

# Effect of Graphic Images in Cigarette Health Warning

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## Abstract

The study analyzed the effect of suddenness, curiosity, and importance when including a stunning picture on cigarette bundles in Pakistan. A test configuration contrasted responses of Pakistanis smokers uncovered with a health warning. A health warning with a graphic image was affirmed as more viable in seeking attention with some restricted effects in convincing smokers to follow up on the data. By and large, the researchers support the regulations in Pakistan to oblige health warnings highlighting novel imagery, for example, those found in Japan, Europe, Canada, and Australia.

## Keywords

Graphic Images, Health Warning, Smoking, Pakistan, Tobacco

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## 1. Introduction

According to the World Health Organization (2014), the consumption of tobacco causes of 6 million deaths every year worldwide and therefore, it is one of the main reasons of preventable deaths. Irrespective of the fact that a decline in the smoking rates has been noticed not only in Pakistan, but also in the world. However, per person consumption of cigarettes in Pakistan is substantially high when compared with the per person consumption of cigarettes in other countries of the world. Considering such a high consumption of tobacco, the governments of many developed and developing countries have devised many action plans to lower the consumption of tobacco. In order to achieve their goals, the governments and public health organizations are involved in many antismoking campaigns, and devised and implemented different new laws and regulations. Perhaps, the most commonly known actions in this regard are the increasing amount of duties on tobacco and displaying a health warning message on the cover of the cigarette

package. In the article, the researchers are concerned to explore the latter action plan, with respect to exploring its role and effectiveness in the prevention or reduction of consumption of tobacco.

Previously in Pakistan, only the text-based warning message was mandatory to display on the cigarette package. Moreover, the tone of the message was pretty much formal and not so convincing, and occupied only a very little proportion of the whole cigarette package. A couple of years back, the tighten rules on tobacco consumptions have made cigarette companies in Pakistan to include a novel image of mouth cancer on along with the formal text based warning message of smoking. Under this study, the researchers are supposed to explore the impact of novel mouth cancer image, so as to find if it is of that level of significance that it could convince a smoker to quit smoking.

Feeling the need of the study, a short research survey was done by the researchers, which was supposed to record the affective, cognitive, and behavioral responses of Pakistani smokers on the utilization of a health warning including a

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stunning picture as an antismoking message on cigarette packaging. The rest of the article contains the literature review, methodology, finding and results, discussion and analysis, and a conclusion, and this present piece of information is being provided as the context of the study.

## 2. Literature Review

Cigarette smoking ingestion as well as dependency, addressing a dark area involving buyer actions. Regardless of the greatest efforts involving research workers, Govt. regulators, as well as involved industry workers, at times consumers' toughest predators are actually independently (Chéron, 2015). Thought to be reasonable chiefs, doing their best to utilize items and administrations that will boost the wellbeing and prosperity of themselves, their families, and society. In all actuality, then again, shoppers' goals, decisions, and activities frequently bring about burdensome, negative outcomes to people and the general public in which they live. Buyer habit is a physiological or mental reliance on items or administrations.

Numerous organizations benefit from offering addictive items, similar to the case with tobacco organizations and cigarettes. As a beginning stage, the customary correspondence model grew by (Berlo, 1960) may help outline the components liable to impact an adjustment in state of mind of an intended interest group. The primary components of the model include: the source, the message, the medium, the crowd, and the criticism. This trial study will concentrate on controlling the message component and keeping up alternate components steady. It might be contended that the message is the most essential component, since there are numerous approaches to say something, and the structure of the message is liable to have a huge impact on how it is seen. The substance of the message and all the more particularly whether it ought to be imparted through a photo or words or a blend of both, is the object of this examination.

Although some examination recommends that a photo is not generally as compelling when imparting truthful data, it has been observed that verbal or content based components are more viable when a going hand in hand with picture strengthens them, particularly on the off chance that they outline the delineation, or the message in the photo firmly identifies with the duplicate (Houston, Childers, & Heckler, 1987). Additionally, the same source recommends that intense depictions or design summon consideration and are all the more unequivocally inserted in memory, likely on the grounds that distinctive pictures have a tendency to enact mental symbolism. This type of communication like pictures, word or the combination of both can pay impacts in different

ways on different peoples. For instance some may laugh, some may cry, or other ones may make some kind of jokes (Gallopel & Valette-Florence, 2002). Apprehension claims accentuate the negative consequences that can happen unless customers change their demeanor or conduct (Ray & Wilkie, 1970).

