

# The Effect of Poster-Based Pictorial Health Warning Quit Smoking Behavior Toward the Adolescents of Tlogo, Tamantirto, Kasihan, Bantul

1<sup>st</sup> Rizaluddin Akbar<sup>1\*</sup>

Departement of Nurse Bachelor Degree,  
Health Science Faculty, Universitas  
Muhammadiyah Cirebon, Indonesia,  
Rizaluddin.akbar@umc.ac.id  
rizaluddin.akbar003@gmail.com

2<sup>nd</sup> Moh. Afandi

Departement of Nures Bachelor Degree,  
Medical and Health Science Faculty,  
Universitas Muhammadiyah  
Yogyakarta, Indonesia,  
mohafandi2003@yahoo.com

**Abstract**— The Government of Indonesia in 28 PERMENKES explains Pictorial Health Warning or Health Warnings and Writings are images that provide information about the dangers of smoking. Drawings and Writings Health Warnings should have the meanings printed together with the Tobacco Products Packaging and are not in form of a sticker attached to the Tobacco Product Packaging or are replaced by the consumer with a cute sticker. Smoking behavior among adolescents need to be enhanced by utilizing the visual media warning poster image or PHW

The purpose of this study is to identify the effect of PHW-based quit smoking posters on adolescent behavior hamlet logo.

This study is a quantitative research, Quasi-Experimental with pre-test and post-test control group design. The measurement of behaviors was conducted during the pre-test and post-test for 1 month. The research was conducted from January to March 2016 in Tlogo, Tamantirto. Respondents consisted of 16 treatment groups given intervention in the form of posters based on PHW and 16 people in the control group.

The results of Wilcoxon Signed Ranks Test showed no influence of PHW-based poster with a value of  $p = <0.014$ , then, there is no difference in the level of smoking behavior in the intervention group and the control group. The Mann-Whitney test result on the difference in smoking behavior of pre-test control group and treatment group obtained the result of 0.812, and the Mann-Whitney test result on the difference in smoking behavior of the post-test control group and the treatment group obtained the result of 0.838.

There is no effect of PHW-based posters on adolescent smoking behavior in Tlogo Village, Kasihan, Bantul. The next researchers are expected to do a deeper analysis on factors related to adolescent smoking behavior.

**Keywords** ---- Pictorial Health Warning, Posters, Smoking Behavior, Adolescent smokers

## I. INTRODUCTION

In developing countries such as Indonesia, in the book-IAKMI TCSC, the number of smokers aged >15 years with the intensity of daily cigarette consumption reached 34.2% in 2007 and increased in 2013 to 36.3% [1]. In 2012, the smoking behavior of teenagers in Yogyakarta province

with an average of smoked cigarettes is 31.6%. The results of preliminary surveys on the number of teenage smokers in Tlogo Village, Tamantirto, Kasihan, Bantul showed that there are 32 people out of 112 teenagers are active smokers.

Smoking is a problem in the society that can cause much harm in terms of social, economic, health, and even death [2]. Smoking behavior is detrimental for health because it can lead to a lot of non-communicable diseases such as infectious and respiratory infections, pneumonia, bronchial lung cancer, nasopharyngeal cancer, diabetes mellitus, and stroke [1]. WHO reports that in 2011, more than 6 million people die from diseases caused by smoking [3].

In order to control the behavior of smoking, Indonesia has issued Regulation of the Minister of Health of the Republic of Indonesia Number 28 Year 2013 about Inclusion Health Warning and Information Health on Packaging of Tobacco Products in which it described the use of health warnings that must be used on packs of cigarettes known as the Pictorial Health Warning (PHW). PHW consists of five kinds of images which purpose is to give a warning about the dangers of smoking [4]. The effectiveness of pictorial warning labels on cigarette packs have shown their effects on smoking behavior [5].

Therefore, due to the importance of behavior change, adolescent smokers to quit smoking with a focus to provide interventions in the form of posters based on PHW make researchers feel the need to conduct a study on the effect of poster based Pictorial Health Warning against teenage smoking behavior in Tlogo Village, Tamantirto, Kasihan, Bantul. Administration PHW-based poster is expected to be the choice in shaping behavioral interventions for smoking cessation among adolescents and may be a reference and is expected to be a source of scientific contribution to research related to similar like teenage smoking behavior.

