

Assessment of People's Attitudes Towards Smoking

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Abstract

A practical, thought-provoking quit-smoking advertising campaign can change smokers' attitudes toward smoking and even encourage them to quit. The anti-smoking video that uses guilt appeal and surprise appeal can encourage quitting behavior and thus persuade smokers to make changes. This pre-test/post-test survey used Qualtrics to examine whether the adults over 18 who smoke/vape (N=55) after watching the video could assess people's attitudes toward smoking. In this study, we used t test method to calculate whether the chosen advertisement was persuasively effective. The calculated result indicates that there was a negative attitude change in the designed persuasive messaging. The insufficient attitude change by using video messaging can have various reasons. The participants, mostly young people under 25 and without children, were untouched by the strategies used in the ads. On another hand, guilt appeals may cause the smokers to feel shame and thus have a negative perspective towards the ads.

Keywords

Quit-smoking campaign, Persuasive appeals, Guilt appeals, Surprise appeals, Anti-smoking advertisement.

1. Introduction

Smoking is strongly linked with health conditions, according to the World Health Report, among the top ten factors affecting health, smoking ranks fourth. Nicotine is a known addictive substance in tobacco. Regular use of tobacco products leads to addiction in many users. Nicotine is a drug that occurs naturally in tobacco and it's thought to be as addictive as heroin or cocaine. The nicotine in tobacco will reach the brain within 7 seconds after being inhaled into the human body, bind to the nicotine receptors in the brain, and promote the brain to secrete dopamine, which will make people feel relaxed and happy. As the smoking time increases, the more nicotine is inhaled, the more nicotine receptors the brain produces, and the greater the body's demand for nicotine. In addition to traditional cigarettes, electronic cigarettes have also become one of the sources of nicotine for modern people. CDC reported that an estimated 12.5% (30.8 million) of U.S. adults currently smoke cigarettes in 2020. Cigarette smoking remains the leading cause of preventable disease, disability, and death. Smoking causes cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Smoking also increases the risk of tuberculosis, certain eye diseases, and problems of the immune system, including rheumatoid arthritis. There are more than 480,000 deaths caused by smoking every year or about 1 in 5 deaths.

Disease, disability, and death caused by smoking are preventable. Reducing tobacco and nicotine intake is an effective way to help people stay away from tobacco harm. In our project, we want to increase people's awareness of smoking cessation and reduce smoking behavior by disseminating advertisements with persuasive messages. At the same time, we use questionnaires to observe our audiences—adult smokers, in order to test whether people's awareness of smoking cessation has changed.

2. Topic and Persuasive Message

Strategy 1: Guilt Appeals One of the persuasive appeals used in the video is guilt appeal. The video intends to provoke guilt in audiences as a way to change their attitudes about smoking. Guilt may encourage people to apologize, repent, and inhibit certain behaviors. (Graton & Mailliez, 2019). People will want to do something to exonerate themselves after feeling guilty, so guilt appeals usually lead people to want to make some changes to make up for their mistakes. If the emotion of guilt is not strong enough, the audience will not feel like they are doing something wrong and want to make changes because the message does not resonate with them (Turner, 2012). Appropriate guilt appeal can remind viewers to take care of the interests and feelings of others and make some reasonable adjustments. Excessive use of guilt can make the viewer feel frightened and resistant to the message, which would lose the effectiveness of the method's purpose (Turner, 2012). In this video, there are no images of putting children's lives in danger because of adults' smoking behavior, so the smoker will not feel overly frightened. The content of the video intends to make smokers feel guilty after watching it and consider quitting smoking.

In this video, some adults were smoking in a public area when some kids came up and said they wanted to borrow a lighter because they wanted to smoke too. It is apparent in the video that these adults are upset after hearing the children's claims. None of the adults were willing to lend the children a lighter, and every adult asked would dissuade the children by saying, "you are too young to smoke," "smoking is bad for your health," or "I cannot lend you a lighter because it is not right for kids to smoke. Audiences who smoke watch this video will feel guilty because they may also have smoked in public or front of children. Then it is likely that the children will imitate their smoking behavior. Therefore, using the method of guilt appeal in the video may encourage the viewer to change their attitude towards smoking. Viewers will think it will not lead children to try to smoke if they do not smoke.

