HUBUNGAN PENGETAHUAN, SIKAP DAN PERILAKU TERHADAP KONSUMSI TEMBAKAU DI WILAYAH KERJA PUSKESMAS SUNGAI DURIAN, KABUPATEN SINTANG, PROVINSI KALIMANTAN BARAT

The Association of Smoking With Knowledge, Attitude, And Practice (KAP) With Tobacco Use In The Working Area Of Primary Healthcare Center Of Sungai Durian, Sintang District, West Kalimantan Province

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ABSTRAK

Penggunaan tembakau merupakan salah satu faktor risiko penyakit tidak menular. Pada tahun 2003, konsumsi rokok merupakan penyebab utama kematian 4,9 juta penduduk di negara berkembang. 31,5% penduduk Indonesia adalah pengguna tembakau berdasarkan data tahun 2000. Secara khusus di Provinsi Kalimantan Barat, lebih dari satu per empat laki-lakinya adalah perokok, dan secara lebih khusus lagi, tiga per empat laki-laki usia 20-30 tahun di wilayah kerja Puskesmas Sungai Durian adalah perokok. Studi ini dilakukan untuk menguji hubungan pengetahuan, sikap, dan perilaku terhadap penggunaan tembakau. studi *cross-sectional* ini melibatkan 180 perokok di antara 4,321 total populasi laki-laki. Faktor prediksi pada studi ini yaitu: pengetahuan, sikap, dan praktik. Uji statistik telah dilakukan yaitu uji tunggal, ganda (*Chi-Square*), dan *multivariabel* (*binary logistic regression*). Uji ganda menemukan bahwa pengetahuan dan perilaku secara signifikan berhubungan dengan penggunaan tembakau. Lebih jauh, berdasarkan hasil *multivariabel*, perilaku merupakan pengaruh terbesar (AOR= 4,25, CI 95% (1,93 – 9,36)) dan diikuti dengan pengetahuan (AOR= 2,46, CI 95% (1,00 – 6,04)). Penggunaan tembakau di wilayah kerja Puskesmas Sungai Durian sebagian besar dipengaruhi oleh perilaku. Puskesmas sebagai pelayanan kesehatan terdekat butuh menyelenggarakan pendidikan kesehatan untuk menurunkan konsumsi tembakau. Pengendalian tembakau yang diimplementasikan dengan larangan merokok di dalam ruangan sangat penting untuk mengurangi kebiasaan merokok.

Kata kunci: Konsumsi tembakau, pengetahuan, perilaku, praktik

ABSTRACT

Tobacco use is one of the predicting factors of non-communicable diseases. In 2003, cigarette consumption was the main factor contributing to 4.9 million deaths in developing countries. In 2020, Bureau of Statistics Indonesia reported 31.5% of Indonesian population were tobacco users. Particularly, in West Kalimantan province, more than one-fourth of men are smokers. Specifically, in the working area of Sungai Durian Primary Healthcare Center, third-fourth of men are smokers. This study was conducted to examine the relationship between Knowledge, Attitude, and Practice (KAP) with tobacco use. This cross-sectional study employed 218 respondents of 4,321 male population. The predicting factors in this study were knowledge, attitude, and practice. The statistical test was done using univariate, bivariate (Chi-Square),

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and multivariate (binary logistic regression) analyses. The bivariate analysis test showed that knowledge and practice were significantly associated with tobacco use. Regarding the multivariate analysis results, practice was the strongest factor affecting tobacco use (AOR= 4.25, CI 95% (1.93 – 9.36)), and the second strongest factor was knowledge (AOR= 2.46, CI 95% (1.00 – 6.04)). Tobacco use in the working area of Sungai Durian Primary Healthcare Center was mostly affected by practice. Primary healthcare centers as the nearest healthcare facility in the community need to improve health education and decrease tobacco consumption. A tobacco control can be implemented by banning smoking indoors to reduce smoking behavior.

Keywords: Tobacco use, knowledge, attitude, practice

INTRODUCTION

Tobacco use is one of the major predicting factors that leads to non-communicable diseases such as cancer, heart disease, and stroke (Sirait, Pradono, & Toruan, 2002). Around 1 billion men in the world are smokers, and half of them live in developing countries (Rahmadi, Lestari, & Yenita, 2013). Every year, in the United States, out of five deaths, one of them died because of smoking-related diseases. In developing countries, tobacco use causes about 435,000 death rates per year. In Indonesia, tobacco consumption also increased seven times in 1997-2000 for all age groups (Hasanah, 2014). The phenomenon of smoking behavior occurred in the last decade. In 1964, the Surgeon General of the United States has estimated that more than 430,000 tobacco users died at a young age each year (Davidson, G.C & Neale, 1990).

