
Research Article**Correlation between Visual Warning on Cigarette Pack and Smoking Behavior of Man Students in Banda Aceh Year 2016****Ismail**Lecturer at the Nursing Department of Health Polytechnic Aceh Health Ministry

ABSTRACT:

The dangers of smoking cigarettes are commonly known especially by the smokers because every pack of cigarettes contained the words “smoking can cause cancer, heart attack, impotence, as well as pregnancy and fetal disorders.” The objective of this study was to determine the correlation between visual warning on cigarette packs and smoking behavior among teenagers. The population of this study were the 11th and 12th grade male students in a MAN (Madrasah Aliyah Negeri—Public Islamic Senior High School) in Banda Aceh with a sample of 71 students. This research was designed in the form of analytical survey with cross-sectional study approach. Data collection was conducted from 17 to 18 June 2016. The result of the study shows that teenage smoking behavior in a MAN in Banda Aceh correlates to visual illustration with p-value of 0.003, typography with p-value of 0.016, coloring with p-value of 0.037, and layout with p-value 0.001. Therefore, it is suggested that smoking hazards awareness programs need to be improved with various approaches. The government is expected to enact a regulation on using plain packaging and visual warning images that cover at least 50% of the cigarette package. The school is expected to administer regular health education programs and to provide guidance to students who smoke.

Key words: visual warning on cigarette packs, smoking behavior, students.**INTRODUCTION**

Smoking is an activity that teenagers do to look liberated and mature when adjusting themselves to their smoking peers. Rest, relaxation, pleasure, peer pressure, self-appearance, curiosity, stress, boredom, desire to look masculine, as well as rebellious trait are some of the factors that contribute to smoking behavior among teenagers. Teenagers who show symptoms of depression and anxiety have a higher risk of starting smoking than asymptomatic teenagers. Having parents or siblings who smoke is also one of the factors that influence teenagers to smoke. Nevertheless, cigarette advertisements have a greater influence, as they may affect teenagers' perceptions on their appearance and the benefits of smoking. The reason why teenagers start to smoke is more likely due to environmental influences, while the shift from being a first-time smoker to an addict seems to be influenced by personal and pharmacologic factors¹.

Rochadi (2004)² argued that the greatest smoking behavior begins in adolescence, and one becomes a permanent smoker within a few years after that. Smet (1994)³ stated that the age an individual starting to smoke ranges from 11 to 13 years old, and in general, a person smokes before the age of 18.

A survey conducted by Global Adult Tobacco Survey (GATS) in 2011⁴ mentioned that 67% of smokers are males, while 2.7% are females. Furthermore, according to Global Youth Tobacco Survey (GYTS)⁵ in 2009, 30.4% of schoolchildren aged 11-15 years have tried smoking, 57.8% of whom are males and 6.4% are females. The study also mentioned that as many as 20.3% of schoolchildren are active smokers, where 41% of whom are males and 3.5% are females.

Basic Health Research (Riskesdas)⁶ in 2013 found that the smoking behavior of the 15-year-old population tended to

increase from 34.2% in 2007 to 36.2% in 2013. In addition, the research also found that 1.4% of smokers are around the age of 10 to 14 and that 9.9% of smokers are in the unemployed group. Meanwhile, the average number of cigarettes smoked per day was around 12.3 cigarettes, varying from the lowest of 10 cigarettes per day in DIY (Yogyakarta) and the highest of 18.3 cigarettes per day in Bangka Belitung. Furthermore, the proportion of current smokers aged 10 years and above in Aceh is 29.3 percent, consisting of 25.0% daily smokers and 4.3% occasional smokers, with the average number of cigarettes smoked per day of 15.3 cigarettes.

The increased habit of smoking among children and adolescents occurs because they have not understood the dangers of smoking for health and the negative effects of nicotine⁷. In addition, incessant advertising and promotion made by the tobacco industry that targets children and adolescents also influence smoking behavior in adolescents. The marketing activities of the tobacco industry are a series that systematically aims at luring children to become new smokers⁸.

