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Knowledge, Attitudes and Practices Regarding Smoking Prevention Among Students of Jakarta Global University

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ABSTRACT

Students need good knowledge, attitudes, and behavior in maintaining a healthy lifestyle, especially in avoiding smoking and understanding its dangers, to set a good example for the public and younger generations. This study aims to examine the knowledge, attitudes, and practices (KAP) of students regarding smoking habits at Jakarta Global University (JGU). The research uses a descriptive quantitative method with an online questionnaire involving 105 respondents. The results show that most students are aged 18 to 22 years (86.7%), with the majority from the pharmacy department (43.8%). Students' knowledge about the dangers of smoking is quite good, although challenges remain in improving their understanding of the serious health risks. Their attitudes demonstrate strong belief in the effectiveness of anti-smoking campaigns, with 67.6% of respondents agreeing that smoking has a severe negative impact on health. The practice of smoking prevention is also relatively high, with 64.8% of students supporting smoking cessation programs and replacing smoking habits with healthy activities. The study concludes that students' knowledge, attitudes, and behavior regarding smoking habits are generally good. However, further education is needed to ensure effective smoking prevention and reduce the associated health risks.

INTRODUCTION

Smoking is one of the most serious and widespread public health issues globally. According to a report by the World Health Organization (WHO) on global tobacco consumption, the number of active smokers worldwide has reached 62.8 million people, with 40% of them coming from low to middle-income groups. In Indonesia, the smoking prevalence rate is the third highest in the world, with approximately 46.8% of men and 3.1% of women identified as smokers, based on the classification of individuals aged 10 years and older (WHO, 2021). The prevalence of smoking in Indonesia has shown a significant increase, as highlighted by data from the National Socioeconomic Survey (Susenas) by BPS (2018). The percentage of smokers under the age of 18 based on age groups is 0.71% for ages 10-12, 7.30% for ages 13-15, and 21.57% for ages 16-18. West Java is among the provinces with the highest percentage of smokers aged 15 and above, at 35.78%, compared to the national average of 32.20%. This information requires serious attention, considering the highly complex impacts of smoking.

Inadequate knowledge, attitudes, and behaviors regarding the negative effects of smoking, as well as a lack of awareness of the associated health risks, make students more likely to continue smoking despite understanding its dangers. Many smokers express a desire to quit, yet this effort is often challenging due to various influencing factors. One such factor is the economic aspect—quitting smoking can reduce expenses, allowing funds to be allocated for other needs (Psychology et al., 2016). Understanding students' knowledge, attitudes, and practices (KAP) regarding smoking is crucial for developing effective prevention strategies and creating a healthy, smoke-free campus environment. Beyond concerns about smoking, it is also essential to emphasize educational efforts and interventions that can support students in making healthier decisions.

This study aims to evaluate and understand the knowledge, attitudes, and behaviors related to smoking among students at Jakarta Global University. Considering that not all students receive adequate education and that there is a lack of awareness regarding the risks associated with smoking, it is essential to explore these aspects. By gaining a deeper understanding, this research is expected to provide valuable insights for healthcare practitioners, educators, and policymakers in developing more effective and supportive educational strategies. Ultimately, these efforts can help reduce smoking habits and raise awareness of the dangers of smoking among students.

RESEARCH METHODOLOGY

Research Design, Population, and Sample

A descriptive cross-sectional study design was used to collect respondent information to assess the knowledge, attitudes, and practices of students at Jakarta Global University regarding smoking habits from May to July 2024. Data collection methods included online observations and questionnaires. In cases where respondents did not understand certain statements, the research team provided further clarification. This study involved 105 randomly selected students. Prospective participants were given an explanation of the study and were asked to voluntarily provide their consent to participate in the research.

Research Questionnaire

After reviewing relevant literature, a self-designed questionnaire was developed based on the KAP model. The questionnaire consists of a series of statements structured using a 2-Point Likert Scale (Yes and No) for the knowledge section and a 4-Point Likert Scale (Strongly Disagree, Disagree, Agree, Strongly Agree) for the attitude and practice sections, allowing respondents to express their level of agreement and knowledge regarding the given statements. The questionnaire consists of four sections and is administered online via Google Forms (*https://forms.gle/2Gy3aEYdeaUV8Got9*). The first section consists of five statements documenting the socio-demographic characteristics of the participants. The second section of the questionnaire includes 12 statements evaluating knowledge and awareness regarding the health risks of smoking and the economic impact of rising cigarette prices. In the third section of the questionnaire, there are 11 statements assessing participants' attitudes toward the dangers of smoking, their support for anti-smoking policies, and their beliefs about the importance of quitting smoking for health reasons. In the fourth section of the questionnaire, there are seven statements evaluating the actual actions taken by respondents related to smoking and their support for smoking cessation programs.

