. This figure experienced a drastic increase because according to Riskesdas 2010 data, the proportion of smokers in Aceh was 37.1%, this con-
Bireuen Regency is one of the regencies in Aceh Province, this regency has its capital in Bireuen; this district has become an autonomous region since 2000 as a result of the division of North Aceh. As a district in Aceh Province, Bireuen has Qanun number 18 of 2014 concerning non-smoking areas. The policy of the Bireuen Regency Government does not allow smoking in places where the teaching and learning process and activities take place, such as schools, madrasas, colleges, courses, places of religious education/Qu’ran study education parks, including library rooms, practice rooms or laboratories, and museums.

Peulimbang4District is an area where many cultural activities take place, such as wedding parties that must provide cigarettes for men, in this case including teenage school students. Bireuen Regency is also an area with a lot of coffee shops where many men as well as high school students drink coffee; according to the students’ confession, drinking coffee feels more delicious if it is accompanied by smoking. Also for men, including school students in the Peulimbang sub-district, coffee is a morning ritual with cigarettes, afternoon encouragement, and closing of the night. In the taverns men congregate, enjoying a cup of coffee and a cigarette.

Public Senior High School 1 Peulimbang also has a policy of not allowing its students to smoke in the school environment, Public Senior High School 1 Peulimbang is one of the schools that enforces a smoking ban for students and students, even though the consumption of cigarettes in Public Senior High School 1 Peulimbang should be reduced, but in reality, it is not according to a survey conducted through direct interviews with students, based on the class at Public Senior High School 1 Peulimbang. Most of them were male students in class XI (70%) and there were also male students in class X who smoked (30%). Students who often smoke outside school hours are 60% of XII graders. Based on the results of interviews conducted with 10 students, it was found that as many as 2 students (20%) did not smoke and 8 students (80%) smoked. According to information obtained from school principals and counseling teachers, students who smoke are not only smoking inside the school environment since a lot of smoking occurs outside of schools, such as in coffee shops, internet cafes, and wedding venues. Some studies have done a lot of research on socio-cultural issues with smoking, some of which are related and some unrelated.

Materials and Methods

This cross-sectional research aims to analyze the relationship between personality variables and the smoking behavior of students at Public Senior High School Peulimbang. The population in this study was all class students, X and XI in Public Senior High School Peulimbang comprise 125 students. Data analysis methods

### Table 1. The results of the cross-tabulation of socio-cultural, personal, and environmental smoking behavior in Public Senior High School 1 Peulimbang.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Smoking behavior</th>
<th>Total</th>
<th>RP CI 95</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smoke</td>
<td>Do not smoke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Socio-cultural</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not good</td>
<td>10</td>
<td>72</td>
<td>82</td>
<td>100</td>
</tr>
<tr>
<td>Good</td>
<td>41</td>
<td>95.3</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>Personality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not good</td>
<td>1</td>
<td>1.5</td>
<td>67</td>
<td>100</td>
</tr>
<tr>
<td>Good</td>
<td>50</td>
<td>86.2</td>
<td>58</td>
<td>100</td>
</tr>
<tr>
<td>Environmental Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not support</td>
<td>9</td>
<td>13</td>
<td>69</td>
<td>100</td>
</tr>
<tr>
<td>Support</td>
<td>42</td>
<td>75</td>
<td>56</td>
<td>100</td>
</tr>
</tbody>
</table>

RP: prevalence ratio; CI: confidence interval.

### Table 2. Results of multivariate Poisson regression analysis on socio-cultural relationships with student smoking behavior at Public Senior High School 1 Peulimbang.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Exp(B)</th>
<th>95% Wald Confidence Interval for Exp(B)</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Socio-cultural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not good</td>
<td>2.330</td>
<td>0.836</td>
<td>6.496</td>
</tr>
<tr>
<td>Good</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not good</td>
<td>42.630</td>
<td>5.376</td>
<td>338.064</td>
</tr>
<tr>
<td>Good</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not support</td>
<td>0.629</td>
<td>0.216</td>
<td>1.831</td>
</tr>
<tr>
<td>Support</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exp(B): exponential value of B; Sig: significance.
used include univariate analysis, bivariate analysis with Poisson regression, and multivariate analysis also using the Poisson regression test.\textsuperscript{15}

## Results

Data were analyzed univariately, bivariately, and multivariately and the results are reported in Table 1. Table 1 shows the smoking behavior of 43 people who said the socio-cultural variable was good and who said they didn’t smoke as many as 2 (1.6%), 41 (32.8%) people smoked, and 82 people who said the socio-cultural did not both as many as 72 (57.6%) people do not smoke and as many as 10 (8.0%) people smoke. The results of the Chi-square statistical test were carried out to determine the socio-cultural relationship with smoking behavior, and from the results of the tests carried out, the P value was P<0.001 so it can be concluded that there is a significant relationship between socio-culture and smoking behavior. Based on the value of the prevalence ratio (RP) it is known that the value is 7.819 with a CI between 4.358 to 14.028, meaning that if RP>1 then it is a high risk. It can be concluded that smoking behavior poses a high risk to the sociocultural environment. The results of this study are also line with Rizky Septi Nugroho’s research entitled Adolescent smoking behavior (smoking behavior as a social identity of adolescents in association in Surabaya). The sociocultural functions of adolescents in the past included a means to open communication, maintain friendships, and make friends.\textsuperscript{16,17} For the personal category, it can be seen that the smoking behavior of 58 people who said that person was good, as many as 8 people (6.4%) did not smoke and as many as 50 people (40.0%) smoked. Meanwhile, of the 67 people who said that person was not good, 66 people (52.8%) said they didn’t smoke and 1 person (0.8%) smoked. The results of the Chi-square statistical test analysis were carried out to determine the personal relationship with smoking behavior, and from the results of the tests carried out, the P<0.001 was obtained. Thus, it can be concluded that there is a significant relationship between personal and smoking behavior. From the results of the RP in person, it is known that the RP=57.759 with a CI 95% =8.234-405.158, meaning that the person is at high risk with smoking behavior seen from the RP>1. The results of this study are in line with the results of Prasasti’s research (2011) on the relationship between personality neuroticism, extraversion, agreeableness, conscientiousness, and openness to smoking behavior, with P=0.004<0.05, which means there is a significant relationship.\textsuperscript{18} For the environmental influence category, it can be seen that the smoking behavior of 56 people who said environmental factors supported as many as 14 people according to Allport is a dynamic organization in the individual and makes individual responses or reflexive responses, which are responses elicited by stimuli.\textsuperscript{25,26} Responses are divided into 2 (two), namely: i) respondent responses or reflexive responses, which are responses elicited by certain stimuli; ii) operant responses, which are responses that arise and develop based on certain stimuli.\textsuperscript{27,28}