The purpose of advertisements is not only to persuade consumers to buy certain products, but also to convince them to try out the latest products that they may never have used before. This then forms an emotional bond between the consumer and the producer. Various studies have proven that if a teen's favorite movie star is a smoker, it is likely that the teen will also smoke⁹. When a teenager sees a cigarette advertisement in print or electronic media signifying that smokers are the symbol of masculinity or glamour lifestyle, he is often triggered to follow such behavior displayed in the ad¹⁰.

In another survey, it was reported that cigarette advertisements in both print and electronic media influence the knowledge, attitudes and actions of teenagers to smoke¹¹. The survey is

supported by a study conducted in Arizona and Washington on teenagers aged 12 to 17 who are exposed to cigarette advertising. They were presented with two ads for each of five youth brands (Marlboro, Newport, Camel, Kool, and Winston) and one ad for an adult brand (Merit). The results demonstrated that teenage smokers love ad exposure, and they believe that advertisements make smoking more interesting¹². Promotions also foster positive attitudes, assurance, and expectations about smoking cigarette. This encourages the intention to smoke and increase the likelihood of early smoking initiation. Greater exposure to promotions leads to greater risks as well¹³.

Therefore, prevention efforts must be made by various parties; both health and non-health sectors, as well as other related institutions. It takes an active role of health workers to warn about the dangers of smoking for health so that teenagers do not fall into the habit of smoking. Over the years, cigarette manufacturers have been using cigarette packaging as a means to attract more consumers, and this contradicts the placement of the illustrated health warning labels on the packaging¹⁴. This phenomenon has encouraged many countries to provide warnings about the dangers of smoking more vigorously; ranging from text-based warnings to the visual labels.

Given the global statistics of tobacco consumption, the WHO adopted the Framework Convention on Tobacco Control (FCTC)¹⁵ in 2003, which is a public health agreement that requires warning information in the form of texts, images, or combinations of the two that cover at least 30% of the front and the back of the cigarette pack, or ideally 50% or more on the whole package.

Studies conducted in Australia, Belgium, Brazil, Canada, Thailand and some other countries showed that health warnings on cigarette packs, especially the graphic ones, are an important source of information for young smokers in poor-educated countries¹⁶. This is the best way for health authorities to communicate with smokers and their family members¹⁷. Health warnings with graphic images that stand out will reduce cigarette demands. Regulators must not only consider the type of warning labels, but also consider the policy of plain packaging for tobacco products¹⁸.

In Indonesia, the government has issued a pictorial health warning on cigarette packs in accordance with the Government Regulation number 109 of 2012¹⁹ consisting of five images that are accompanied by different written warnings related to them. Information on the inclusion of written and graphic health warnings is further explained in the Regulation of the Health Minister of the Republic of Indonesia Number 28 of 2013²⁰ Concerning Inclusion of Health Warnings and Health Information on Packaging of Tobacco Products. The regulation issued by the Ministry of Health is applied to all tobacco companies starting June 24, 2014 and is expected to awaken the public to the dangers of smoking, especially for teenagers or new smokers, thus discouraging their intention to smoke.

The preliminary study suggested that there are many students in the model city of Banda Aceh who smoke. We can also easily find cigarette advertisements nearby the school. In addition, cigarette sellers can also sell cigarettes around the school freely. Based on the above phenomena, the author is interested to conduct a study on "The correlation between visual warning on cigarette packs and smoking behavior of MAN students in Banda Aceh Year 2016."

Research Methods

This study was conducted in the form of an analytical survey using cross-sectional approach. The population of the study were all of the male students in grades 11th and 12th in a MAN in Banda Aceh, with a sample of 71 students. The data were analyzed by using chi-square test.

III. result

1. Univariate Analysis

Table 1 Univariate Analysis

<i>Smoking Behavior</i>	f	%
Smoking	12	16,9
Non-smoking	59	83,1
<i>Visual Illustration</i>		
Influential	46	64,8
Uninfluential	25	35,2
<i>Typography</i>		
Influential	47	66,2
Uninfluential	24	33,8
<i>Coloring</i>		
Influential	40	56,2
Uninfluential	31	43,7
<i>Layout</i>		
Influential	35	49,3
Uninfluential	36	50,7

Based on table 1. above shows that 16.9% of the respondents in a MAN in Banda Aceh were smokers. Visual illustration, typography, coloring, as well as layout used on cigarette packs influenced smoking behavior by 64.8%, 66.2%, 56.2%, and 49.3% respectively.