Furthermore the study analysis that promotes the negativity of smoking among individuals changes their personal attitude, liking, interest and preferences (Witte & Allen, 2000). Notwithstanding these ideas, the present study obtains from (Sloutsky, Kaminski, & Heckler, 2005) On the impact of inconsistent data on memory, when testing the impact of controlling hope and importance in visual segments of print commercials. The finish of the study was that "publicizing utilizing unforeseen and significant data may pull in consideration, yet sudden data coupled with unimportant data may diminish the arrangement of a complete choice making procedure. Besides, the most vital hypothetical foundation that was utilized by (Chen et al., 2007) about promoting inventiveness will likewise be instrumental in the study. This later study demonstrated that "oddity, weightiness, and connectedness were key components to create higher review and better demeanor."

The principle independent variables measured in this trial study are sorted out as indicated by the settled tri-dimensional structure of mentality. This structure comprises of the emotional, subjective, and behavioral measurements of demeanor (Bagozzi, 1981). Realistic cautioning marks on cigarette packs are recognized by the greater part of young people, expand youths' intellectual handling of these messages and can possibly lower smoking aims. Our discoveries propose that the presentation of realistic cautioning names may help to diminish smoking among teenagers (White, Webster, & Wakefield, 2008). Danger level directed the impact of self-certification on pertinence and propositions: Self-assertion expanded evaluations on both measures among the individuals who smoked more. What's more, self-insistence directed the danger plan relationship, which was weaker in the self-insisted gathering. At post luminary, inspiration to lessen utilization stayed higher in self-insisted members, yet there were no distinctions in reported utilization (Harris, Mayle, Mabbott, & Napper, 2007) Health warning messages on bundles are among the most immediate and noticeable method for speaking with smokers. Bigger notices with pictures are essentially more successful than littler, content just messages (Hammond, 2011). Australia's new Health warning messages expanded responses that are tentatively prescient of discontinuance action. Cautioning size expands cautioning adequacy and realistic notices may be better than content based notices (Borland et al., 2009). Expelling however much brand data

from cigarette packs as could reasonably be expected is prone to lessen positive cigarette brand picture relationship among teenagers. By furthermore expanding the span of pictorial Health warning messages, positive pack view of the individuals who are at more serious danger of getting to be consistent dependent grown-up smokers are destined to be lessened (Germain, Wakefield, & Durkin, 2010). Both present and previous smokers suspected that cigarette cautioning names with content in addition to design were considerably to a greater extent a hindrance than content just marks. The apparent adequacy of these names was higher in general, as well as for the particular ranges of smoking-related wellbeing impacts, aversion, suspension, and support of refraining (O'Hegarty et al., 2006). Expansive, extensive notices on cigarette bundles are more inclined to be perceived and appraised as viable by smokers. Changes in Health warning messages are likewise connected with expanded viability. Health warning messages on U.S. bundles, which were last overhauled in 1984, were connected with the minimum viability (Hammond et al., 2007). The discoveries show that including both realistic visual notices, for example, those utilized as a part of Canada, and cautioning proclamations presently utilized as a part of the United States can diminish the apparent engaging quality of the bundle and make larger amounts of negative influence, for example, trepidation or nervousness.

The outcomes likewise demonstrate that the expansion of the particular visual notices inspected to the U.S. articulations expands smokers' apparent plans of stopping smoking contrasted and cautioning proclamations alone. The creators offer ramifications for open approach and general wellbeing and give proposals to further research (Kees, Burton, Andrews, & Kozup, 2006). Realistic cigarette cautioning names serve as a viable populace based smoking discontinuance mediation (Hammond, Fong, McDonald, Cameron, & Brown, 2003). Results propose that unmistakable Health warning messages with realistic pictures will diminish interest for cigarettes. Controllers ought to consider this sort of caution name, as well as plain bundling arrangements for tobacco items (Thrasher, Rousu, Hammond, Navarro, & Corrigan, 2011). In multivariate investigations, smokers who had former introduction to the notices were altogether more prone to report positive reactions to the commercials and stronger post-presentation stopping aims (Brennan, Durkin, Cotter, Harper, & Wakefield, 2011).

### 3. Methodology

#### 3.1. Questionnaire

The style and the format of the questions utilized as a part of the present study's questionnaire was in the light of the past

investigations of the similar kind made by the researchers in Japan (Chéron, 2015). As used by them, a 5-point Likert scale is used in the study as opposed to a 7-point semantic differential scale, another option available to the researchers at their disposal. The questionnaire was consisted of 11 items (indicated in table 1) representing the tri-dimensional structure of affective, cognitive and behavioral responses of the respondents.

Also, survey questions were designed receiving a scale utilizing a diminishing level of understanding (5, 4, 3, 2, 1) indicated from the left to the right. This is additionally the standard in various consumer loyalty surveys led in Pakistan, rather than the traditional English expanding numbered scales. The one-page questionnaire included a short introduction, 11 statements with the 5 degrees of agreement previously mentioned, which is displayed in the table 1 below.