## II. METHOD

This study used quantitative research methods with experimental quasi pretest-posttest control group design. The total sample used in this study were adolescents aged 10-19 in Tlogo village comprising of 32 people who were then divided into 10 treatment groups by PHW-based

intervention in the form of a poster-sized 20% of wall room with a ratio of 7:5 and 16 control group using simple random sampling technique. The study was conducted from January to March, 2016.

Smoking behavior will be measured at the time of pretests and posttest (1 month after exposure posters) with the Questionnaire of Smoking Glover - Nilsson Smoking Behavior questionnaire (GN - SBQ). The analysis of data using a hypothesis test was Wilcoxon paired and unpaired test, while the hypothesis used Mann-Whitney. In this study, there are four points of research ethics and have obtained ethical approval from the research ethics commission of the faculty of medicine and health sciences. The principles that must be considered in the research comprising of respect for human dignity, respect for privacy and confidentiality, respect for justice and inclusiveness, and respect for balancing harms and benefits.

### III. RESULT

Table 1 shows the results with the majority of respondents by age in the study group was 16 years with the number of six respondents (37.5%) in the treatment group and eight respondents (50%) in the control group.

100% of respondents in the study group comprising of respondents whose religion is Islam and the tribe is Javanese with the results of 13 respondents (81.3%) in the treatment group and 15 respondents (93.8%) in the control group. Table 4.1 shows the first age data time smoker respondents, with the result of 8 respondents (50%) admitted to do smoking for the first time in the age range of 5-11 years. Data smoking reasons of the respondents were dominated by the influence of a friend with the results (87.5%) with 14 respondents. Frequency of smoking respondent treatment group showed the results on the frequency at any time while hanging out with friends (56.3%) with 9 respondents. The number of cigarettes in a day by respondents in the treatment group showed the highest number of cigarettes of 11-15 which shows the results (50%) with 8 respondents. In Table 4.1, it shows the number of attempts to stop smoking in which the most in the treatment group that is 1-2 times of the results (37.5%) with 6 respondents. Category longer sleep in the room showed the same results in two groups with sleep duration in the bedroom is 7-9 hours (62.5%) with 10 respondents and (87.5%) with 14 respondents.

Table 1. Frequency Distribution Characteristics of Respondents (n = 32)

Characteristics	treatment group		Control group	
	Number (n)	percentage%	Number (n)	percentage%
<b>Gender</b>				
a. Man	16	100	16	100
b. Woman				
<b>Age now</b>				
a. 15 years	1	6.3	1	6.3
b. 16 years	6	37.5	8	50
c. 17 years	2	12.5	2	12.5
d. 18 years	4	25	2	12.5
e. 19 years old	3	18.8	3	18.8
<b>Religion</b>				
Islam	16	100	16	100
<b>Tribe</b>				
a. Java	13	81.3	15	93.8
b. Dayak	1	6.3	1	6.3
c. Malay	1	6.3		
d. Sunda	1	6.3		
<b>The age of first smoking</b>				
a. 5-11 years	8	50	8	50
b. 12-15 years	8	50	8	50
<b>Reasons to smoke</b>				
a. Parents and siblings			4	25
b. The influence of friends	14	87.5	4	25
c. The influence of the mass media			5	31.4
d. The influence of social media	2	12.5	3	18.8
e. And others				
<b>Frequency of smoking</b>				
a. Several times a day	5	31.3	4	25
b. Several times a week, especially weekend			6	37.5

c. Whenever while hanging out with friends.	9	56.3	4	25
d. and others	2	12.5	2	12.5
The number of cigarettes in a day				
a. 1-5	2	12.5	2	12.5
b. 6-10	1	6.3	4	25
c. 11-15	8	50	3	18.8
d. 16-20	5	31.3	5	31.3
e. > 20			2	12.5
Number of attempts to quit smoking				
a. 1-2 times	6	37.5	4	25
b. 3-5 times	5	31.3	4	25
c. > 5 times	5	31.3	8	50
Long bed in the room				
a. 1-3 Hours				
b. 4-6 Hours	2	12.5	2	12.5
c. 7-9 Hours	10	62.5	14	87.5
d. 10-12 Hours	4	25		

Table 2. shows that smoking behavior early treatment group (pretest) obtained by the smoking behavior of the most dominant is the medium category were 10 respondents (15.6%). Smoking behavior early control group (pretest) gained the most dominant smoking behavior containing the medium category with the number of 9 respondents (14.1%).