Cigarettes contain more than 4,000 toxic chemicals which are harmful to health. Smokes are dangerous not only for smokers but also for people around smokers (Hasanah, 2014). Knowledge is not the only factor contributing to tobacco use, and most people understand the negative health effects of tobacco use, but they continue to smoke. Between urban and rural areas, the study has found rules inside the home, sex, and age were the most significant predictors of tobacco use (Rahim, Suksaroj, & Jayasvasti, 2016). Studies conducted in Jakarta, Semarang, Surabaya, Makassar, and Padang have reported that the risk of U5MR (Under Five Mortality Rate) accounted for 14% for urban areas and 24% for the rural areas (Central Bureau of Statistics Indonesia, 2011). Cigarettes are the cause of more than 1,100 deaths every year, meaning every one of six deaths is caused by smoking-related diseases. Additionally, cigarettes

are the most main cause of premature death (Davidson, G.C & Neale, 1990).

The number of smokers in Indonesia increases gradually since the age of smokers decreases around 11-13 years. Smoking habit is closely related to low education levels in remote and border areas (Hasanah, 2014). The Indonesian Basic Health Research in 2018 shows 64.8% of men over 13 years old in Jakarta were smokers. Around 27.2% of the total smokers in Indonesia lived in West Kalimantan province (MoH Indonesia, 2008). Furthermore, among all smokers in West Kalimantan province, 28.5% of them lived in Sintang district. Regarding household expenditure, farmers, fishermen, and workers had no differences in expenditure per capita per month. In other words, varieties of occupation had the same opportunity to smoke (MoH Indonesia, 2008). The number of smokers is associated with the implementation of smoking policy in public areas. Public health problems could be prevented through the implementation of smoking policy, for example, smoking bans indoors (Mayne et al., 2018). This study aimed to identify the effect of knowledge, attitude, and practice on smoking behavior in the working area of Sungai Durian Primary Healthcare Center.

METHODS

This quantitative study used a cross-sectional design. The dependent variable was tobacco use, and the predictors were knowledge, attitude, and practice. The data were collected from January to June 2017. The research samples involved 220 men of 4,321 male population in the working area of Sungai Durian Primary Healthcare Center. The inclusion criteria of the respondents were male

respondents living in the working area of Sungai Durian Primary Healthcare Center, being at the age of 15 years or above, and being available for interview. The samples were selected using purposive sampling, and the sample size was defined using the Lemeshow's formula. Questionnaires were distributed to the respondents. The estimated prevalence of smoking practices was reported in 95% confidence intervals (CI). The chi-square test was performed to identify the relationship between tobacco use and KAP. The p value was < 0.05 considered statistically significant. The binary logistic regression determined predictors of tobacco use. All of the statistical tests were performed using STATA 15 software.

Knowledge was defined as how respondents knew and understood the effects of tobacco use on

health. Questions about knowledge were related to health hazards of tobacco use. Practice was described as how respondents practiced smoking prevention and accessed information about disadvantages of smoking, smoking-related diseases, prevention measures to reduce cigarette consumption, and ways to minimize the effect of smokes on vital organs.

RESULTS

The statistical tests could describe characteristics of the respondents and identify the relationship between independent variables and dependent variables. The results of this study are based on the univariate, bivariate, and multivariate analyses.

Table 1. The distribution of predictors of tobacco use in respondents living in the working area of Sungai Durian Primary Healthcare Center.

Variables	Frequency (n)	Percentage (%)
Age		
20 - 30 years	63	28.9
31- 40 years	96	44.0
41 – 50 years	59	27.1
Smoking status		
No	38	17.4
Yes	180	82.6
Knowledge		
Adequate	142	65.14
Inadequate	76	34.86
Attitude		
Good	187	85.78
Poor	31	14.22
Practice		
Good	97	44.50
Poor	121	55.50

Table 1 shows the number of smokers was much higher than that of non-smokers. It explains that 82.6% of the respondents were smokers and the rest were not.

Table 2. The relationship of predictors and tobacco use in respondents living in the working area of Sungai Durian Primary Healthcare Center

Predictors		Smoking status				Total		Chi-Square value
		No		Yes				
		n	%	n	%	n	%	
Knowledge	Adequate	31	21.8	111	78.2	142	100	5.48*
	Inadequate	7	9	69	90.8	76	100	
Attitude	Good	36	19,3	151	80.7	187	100	3.03
	Poor	2	6.5	29	93.5	31	100	
Practice	Good	28	28,9	69	71,1	97	100	15.88***
	Poor	10	8.3	111	91.7	121	100	

Note: *p value < 0.05, **p value < 0.01, ***p value <0.001

The results of simple logistic regression in Table 2 show knowledge was significantly associated with tobacco use ($p < 0.05$). Specifically, those who had inadequate knowledge were 2.7 times more likely to have smoking behavior compared to those who had adequate knowledge. Practice was significantly

associated with smoking behavior ($p < 0.05$). Particularly, those who had poor practice about smoking prevention were 4.5 times more likely to have smoking behavior. However, attitude was not significantly associated with smoking behavior ($p > 0.05$).

