The Effect of Warning Labels on Cigarette Packages: Textual vs. Textual-Visual and Self-Efficacy

Rizal Edy Halim*, Faisal Muttaqin**

Abstract

The small number of fusion research that addresses fear-appeal and self-efficacy in the effectiveness of warning labels cause the label is not clear, then the purpose of the study is the first to examine the effect of the combination of the message. With the experimental method, a total of 240 participants were smokers consist of Indonesian university students in the age range 18-23 years. Data obtained then processed with ANOVA statistical methods and Test T. The results are consistent with previous studies that the visual warning labels more effective than the textual warning labels alone. Results also suggest that a warning label should be both visual and textual messages combined with self-efficacy. Limitations, this study does not differentiate among smokers and non-smokers, in addition to the images are used only one type of disease, so that the research needs to be done to distinguish these factors.

Keywords: Cigarette Packaging, Warning Labels, Visual Fear-Appeal, Self-Efficacy

JEL Classifications: M31, M37, M38, C92, I18

1. Introduction

Cigarettes became one of the important health issue in the world, according to WHO there are about 5.4 million people die each year from diseases caused by tobacco consumption. Since 2003, WHO has started campaigning demarketing cigarette or commonly referred to as anti-smoking campaigns. WHO and its member States has made an agreement to reduce tobacco consumption through policies that support the world's anti-smoking campaign. one of the policy is to put pictorial warnings on each pack of cigarettes. The deal was welcomed by the State concerned of the dangers of cigarettes just as Canada, U.S., Brazil, European countries, Australia and even Singapore and Malaysia.

The first scientific publications on tobacco pictorial warnings appear in 2003 (Hammond, Fong, McDonald, Cameron, & Brown, 2003) and followed by other studies, particularly by public health researchers. This study underscores that the warning labels are more effective than textual graphics on cognitive and emotional reactions and behavioral intentions. Cognitive reactions, pictorial warning labels are designed in color and more clearly visible, assessed are easier to understand and increase awareness and knowledge about the health hazards of smoking. Several previous studies (Hammond, Fong, Borland, Cummings, McNeill, & Driezen, 2007; Bansal-Travers, Hammond, Smith, & Cummings, 2011; O'Hegarty, Pederson, Nelson, Mowery, Gable, & Wortley, 2006) are implemented graphic warnings in Canada since 2000 proved to be effective to make young people think about trying to quit smoking. The second is an emotional reaction; graphic labels activate responses that impact on behavior. Several Studies (Hammond et al., 2007; Gallopel-Morvan, Gabriel, Le Gall-Ely, Rieunier, & Urien, 2011) highlighted that loss-framed graphic warnings result in emotions of fear, disgust, or anxiety have a positive impact on quit, trying to quit or reduce smoking. Behavioral Intention is the last reaction, graphic labels more effective than text in motivating smokers to quit and to prevent non-smokers to start smoking (Kees, Burton, Andrews, & Kozup, 2006).

Despite the promising results of a number of previous studies, the effect of using a visual warning labels are still unclear in two points. First, Gallopel-Morvan et al. (2011) said that the possibility of side effects caused by a warning message containing the fear appeal. In Hammond et al. (2007)'s study, it was found that 1 percent of smokers want to smoke more after being given a warning label, and 33 percent of smokers trying to avoid the warning labels, and 13 percent of smokers assessing the warning label is not credible enough. This defensive reactions that may be caused sharp warning label into the spotlight marketing academics and psychology (Gallopel-Morvan et al., 2011). To address this problem, the theory of protection mo-

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* First author and corresponding author. Management Department, Faculty of Economics, University of Indonesia [Management Department, Faculty of Economics, University of Indonesia Kampus UI Baru Tel: (+62 21) 727-2425 e-mail: rizaledy@gmail.com ; rizal.edy@ui.ac.id]

** Management Department, Faculty of Economics, University of Indonesia [Management Department, Faculty of Economics, University of Indonesia Kampus UI Baru Tel: (+62 21) 727-2425 e-mail: faisalmuttaqin@yahoo.com]

tivation suggests the need to combine the warning message with self-efficacy content. Gallopel-Morvan et al. (2011) argue that the warning label for the communication between the message should be combining negative and positive messages for future research.

