Application Of Non-Smoking Area Policy in Non Health Student Environments, Is That Effective?

Sri Surantini[1], Retno Palupi[2], Windhu Purnomo[3]

[1]Graduate Student of Policy and Health Administration Department, Faculty of Public Health Universitas Airlangga Indonesia
[2]Department of Dental Public Health, Faculty of Dental Medicine, Universitas Airlangga Indonesia
[3]Department of Biostatistics and Population, Faculty of Public Health, Universitas Airlangga Indonesia

Corresponding author: Windhu Purnomo, Department of Biostatistics and Population, Faculty of Public Health, Universitas Airlangga Indonesia, Mulyorejo, Faculty of Public Health, Campus C Universitas Airlangga, Indonesia, phone numbers (+6231) 5929427, facsimile numbers (+6231) 5924618, (+6231) 5929427, email: purno.win20@gmail.com

ABSTRACT

Background: No-Smoking Area is a room or area that is declared prohibited from smoking, or producing, selling, advertising and or producing tobacco products. Universitas Airlangga as one of the favorite universities that has implemented of No-Smoking Areas policy so that it is expected to be an example in the effort to implement of No-Smoking Areas in the tertiary environment. However, the implementation of the No-Smoking Areas policy has not been carried out to the maximum.
Purpose: this study was to analyze student behavior towards the implementation of the no-smoking area policy at the faculty of economics and business at Universitas Airlangga.
Materials and Methods: This research is a quantitative study with cross sectional design involving 5,203 undergraduate students in the Economics and Business Faculty as a population and 100 students as samples. Data were collected using a questionnaire and data analysis was performed univariately and bivariately using the chi-square test.
Result: Based on the results of the study it can be concluded that the proportion of students who smoke in the Environment and Business Faculty of Universitas Airlangga is still very high at 64%.
Conclusion: The factors related to smoking behavior are the low attitudes of students' care towards the implementation of a non-smoking area, so that the application of a non-smoking area within the Faculty of Economics and Business, Universitas Airlangga has not been effectively implemented

INTRODUCTION

Smoking is one of the largest causes of death in the world that can be prevented. Smoking causes many losses, not only is it harmful to health but can worsen poverty and cause social, economic and environmental damage[1,2]. However, the number of smokers is increasing every day. In 2018 the number of smokers around the world was 1.1 billion. As many as 800 million of them live in developing countries while 300 million smokers live in developed countries. The number of male smokers was 945 million and female smokers were 180 million. The use of tobacco is more than 6 million people die each year[3].

According to the Southeast Asia Tobacco Control Alliance (SEATCA) Indonesia is a country in ASEAN with the largest cigarette market in the world with the highest number of smokers in ASEAN, which is 65.19 million people. This figure is equivalent to 34% of the total population of Indonesia in 2016. Based on data from WHO in 2018 deaths due to smoking in Indonesia as many as 225,720 per year (14.7%) of all types of deaths. This is also supported by the fact that in 2018 the number of smokers in Indonesia is increasing at 36.1% of the total population in Indonesia.

From the health aspect, cigarettes contain 4000 chemicals that are harmful to health, such as nicotine which is addictive and Tar which is carcinogenic even in cigarettes also contains formalin. There are 25 types of diseases that can be caused by cigarette smoke ranging from respiratory diseases, lung cancer, vascular disease, impotence, stroke, to bladder cancer[4–7]. In addition, based on 2018 Riskesdas data shows that the prevalence of non-communicable diseases in Indonesia has increased compared to Riskesdas 2013 data, including cancer, stroke, chronic kidney disease, diabetes mellitus and hypertension. These diseases can ultimately weaken the quality of Indonesian human resources[8].

In connection with the impact caused by smoking, regulations are needed to provide protection against exposure to cigarette smoke, but with due regard for the rights of smokers[9]. According to Prabandari, et al (2009) policy is an effective way to control tobacco in Indonesia or more specifically to reduce smoking[10]. The Tobacco Control Support Center of the Indonesian Association of Public Health Experts in collaboration with the Southeast Asia Tobacco Control Alliance (SEATCA) and the World Health Organization (WHO) states that there are four alternative policies in reducing smoking behavior in the community, one of which is by implementing 100% No Smoking Area in public places, workplaces and teaching and learning[11,12].