Validation and Reliability of the Research Questionnaire

The validity test was conducted and discussed with two professional lecturers in the health field, as well as referenced from published journals. The reliability of the questionnaire was tested by piloting it on 30 respondents. For the statements measuring attitudes and practices, the Cronbach's alpha values were calculated and showed high results, ranging from 0.660 to 0.909. Meanwhile, the statements assessing knowledge produced a lower value of -0.157. Although the Cronbach's alpha value for the knowledge statements in this study falls below the commonly accepted standard, these statements were retained for descriptive analysis as each one measures a unique aspect of knowledge. Despite its low consistency, each statement provides essential information that contributes to a comprehensive understanding of the subject. The results of this analysis should be interpreted with caution, and further improvements to these statements will be pursued in future research.

Data Analysis

All data from the completed questionnaires were automatically collected by the survey platform and downloaded into Microsoft Excel 2010. The data were then analyzed using SPSS for Windows, version 22, to conduct descriptive data analysis.

RESULTS AND DISCUSSION

Result

This study was conducted on students at Jakarta Global University, involving both smokers and non-smokers. A total of 105 students participated as respondents, selected through a random sampling method.

Tabel 1. Socio-Demographic Characteristics of Respondents (n = 105))

Characteristic	***n***	**%**
Total	105	100
Age		
18 - 22	91	86,7
23 - 27	10	9,5
28 - 32	2	1,9
> 32	2	1,9

Characteristic	*n*	%
Gender		
Male	37	35,2
Female	68	64,8
Major		
D3 Accounting	2	1,9
S1 Pharmacy	46	43,8
S1 Civil Engineering	8	7,6
S1 Electrical Engineering	13	12,4
S1 Mechanical Engineering	8	7,6
S1 Industrial Engineering	3	2,9
S1 Informatics Engineering	7	6,7
S1 Digital Business	5	4,8
S1 Management	13	12,4
S2 Electrical Engineering	-	-
Semester		
1	-	-
2	48	45,7
3	2	1,9
4	38	36,2
5	2	1,9
6	7	6,7
7	1	1
8	7	6,7
Smoking Status		
Active Smokers	14	13,3
Passive Smokers (those exposed to secondhand smoke from family members or close friends)	19	18,1
Non-smokers.	72	68,6

Based on Table 1, the characteristics of the respondents indicate that the majority of students were aged 18-22 years, with a total of 91 students (86.7%). In the age category of 23-27 years, there were 10 students (9.5%), while the 28-32 years and >32 years categories each consisted of 2 students (1.9%). In terms of gender, there were more female students (68 students or 64.8%) compared to male students (37 students or 35.2%). Regarding academic majors, most respondents were from the S1 Pharmacy program, with 46 students (43.8%). Other majors, such as S1 Electrical Engineering and S1 Management, were each represented by 13 students (12.4%), followed by S1 Civil Engineering and S1 Mechanical Engineering, with 8 students (7.6%) each. Respondents from other majors had lower percentages. In the semester classification, second-semester students dominated, with 48 students (45.7%), followed by fourth-semester students, with 38 students (36.2%). The other semesters had fewer respondents. Regarding smoking status, the majority of respondents were non-smokers, with 72 students (68.6%). A total of 19 students (18.1%) were passive smokers, and 14 students (13.3%) were active smokers.

Tabel 2. Knowledge of Smoking Prevention

Statement	Total n (%)	
	Yes	No
Health Risks of Smoking		
Smoking causes lung cancer	104 (99)	1 (1)
Cigarette smoke is harmful to passive smokers	105 (100)	-
Nicotine in cigarettes causes addiction	103 (98,1)	2 (1,9)
Smoking increases the risk of heart disease	104 (99)	1 (1)
Smoking reduces lung function	103 (98,1)	2 (1,9)
Individuals exposed to cigarette smoke are more vulnerable to respiratory diseases	103 (98,1)	2 (1,9)
Electronic cigarettes contain harmful substances	103 (98,1)	2 (1,9)
Quitting smoking reduces the risk of heart disease, stroke, and lung cancer	99 (94,3)	6 (5,7)
Smoking can affect brain function, including cognitive abilities and memory, due to nicotine content	98 (93,3)	7 (6,7)
Smoking worsens health conditions for students with a history of respiratory diseases (e.g., asthma)	105 (100)	-
Nicotine buildup negatively impacts health, leading to decreased motivation, reduced concentration ability, and memory impairment, especially among students	101 (96,2)	4 (3,8)
Economic Impact of Cigarette Price Increases		
This study indicates that over the past five years, the price of cigarettes has increased from IDR 1,500 per stick to IDR 2,250 per stick, far exceeding the inflation rate of only 3% per year	103 (98,1)	2 (1,9)