Secondly, there is a lack of visual warning label studies in the world except The U.S. and Canada (Gallopel-Morvan et al., 2011). Previous study found that cultural differences will lead to differences responses of visual symbols in advertising, the media campaign used and visual warning labels used (Gallopel-Morvan et al., 2011).

Considering all these limitations, this study aims to explore the Indonesian assessment of the visual warning labels and textual warning labels, especially the use of fear-appeal and self-efficacy as well as a combination of both. The main objective of this study was to determine the effect of self-efficacy warning messages on cigarette to the intention to quit smoking smokers. This research provides additional marketing science. The results of the study suggest that the warning messages on cigarette packs should contain the message that integrates the communication between the negative messages and positive messages. The study was conducted in the State of Indonesia, thus this study has also expanded the area of research on smoking warning labels. The results showed that there was no difference in outcome between studies outside Indonesia.

2. Literature Review

2.1 Warning Message and Self-efficacy

Associated with cigarette warning, self-efficacy refers to a person's confidence that he has the ability to overcome the costs / barriers or difficulties in adopting the recommended behavior (Cismarru & Lavack, 2007). Research suggests that the use of a message-efficacy can increase motivation and persuasion to be effective tools to invite someone change the behavior, such as smoking cessation. Finish due to cigarette use reminder message, smokers will tend to focus and Aware of the threat, because it takes the message as a counterweight effect efficacy threat. To increase self-efficacy, a message should produce a recommendation, for example how to stop until someone is a belief that they have the ability to follow the warning label message (Strahan et al., 2002). By simply making a push message that they can quit smoking, could be an effective strategy to increase self-efficacy and persuade them to change their behavior (Strahan et al., 2002). Share information and tell how one can quit smoking can also improve self-efficacy.

To increase self-efficacy in the context of smoking, a message must be stressed that quitting smoking can reduce the risk of health problems (Cisamarru & Lavack, 2007). Warning message should be able to display information about the benefits of quitting smoking and encourage others to start quit smoking. For example, "to quit smoking then you reduce the risk of oral can-

cer" or messages that drive to start quitting smoking for example, "to quit smoking, please call our hotline number (such as warning labels on cigarette packs Malaysia and Singapore).

In the global scope, the State which first apply a warning message with a message of self-efficacy is Canada. In the early application of labels, this country uses a warning message that focused on the danger of cigarette use visual elements such as fear-appeal, and with the development of studies on the effectiveness of cigarette warning message, Canada country combining visual alert message with the message self-efficacy, as the following:

"I wish I had never started smoking" I was diagnosed with cancer of the larynx When I was 48. I had to have my vocal cord removed, and now i breathe through hole in my throat. "Lerry.

Need help to Quit ? call ; 08xxxxx .. / govxxxxx.com

Message according to the statement above Strathan et al. (2002) that by sharing stories about quitting smoking experiences, and provide recommendations on how to quit smoking can increase self-efficacy.

From the above explanation, the authors suspect based on the findings of previous studies (Hammond et al., 2007) that the visual textual warning labels fear-appeal more effectively influence smokers compared with only textual warning labels. Therefore the research hypothesis as follows:

H1: Participants were given visual stimulus textual warning labels have the intention to quit smoking is higher than that given participant textual warning labels alone.

Based on research suggestions Cisamaru and Lavack (2007) and Morvan (2011) which says that the visual textual warning labels should be combined with self-efficacy textual messages. therefore, this study will test the following hypothesis:

H2: Participants were given visual stimulus textual warning labels combined with a message of self-efficacy will have the intention to quit smoking is higher compared to participants given visual stimulus textual warning labels alone.

H3: Participants were given stimulus textual warning labels combined with a message of self-efficacy will have the intention to quit smoking is higher compared to participants given stimulus textual warning labels alone.