Based on the Joint Regulation of the Minister of Health and the Minister of Home Affairs Number 188 / PB / I / 2011, Number 7 of 2011 concerning guidelines for the implementation of non-smoking areas referred to as No-Smoking Areas are rooms or areas that are declared prohibited for smoking activities, or activities produce, sell, advertise and or produce tobacco products[13]. This prohibition applies to public facilities such as health facilities, teaching and learning facilities, religious facilities, facilities where children play, public transportation, workplaces, public places and other

specified places[14,15]. In order for this No-Smoking Areas policy to be effective, the government also gives authority to the regional government to make regional regulations on No-Smoking Areas, and one of the regions that already has regional regulations on No-Smoking Areas is Surabaya City, namely the existence of Surabaya City Regulation Number 2 of 2019 concerning No-Smoking Areas[16].

However, the policies that have been made by the government both from the central to the regions have not yet been fully effective in controlling smoking behavior in the community[17], because despite the existence of the policy on smoking bans there are still many people who smoke in places that should not be allowed to smoke. Based on the Joint Regulation of the Minister of Health and the Minister of Home Affairs (2011) regarding of No-Smoking Areas, one of the areas that should be free from cigarette smoke is the educational environment including universities. Higher education is dominated by adults who are in the productive age so that the high potential for the occurrence of smoking violations, because the highest number of smokers smoking is in the productive age[13].

One of the tertiary institutions that has implemented a no-smoking area in the campus environment is Universitas Airlangga. Universitas Airlangga is a favorite university in the city of Surabaya, so it is expected to be the foremost example in efforts to implement of No-Smoking Areas in the tertiary environment. However, based on the results of a preliminary survey conducted at the Faculty of Economics and Business, there are still many students who smoke in the Faku environment.

MATERIALS AND METHODS

This research is a quantitative study with a cross sectional design that is research in which the process of collecting data is carried out at the same time. This research was conducted at the Faculty of Economics and Business, Universitas Airlangga, Surabaya. This location was chosen because this faculty is one of the non-health faculties which has the highest number of students and based on preliminary survey results on this faculty there are still many students who smoke in the campus environment. This study involved 5,203 undergraduate students as a population and 100 students as samples. Determination of the sample using simple random sampling technique using the Slovin formula. Data were collected using a questionnaire and data analysis was performed univariately and bivariately using the chi-square test.

This variable consists of knowledge variables (independent variables) as measured by a questionnaire of 6 questions, multiple choice ac (if true = 1, if false = 0), calculated the total score and categorized as good (if the correct question> 4), sufficient (if the correct question 3 or 4) and less (if the correct question <4). Attitude variable (independent variable) measured by questionnaire 5 questions, choice using scale 1-4 (Strongly disagree-strongly agree), calculated total score and categorized as good (if total score> 15) and not good (if total score ≤ 15) and behavioral variables (dependent variable) measured by questionnaire 9 questions, multiple choice ab (if true = 1, if false = 0), calculated the total score and categorized as good (if total score> 6) and not good (if total score ≤ 6).

RESULT
Univariate Analysis

Table 1. Respondent's Characteristic

Characteristic	n(%)	Attitude		P value
		Poor	Good	
Study Program				
Management	26 (26%)	21(80.8%)	5(19.2%)	
Accounting	29(29%)	19(65.5%)	10(34.5%)	> 0.05
Economic Development	30(30%)	17(56.7%)	13(43.3%)	
Islamic Economy	15(15%)	7(46.7%)	8(53.3%)	
Year of Entrance				
Freshman	49(49%)	26(53.1%)	23(46.9%)	< 0.05
Current student	51(51%)	38(74.5%)	13(25.5%)	
Gender				
Female	46(46%)	28(60.9%)	18(39.1%)	
Male	54(54%)	36(66.7%)	18(33.3%)	> 0.05

Based on table 1. above it can be seen that the majority of respondents come from the Development Economics study program (30%), most of the respondents are old students (51%) and are male (54%).

