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Prevalence and the Level of Knowledge Toward Cigarette Smoking Among Adult Male in Rural Area

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ABSTRACT

Cigarette smoking is the leading cause of non-communicable diseases such as lung cancer, chronic obstructive pulmonary disease, ischemic heart disease, stroke, and many more. In USA, the prevalence smokers in rural area were higher than in urban or metropolitan area. But there was still no data in Indonesia. The level of knowledge may influence health behaviour, including smoking. This study aimed to know the prevalence of cigarette smokers among adult males in rural areas and to investigate the level of their knowledge about smoking. This study used a cross-sectional design and a consecutive sampling technique. This study used a closed questionnaire to sixty adult males who were attending a meeting in Mojodawu village meeting hall, East Java, Indonesia. Fifty adult males confessed as a smoker (83.3%) and only ten (16,7%) respondents who were not. The level of knowledge among smokers was mostly not good (64%). Only 46% of respondents stated that smoking was dangerous to their health, and only 38% of respondents stated cigarettes harmed people around. This study showed a high prevalence of smokers among adult males in a rural area. Most of the smokers had a lack of knowledge about smoking hazards.
Keywords: prevalence, knowledge toward cigarette smoking, male

1. INTRODUCTION

Smoking is still one of the biggest public health problems in the world. In 2019, the World Health Organization (WHO) showed that over 1.1 billion people smoked tobacco and 80 % of smokers live in the low-middle country [1]. Smoking kills more than 8 million people each year. Direct tobacco smoking kills more than 7 million people around the world annually, while 1.2 deaths are the result of non-smokers being exposed to second-hand smoke [1]. Smoking causes more deaths each year than Human Immunodeficiency Virus (HIV), illegal drug use, alcohol use, vehicle motor injuries, and fire-related incidents combined [2].

The prevalence of smoking continues to increase in Indonesia. Data from the Global Adults Tobacco Survey (GATS) survey in 2011 showed that Indonesia had the highest number of active smokers with a male smoker prevalence of 67% (57.6 million) and a female smoker prevalence of 2.7% (2.3 million). Indonesia is the third-largest cigarette consumer in the world [3]. Based on WHO data in 2015, the prevalence of current tobacco smoking among persons aged 15 years and older was 39.5%, and the majority was male (76.1%) [4].

By region, the prevalence of cigarette smoking among adults living in rural areas in United States is the highest (28.5%) [5]. Based on data survey in Indonesia 2011, cigarette smoking is also more prevalent in rural areas (39.1%) compared to urban areas (33%) [3]. Daily smoking is higher in rural areas (32.2%) than in urban areas (26.3%) [3].

Cigarette smoke contains more than 7,000 chemicals such as formaldehyde, benzene, polonium and many more. It contains hundreds of toxic metals such as chromium, arsenic, lead, and also contains poison gases such as carbon monoxide, hydrogen cyanide, ammonia, butane, and toluene. About 70 chemicals are carcinogenic. There are 25 types of diseases caused by smoking, such as Emphysema, Lung Cancer, Chronic Bronchitis and other Lung Diseases [6]. Smoking affects nearly every organ of the body. Smoking in a pregnant woman can increase preterm delivery, stillbirths, low birth weight, and orofacial cleft in infants. Smoking can reduce man fertility, increase the risk of cataract, diabetes Mellitus type 2, inflammation disease and decreased immune function [7].

Public knowledge of smoking hazards is still low. Although it has been proven about the dangers of smoking, few smokers understand that smoking harms almost every organ of the body and causes many diseases. Most think smoking causes only a few diseases [3]. This study aimed to know the prevalence of cigarette smokers among adult males in rural areas and to investigate the level of their knowledge about smoking hazards.

2. METHODS

This study used a cross-sectional design and a consecutive sampling technique. Respondents of this study were male, aged 15 years and older, who were attending a meeting in Mojodawu village meeting hall, East Java, Indonesia. The total respondents of this study were sixty adult males. This study used a closed questionnaire for sixty adult males. Respondents were interviewed for the socio-demographic profile and the level of knowledge using a simple semi-structured questionnaire. There were seven true-false statements to assess the respondent's knowledge including

smoking hazards. Every correct answer on knowledge and perception scored one, while false answers scored 0. A higher score indicated better understanding of cigarette smoking. Informed consent obtained from all patients. The ethical approval for this study was obtained from the Ethical Committee of Faculty of Medicine, Muhammadiyah University of Surabaya.