3. Research Methods

The method used for this research is experimental, which is an experimental method used to study causal explains the evidence of a causal relationship (Malhotra, 2007). Experimental research method was chosen in this study to answer the above research hypothesis. Design research is (textual visual warning

labels, warning labels textual) x 2 (message self-efficacy, non-efficacy) between subjects. Each cell is given a different stimulus. Participants were randomly placed into four cells are formed in the experimental design.

3.1. Independent Variables

Independent variables in this study are stimulus visual textual warning labels, warning labels textual stimulus alone, stimulus visual textual warning labels combined with self-efficacy, textual warning labels stimulus combined with self-efficacy. To determine the stimulus used in this study it conducted three pilot studies, the first pilot study to determine the diseases image is used. Pilot study 2 to determine the use of textual messages, Pilot study 3 to determine the message of self-efficacy are used.

3.2. Dependent Variables

As the Kees et al. (2006)'s study consisted of two dependent variables: Affective Variables and Perceived Effectiveness and Intention to quit. Affective variables consist of sub variables: Negative Affect and Package attractiveness. To measure the variable Affect negative we will ask respondents to indicate the extent of the information on the packaging form for their negative feelings. Feelings will be determined under the "worried / not worried at all," "nervous / not nervous at all," "fear / no fear at all," "not comfortable / casual," and "angry / not angry at all. While package variable to measure our attractiveness measure "unattractive / attractive" and "unappealing / appealing." on a scale of 7. to assess the perceived effectiveness of the package to encourage more smokers to quit and prevent non-smokers from starting to smoke, this study using the scale "strongly agree / strongly disagree. " To measure intention to quit smoking, we use the item in question intention to quit as Kees et al. (2006).

3.3. Manipulation Checks

To determine success or failure of a given stimulus, this study first performs manipulation checks. From the results of manipulation checks concluded that the stimulus has been given in accordance with the research objectives of textual and visual stimulus labels combined with efficacy messages and warning messages that are not coupled with efficacy message. Also, the results indicate that a given stimulus has managed to convey the message to suit the purpose of research by looking at each stimulus level of confidence is high by any participant.

4. Results of Data Analysis

From the data processing shows that participants given stim-

ulus of visual warning labels feel the negative affective efficacy (M = 2.6667) greater than textual only (M = 2.3867). While the average participant is given a visual warning stimulus labels feel negative affective efficacy (M = 5.36) greater than visual-textual (M= 5,086). Of these results shows that there are differences in the influence of visual and textual stimulus to the negative affective. Visual Affect showed greater negative effect than textual. Thus it can be said that the visual stimulus provided both visual self-efficacy and visual textual alone have increased negative feelings such as, anxious, nervous, scared, uncomfortable and angry. These results are consistent with the findings of previous studies (Hammond et al., 2007, Kees et al., 2006) which says that the visual warning labels that use elements of fear-appeal was effective in improving negative feelings. Thus a given visual stimulus in this study has succeeded in providing a sense of fear to the participants.

<Table 1> Difference of Means

Differences Between Means				
Stimulus	Affective	Attractive	Effectiveness	Intention to quit
Textual efficacy	2.6667	3.8000	3.2933	4.0333
Visual efficacy	5.3600	4.5500	4.6733	5.6833
Textual only	2.3867	2.6500	2.6067	2.5667
Textual-Visual	5.0867	4.3667	4.9200	3.2500

From the data processing shows that the textual warning labels combined with a message of self-efficacy rated attractive by participants at M = 3.8000 and visual self-efficacy for M = 4.5500, textual only for M = 2.6500, and Visual textual at M = 4.3667. There are differences between the visual and the textual, visual warning label which is higher than the textual warning labels. It is believed to label participants visually more interesting because it contains images and information are more striking. The results are consistent with research findings Kees et al. (2006) is visually more interesting than the textual course participants.