Bivariate Analysis

Table 2. Frequency Distribution of Independent and Dependent Factor Categories

Independent Factors	N	%
Knowledge		
Low	28	(28%)
High	72	(72%)
Attitude		
Poor	33	(33%)
good	67	(67%)
Dependent Factor		
Behavior		
Poor	64	(64%)
Good	36	(36%)

Based on the results of the analysis from table 2. most of the respondents have good knowledge and attitude about smoking and No-Smoking Areas, but this is contrary to the behavior of the majority of respondents who are not good at 64%.

Table 3. Dependent and Independent Variable Cross Tabulation

Variable	n(%)	Behavior		OR	p value
		Poor	Good		
Knowledge					
Low	28(28%)	18(64.3%)	10(35.7%)	0.758	>0.05
High	72(72%)	46(63.9%)	26(36.1%)		
Attitude					
Poor	33 (33%)	28(84.4%)	5(15.2%)	5.086	<0.05
Good	67(67%)	36(53.7%)	31(46.3%)		

Based on Table 3. only the attitude variable has a relationship with the smoking behavior of students in the Faculty of Economics and Business.

Discussion

The results showed that there was no relationship of knowledge with student behavior. Based on the results of the bivariate analysis test using the chi square test obtained p value> 0.05, so that H0 is accepted which means there is no relationship between student knowledge about cigarettes and No-Smoking Areas not related to smoking behavior of students in the Faculty of Economics and business. When viewed from the results of data analysis the majority of students have good knowledge of cigarettes and the effects caused by smoking, but this does not affect the number of students who smoke.

The research is in line, which says that there is no relationship between knowledge and compliance with the application of non-smoking areas[18]. According to Asari knowledge is not the only factor that encourages students to comply with the no-smoking area policy, but compliance can be caused by other factors that are more dominant. For example, the results of a study conducted by Triana (2014) show that compliance with the implementation of a non-smoking area in the SMK Muhamadiyah 2 City of Palembang is influenced by the existence of a fatwa that smoking is haram[19].

This study is different from the results, which shows that male students who have low knowledge are 7 times more likely to behave in smoking than students who have high knowledge about smoking[20]. The same result was also stated by Renaldi (2013) that knowledge is related to the implementation of the no-smoking area policy, where students who have low knowledge have a 25 times greater chance of not complying with the application of no-smoking areas compared to students who have good knowledge[21]. It is also not different from the results, which shows that knowledge is the dominant factor related to smoking behavior[21].

Knowledge is an important domain to support and support the formation of actions of an individual. With sufficient knowledge it will tend to make individuals to behave properly, and vice versa. As for the knowledge that is not widely known by students including the understanding of the area without smoking (46%). This condition is one of the causes of the high number of smokers in the Faculty of Economics and Business even though the area has been given banners containing smoking bans. It turns out that good knowledge does not affect the low number of smokers[22]. This is because students feel that the cigarettes they consume still do not have a negative impact on their current health condition and they still do not care much about their health investment in the future and the risks that threaten the people around them who are exposed to cigarette smoke.

Based on the results of the study note that there is a relationship between the attitudes and smoking behavior of students in the Faculty of Economics and Business. This is shown from the results of the bivariate analysis test using chi-square with a p value <0.05 with an OR value of 4.8, which means students who have a bad attitude (negative) towards cigarettes and the application of non-smoking areas in the campus environment are at risk 5 times are greater for smoking compared to students who have a good attitude. This study is in line with the results, who said that adolescents who have negative attitudes towards cigarettes tend to behave in smoking[22].