Table 2. Distribution of Frequency of Smoking and Hypothesis Testing Results The treatment group and control group at the beginning (pretest) and End (posttest) (n = 16)

Groups	smoking behavior	pretest		posttest		Wilcoxon Signed Ranks Test
		total	%	total	%	
Treatment	Low	1	1.6%	2	3.1%	0,414
	Moderate	10	15.6%	10	15.6%	
	Strong	5	7.8%	4	6.3%	
	Very strong					
Control	Low	2	3.1%	3	4.7%	0,414
	Moderate	9	14.1%	9	14.1%	
	Strong	5	7.8%	4	6.3%	
	Very strong					
Total		16	100	16	100	

From the results of Table 3, has done Mann-Whitney Test values obtained P = 0.812, and the results of the Mann-Whitney Test values obtained P = 0.83

Table 3. Results of Analysis of the Mann-Whitney Differences in Smoking Behavior pretest in Treatment Group and the Control and Analysis of Results of Mann-Whitney Test posttest Smoking Behavior Differences In Treatment and Control Group.

Group		N	mean	Delta mean ( $\bar{\delta}$ )	Std. deviation	P. value
pretest	Treatment	16	16.84	0.68	0.623	0,812
	Control	16	16.16			
posttest	Treatment	16	16.88	0.75	0.623	.838
	Control	16	16.13			

#### IV. DISCUSSION

This research shows that the dominated result is a category change smoking behavior of behavioral categories were (15.6%). This study is not in line with the research [6] which stated that learning using visual media in the classroom can improve student learning outcomes, or there are significant visual media in the classroom that is equal to 57.29%. Argued that the use of visual media posters, leaflets accompanied by presentations is effective in improving students' knowledge about the dangers of smoking but it cannot affect students' attitudes toward smoking behavior [7].

The investigators' analysis revealed that the categories of behavioral changes obtained in this study can be caused by several factors which are television and the mass media or billboard that causes the smoking behavior of adolescents and also to establish a change in smoking behavior need to provide interventions that more is not only a visual medium poster.

The level of adolescent smoking behavior before and after the control group which did not give poster PHW is increased, and the test results showed that there was no change in smoking behavior early and late in the control group ( $p = 0.414 < 0.05$ ). In health behavior, there are several important things that matter formation and behavior change. It is because behavior change is the purpose of a provision of health information [8]. There are several factors that influence changes in adolescent behavior such as consumption of cigarettes in a day, peers, and media advertising in their environment according to Liem [9] Rosita, et al [10], Nash, et al [11], so that this factor that maintains the smoking behavior of young people who have not been able to control completely in the activities of the adolescents. The researchers' analysis found the smoking behavior of the control group that there was no change in the control group not given due to treatment or pasted posters PHW based on wall room respondents. Researchers contend with changes in the behavior required the existence of a provision of the information or visual media exposure PHW-based poster to get a change of behavior and minimize or avoid the factors that influence behavior change as peers who smoke.

Test results on smoking behavior research group of  $p = 0.838$ , there are no differences in smoking behavior when conducted posttest or given posters PHW in the treatment group and the control group was given a poster. Hosland, et al (1953) in the book says that the change in behavior is essentially the same as the process of learning [12]

#### V. CONCLUSION

Based on the results of research and discussion in this study, we can conclude several things: the level of smoking behavior in the intervention group was given posters PHW-based and controls that are not given treatment are dominated by the moderate category smoking behavior. The current smoking behavior conducted a pretest in both groups that there was no significant difference between the treatment group and the control group when it is done the

pretest. Post-test current smoking behavior in the intervention group were given posters PHW-based and a control group that was not given treatment and there is no influence based on poster PHW against teenage smoking behavior.

The results showed no effect poster PHW based on adolescent smoking behavior in Tlogo Village, Tamantirto, Kasihan, Bantul. The researchers hope to all respondents to increase knowledge about the dangers of tobacco consumption and improve the smoking behavior to quit smoking. The researchers also hope that this research can be developed better in the future and deepen all the factors associated with adolescent smoking behavior.

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