Strategy 2: Surprise Appeals We are surprised when we encounter an unexpected event different from what we expected. The emotion of surprise causes us to rethink our behavior and focus our attention on what is happening. People will often see videos about persuading smokers to quit. Usually, these PSAs will directly educate smokers not to smoke. Many videos that urge people to quit smoking express the idea that "if you smoke, you are prone to cancer" or "you are endangering children's health by smoking." However, in this video, the viewer is surprised that there is no preachy content but relatively gentle questioning, allowing the viewer to focus and re-examine their smoking behavior.

The surprise appeal is achieved when children hand the note to the adults. When they open it, the message on the note says, "You worry about me. Why not about yourself?" this leads the audience to think something different. The audience thought the note would say something like, "If you smoke in front of children, they will learn to smoke too." However, the video took a gentle approach to the message of wanting people not to smoke. When we teach children that smoking is bad behavior, we should also tell ourselves the same thing. This method makes the audience think about the message in a different way. Rather than expound the message mechanically, the viewer will be surprised and moved by the words written on the note. The video is not about criticizing the audience for their smoking behavior but about wanting them to care more about themselves. The surprise appeal in this video is practical because, unlike most other ads that urge people to quit smoking, it talks about adults not wanting children to smoke because they know it is unhealthy. However, this does not mean criticizing the smoker. This video wants the smoker to care about their health while caring about others, and to quit smoking is a sign of caring about smokers' health.

3. Method

Participants: The study consisted of 55 participants who participated and completed a questionnaire about whether this video affects people's attitudes toward smoking. The participants in the study were all over the age of 18 who smoked or vaped. The age distribution of the participants ranged from 18 to 55+, with 37 participants (67.27%) in the age range of 18-25. The remaining participants included 6 participants (10.90%) in the age range of 26-35, 4 participants (7.27%) in the age range of 35-45, 4 (7.27%) in the age range of 46-55, and 4 participants (7.27%) in the age range of 55+. Excluding a few participants who did not wish to disclose their gender, the remaining 35 were male, and 18 were female. 87.5% of the participants had a high school diploma or higher. The majority (67.86%) of the participants were unmarried, 23.21% were married, and a small percentage (8.93%) were separated, divorced, or married but living like single people. Most participants (76.79%) did not have children, and of the 55 participants, only 9 had one child, and 4 had two children.

Procedure: We created an online questionnaire through Qualtrics. The adult smoker survey was divided into six sections: introduction, pre-test measurement (12 questions), message block, post-test measurement (4 questions), demographic measurement (5 questions) and debrief. First, the introduction section introduces the audience to the main content and purpose of the questionnaire and the respondents-adults over the age of 18 who smoke/vape, as well as the basic information and guidelines of the questionnaire. The purpose of pre-test measurement questions is to study the background information of the respondents. Message block is the main display information: video of anti-smoking advertisements for the audience to watch. The post-test measurement questions are used to test the difference in the viewer's thoughts about smoking after viewing the quit smoking ad. The main focus of demographic measurement is on the personal information and basic background information of the respondents. At the end, we thanked the respondents for completing the survey and reiterated the purpose of our survey and our contact information to help respondents answer additional questions.

Measurement: We mainly use multiple choice and slider format in the questionnaire. In the pre-test measurement part, the first five questions asked respondents about their smoking method: smoking or vaping, duration of smoking, frequency, and when they started smoking. The second half of our study focuses on audiences' perceptions of smoking in public places. We tried to ask respondents about their understanding of the importance of smoking, whether they had ever smoked in public, and their perceptions of adult smokers smoking in front of children. In some multi-selections, we provided a section-'other', for respondents to fill in their personal information details to better collect the data from audiences. In the final section of the pre-test, we wanted to explore respondents' practices regarding smoking behavior: whether they had tried to quit smoking over time. Pre-questions can help us better understand the respondents' smoking status and some of their perceptions about smoking, as well as give them an idea of the core survey directions of the questionnaire. In this section, we add a skip logic function, so that if the respondents are positive, they will be redirected to a deeper question: how strongly do they think about quitting. In addition to this, we wanted to explore the reasons for the failure of smokers who had tried to quit.