Table 1. Questionnaire and Their Dimensions.

Items of the Questionnaire	Dimensions
1. Warning left an impression.	Affective
2. Warning is eye-catching.	Affective
3. Warning is frightening.	Affective
4. Warning is easy to understand.	Cognitive
5. Warning is convincing (believable).	Cognitive
6. Pictured cigarette is more harmful.	Cognitive
7. Learn more how to quit.	Behavioral
8. Seek info to quit.	Behavioral
9. Quitting is likely.	Behavioral
10. Share info with a friend.	Behavioral
11. Warning is effective to stop buying.	Behavioral

#### 3.2. Variables

In the study, the model measuring the impact of the novel imagery on the smokers is led by 1 dependent and 2 independent variables. Two independent variables include the affective and cognitive dimensions, joined by the behavioral dimension, which is the dependent variable of the study. Thus, the schematic diagram explaining the relationship between the dependent and independent variables seem like:

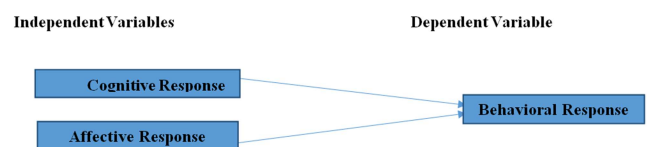


Figure 1. Theoretical Model.

#### 3.3. Hypotheses

In the light of the theoretical model, the two main hypothesis of the study are:

H1: If there is any significant impact of cognitive dimension on behavioral dimension. Numerically, it can be represented as:

$$H_{\text{null}}: \mu_2 - \mu_1 = 0$$

$$H_{\text{alternative}}: \mu_2 - \mu_1 > 0$$

Here, the null hypothesis demonstrate that there is no significant effect, while the alternative hypothesis accepts the existence of the significant effect.

H2: The second and the last hypothesis of the study is that if there is any significant impact of affective dimension on behavioral dimension. Numerically, it can be represented as:

$$H_{\text{null}}: \mu_2 - \mu_1 = 0$$

$$H_{\text{alternative}}: \mu_2 - \mu_1 > 0$$

Here, the null hypothesis describes that the behavioral dimension is not affected by the affective dimension, while the alternative hypothesis is opposite to it.

### 3.4. Experimental Procedure

Researchers approached to a sample size of 150 smokers under convenience sampling in different departments of University of the Punjab. After a welcome and self-presentation, researchers provided for willing members a brief prologue to the reason for the undertaking in Pakistan.

Taking their due permissions and answering their queries, the questionnaire was personally administered by the researchers. The same procedure was used for all 150 questionnaires.

### 3.5. Study Sample

Total 150 questionnaires were presented for the research, out of which only 135 were to be helpful for the research and the 10 percent of the total 150 got wasted. Some people, who were asked to fill the questionnaire, refused to do so giving different reasons, out of which the common one were:

“I’m busy,”

“I don’t have the time,” and, unluckily,

“I don’t want to think about health-related consequences and warning labels while I’m smoking.”

## 4. Findings and Results

Table 2 shows qualification of the respondents. Two third of the respondents were having masters level qualification while one third were bachelors level.

**Table 2.** Qualification of the Respondents.

Bachelors	Masters	Total
45	90	135

Table 3 shows age of the respondents. Most of the respondents were of age 24 and 23, which shows maturity

level of the respondents.

**Table 3.** Actual Age of the Respondents.

Age (Years)	Frequency
20	08
21	15
22	21
23	24
24	25
25	13
26	13
27	07
28	05
29	03
30	01
Total	135

Questionnaire was developed consisting of 11 items. 150 respondents were approached, out of which 135 respondents filled the questionnaire. Overall reliability of the study as reported by SPSS software was .793 which is acceptable for basic research.

**Table 4.** Reliability Analysis.

Cronbach’s Alpha	No. of Items
.793	11

If we look on item-wise reliability, it can be examined that a slight variation is there, among the items. It means that whole questionnaire shows consistency.

**Table 5.** Item-wise Reliability Statistics.

Items Item Deleted	Cronbach’s Alpha If
AD1	.746
AD2	.786
AD3	.802
CD1	.783
CD2	.791
CD3	.793
BD1	.764
BD2	.753
BD3	.749
BD4	.796
BD5	.765

Here AD represents Affective Dimension, CD stands for Cognitive Dimension, and BD replaces the Behavioral Dimension.

And now let us consider the factor wise reliability.