Table 3. Results of multivariate analysis using multiple logistic regression test on predictors and outcome.

Predictors	COR	CI 95%	AOR	CI 95%
Knowledge				
Adequate	1		1	
Inadequate	2.75*	(1.149 – 6.594)	2.46*	(1.004-6.038)
Practice				
Good	1		1	
Poor	4.50***	(2.061 – 9.846)	4.25***	(1.931-9.356)

Note: *p value < 0.05, **p value < 0.01, ***p value <0.001

Table 3 describes the multivariate analysis of all predictors and dependent variables using multiple logistic regression. After practice was adjusted to other independents variables, those who had poor practice were 4.25 times more likely to be smokers.

In terms of knowledge, those who had inadequate knowledge were 2.46 times more likely to be smoker after knowledge was controlled with other variables. In short, practice was a stronger predictor related to tobacco use than knowledge.

DISCUSSION

Knowledge is related to values in life. Most smokers are still addicted and decide to continue to smoke even though they know the negative effects of smoking (Eysenck, 2017). Concerning knowledge, a previous study conducted in Indonesia has found educational level was a strong predictor of smoking behavior (Rahim et al., 2016). Knowledge about effects of tobacco consumption on health can be manifested in the long process. Those with inadequate knowledge were likely to smoke if people around them were smokers as well. Notoatmodjo in the Indonesian Basic Health Research states knowledge is the results of knowing process that occurs after people do sensing a particular object (MoH Indonesia, 2008). The sensing process comes from sight, hearing, smell, taste, and touch. The majority of people effectively get insights through sight and hearing senses. Cognitivism is a very important domain in shaping behaviors. A study conducted in Gujarat, India has found that being knowledgeable about effects of tobacco on health can reduce the risk to continue the smoking behavior by 30-40 % (Kahar, Misra, & Patel, 2016). A systematic review of studies in African countries and the Middle East has explained that the large gap of knowledge contributed to tobacco use (Adznam, Sedek, & Kasim, 2018). Similarly, a study conducted in East Africa has found that knowledge influenced smoking behavior (Tezera & Endalamaw, 2019). Seen from the previous studies, it can be concluded that better knowledge primarily can decrease smoking behavior. A study conducted in China has figured out that the higher score of KAP (Knowledge, Attitude, and Practice) indicated knowledge about negative consequences of smoking, positive attitude, and poor smoking practice (Haq et al., 2019). The results of the statistical analysis show that knowledge was associated with smoking behavior ($p < 0.05$). This study concludes that there was a difference in smoking behavior between the respondents with adequate knowledge and inadequate knowledge. The theory of knowledge states that knowledge is the result of remembering things, including recalling events experienced intentionally or unintentionally after people make contact or observation (Mubarak, Wahit Iqbal, 2007). Applying that theory to smoking behavior, people who had inadequate knowledge about negative effects of tobacco use were likely to try smoking. Similar findings were also found in a study researching elementary and junior high-school students who tried cigarettes for the first

time continued to smoke due to inadequate knowledge a. In line with this current study, the theory of health promotion explains that knowledge is the result of the remembering process (Mubarak, Wahit Iqbal, 2007). Policymakers and tobacco industries need to compromise to discuss about negative effects of tobacco (Hiilamo & Glantz, 2015). An interactive puppet show is one alternative health promotion medium to enrich adolescent's knowledge about negative effects of smoking (Lestari & Wulansari, 2018). A study on adolescents in South Sulawesi province has revealed that knowledge of tobacco use risk was affected by several factors, including maternal education, environment and schooling, mother's employment, and pocket money (Sutherland, 2020). School counseling is one prevention to reduce the risk of smoking in Brazilian students (César et al., 2019).

