

Cross-Sectional Study: Can Cigarette Advertising Influence Health Faculty Students?

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ABSTRACT

Background: Smoking behavior among faculty students still in a high prevalence. One of the causes of this behavior is the existence of smoking advertisements on various media, including social media. **Objective:** This research aims to determine smoking behavior among students and their responses to cigarette advertising. **Method:** This is survey research using a cross-sectional approach. Samples were taken from 69 students who had filled out a questionnaire distributed via Google Forms. **Results:** The research showed that the average age of respondents was 24 years from 19-44 years. As many as 68.1% were female, and unmarried (63.8%). As many as 26.1% of respondents smoked and the age at which they started smoking was approximately 17 years from the range of 14-19 years with an average of 1-12 cigarettes per day from their pocket money (68%). As many as 29% of respondents were influenced by cigarette advertising, with medium and large levels of influence each at 1.4%. As many as 62.3% of their family members smoke; the majority are fathers (46.4%) and older brothers (8.7%). The results of the research show that smoking behavior is still widely practiced by students at health faculties. **Conclusion:** Gender and the influence of cigarette advertising related to students' smoking behavior. It's necessary to invigilate and stop cigarette advertisements in various accessible media. Education for students is needed, and can be included in learning courses, as well as a policy not to smoke in all academic activities, both on and off campus.

Keywords: Cigarette advertising, Health faculty students, Smoking behavior.

INTRODUCTION

Smoking behavior among school children and students still has a high prevalence. One of the causes of this behavior is the existence of smoking advertisements on various media, including social media and electronic media. Smoking behavior is one of the main health problems in Indonesia and other developing countries. Smoking behavior in the world is 1.3 billion, of which 942 million are male smokers and 175 million are female smokers who are over 15 years old (Drope & Schluger, 2018).

Basic Health Research Data in 2018, the highest prevalence of residents aged ≥10 years who smoke every day and occasionally is in West Java province (32.0%), the lowest is in Bali province

(23.5%)(Badan Penelitian dan Pengembangan Kesehatan, 2018). The 2023 Indonesian Health Survey found results regarding conditions related to smoking behavior. Prevalence of Smoking in Population Aged 10-18 years in the last 1month, West Java Province is the highest province with the number of daily smokers (7.3%), occasional smokers 3.8% and former smokers 1.4%. Men who smoke every day are higher (8.9%) than women (0.1%). The education level of most smokers is high school (12.9%), with the occupations of farmers/farm laborers and fishermen, each accounting for more than 40%. There are more smokers living in rural areas than in urban areas and those with high incomes smoke, less than those with lower incomes (Badan Kebijakan Pembangunan Kesehatan, 2023). As many as 7 million deaths in developing

countries are caused by exposure to cigarette smoke from other people, including in Indonesia. If not prevented, it's estimated that by 2020 there will be an increase of 8 million deaths (World Health Organization, 2018)

The results of previous research conducted at high schools in Pekanbaru concluded that the reason why someone smokes is because of their peers. Students smoke because they are influenced by their school friends. The more school friends who smoke, the more likely a student is to become a smoker because they want to join in and be friends with these friends. Apart from that, giving unreasonable pocket money also causes students to become smokers (Yulviana, 2015). (Yulviana, 2015). Research conducted on students from health faculties and non-health faculties at the Muhammadiyah University of Surakarta shows that the number of health faculty students who smoke is still quite high. Smoking-free areas have been implemented on the campus, but there are obstacles to implementing them (Nugroho, Kusumawati, & Wijayanti, 2019).

The price of cigarettes is not expensive and it is permissible to buy one cigarette at a time, causing someone to be tempted to buy, and can cause addiction. The ease of getting cigarettes and the fact that there is no prohibition on being a smoker has been the reason why people smoke (Fransiska & Firdaus, 2019). Research conducted in 2021 on teenagers shows that smoking behavior mostly starts at the age of 15 years. The biggest source of influence comes from peers, and the reason for smoking is because they want to try it and just want to taste cigarettes. Most people know the dangers of smoking because of the advertisements on cigarette packs. Even though they know the dangers of smoking, they still smoke for the reason of reducing the stress they feel and feeling calmer by smoking (Almaidah et al., 2020).