4.1. Effectiveness Intentions towards Others

From the data processing textual warning labels found that self-efficacy was rated by participants effective in influencing the intention to stop and prevents others to smoke at M = 3.2933, visual warning labels, self-efficacy for M = 4.6733, textual labels only for M = 2.6067 and visual textual labels for M = 4.9200. Textual warning labels are combined with self-efficacy assessed over effective influence others with textual warning labels alone. It can be concluded that there is a rise in the effectiveness of warning labels when combined with textual warning labels self-efficacy. However, this was not found in the visual warning labels and visual textual self-efficacy, which can be seen from

the results of the average state that visual textual higher than self-efficacy. Meanwhile, visual and textual warning labels compared the effectiveness of both the visual look that is more effective, the findings are consistent with research findings Kees et al. (2006).

4.2. Intention to Quit Smoking

From the data processing, it was found that on average participants' intentions to quit smoking given textual warning labels self-efficacy for M = 4.0333, visual warning label self-efficacy for M = 5.6833, textual warning labels only for M = 2.5667, and warning labels textual visual for M = 3.2500. These results show that there are differences in the stimulus effects of textual and visual warning labels that use self-efficacy with textual visual and textual labels alone. Visual and textual warning labels are combined with self-efficacy is more effective than visual and textual alone in influencing the intention to quit smoking. These results are consistent with the results of the study Morvan et al. (2011) suggest that a warning label should be combined with a message of self-efficacy. Results of this study also proves the statement Cissamaru and Lavack (2007) which states that by increasing self-efficacy will increase smokers' motivation to quit smoking.

To compare the significance of differences in each stimulus given at stud 1, this study using T test using SPSS 19. From the table of group statistics are compared to the carrying factor 2 (non-efficacy of visual, textual only non-efficacy) x 2 (visual efficacy, textual efficacy), the results showed that on average participants' intentions to quit smoking given textual warning labels self-efficacy for M = 4.0333, visual warning labels, self-efficacy for M = 5.6833, textual warning labels only for M = 2.5667, visual and textual warning labels for M = 3.2500. These results show that there are differences in the average effect of stimulus textual and visual warning labels that use self-efficacy with textual visual and textual labels alone.

4.3. Comparison of Participants' Intentions towards Textual and Visual Warning Labels

From the table T test shows that the average label textual and visual M = 2.5667 M = 3.2500 with sig. 0.003 (p <0.05), and calculate the value of T (t = -3.083) is greater than T table (1.67), where H0 region declined 1.67 to - 1.67, so that t is in the area of Ho rejected. This means that there significant difference between the intention to quit smoking participants given textual warning labels with textual visual warning labels, where higher visual warning labels influence intentions to quit smoking compared with only textual warning labels. Thus H1: Participants were given visual stimulus textual warning labels have the intention to quit smoking is higher than that given participant textual warning labels alone. Thus, it can be concluded that the significant participants given visual stimulus textual warning labels have the intention to quit smoking was higher (M =

3.2500) compared with participant given textual warning labels alone (M = 2.5667).

<Table 2> Mean and T-test Results

Stimulus Compare	Mean	t-value	Sig.
Textual vs. Visual	2.5667 vs. 3.2500	-3.083	.003
Visual Textual Efficacy vs. Visual Textual Only	5.6833 vs. 3.2500	13.417	.000
Textual Efficacy vs. Textual Only	4.0333 vs. 2.5667	5.352	.003

4.4. Comparison of Participants' Self-efficacy Visual Warnings with Visual Textual

From the table T test shows that the average visual label efficacy M = 5.6833 textual and visual only M = 3.2500 with sig. 0.00 (p <0.05), and calculate the value of T = 13 417 greater than the T table with def, 58 (1.67), where the region H0 is rejected if it is outside the 1.67 to - 1.67, so that t is in Ho in the starting area. This means that there significant difference between the intention to quit smoking participants given a visual warning label efficacy with only textual visual warning labels, warning labels where the higher efficacy of visual influence intentions to quit smoking compared to textual alone . Visual warning label so then H2: Participants were given a warning label visual stimulus paired with a message of self-efficacy will have the intention to quit smoking is higher compared to participants given visual stimulus textual warning labels alone. Thus, it can be concluded that the stimulus significant Participants were given a visual warning label, combined with the message of self-efficacy (M = 5.6833) have the intention to quit smoking is higher compared to participants given a visual warning labels textual stimulus alone (M = 3.2500).