In this study, attitude had no association with smoking practice. Different from this finding, previous research has revealed that attitude towards tobacco policy indoors was significantly associated with smoking behavior (Rahim et al., 2016). The study points out that the smokers were likely to have a negative attitude towards smoking indoors if the areas did not have tobacco-free regulations and were not provided with any smoking areas. Besides, attitude can be defined in the reasons for smoking. The critical review research has revealed that depression and the persistence of smoking were associated (Weinberger et al., 2017). However, the meta-analysis research in East Africa has concluded that attitude was significantly affected by smoking behavior, and thus modifying attitude is prominent to decline smoking behavior (Tezera & Endalamaw, 2019). Attitudes and beliefs, as well as community responses about smoking also affected people to considerably quit smoking (Bafunno et al., 2020; Borrelli, Hayes, Dunsiger, & Fava, 2010; Notoatmodjo, 2005). Attitude was significantly correlated with smoking behavior. This finding is implied from the way people show negative attitude towards smoking in public and private areas. For instance, smoking behavior may decline when people stay in free-smoking areas. On the other side, smoking behavior may incline when smoking rooms are available. However, tobacco-free policies did not directly reduce the number of passive smokers affected (Rashiden et al., 2020). Tobacco-free policies need to be considered based on social norms, smoking status, exposure to active smokers, and sociodemographic characteristics (Dilliot, Fazel, Ehsan, & Sibbald, 2020). A study in

Hungary shows children had highly negative attitude towards smoking (Bak & Piko, 2007). A study in the Czech Republic has explained the negative attitude towards tobacco consumption in public outdoors increased by around 20% (Svancarová, Kulhánek, & Fidesová, 2019). Female non-smokers were exposed to effects of smoking more indoors than outdoors, and they were likely to promote tobacco control to young people (Gucuk & Yildirmaz, 2019). Besides, factors, such as social norms and sociodemographic characteristics, also take a part to affect attitude towards smoking behavior regarding the implementation of tobacco-free policies and provision of smoking rooms.

This present study describes smoking practice could be initiated by promoting tobacco as a symbol of social interaction and symbolic use (gifts for wedding celebration and religious ceremonies) (Kahar et al., 2016). In Indonesia, smoking conveys a symbol of friendship and the intimacy between family members. Specifically, in rural areas, people will be friend with others if they smoke in social events. Smoking practice will still continue if the supply of tobacco is available. Living in tobacco plantation areas trigger the community to practice smoking, or sociocultural reasons might contribute to that habit (Adznam et al., 2018). The alcohol consumption behavior also becomes the most common reason for adolescents to smoke (Nainggolan, Dharmayanti, & Kristanto, 2020). To live balanced, smokers need to regularly do physical exercise and consume healthy food (Haq et al., 2019). The greater self-efficacy for quitting smoking, the fewer perceived barriers to quit smoking (Kaufman, Dwyer, Land, Klein, & Park, 2018). Practice of reducing cigarette consumption is one intervention to prevent non-communicable diseases (Kartika & Rachmawati, 2017). In the household, smokers living with children and adolescents could affect them to be smokers as well (Saito et al., 2010). In Madagascar, tobacco use was influenced by the role of peer smokers (Veeranki, Mamudu, John, & Ouma, 2015). Many other factors including culture, norms, and sociodemographic characteristics could affect smoking behavior.

To prevent the increasing tobacco use, faculties of nursing need to embed health education including negative effects of tobacco on health in the curriculum (Heath & Crowell, 2007). To decline the risk of smoking and smoking intensity, the Coronary Artery Risk Development in Young Adults (CARDIA) mentions smoking-free policies are significantly effective (Mayne et al., 2018; MK, HE,

& J, 2019). The Waterpipe Tobacco Smoking (WTS) is one alternative tool to reduce the risk of smoking behavior as it has psychological and social components (Arshad et al., 2019). A study in Myanmar has found students smoked as the male teachers and headmasters practiced smoking at school (Noe et al., 2019). In general, practice and knowledge are factors influencing smoking behavior of people living in the Sungai Durian Primary Healthcare Center. Therefore, it important to encourage adolescents to have good knowledge about negative effects of cigarettes on health and social aspects.

CONCLUSION

Tobacco use could be affected by low educational levels and smoking practice. Rendering the results of the current study, stakeholders need to apply a community approach to solve this problem, provide adequate knowledge about smoking-related diseases, and promote the smoking prevention. All of these efforts need cooperation with stakeholders to develop a good intervention.

RECOMMENDATION

The implementation of smoking bans for tobacco control indoors may significantly reduce smoking behavior. The Sungai Durian Primary Healthcare Center need to apply tobacco-free policies in some public areas and indoors.

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AUTHORS CONTRIBUTION

Conceptualization, M, EJ and S ; methodology, M, DS, and AY ; formal analysis, M, S and DS ; investigation, M, S, EJ and AY; resources, M, AY, EJ, and DS ; writing—original draft preparation, M, DS, and S ; writing-review and editing, M and S; visualization, M, DS, and EJ; supervision, M, DS and EJ; project administration, EJ, S and DS.

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