

The Relationship among Technology Utilization, Obedience to Law and Smoking Culture In Community with Smoking Behavior in Male Adolescents in Semarang Indonesia

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Abstract

Background: Smoking behavior in adolescent is still a problem recently. The number continue to increase. This study purpose was to investigate the connectedness of technology utilization, obedience to law, and smoking culture in community with smoking behavior in adolescent in Semarang.

Method: This study used cross sectional method. The sample was 104 adolescents with range age 15-17 years old. The sample was chosen using purposive sampling. Data collection using a questionnaire. Four aspects namely demographic data, technology utilization, obedience to law, and smoking culture in community were measured. Those variables the compared to smoking behavior of adolescents. The data then analyzed with Spearman's Rho ($\alpha = 0.05$).

Conclusion: This study found that technology has no significant correlation with smoking behavior ($r=0.017$; $p=0.864$). There is significant correlation between obedience to law ($r=0.284$; $p=0.003$), and smoking culture in community ($r=0.251$; $p=0.014$) with smoking behavior in adolescences. It is necessary for efforts from various parties to overcome smoking behavior in adolescents such as the need for socialization in the community to participate in preventing adolescents who smoke in their environment.

Keyword: *adolescence; obedience to law; smoking behavior; smoking culture; technology utilization.*

Introduction

Smoking for teens becomes a symbol of maturity¹. Smoking behavior in adolescents generally starts because of following an adult, following a trend, having a heavy smoker friend, making a means to escape from problems until unwittingly smoking becomes a habit in adolescents². Smoking is a risk factor for early death. The World Health Organization (WHO) in 2014 mentioned smoking has killed around 6 million people per year³. The percentage of deaths due to smoking in ASEAN countries in Indonesia is in the first rank (46.16%) with the age trend of starting smoking is in age group of 15-19 years (55.4%),⁴. Based on preliminary studies at one of senior high school in Semarang Regency, it is found that 45% of male students are active smokers. Previous research⁵ found that the higher the knowledge of adolescents about smoking, the lower the tendency to smoke.

Leininger's Sunrise Model Theory suggests that technological factors; religious and philosophical factors; kinship and social factors; cultural values and lifestyle; legal and political factors; economic factors; and educational factors influence behavior⁶. Different technology usage, state of law dan culture might be have a different influence on adolescent smoking behavior^{5,7,8}.

The technological factor is the use of technology to find information about health problems, sick health perceptions, or medical habits⁹. Previous study showed that 91.7% of teenage boys aged 15 years and over accessed information about cigarettes on television, roadside billboards, and other sponsor media^{10,11}. One of the efforts made by the government is the Directorate General of Primary and Secondary Education of the Ministry of Education and Culture, concerning prohibitions on students carrying cigarettes. Legal regulations related to cigarettes such as Government Regulation of the Republic of Indonesia Number 109 of 2012 concerning Safeguarding Cigarettes for

Health.

Smoking has become a deeply entrenched culture in Indonesia, as in meetings or gatherings it will not feel familiar if you have not offered cigarettes¹². Culture is everything that is learned and experienced socially by community members. Ethnic and cultural variations in smoking reflect the multiple interactions between income, cigarette prices, culture, stress, heredity, age, and type of cigarette advertisements¹³. However, the inculcation of smoking culture cannot be explained in the age group under 18 years in Semarang.

Based on the above background the researcher intends to explain about the "Relationship between Technology Factors, Legal Factors, and Culture with Smoking Behavior in Adolescent Boys Based on Transcultural Nursing Theory in SMA Negeri 1 Bergas". Explaining the relationship of technology, law, and culture with smoking behavior in adolescent boys based on the theory of Transcultural Nursing in SMA Negeri 1 Bergas.

Method

This study used a cross sectional design.

The population in this study were male students who smoked or had smoked in Senior High School of Bergas totaling 142 students. The sampling technique in this study sampling is done by using purposive sampling.

The questionnaire used was based on transcultural nursing theory which has been modified. This questionnaire was tested for its validity and reliability toward 12 respondents $r=0.576$ is obtained. Based on the

analysis results, it can be concluded that the instrument is valid.