Based on the results of research on personal relationships with smoking behavior of Peulimbang 1 Public High School Students, it was found that there were 43 people (34.4%) in the category of good socio-cultural factors. In the bad category, there were 82 people. (65.6%). Thus, it can be concluded that there is a significant relationship between sociocultural factors and smoking behavior. From the value of the RP, it is known that the value is 7.819 with a CI 95% =4.358-14.028, meaning that if the RP>1 then it is high risk, so it can be concluded that social culture that is not good is at risk with smoking behavior. The results of this study are also consistent with Sondos M. S. Islam and Carl Anderson Johnson’s (2005) study titled influence of known psychosocial smoking risk factors on Egyptian adolescents’ smoking behavior that cultural factors influence smoking behavior as seen through the t count 2.816>t table 1.9977. Thus, it can be concluded that there is a significant influence between cultural factors on smoking behavior. In addition, based on the value of the coefficient of determination (Adjusted R Square) of 0.936 or 93.6%. This means that 93.6% of smoking behavior is influenced by cultural factors, social factors, personal factors, and psychological factors. While the remaining 6.4% is by other variables. Skinner in Notoatmodjo (2007) suggests that behavior is the result of the relationship between stimulus (stimulus) and response (response). Responses are divided into 2 (two), namely: i) respondent responses or reflexive responses, which are responses elicited by certain stimuli; ii) operant responses, which are responses that arise and develop based on certain stimuli.\textsuperscript{29,30}

Based on the results of research on personal relationships with smoking behavior of Peulimbang 1 Public High School Students, it was found that personal factors that were not good were 67 people (53.6%) and good were 58 people (46.4%). And obtained a P<0.001 meaning that there is a relationship between personal factors and smoking behavior, and RP=57.759 with a CI of 95% =8.234-405.158, meaning that if the value of RP>1 then a person is not good is at risk of smoking behavior. Personality or personal according to Allport is a dynamic organization in the individual as a system of psychosis that determines the unique way in which the individual adjusts to the environment.\textsuperscript{27,28}

Based on the results of research on the relationship between the environment and smoking behavior of Peulimbang 1 State Senior High School students, it was found that, the behavior of students who smoked in the non-supportive category was 69 people
(55.2%) and the behavior of students who smoked in the supportive category was 56 people (44.8%), while the behavior of students who did not smoke in the non-supportive category was 60 people (48.0%) and the behavior of students who did not smoke in the supportive category were 14 people (11.2%) and obtained a P<0.001 means that there is a significant relationship between environmental factors and smoking behavior, and the value of RP for the environment is known to be a value of 5.750 with a 95% CI=3.069-10.772, meaning that if the value of RP>1 it can be concluded that environmental factors that support the risk with smoking behavior. The result of this study are consistent with Prasetya’s research (2008) entitled The Relationship between Environmental Factors and Smoking Behavior in Adolescents at Narmada 1 Public High School, West Lombok Regency, NTB which shows that 44.67% of respondents are active smokers and 81.82% of smoking behavior is influenced by an environmental factor.29

In general, based on the results of multivariate analysis using the Poisson regression test, personal factors are more dominant than the other 2 variables. The prevalence of smoking behavior with personal is RP=42.630; CI 95%=5.376-338.064; P=0.000), therefore the personal variable in this study was stated as the only variable that was most dominant with students’ smoking behavior. According to Jessor, problematic behavior in a person, including smoking, is the result of the interaction of personality, attitudes, and behavior with the environmental system, including the family environment and peers. According to Hansen in Nasution (2007) also states several factors that influence smoking behavior, namely: i) biological factors, that nicotine in cigarettes is one of the chemicals that plays an important role in smoking dependence; ii) psychological factors, because smoking can increase concentration, drive away drowsiness, familiarize the atmosphere, feel a sense of brotherhood, give the impression of being modern and authoritative; iii) social environmental factors, influencing attitudes, beliefs and individual attention to smokers; iv) demographic factors, including age and gender; v) socio-cultural factors, such as cultural habits, social class, education level, income, and job prestige; vi) socio-political factors, protecting non-smokers and non-smoking health promotion campaign efforts.30

Conclusions

Based on the results of multivariate analysis using the Poisson regression test, personal factors are more dominant than 2 other variables. The prevalence of smoking behavior with personal is RP=42.630; CI 95%=5.376-338.064; P=0.000), therefore the personal variable in this study is stated as the only variable that is most dominant with student smoking behavior.

References