2. Bivariate Analysis

Table 2. Univariate Analysis

	Smoking Behavior				p-Value
	Smoking		Non-Smoking		
Visual Illustration	Σ	%	Σ	%	0,003
Influential	3	6,5	43	93,5	
Un influential	9	36,0	16	64,0	
Σ	12		59		
<i>Typography</i>					
Influential	4	8,5	43	91,5	0,016
Un influential	48	33,3	16	66,7	
Σ	12		59		
<i>Coloring</i>					
Influential	3	7,5	37	92,5	0,037
Un influential	9	29,0	22	71,0	
Σ	12		59		
<i>Layout</i>					
Influential	1	2,9	34	97,1	0,001
Un influential	11	30,6	25	69,4	
Σ	12		59		

Based on table 2. above, it can be seen that non-smoking behavior was more commonly seen in respondents who found the visual illustration on the cigarette pack influential(93.5%), compared to those who were not influenced by it(64.0%). P-value of 0.003 was obtained from the statistical test applied, hence it can be concluded that there is a correlation between

visual illustration on cigarette packs and smoking behavior of MAN students in Banda Aceh.

In addition, non-smoking behavior was also more commonly found in respondents who felt affected by the typography of cigarette packs (91.5%) compared to respondents who did not find typography influential (66.7%). P-value of 0.016 was obtained from the statistical test used, so it can be concluded that there is a correlation between typography of cigarette packs and smoking behavior of MAN students in Banda Aceh.

Similarly, non-smoking behavior was also more commonly seen in respondents affected by the coloring on cigarette packs (92.5%), compared to those who were not affected by the coloring (71.0%). P-value of 0.037 was obtained from the statistical test applied, so it can be concluded that there is a correlation between coloring of cigarette packs and smoking behavior of MAN students in Banda Aceh.

Furthermore, non-smoking behavior was more commonly seen in respondents influenced by the visual layout of cigarette packs (97.1%), compared to respondents who did not find the layout influential (69.4%). P-value of 0.001 was obtained from the statistical test used, and therefore it can be concluded that there is a correlation between visual layout of cigarette packs and smoking behavior of MAN students in Banda Aceh.

IV. discussion.

1. Correlation between visual illustration on cigarette packs and smoking behavior of MAN students in Banda Aceh

The result of the research shows that there is a correlation between visual illustration on cigarette packs and smoking behavior of MAN students in Banda Aceh Year 2016 (p-value of 0.003). This result is in line with a study conducted by²¹ on 2,432 teenagers in Australia. The authors stated that visual warnings on cigarette packs were noticed by the majority of teenagers, thus enhancing their cognitive processes and potentially reducing their intention to smoke. The finding also showed that the use of images could help reduce smoking behavior among teenagers.

WHO FCTC (2003)¹⁵ in article 11 recommended that health warnings should include an image or a pictogram. Images have the extra benefit of potentially reaching people with poor literacy or those who cannot read, and images are also considered as an important aspect in many countries. The article also mentioned that the use of images is more likely to be noticed, more likely to remain salient over time, more effective in communicating health risks, more likely to provoke critical thinking about health risks and to potentially damage the brand image on the pack ageing, which will reduce the appeal of the packaging.

Smoking is an activity that teenagers do to look liberated and mature when adjusting themselves to their smoking peers.³ states that the age an individual starting to smoke ranges from 11 to 13 years old, and in general, a person smokes before the age of 18.

Researchers believe that using visual illustration is an effective way to communicate about health risks among teenagers. Visual illustration is able to warn teenagers about cigarette-induced hazards, allowing them to talk more frequently about the risks of smoking, as well as to think against smoking or to quit smoking, which is very helpful in reducing smoking behavior among teenagers.