Statistical analysis has been done using SPSS Statistics (Statistical Package for the Social Science, Inc., Chicago, USA) for Windows version 11.5. To assess the relationship between smoking and the level of knowledge, we use a chi-square test. Significant result if $p < 0.05$.

3. RESULTS AND DISCUSSION

3.1. Socio-Demographic of Respondents

A total of sixty males aged 15 years and more were included in this study. Most of them had a low level of education. The number of respondents who were passed elementary school was 45 (75%), junior high school was 6 (10%), senior high school was 4 (6.7%), and not entered formal education was 5 (8.3%). Most of the respondents worked as a farmer with low income. Mostly, their income under IDR 2,000,000/month.

The smoking behavior is influenced by many factors, such as individual factors, familial factors, and environmental factors [8]. It is also affected by education and socioeconomic level. In this study, we found most of the respondents only had primary school education. This finding in line with the national baseline data survey in 2011 that showed the prevalence of smoker is highest among those who had only elementary school (38%) and lowest among those with college or university education [3].

Table 1 The level of Respondent's Education

Level of education	Percentage
None	8.3%
Elementary school (SD)	75.0%
Junior high school (SMP)	10.0%
Senior high school (SMA)	6.7%

Table 2 Level of Respondent's Income

Income	Percentage
> IDR 500.000	33.3%
IDR 500.000-1.000.000	50.0%
IDR 1.000.000-2.000.000	11.7%
IDR 2.000.000-3.000.000	1.7%
> IDR 3.000.000	3.3%

3.2. Prevalence of Smoking and The Level of Knowledge About Smoking Hazards

Current active smokers were defined as persons who smoke daily basis or occasionally. The prevalence of smoking in respondents was 83.3%, and the prevalence of non-smoker

was only 16.7%. This prevalence is higher compared to data from WHO 2015 (76%) [1] and data from GATS 2015 (67%) [9]. The health of people living in rural areas that impacted by smoking is more often because of socioeconomic factors, culture, policies and lack of proper healthcare [10].

Table 3 Prevalence of active smoker

Smoking status	Percentage
Active Smoker	83.3%
Non-Smoker	16.7%

The level of knowledge has been assessed by using a simple semi-structured questionnaire. The level of knowledge was classified into two classes; high and low. The level of knowledge was low if the score below average. The level of knowledge was high if the score above average. The number of respondents who had a high level of knowledge was 21 (35%), and the number of respondents who had a low level of knowledge was 39 (65%). There is strong correlation between smoking and the level of knowledge (p=0.000).

Table 4 The level of the respondent's knowledge

Level of knowledge	Percentage
Good knowledge	36.0%
Bad knowledge	64.0%

Overall the respondent's level of knowledge was not good. Half of the respondents (46%) answered the smoking was not dangerous to themselves, and most of the respondents (62%) answered smoking was not harmful to others. Knowledge can influence health behaviour including not smoking [11]. The level of knowledge is also related to the level of education. This study showed that most of the respondents had a low level of knowledge about smoking hazards.

Table 5 Smoking hazards

Is smoking dangerous?	Percentage
Dangerous	46.0%
Not Dangerous	54.0%

Table 6 Smoking hazards to people surrounding

Is smoking harmful to others?	Percentage
Harmful others	38.0%
Not harmful	62.0%

More than half of the respondents did not know if smoking was dangerous to their health and harmful to people's surroundings. A low level of knowledge about smoking hazards leads to smoking behaviour. The smokers usually smoked in random places including at home and public places. This habit is dangerous, because people surround them, including children and pregnant woman can be affected by second-hand smoke.

Socioeconomic is also influence smoking behaviour. This study showed that most of the respondents had a low level of economic. Most of them were a farmer with income less

than IDR 2.000.000. Smoking contributes to family poverty cycles. Money that spends on cigarette can displace other goods and services important for health and wellbeing, such as nutritious food for children. This condition results in debilitating diseases and conditions with high medical costs [12].

Our study has several limitations. This study is a preliminary study so the number of respondents in this study still small. In this study, we did not include the beliefs and perceptions of respondents about smoking.

4. CONCLUSION

This study showed a high prevalence of smokers among adult males in a rural area. Most of the smokers had a lack of knowledge about smoking hazards.

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