According to Table 2, in terms of knowledge, 99% of students (104 out of 105) are aware that smoking can cause lung cancer, while 100% of students (105 out of 105) know that cigarette smoke is harmful to passive smokers. Awareness of the risks of heart disease and reduced lung function is also high, with 99% and 98.1% of students, respectively, agreeing with these statements. This indicates a very high level of knowledge among students regarding the dangers of smoking. A total of 98.1% of students are aware that electronic cigarettes contain harmful substances, while 93.3% of students recognize that smoking can affect brain function. This suggests that the majority of students have a good understanding of the health risks associated with electronic cigarettes and their nicotine content. Additionally, 98.1% of students acknowledge that the increase in cigarette prices over the past five years has exceeded the inflation rate. This indicates that most students are aware of the economic impact caused by rising cigarette prices.

Tabel 3. Attitudes Toward Smoking Prevention

Statement	Total n (%)			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Health Risks of Smoking				
I believe that smoking is very harmful to health	-	3 (2,9)	31 (29,5)	71 (67,6)
Support for Anti-Smoking Policies				
I support the smoking ban policy on campus	3 (2,9)	1 (1)	33 (31,4)	68 (64,8)
I support campus programs such as awareness campaigns that help students quit smoking	-	2 (1,9)	46 (43,8)	57 (54,3)
Regular counseling programs on the dangers of smoking on campus should be conducted to help students quit smoking	-	1 (1)	47 (44,8)	57 (54,3)
Importance of Quitting Smoking for Health				
I believe that quitting smoking is important for health	-	3 (2,9)	30 (28,6)	72 (68,6)
I protect myself and my friends from cigarette smoke	1 (1)	3 (2,9)	41 (39)	60 (57,1)
I believe that a smoke-free campus environment is healthier	2 (1,9)	-	31 (29,5)	72 (68,6)
Electronic cigarettes are not a safe alternative	3 (2,9)	1 (1)	45 (42,9)	56 (53,3)
I appreciate my friends' efforts to quit smoking	-	1 (1)	36 (34,3)	68 (64,8)
I believe that smoking can interfere with academic activities	3 (2,9)	10 (9,5)	51 (48,6)	41 (39)
I agree that quitting smoking can save a lot of money that can be used for other needs	-	2 (1,9)	34 (32,4)	69 (65,7)

Based on Table 3, regarding students' statements on the attitude variable, 67.6% of students strongly agree that smoking is very harmful to health, while 29.5% agree. This indicates that the majority of students have a firm stance on the risks associated with smoking. A total of 64.8% of students strongly agree with the smoking ban on campus, and 54.3% support campus programs that help students quit smoking. This demonstrates significant support for anti-smoking policies and programs within the university. Furthermore, 68.6% of students strongly agree that quitting smoking is important for health, and 57.1% strongly agree on protecting themselves and their peers from cigarette smoke. This reinforces the importance of quitting smoking for personal health, safety, and the well-being of the surrounding environment.

Tabel 4. Practices on Smoking Prevention

Statement	Total n (%)			
	Strongly Disagree	Disagree	Strongly Disagree	Strongly agree
Taking Action to Support Smoking Cessation Programs				
I avoid smoking areas and reduce cigarette consumption	2 (1,9)	1 (1)	42 (40)	60 (57,1)
I do not purchase tobacco products	1 (1)	5 (4,8)	31 (29,5)	68 (64,8)
I try specific methods to help me quit smoking	4 (3,8)	9 (8,6)	41 (39)	51 (48,6)
I choose smoke-free areas	3 (2,9)	2 (1,9)	32 (30,5)	68 (64,8)
I support smoking cessation programs and replace smoking habits with healthy activities	-	1 (1)	36 (34,3)	68 (64,8)
I educate my friends about the dangers of smoking	1 (1)	2 (1,9)	59 (56,2)	43 (41)
I keep track of the number of cigarettes I smoke each day to help reduce consumption	22 (21)	3 (2,9)	43 (41)	37 (35,2)

Based on Table 4, regarding students' statements on the practice variable, 64.8% of students strongly agree not to purchase tobacco products, and 56.2% agree to educate their peers about the dangers of smoking. This demonstrates a strong commitment among students to support smoking cessation efforts and anti-smoking education. Additionally, 57.1% of students strongly agree to avoid smoking areas and reduce cigarette consumption, reflecting concrete efforts to minimize exposure to smoking in their surroundings. Thus, this data indicates that students not only have a positive attitude toward anti-smoking policies but also actively participate in concrete measures to support smoking cessation programs and reduce exposure to cigarettes.