**Table 6.** Factor-wise Reliability Statistics.

Dimensions Dimension Deleted	Cronbach’s Alpha If
Affective Dimension	.418
Cognitive Dimension	.769
Behavioral Dimension	.489

Table 7 shows correlation among three dimensions of the study. This table can be interpreted as: Cognitive as well as Behavioral Dimension have highly positive significant relationship with Affective Dimension. Whereas Behavioral Dimension has highly positive significant relationship with

Cognitive Dimension.

**Table 7.** Correlation Matrix.

1	2	3	
1 Affective Dimension	1		
2 Cognitive Dimension	.324**	1	
3 Behavioral Dimension	.629**	.265**	1

\*\* Correlation is significant at the 0.01 level (2-tailed)

Table 8 shows regression analysis of the study. Behavioral Dimension was considered as Dependent Variable while Affective and Cognitive Dimension was considered as Independent Variables.

**Table 8.** Regression Analysis.

Dependent Variable	Independent Variables	Sig. Values	VIF
Behavioral Dimension	Affective Dimension	.000	1.000
Cognitive Dimension	.002	1.000	

By using SPSS software separate regression was run for both independent variables and the results can be interpreted as follows:

As sig. =.000<.05, affective dimension has some effect on behavioral dimension.

As sig. =.002<.05, cognitive dimension has some effect on behavioral dimension.

As VIF for both results is 1.000<5.000, there is no chance of multicollinearity in the study.

In broad perspective, the results show that the graphic image of health warning on cigarette package has an effect on the behavior of respondents.

## 5. Discussion

The hypothetical tri-dimensional structure of attitude was affirmed to be appropriate in the study. However, when smokers approach the choice to stop smoking, they have to shape convictions taking into account information, then assess the convictions and form feelings to take part in the relevant behavior conduct. The weak behavioral impact found in this study may be identified with the way that after time, the choice to purchase cigarettes may turn into a low-involvement buy choice in light of self-satisfaction. On the other hand, the choice to stop smoking is a high-involvement process, where consideration and perception are accomplished, the purchaser's cognitive reaction will be the way to the change of mentality and the behavior. In any case, smokers require additionally to shape their beliefs in the light of learning before continuing with behavioral change.

In the current study, the health warning message with the novel image to create critical comprehension has missed the

mark as far as creating solid behavioral goal. Further examination is required with respect to the informal and behavioral influence and control. Generally speaking, the hypothesis gives off an impression of being affirmed in Pakistan, with the message including the health warning message with the novel image of mouth cancer.

## 6. Recommendations

The findings of the study recommend the accompanying suggestions to the managers of the antismoking campaigns. The affirmed hypotheses suggest that warnings highlighting novel image are more compelling at changing mentality about smoking than just text based warnings. In this manner, the suggestion is to actualize stricter administrative regulations on tobacco consumption with respect to including a more horrifying and stunning image on the cigarette packages in Pakistan.

Likewise, it is suggested that not to include the image based health warning message, but include the pictorial message, which is the combination of both the text based health warning message and the image based warning message. Similarly, it is suggested to include the pictorial message on the larger size of the picture as is done by the developed countries. A minimum of the 60% of the principal display area should include the pictorial message, so that it may be more compelling and appealing.

## 7. Limitations

A few of the main limitations of the study are now discussed. As the study did exclude an inquiry on the degree of cigarette consumption, it stays obscure if the tried warnings would have had pretty much effect on light versus substantial smokers. However, it can be accepted that because of the lack of structured way of conducting the study on a larger scale, the different levels of smoking power could be covered, just like the case for sex and age.

Further, the convenience sampling assisted the researchers, however, it pretty much makes the research less generalizable. The respondents were approached only in different departments of University of the Punjab. Furthermore, the data were only collected from male students. So, it is the main limitation of the study that other than male students, no one was included in the study. The study could have been more generalized if it was done on a larger scale, and included people from all types of religions, and societies, a crucial part of Pakistani system.

Additionally, since members were not inquired as to whether they had lived abroad widely, it is unclear in the event that



they had interact with comparable antismoking pictures in different nations. In the event that this were the situation, it is unclear whether this may have desensitized certain respondents who had lived abroad broadly to the stunning effect of the photos. On the other hand, it would have made it significantly harder to discover huge contrasts and to reject the invalid hypothesis.

## 8. Conclusion

This study about the impacts of utilizing health warnings with realistic images in antismoking messages infer that it is an exceptionally viable approach to diminish smoking. The results of the study infer that pictorial form of health warning is more compelling than just the content based warnings in teaching people in general of the health dangers and in minimizing aftermaths of the tobacco consumption. The consequences of the present study affirm this. In general, the findings give backing to regulations obliging warnings highlighting novel imagery on cigarette bundles.

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