Research conducted on health faculty and non-health faculty students at Muhammadiyah University Surakarta showed that the number of health faculty students who smoke was still quite high. In health faculties, it was 55.6%, while in non-health faculties it was higher, namely 83.7%. Differences in characteristics and lecture activities are one of the causes of

this difference in prevalence. Health faculty students have better knowledge about the dangers of smoking than non-health faculty students, so there are fewer cases of smoking (Rahayu, 2017). Another research on students was carried out in Papua, namely by comparing the smoking habits of students at the Papua Mining Engineering Faculty and the Medical Faculty. The research results show that students at medical faculties have a lower prevalence compared to engineering faculties. Habits that can affect health include consuming alcohol and smoking which can cause health problems in the future if not treated immediately (Rase, Zaini, Kamalle, & Ain, 2021).

The existence of different regulations in various places is also the cause of the high smoking habit among students. Faculties that do not have a no-smoking rule are one of the factors causing students to smoke. Likewise, the rise of cigarette advertising on every public street in the form of banners or posters which can be seen by all ages, as well as advertisements on television and social media, which are now very easily accessible to all people, can be the cause of someone becomes a smoker. The absence of a ban on cigarette advertising in various media has made the public's perception of cigarettes normal and not considered something dangerous, considering that the state has not banned the distribution of cigarettes along with advertisements and places where cigarettes are easily available.

This research has differences with previous research conducted by Rase, Zaini, Kamalle, & Ain, (2021) who researched the smoking behavior of students at the Faculty of Medicine and the Faculty of Mining, University of Papua. Previous research mostly discussed factors related to smoking behavior, while this research also discusses the responses of students from health faculties to cigarette advertisements and their smoking behavior.

Based on this background, the researcher intends to research smoking behavior among health faculty students and their responses to cigarette advertisements in various media. The difference between this research and previous research is this study aims to analyze the factors that influence

smoking behavior among health faculty students, which consists of several variables, such as age, gender, marital status, family who smoke, age at which they started smoking, costs incurred to buy cigarettes and number of cigarettes per person, age starting smoking, and the influence of advertising in various media on smoking behavior.

METHODS

This research is an analytical survey research with a cross-sectional approach. Data was collected using a questionnaire given to respondents using a Google, form which contained a questionnaire that explored the variables studied. Independent variables of this research are age, gender, marital status, family member smoking behavior, age started smoking, number of cigarettes, cost of cigarettes, and the influence of smoking advertisements. The dependent variable was smoking behavior among health faculty students.

The research population was all health students at the Health Institute in Bandung City, and samples were taken from health faculty students who were willing to take part in the research by filling in informed consent on the form that was distributed. Students at the health faculty consist of regular students and transfer students who come from employees who are already working. The total number of samples who filled out the questionnaire containing 10 questions about respondent characteristics, smoking habits, and responses to cigarette advertising in full was 69 people. The sample was taken by purposive sampling, namely respondents who were willing to fill out the questionnaire, which was circulated using Google Forms via the WhatsApp group for a week. The collected data was analyzed using a tabular form with descriptive explanations. To determine the relationship between cigarette advertising and smoking behavior, it was tested using the Chi-Square statistical test at alpha 5%. This research has received an ethical certificate from the Health Research Committee from Immanuel Health Institute Number 32/KEPK/IKI/IV/2024.

RESULTS AND DISCUSSION

The research was conducted on 69 health faculty students at one of the health colleges in Bandung, consisting of transfer students and regular students. Data was collected within 1 week, and the following results were obtained:

Table 1. Research variables and respondent characteristics

Variable	n = 69	%
Age (years)		
15-19	9	13.0
20-24	40	58.0
25-29	5	7.2
30-34	8	11.6
35-39	2	2.9
40-44	5	7.2
Gender		
Male	22	31.9
Female	47	68.1
Marital status		
Married	25	36.2
Unmarried	44	63.8
Smoking behavior		
Yes	18	34.1
No	44	65.9
Ever	7	10.1
Family members smoking		
Yes	43	62.3
No	26	37.7
Family members who smoke		
Father	32	46.4
Brother	7	10.1
Inlaw	1	1.4
Husband	1	1.4
Father and brother	1	1.4
Mother and uncle	1	1.4
Little brother	1	1.4
Age started smoking (year) (n=25)		
10-14	1	4.0
15-19	24	96.0
Number of cigarettes/day (stick)		
1-6	19	76.0
7-12	6	24.0
Cost of buying cigarettes (n=25)		
Pocket money	17	68.0
From work	6	24.0
From others	2	8.0
Total Cost of buying cigarettes (n=25)		
>= Rp 25.000,-	20	80.0
>Rp 25.000,-	5	20.0
Family responses		
Forbid	9	13.0

Let	60	87.0
The influence of advertising on smoking behavior		
Yes	20	29.0
No	49	71.0
The big influences of advertisements on smoking behavior		
Nothing	49	71.0
Normal	18	26.1
Currently	1	1.4
Big	1	1.4