The results of this study are in line with research conducted by Imelda (2012) which says that there is a relationship between attitudes about smoking and no-smoking policies on participation in the implementation of no-smoking areas in SMP Negeri 1 Medan[18]. The better the respondent's attitude towards smoking, the implementation of the non-smoking area will be effective, so that there will be less number of teachers who smoke in the school area. The same result was also stated by Jamal (2012) where students who have a positive attitude tend to be obedient towards the implementation of non-smoking areas in the University of Hasanudin[23].

Attitude is also one of the main foundations for a person to take action. According to Aryani (2010) attitude is a very important thing related to smoking behavior, because in essence the attitude will determine a person in behavior[24].

The majority of students are still having a negative attitude towards the implementation of a non-smoking area, this is because many students still do not know the purpose of applying No-Smoking Areas, one of which is to implement healthy living behaviors in the campus environment. In addition, 83.3% of students still do not care about the surrounding environment, especially to advise their friends who smoke to not smoke in areas that are prohibited from smoking[25].

In this study it can be seen that there are still many students who have not obeyed the no-smoking area regulations within the Faculty of Economics and Business. This is evidenced by the high number of smokers who smoke freely in areas where smoking restrictions are

installed. So that the application of no-smoking areas within the Faculty of Economics and Business is still not effective. One way that can be done so that the application of a non-smoking area works effectively is by giving strict sanctions to the smoking academic community. But based on the results of the study (62.5%) the respondents did not agree if sanctions were applied. This shows that most respondents tend to want to be given the freedom to smoke.

Conclusion

Based on the results of the study it can be concluded that the proportion of students who smoke in the Environment and Business Faculty of Universitas Airlangga is still very high at 64%. The factors related to smoking behavior are the low attitudes of students' care towards the implementation of a non-smoking area, so that the application of a non-smoking area within the Faculty of Economics and Business, Universitas Airlangga has not been effectively implemented.

Conflict of interest	: None
Source of Funding	: Self-Funding
Ethical Clearance	: Approved