After respondents viewed the smoking cessation commercial, we investigated the same questions in the post-test measurement section as in the previous section: the importance of quitting smoking, perceptions of smoking in public places, thoughts about smoking in front of children, and the extent to which they want to quit. The main purpose of asking the same questions was to examine whether respondents changed their minds about smoking and their commitment to quitting after viewing the ad. All four of our questions use a slider as the question type. We believe that when it comes to interviewing viewers about the importance of

an issue and their level of agreement, the slider approach is a better way to provide respondents with more detailed and personalized options.

In the final section, we applied multiple choices as question types to invest the audiences' personal background information: age, gender, education level, marital status, and family situation.

4. Results

Using a paired *t* test, the statistical data from the questionnaire were analyzed. The *p* value has a result of 0.0015; according to conventional criteria, the difference is considered very statistically significant. Using people who take attitude questions before watching the advertisement is a Pre-test in the following contents. And people who take attitude questions again after watching the advertisement, which is called a Post-test. The mean for the pre-test is 2.060, and the standard deviation is 0.89. The mean for the post-test is 1.668, and the standard deviation is 0.91. See Table 1 for more data.

Table 1: Pre-test and Post-test Attitude Changes on Smoking After Viewing the Anti-Smoking Advertisement

Group	Pretest	Posttest
Mean	2.060	1.668
SD	0.890	0.915
SEM	0.130	0.133
N	47	47

Table 1

In the questionnaire, we collected 55 responses, and 47 responses were calculated due to incomplete responses. The questionnaire only contains 21 questions examining the attitude change toward the smoking population. According to the results, the Pre-test mean is lower than the Post-test mean, and respondents show a negative persuasive attitude towards the advertisement. In figure 1, 43.42% of respondents smoked for more than 5 years, and 36.84% smoked between 2 and 5 years. Both the population can be viewed as heavy users of tobacco. When asking about the attitude toward cessation before and after watching the advertisement, there are no significant attitude transitions; thus, respondents don't feel persuasive enough to change their actions on smoking.

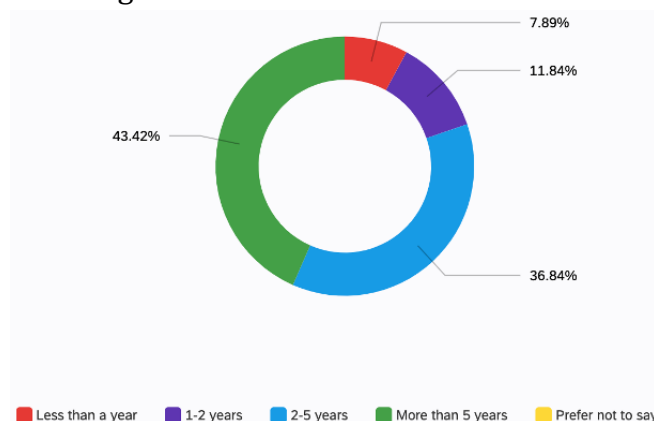


Figure 1: Smoking Duration and Respondents' Attitude Toward Smoking Cessation

We also compared the attitude changes from classified data. We used t test to calculate under different demographic conditions whether or not the mean value may have changed and also tried to find what reason caused this advertisement to become insufficiently effective. The results show that the decline in mean values continued under different genders, whether respondents had children or not.

When we examined the question of “Rate the importance of quitting smoking/vaping,” in figure 2, the peak value before test is located on the “moderately important” option, and we can observe that the peak value made a slight change after the test, some respondents changed their attitudes into “extremely important.” This result shows that the advertisement slightly influences respondents’ attitudes. However, this change does not affect the overall cessation orientation.