Table 1 shows that most of the respondents' ages ranged from 20-24 years (58.0%). This is because this age is the end of regular students who are currently studying. The research respondents consisted of regular students and students from transfer levels or employees who were continuing their studies with basic education from Diploma III, so the age range ranged from 19 to 44 years, with a mean of 24.7 years and a standard deviation of 6.9 years. Based on SKI data for 2023, the proportion of people aged 20-24 years who smoke is 24.5% (23.8-25.2%) (Badan Kebijakan Pembangunan Kesehatan, 2023). When compared with the 2023 Indonesian Health Survey results, the percentage is higher, considering that the target of this research is students with ages ranging from 20-25 years.

The male gender of the respondents was 31.9% male and 68.1% female. There are more women in health faculties, compared to non-health faculties, for example, engineering faculties. As many as 25 people (36.2%) of respondents were married, especially students with transfer status, while there were more unmarried students, namely 44 people (65.9%). The 2023 Indonesian Health Survey results show that men have a greater proportion of smoking (Health Development Policy Agency, 2023). The results of the logit analysis of the 2018 Riskesdas found that gender was positively related to smoking behavior in male adolescents, and they had a higher probability of daily smoking than females (Direja & Febrimuliani, 2021).

There were 34.1% of respondents who had a smoking habit, 65.9% who did not, and 7 people who had smoked (10.1%). The reasons for smoking among students are that at first, they try it, feel calmer when smoking, some are addicted

to cigarettes, are curious about the taste of cigarettes, close friends have a smoking habit and feel stressed so they need to calm their minds, and some smoking for no particular reason.

Respondents who had family members who smoked were 62.3%, and most of the family members who smoked were fathers (46.4%). Of the 25 people who smoked, the age at the start of smoking was between 15-19 years (96.0%). The number of cigarettes spent per day is between 1-6 cigarettes (76.0%), and the money used to buy them is mostly pocket money (96.0%) and the amount of money spent on cigarettes is mostly less than IDR 25,000. ,- (80.0%). The smoking location for most students is not on campus, because there is a prohibition on smoking in campus areas. Places, where students smoke, include on the balcony of the house, anywhere other than on campus, at a friend's house or boarding house, and also in places to hang out, such as in cafes with other friends.

The presence of family members who smoke can be the cause of a child becoming a smoker because they feel there is support from parents or other family members. Apart from that, family members who smoke at home cause disease for other family members, because the others become passive smokers. The results of research on family members who smoke, it turn out to be the cause of bronchopneumonia (Sustrami, 2020). Apart from that, many diseases can be caused by smoking behavior, such as hypertension, various types of cancer, stomach problems, and also reproductive health problems. The majority of respondents' families responded to the smoking habit (87.0%) and only 13.0% gave warnings. The results of research on adolescents in Banda Aceh show that the family has an important role in adolescent smoking behavior. One of the functions of the family is to prevent bad behavior, namely the smoking behavior of family members. There is a need to divide roles and control functions between families, so that they can prevent behavior that endangers the health of individual family members and their families, such as active and passive smoking at home (Raihana Irma ; Suryane Sulistiana Susanti, 2019).

The existence of cigarette advertisements in various media can

influence someone to become a smoker. The research results showed that the majority of respondents were not influenced by cigarette advertisements (71.0%), however, there were still 29.0% who were influenced by these advertisements, so they need to be wary

of advertisements in various media. The magnitude of the influence of these advertisements varies, as many as 1.4% still feel that cigarette advertisements have a big influence on their smoking behavior.

Table 2. Cross Tabulation Analysis of Factors Associated with Smoking Habits

Independent Variables	Smoking Habits				p-value OR (CI 95%)
	Yes		No		
	f	%	f	%	
Age (years)					0.101 4.36 (0.90-21.14)
< 25	16	32.7	33	67.3	
>= 25	2	10.0	18	90.0	
Gender					0.005** 5.71 (1.79-18.21)
Male	11	50.0	11	50.0	
Female	7	14.9	40	85.1	
Marital status					0.560 0.596 (0.184-1.93)
Married	5	20.0	20	80.0	
Unmarried	13	29.5	31	70.5	
Family member smoking					0.468 1.82 (0.56-5.88)
Yes	13	30.2	30	69.8	
No	5	19.2	21	80.8	
The family member who smoking					0.756 0.53 (0.10-2.82)
Parents	10	28.6	25	71.4	
Relatives	3	42.9	4	57.1	
Age started smoking					1.00 1.41 (1.09-1.83)
10-14 years	1	100.0	0	0.0	
15-19 years	17	70.8	7	29.2	
Number of cigarettes/day (stick)					0.218 0.63 (0.45-0.89)
1-6	12	63.2	7	36.8	
7-12	6	100.0	0	0.0	
Total cost of buying cigarettes					0.36 0.86 (0.47-0.89)
<=Rp 25.000,-	13	65.0	7	35.0	
>Rp 25.000,-	5	100.0	0	0.0	
The influences of cigarette smoking					0.0001** 26.26 (8.47-106.46)
Yes	14	70.0	6	30.0	
No	4	8.2	45	91.8	