Study permit were obtained from school. Then, respondents were chosen through purposive sampling, after obtaining the research subject by giving an informed consent letter and the respondent was collected at one time in one designated place for research data collection. The questionnaire was distributed to respondents after study. Subjects were asked to fill out biodata and questionnaires provided to determine their smoking behavior. After the questionnaire was collected and completed, health education related to the study were delivered to provide positive health benefits for students.

This study was conducted in line with ethical standards such as anonymity, informed consent, voluntary participation, privacy and confidentiality, justice and beneficence, and right to review.

Results

The majority of respondents aged 17 years, consuming 1-4 cigarettes per day. The majority of respondents want to quit smoking, have been smoking for 1-5 years, almost all respondents have smoker friends as much as 99%, majority of respondents have parents smokers as much as 54.8%, the reason smoking shows that the majority of respondents smoke because they join friends / invite friends as much as 44.2%, the majority of respondents receive pocket money in range of 10.000 idr-15.000 idr, the majority of respondents living with parents as much as 86.5, the majority of respondents fill their leisure time with sports activities as much as 60.6%. (table 1)

Table 1 Demography data of respondents

Variable	n(%)
Age (years)	
15	12 (11.5)
16	25 (24)
17	67 (64.4)
Cigarette consumed in a day	
1-4	80 (76.9)
5-14	20 (20)
>15	4 (3.8)
Desire to stop smoking	
Yes	95 (91.3)

No	9 (8.7)
Length of smoking behavior (year)	
<6 month	35 (33.7)
6 month-1 year	18 (17.3)
1-5 year	42 (40.4)
>5 year	9 (8.7)
Friend who are smoking	
Yes	103 (99)
No	1 (1)
Parent who are smoking	
yes	57 (54.8)
No	47 (45.2)
Reason of smoking	
Going along with friends / friend invitation	46 (44.2)
Parents are smoking	2 (1.9)
Relieve stress because of many problems	28 (26.9)
It has become a habit due to nicotine dependence	28 (26.9)
Pocket money	
10.000-15.000 idr	77 (74)
16.000-20.000 idr	17 (16.3)
21.000-25.000 idr	4 (3.8)
>25.000 idr	6 (5.8)
Living place	
With parents	90 (86.5)
Dormitory	5 (4.8)
Other Family house	8 (7.7)
Friend's house	1 (1)
Spare time activity	
Enjoying smoking with friends	28 (26.9)
Reading book, magazine, etc	13 (12.5)
Exercising futsal, badminton, etc	63 (60.6)

There is no significant correlation between technology and smoking behavior ($r=0.017$; $p=0.864$). There is significant correlation between obedience to law ($r=0.284$; $p=0.003$), and smoking culture ($r=0.251$; $p=0.014$) with smoking behavior in adolescences (table 2).

Table 2 The relationship of technology, law and culture toward smoking behavior in adolescent

Variable	n(%)	p-value	r
Smoking behavior			
Mild	73 (70.2)		
Moderate	30 (28.8)		
Severe	1 (1)		
Technology utilization		0,864	0,017
Underutilize	7 (6.7)		
Enough utilize	91 (87.5)		
Good utilize	6 (5.8)		
Obedience to law		0,003	0.284
Less	2 (1.9)		
Moderate	53 (51)		
Good	49 (47.1)		
Smoking culture in society		0,014	0,251
Less	16 (15.4)		
Moderate	82 (78.8)		
High	6 (5.8)		

Disussion

This study result showed that there is no correlation between technology utilization with smoking behavior. Adolescent have a good behavior to utilize technology to find information about smoking behavior but has nothing to do with their smoking behavior. Health seeking behavior of information is influenced by health workers’ attitude, the needs, and interests of the community (Leininger in Loedin, 2003). Smoking behavior advertisement that delivered through technology media could influence the smoking behavior in adolescences¹⁴⁻¹⁶. Technology utilization such as mass media and electronic media could be an exposure to adolescent about smoking behavior through its advertisement. Adolescents knowledge about smoking effect also can not prevent of their smoking behavior¹⁷. In this study, this technology usage is not correlate with smoking

behavior. Eventhough adolescent in this study often watch advertisement about smoking, they said that those advertisement is not the main reason of their smoking behavior.