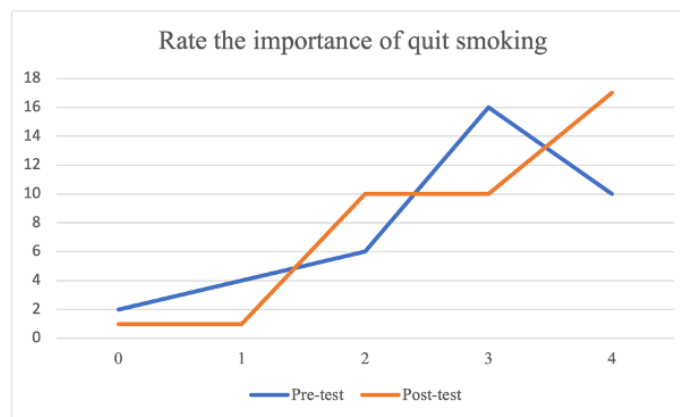


Figure 2. Attitude Changes Toward Smoking Cessation by Demographic Factors and Pre/Post-test Comparison

To better understand our respondents, we interviewed one of the respondents from the questionnaire. This respondent is a male, 22 years old, who has over 5 years of smoking history. We asked him whether his attitude had changed after viewing the advertisement. He states that this test keeps his attitude towards smoking the same because he understands that smoking is bad for your health; however, quitting smoking is a long-term move that is difficult to sustain. Although the ads were shocking, he thought it wasn't enough to make him feel guilty. And it takes motivation to quit smoking, but at the moment, because he is still young and does not have children, he does not feel the pressure of responsibility, so he will not move to quit for now.

5. Discussion

The results indicate that the designed persuasive messages successfully influenced participants' attitudes; however, the findings were opposed to our expectations. Participants developed more negative attitudes about quitting smoking after viewing the advertisement. Based on the results, the posttest mean is lower than the pretest mean, which means this advertisement is not persuasive enough to influence respondents' attitudes toward smoking. This not only shows that the advertisement is not convincing enough for smokers, but also shows that smokers are offended by it. Smokers are aware of the harms of smoking, but because the results of this behavior are not obvious in the short term, people tend to deliberately avoid associating the harms caused by smoking in their current lives. Even though through qualitative survey, we know some smokers feel guilty after exposure to the advertisement, the guilt appeals are too strong to make the participants feel ashamed. Thus, they are not willing to bring an actual change, which means quitting smoking in this case.

Quitting smoking is a process that requires long-term effort, and it is difficult for smokers to successfully overcome all the difficulties in the process of quitting because of a single

advertisement. People have seen too many smoking cessation advertisements, especially for smokers, and some of them have become "immune" to these advertisements. Tobacco is addictive, smokers need to work hard to quit, thus it is difficult to achieve the goal through a single advertisement. However, something is better than nothing, and the ads can use different ways and methods to target different groups of people and eventually make the general public more aware of the dangers of smoking.

6. Limitations and Future Evaluations

We have limitations on demographic components. 37 of the 47 people who filled out this survey were under the age of 25. Although the survey found no difference in sentiments between men and women after viewing the advertisement, the presence of children could be an important factor. The advertisement utilizes concern for children to encourage adult smokers to quit smoking, but since only 15% of our participants had children, the effectiveness of the advertisement could be underestimated. Increasing the sample's variety may possibly have had a different influence on the results.

For the future evaluation, I think we could add a question to measure the participants' feelings about the level of guilt appeals that the campaign used. Thus, we can better investigate whether the guilt appeals themselves are ineffective, or is it just that the message creator did not use the right amount of guilt appeals in this advertisement. Secondly, for a better analysis of the effectiveness of the ad, we could also obtain more comprehensive information by surveying non-smokers about their perceptions of the ad. This cessation ad's primary target audience is smokers, but if the ad can help nonsmokers to become more determined to avoid tobacco, it will also be beneficial.

7. Conclusion

The purpose of this survey was to analyze smokers' attitude of this smoking cessation advertisement. In order to better examine the gap in attitudes before and after the ad, we used a pretest posttest measurement, which showed that we had very significant answers to the question of a negative shift in participants' attitudes after viewing the ad. I think this is very research-based and it represents the need to convince smokers to quit by taking better account of their own situation and their original perceptions of how to quit smoking. By analyzing this ad, we can conclude that it does not motivate smokers to quit smoking, but stimulate negative emotions towards quitting behavior in general. In the survey, gender did not make a significant difference in the results. Age and the presence of children may be another important reference factor, as people with children may have different views on health issues compared to young people without children that we mainly investigated in this survey. In general, the results of this survey demonstrate that for smokers, the tactics, guilt appeals and surprise appeals, are not convincing in this specific campaign.

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