Adv: Chi-Square Test at level 5%, 1%**

Based on Table 2, the results of the cross-tabulation between several factors related to smoking habits, data shows

that there is a relationship between gender and the influence of advertising and the ability to smoke, with a p-value

of less than 5%. The research results show that the higher the advertising, the more it will influence students in deciding to smoke. If we look at the OR value, it can be said that students who are influenced by smoking advertisements will have a 26 times higher chance of smoking compared to those who are not influenced by cigarette advertisements. Likewise, with the gender variable, the majority of students who smoke are male. Men have a 6 times higher chance of smoking than women. This is per the results of previous research and the results of the 2023 Indonesian health survey.

Other variables studied, such as age, marital status, age at which one started smoking, as well as the cost of buying cigarettes and others, did not have a significant relationship with smoking behavior in students. The presence of parents or family members who smoke does not influence smoking behavior, this is because students have a circle of friends outside the home who spend more time away from home. Peer influence can be an opportunity for someone to smoke. Research conducted on teenagers in the Parongpong area stated that peers have a positive influence on someone's smoking behavior (92.0%) (Kristiani & Ricky, 2023). Likewise, research conducted on students in Wonokromo Surabaya, proved that peer support is one of the causes of someone smoking, especially for teenage boys (Amalizar, Afridah, & Setiano, 2023).

Of the 20 respondents who felt that cigarette advertising influenced their behavior, it turned out that the majority, namely 70.0%, had the habit of smoking. Of the 49 respondents who felt that the cigarette advertisements they accessed did not influence their smoking behavior, it turned out that the majority (81.6%) did not have a smoking habit. Advertisements of various cigarette brands can influence smoking behavior. Someone who is exposed to cigarette advertising through various mass media has a more or less greater chance than those who are not exposed to cigarette advertising to become a smoker (TCSC-IAKMI, 2018). Another study of 533 respondents from various districts and cities in Indonesia, found that cigarette advertising had a statistically significant effect on smoking behavior (Putro et al., 2022). Students who are exposed to cigarette

advertisements have a permissive tendency towards smoking behavior.

Other research conducted in Pamekasan Regency, East Java, shows that there is a significant influence between smoking behavior and cigarette advertising. When compared between urban and rural areas, the influence of cigarette advertising affects urban communities compared to rural areas (Fadhila, Widati, & Fatah, 2022). Research conducted at the Islamic Boarding School stated that knowledge was not related to smoking behavior in students (Rokhmah, 2023). Based on this, it can be interpreted that even though students are students from health faculties, it turns out there are still those who have the habit of smoking.

In urban areas, cigarette advertising is more massive, because it can be carried out along the roads, as well as in strategic places visited by many people, especially teenagers, students, and college students. In the City of Bandung, there is a Bandung City Regional Regulation Number 4 of 2021 concerning No-Smoking Areas. The onslaught of advertising is of course more in urban areas than rural areas, so health workers should be more alert in areas with people who are more susceptible to the influence of cigarette advertising. Education must be carried out starting from elementary school because at these ages, advertising has a big influence on a person's life. If no education balances the information obtained, it will give an incorrect perception of smoking behavior.

CONCLUSION

Smoking behavior still exists among students in health faculties, especially male students. There is a relationship between gender and smoking behavior, with the trend being that more men smoke than women. Even though they know a lot about the dangers of smoking, because they have been exposed to a lot of information about the dangers of smoking, they still smoke for various reasons. Cigarette advertisements in various mass media are related to students' smoking behavior. There are still those who are influenced by the cigarette advertisements. Based on this study, it is necessary to follow up with education and regional regulations regarding smoking-

free areas which can prevent and reduce smoking habits. A ban on cigarette advertising in various media would be an alternative solution to reduce or eliminate the influence of advertising on smoking habits, especially for pupils and students. Despite the prevalence of healthy students who are influenced by cigarette advertising on their smoking behavior, it is also necessary to pay attention to the importance of discussing the dangers of smoking during college and limiting cigarette advertising in the campus environment.

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