2. Correlation between typography of cigarette packs and smoking behavior of MAN students in Banda Aceh

The result of the study shows that there is a correlation between typography of cigarette packs and teenage smoking behavior (p-value of 0.016). This result is in line with a research conducted by²² in the UK on 1,401 teenagers aged 11-16 years old. They reported that textual warnings had stopped respondents to have cigarettes, although only 6% of smokers showed that textual warnings could actually reduce teenage smoking behavior. They also mentioned that textual warnings help communicate about the dangers of smoking.

Experimental surveys and studies conducted in other countries reported that textual warnings are considered more effective than pictorial warnings alone to inform smokers about smoking risks and cessation of smoking.²³ in their research evaluation also stated that health warnings that contain texts are considered to have a greater impact than pictorial warnings alone.

Researchers assume that the use of typography can help communicate about the risks of smoking. Striking visual typography will make it easier for someone to remember the messages that are expected to reduce smoking rates.

3. Correlation between coloring on cigarette packs and smoking behavior of MAN students in Banda Aceh

The result of the study also shows that there is a correlation between coloring on cigarette packs and teenage smoking behavior (p-value of 0.037). This result is consistent with the study of²⁴ that was conducted in the UK on teenagers aged 11-16 years. The authors reported that teenagers who think about the structure and the colors of cigarette packs are most likely to go on to smoke. In contrast, plain packaging directly reduces the appeal of smoking in adolescents.

This current study supports the research conducted by²⁵ in New York, USA, on 397 respondents. They found that colors and product descriptors are associated with false beliefs against the risks of smoking. Plain packaging can reduce many erroneous misperceptions in communicating about the risks of smoking through packaging features.

Article 11 on WHO FCTC 2003¹⁵, explained that the use of colors, as opposed to black and white, affects the overall notice ability of illustrated elements of health warnings and messages. Therefore, all parties are strongly encouraged to use full colors, rather than just black and white. Contrasting colors for text background should be used in order to increase notice ability of warnings and to maximize text-based elements of health warnings.

Researchers argue that there is a correlation between coloring on cigarette packs and teenage smoking behavior since the cigarette industry has been using colors on cigarette packaging to obscure health risks caused by cigarettes. Therefore, the use of contrasting colors, as well as a plain packaging policy, is highly recommended as a warning message on cigarette packs.

4. Correlation between layout of cigarette packs and smoking behavior of MAN students in Banda Aceh

The result demonstrated that there is a correlation between visual layout on cigarette packs and teenage smoking behavior (p-value of 0.001). This result supports the study of²⁵ that was conducted in New York, USA, on 397 respondents. They found that warnings using larger images are more likely to

attract attention, encourage thoughts about health risks, motivate quitting, and most effective.

Southeast Asia Tobacco Control Alliance (SEATCA, 2008)²⁶, in reporting some research conducted in Southeast Asia, suggested that some respondents in Laos said that the size of the warning should be in large print and should include images. Half of the respondents, the majority of whom are smokers, recommended that the visual health warning should cover 50% to 100% of the main display area. A report in Vietnam mentioned that all respondents preferred a visual health warning that covers more than 50% of the main display. In addition, the majority of respondents in Cambodia (90.5%) stated that warnings should be larger and more prominently featured, covering 50% or more of the packaging. Meanwhile, in Indonesia, 78% of the respondents preferred warnings that cover about 50% of the cigarette packaging. Layout directly affects the success of health warnings, and the success of health warnings affects teenage smoking behavior. All of them have direct or indirect relevance.

E. Conclusions and Suggestions

There are correlations between visual illustration on cigarette packs, typography of cigarette packs, coloring on cigarette packs, as well as layout of cigarette packs and smoking behavior of MAN students in Banda Aceh.

It is therefore recommended that smoking hazard awareness programs need to be continuously improved using various media and platforms. The government, specifically the policy makers, are expected to set regulations for tobacco companies to urge the use of plain packaging on cigarette packs and the display of a more frightening visual warning of the dangers of smoking on cigarette packs that cover at least 50% of the whole package. The school is expected to administer regular health education programs and to provide guidance to smoking students so that they quit smoking.

F. The Gratitude Expression

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G. References

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