REFERENCES

1. Susilawati S, Monica G, Fadilah RPN, Bramantoro T, Setijanto D, Wening GRS, Palupi R. Building team agreement on large population surveys through inter-rater reliability among oral health survey examiners. Dent J (Majalah Kedokt Gigi). 2018;51(1):42–6.
2. Lubis HF, Laturiuw HP. Socioeconomic status and orthodontic treatment need based on the Dental Health Component. Dent J (Majalah Kedokt Gigi). 2018;51(3):119.
3. Lian TY, Dorotheo U. The Tobacco Control Atlas ASEAN Region. Fourth ed. Thailand: SEATCA.; 2018.
4. Kementrian Kesehatan Republik Indonesia. Pedoman Kawasan Tanpa Rokok. Jakarta; 2011.
5. Sinaga BYM, Siregar Y, Amin M, Sarumpaet S. Effect of smoking and alcohol consumption on pulmonary tuberculosis among Batak ethnic population in Medan, Indonesia. IOP Conf Ser Earth Environ Sci. 2018;125(1).
6. Sari MI, Sari N, Darlan DM, Prasetya RJ. Cigarette smoking and hyperglycaemia in diabetic patients. Open Access Maced J Med Sci. 2018;6(4):634–7.
7. Soeroso NN, Zain-Hamid R, Sinaga BYM, Sadewa AH, Syafiuddin T, Syahruddin E, Tann G, Mutiara E. Genetic polymorphism of CYP2A6 and its relationship with nicotine metabolism in male bataknese smokers suffered from lung cancer in Indonesia. Open Access Maced J Med Sci. 2018;6(7):1199–205.
8. Badan Penelitian dan Pengembangan Kesehatan Republik Indonesia. Riset kesehatan Dasar (RISKESDAS) Tahun 2018. Jakarta; 2018.
9. Pusat Data dan Informasi Kementrian Kesehatan Republik Indonesia. Situasi Umum Konsumsi Tembakau Di Indonesia . Jakarta:; 2018.
10. Prabandari, Yayi S, Dkk. Kawasan Tanpa Rokok Sebagai Alternatif Pengendalian Tembakau Studi efektivitas Penerapan Kebijakan Kampus Bebas Rokok Terhadap Perilaku dan Status Merokok Mahasiswa di Fakultas Kedokteran UGM. J Manjemen Pelayanan. 2009;
11. TCSC. Atlas Tembakau Indonesia. Jakarta; 2012.
12. Ba O, Faye A, Al. E. National Adult Tobacco Survey (GATS -Global Adult Tobacco Survey) Senegal 2015. Joournal Cancer Sci Clin Oncol. 2018;5.
13. Kemenkes RI. Pedoman Pengembangan Kawasan Tanpa Rokok. Jakarta; 2011.
14. Ruslin M, Samad R, Burhanuddin DP, Tajrin A, Fauzi A, Rasul MI, Djamaluddin N, St. Hajrah Yusuf A, Sri Permatasari A, Adam Malik H. Demography of oral health status for students and teachers in Islamic boarding school. J Int Dent Med Res [Internet]. 2019;12(2):677–81.
15. Pasiga BD, Samad R, Pratiwi R, Akbar FH. Identification of lead exposure through saliva and the occurrence of gingival pigmentation at fuel station Indonesian officers. Pesqui Bras Odontopediatria Clin Integr [Internet]. 2019;19(1).
16. Peraturan Bersama Menteri Kesehatan dan Menteri dalam Negeri. Peraturan bersama Menteri Kesehatan dan Menteri dalam Negeri Nomor 188/MENKES/PB/I/2011tentang Pedoman Pelaksanaan Kawasan Tanpa Rokok. Jakarta; 2011.
17. Setijanto RD, Bramantoro T, Palupi R, Hanani A. The role of attitude, subjective norm, and perceived behavioral control (PBC) of mothers on teaching toothbrushing to preschool children - Based on the Theory of Planned Behavior: A cross-sectional study. Fam Med Prim Care Rev. 2019;21(1):53–7.
18. Imelda C. Pengaruh Pengatahuan dan Sikap Guru dan Siswa Tentang Rokok dan Kebijakan Tanpa Rokok Terhadap Partisipasi Dalam Penerapan Kawasan Tanpa Rokok di SMA Negeri 1 Medan tahun 2012. Universitas Sumatera Utara.; 2012.
19. Triana, Anna Z. Analisis Implementasi Peraturan Daerah Kota Palembang Nomor 07 Tahun 2009 Tentang Kawasan Tanpa Rokok di SMK Muhammadiyah 2 Kota Palembang. Universitas Sriwijaya.; 2014.
20. Pasepe, Monita H. Hubungan Kebijakan Kawasan Tanpa Rokok dengan Perilaku Merokok Siswa SMP N 7 Palu. Fakultas Ilmu Kesehatan Masyrakat Universitas Tadulako; 2017.
21. Renaldi R. Implementasi Kebijakan Kawasan Tanpa Rokok (KTR) Pada Mahasiswa di Lingkungan Sekolah Tinggi Ilmu Kesehatan Hang Tuah Pekanbaru. J Kesehat Komunitas. 2014;2(5).
22. Azkha N. Study Efektivitas Penerapan Kebijakan PERDA Kota Tentang Kawasan Tanpa Rokok (KTR) Dalam Upaya Menurunkan Perokok Aktif di Sumatera Barat Tahun 2013. J Kebijak Kesehat Indones. 2013;4:171–9.
23. Jamal H. Kepatuhan Mahasiswa Terhadap Penerapan Kawasan Tanpa Rokok Di kampus Universitas Hasanudin. Universitas Hasanudin.; 2012.
24. Al-sadat, Nabila, Al. E. Adolecent Tobacco Use and Health in Southeast Asia. Asia. Pacific Journal of Public Health.SAGE.; 2010.
25. Sayuti M. Implementasi Kebijakan Kawasan Tanpa Rokok (KTR) Pada Puskesmas Lhok Beuringen dan Puskesmas Tanah Jambo Aye di Kabupaten Aceh Utara Tahun 2017. Fakultas Kesehatan Masyarakat Universitas Sumatera Utara; 2018.