Discussion

Among the 105 students involved in this study, 97.52% demonstrated good knowledge regarding smoking prevention, while 2.48% had poor knowledge. These findings align with the study by Mukuan (2012), which involved 223 students out of a total population of 412 students at SMK Kristen Kawangkoan and revealed a significant relationship between knowledge about the dangers of smoking and smoking behavior, with a p-value of 0.000. Notoatmodjo (2007) stated that knowledge or cognitive aspects are essential elements in shaping individual actions. Research and experience indicate that behavior based on knowledge tends to be more effective compared to behavior that is not knowledge-driven. The process of adopting new behavior typically involves sequential stages within an individual.

According to Lawrence Green, one of the factors influencing individual behavior is predisposing factors, which include aspects of knowledge. Knowledge itself is the result of a person's sensory process or understanding of an object through their five senses (Notoatmodjo, 2018). A study conducted by Baharuddin (2017) also revealed a relationship between knowledge levels and smoking behavior. This is consistent with the theory proposed by

Notoatmodjo (2018), which explains that knowledge is a crucial domain in shaping actions (overt behavior). When an action is based on knowledge, it tends to have greater endurance and long-lasting effects.

Among the 105 students studied, 68.6% exhibited a positive attitude toward smoking prevention, while 31.4% had a less supportive attitude. These findings are consistent with a study conducted by Nurlaily (2015), which explored the relationship between knowledge and male adolescents' attitudes toward the dangers of smoking at SMP Muhammadiyah Pamekasan. The study involved 51 male adolescents, with 25 being smokers and 26 non-smokers, from a total sample of 45 students. The results showed a p-value of 0.010 and $\alpha = 0.05$, indicating a significant relationship between knowledge and adolescents' attitudes toward the dangers of smoking.

Among the 105 students studied, 64.8% demonstrated good smoking prevention practices, while 35.2% had poor smoking prevention practices. Based on the testing and analysis conducted by Gulo, Darieli Berkat Jaya (2019), the hypothesis in this study was accepted, indicating that several factors influence adolescents to smoke, which are related to their smoking behavior, although this behavior never occurred within the school environment. The findings of this study are significantly higher than those reported by Amira and colleagues (2019), which revealed that 34 students (36%) in the studied school were smokers. This discrepancy may be attributed to differences in environment and student lifestyles, where some students perceive smoking as a common practice for their age group. Additionally, differences in adolescent characteristics based on developmental stages also play a role. Early adolescents tend to begin exploring new ideas, including curiosity about smoking. Several factors influence smoking behavior among adolescents, such as knowledge, curiosity, and peer influence. The social environment is one of the primary causes of adolescents starting to smoke, with role modeling (imitating others' behavior) being a key factor in initiating the habit (Mahabbah, 2019).

Factors influencing smoking behavior among adolescents include knowledge and attitudes toward smoking, social environmental influences, access to facilities and infrastructure, and psychological factors. These influences affect adolescent smoking behavior because adolescence is a stage that is highly vulnerable to negative influences (Aditama, 2019). Social environment plays a significant role in shaping an individual's smoking habits. Peer pressure and social groups have a major impact on determining whether an adolescent will start smoking (Fajar, 2017). Adolescents often imitate the habits of their peers or groups to gain acceptance. This behavior is also linked to low self-confidence, making them more likely to adopt habits such as smoking (Agustiani, 2018). According to Hurlock (2017), many adolescents strive to be accepted by their peer groups, but this acceptance is often sought through irresponsible behaviors, such as smoking.

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CONCLUSIONS

The findings of this study indicate that students have good knowledge of the dangers of smoking and exhibit a positive attitude, as reflected in their smoking prevention practices. Most students recognize the importance of participating in anti-smoking campaigns to improve health and believe that comprehensive education and collaboration among stakeholders are essential for effective prevention. However, the lack of a supportive environment remains a significant challenge. Therefore,

students are encouraged to maintain a healthy lifestyle by avoiding smoking and serving as positive role models for society and younger generations. This study serves as a valuable reference for future research exploring smoking prevention efforts in high-risk areas. Additionally, universities should actively promote initiatives that enhance knowledge, attitudes, and practices regarding smoking prevention within the campus environment.

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