4.5. Comparison of Participants' Intentions towards Textual Course

From the table that the average T test shows textual label efficacy and textual M = 4.0333 M = 2.5667 only with sig. 0.003 (p <0.05), and calculate the value of T (t = 5,352) is greater than T table (1.67), where the region H0 is rejected at the 1.67 to - 1.67, so that t is in the area of Ho is rejected . This means that there significant difference between the intention to quit smoking participants given textual warning labels efficacy with only textual warning labels, warning labels textual where higher efficacy influence intentions to quit smoking compared with only textual warning labels. Thus H3: Participants were given stimulus textual warning labels combined with a message of self-efficacy will have the intention to quit smoking is higher compared to participants given stimulus textual warning labels alone. (Hypothesis accepted). Thus, it can be concluded that the participants were given significant stimulus textual warning labels combined with a message of self-efficacy have the in-

tention to quit smoking was higher (M = 4.0333) compared with participants given stimulus textual warning labels alone (M = 2.5667).

5. Discussion and Managerial Implications

This study found that participants who were given visual stimulus textual warning labels have the intention to quit smoking is higher compared to participants given textual warning labels alone. The findings of this study support the findings of previous studies, such as research findings in Canada (Hammond et al., 2003; Kees et al., 2006). Previously, marketing academics have found that visual warnings are more effective than textual warning labels, these results corroborate the findings of intensive search. Furthermore, this study proves that the use of warning labels on cigarette packs is not enough just to use the element of fear-appeal alone, but should be combined with a message of self-efficacy. Moreover, adolescents tend to cause a reaction dared to fight the fear element is given in the figure. The research findings demonstrate that the participants were given visual stimulus and textual warning labels combined with a message of self-efficacy will have the intention to quit smoking is higher compared to participants given visual stimulus textual warning labels alone. This is consistent with research findings Morvan et al. (2011), and Cissamaruu and Lavack (2007) which says that individuals who have high self-efficacy is believed to be able to quit smoking.

This study is useful for marketing academics to assess the effectiveness of warning labels on cigarette packs. with the findings of the study, is likely to provide new insights to the topic area warning label. This study has also consistent with the findings of previous studies which say that the visual warning labels more effective than textual warning labels, As well as the warning labels should be combined with a message of self-efficacy, which is consistent with the labels used in Canada. This study is useful for social marketing practitioners such as anti-tobacco organization, World Health Organization (WHO). With these results it practitioners can use social marketing as a tool of persuasion warning labels to reduce cigarette consumption, both nationally and internationally. This effort can be called with de-marketing efforts. Demarketing is a marketing activity that aims to reduce demand temporarily or permanently (Kotler & Keller, 2012, p. 16). This study is useful for decision-makers. In this case the ministry of health and trade ministries Indonesian republic. Given this research, it can strengthen the foundation of the health ministry to put a size larger pictorial warning on cigarette packs.

6. Conclusion

From the results of this study concluded that, all hypotheses are significantly supported by the data. Where visual warning la-

bels more than effective textual warning labels. As well as the warning labels should be combined with messages containing self-efficacy. Study did not compare between smokers and non-smokers, it is likely there is a difference between the intentions of smokers and non-smokers. It is important to compare the two groups to test the effectiveness of warning labels with self-efficacy. Limitations of this study using the textual content of the message is different in visual and textual labels, although the wording has been carried out different tests to make sure there was no effect of differences in the textual content of the message, but this study did not test different graphics that label. This study did not include a professional designer, so there is the possibility of the influence of design factors on the assessment of participants' images. This study only using lab experiments, required subsequent experiments performed by the method of field experiments. This study did not compare the gender differences in this group only participant population target. There might be differences in valuation when using populations of adults and children. This study population is limited (Student of University of Indonesia), it is believed to have carried out another investigation involving participants from all over the Indonesian sample.

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APPENDIX: Viual Textual & Self efficacy Label