Based on Leininger theory, the use of technology can be influenced by the specialization of the individual itself. so it can be said even though the individual uses technology to find information about cigarettes quite well but not necessarily these individuals engage in smoking¹⁸. Adolescents in this study agreed that the use of technology with cell phones is easier to find information about cigarettes. It can be concluded that although respondents agreed that cellphones usage can foster the information finding, but it depends on adolescent interest about what information that they are searching for.

This study showed that there was a significant correlation between law obedience with smoking behavior in adolescents. The less obedience towards law, the more severe adolescents' smoking behavior. Policies and regulations will affect individual activities in cross-cultural nursing care (Leininger in Andrew and Boyle, 1995). Regulations related to cigarettes in adolescents is concerning prohibitions on students carrying cigarettes. Adolescent agreed about prohibition in students carrying cigarettes but they still smoking. Smet (1994) explained that political and legal factors are protective for non-smokers and efforts to reduce smoking behavior. Although there are regulations in the school regarding smoking bans but are not deterred for adolescent smoking behavior. A study found that teacher role model was correlated with their students smoking behavior¹⁹.

Many adolescents reported that they want to stop smoking. This intention to stop a smoking behavior need to be supported by adolescents environment such as school regulation, teacher behavior as role model and regulation of smoking in community¹⁹. Regulations will affect a person's attitude to act as Leininger said, rules can affect individual activities, so depending on the attitude taken by the respondent if the respondent takes a positive attitude then it will obey the rules, if the respondent takes a negative attitude then will violate it. So it can be said that the more respondents have low legal violations, the more types of mild smoking behavior, while the less severe violations of the law, the less the type of heavy smoking behavior.

This study found that there was significant correlation between Smoking culture in society with smoking behavior in adolescents. Culture is the norm or rules in the actions of group members who are studied and shared and give instructions in thinking, acting and making decisions²⁰. The smoking culture is included in a main concepts of transculturalism, which means the perspective of an individual or group in viewing their lives, giving rise to beliefs and values (Leininger 1984 in Pratiwi 2011). Community culture is a factor that influence smoking behavior, one of them is socio-cultural factors which say that cultural habits and prestige will influence smoking behavior in individuals²¹.

Most of adolescents reported that the have a lot of smokers friends and their parents also smoking. The existence of a cultural relationship with smoking behavior can occur because as explained above that

adolescents smoke because of teachings in the family, belief in the benefits of cigarettes as traditional medicine, and smoking habits in daily life which is reinforced by Leininger's theory that says culture can occur if the individual's perspective give rise to belief and value²². There are 3 strategies in transcultural nursing namely maintaining culture, cultural negotiation, and changing culture (Leininger in Pratiwi 2011). It can be said that smoking culture is detrimental to health status, which can use a strategy of changing the culture from smoking to non-smoking with a life plan that is in accordance with the individual's belief (Pratiwi, 2011). The more respondents do not have a smoking culture, the more types of mild smoking behavior and the fewer respondents who have a culture the less the type of heavy smoking behavior.

Conclusion

The results of this study indicate that the use of technology is not related to smoking behavior in adolescents. Although there is a lot of information about smoking behavior obtained from the internet as well as many advertisements about smoking, it does not change the views of adolescents about their smoking behavior. Compliance with the law can prevent adolescents from engaging in smoking even though adolescents continue to smoke but not in the school environment. Smoking culture in the community can be a trigger for smoking behavior in adolescents. from this conclusion it is necessary for efforts from various parties to overcome smoking behavior in adolescents such as the need for socialization in the community to participate in preventing adolescents who smoke in their environment. in addition, the participation of parents and teachers is also important to instill perceptions about smoking in adolescents.

Conflict of Interest: None

Ethical Clearance: This study was approved by ethical committee of Faculty of Nursing Universitas Airlangga

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