



Graphic Health Warning Messages on Cigarette Packs - The Case of Germany

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Abstract

The warning ads on cigarette packs are well known almost in every country on the globe. The anti-smoking campaigns which are managed and directed by the governments include several types of warning: textual, pictorial and combined. This work will focus on the newest campaign in Germany, which combines the graphical and the textual warnings and will try to discuss the advantages, the disadvantages and the ethical issues of such type of warnings by an overview of the literature. Also, this paper will try to suggest alternative methods for health warnings on the packs that according to the literature may cause to the same or even improve the goals and its results. A new theoretical model will be suggested as well when the goal of this model is to provide a new point of view based on literature and previous researches about the effectiveness of the warnings among those who are heavy smokers and those who are not. However, this model is a theoretical one and is not proven yet in the field.

Keywords: Cigarette packs; Health warnings; Smokers

Introduction

The health warnings presented on many products that we are purchasing and using in a daily life. It can be a warning about allergenic ingredients, chemical warnings on cleaning goods, regarding alcohol usage and many others. However, one of the most popular and well known warnings is related to the damages caused by tobacco usage. Important to note that the international guidelines for cigarette health warnings "have been established under Article 11 of the WHO's Framework Convention on Tobacco Control (FCTC)" [1]. According to him, in 2011, 165 countries have ratified the treaty. Also, it can be noted that those warning ads mostly use the fear in order to influence the human behavior and to try to avoid people from smoking. In 2016 the German parliament and its health department decided to implement pictorial warnings combined with textual warnings when according to Burkhard Blienert, the drug policy spokesman for the Social

Democrats group in the Bundestag, the "goal is to prevent young people from starting to smoke" [2]. In Germany, about 120000 people are dying annually [2] and the goal of the German government and the German ministry of health was to reduce the numbers of deaths. The German politicians hope that the new gruesome and shocking images will affect the smokers. Germany is following the European Union's law that according to at least two thirds (about 65 percent) of the front and the back of the packaging will be covered by the graphical ad [2] and a textual warning should be added to the pictorial one. The pictorial warnings, such as blackened lungs and rotten teeth will try to shock the smokers and to prevent them from buying cigarettes when the main goal is smoking cessation among the German population in general and among the youth in particular.

Till the new law, about one-third of the surface of the cigarette pack was covered by warnings, and probably was not effective enough. The German politics looked for a way for improving the anti-smoking persuasion and based on researches concluded that adding pictorial warning together with the textual one will give the most effective way of persuasion [2]. However, the first country that implemented the pictorial warning was Canada in 2001. Then, according to the local new law precedents, the graphical warnings had to cover at least 50 percent of the potential display area [1]. Since then, a large amount of researches were carried out trying to support or to criticize the pictorial warnings that are using threats and fear. Both will be discussed in details in the work. However, the implementation of pictorial warnings by many governments seems for now as the more successful anti-smoking campaign comparing to the textual warnings.

Methodology

This research is based on literature review, which was analyzed in two main categories: those that are arguing for the warning ads which are using threats as the main method of persuasion and those who are claiming against. In this literature review it was also an attempt to analyze the advantages of the graphical warnings over the textual one. In the second stage of the research, the current German pictorial anti-smoking campaign was presented as a study case and was analyzed basing on the literature review.

Literature Review

Health warning as a media tool and a target audience

Cigarette packages provide a high level of exposure. Smokers, especially those who are smoking about a pack per day, are potentially exposed to the warnings over 7000 times per year [1]. Based on this claim it was suggested by Hammond that these warnings (written and graphics) are an important media tool for communicating with the target audience - the smokers about the health risks of tobacco use. A survey among smokers in Canada in 1990s found that the smokers have referred to the warnings as to an important source of health information and had increased the awareness to the risks [1].

Besides the smokers which were mentioned above, the non-smokers and the second-hand smokers (passive smokers) can be seen as a target audience themselves [3]. The goal of these ads in this case is to prevent them from smoking [1]. The same scenario can be discarded on those who stopped smoking. The cigarette packs and the warnings are displayed each time the product is used and in many cases the packs are often left in public view [1,4]. As a result, the smokers and the non-smokers are exposed to the ads. The ethical issue of this exposure and the results of it will be discussed later.

Graphical warnings as an alternative method

Several researches about the efficacy of the graphical warnings suggested that comparing to the textual warnings; the pictorial warnings have more effect. Fisher, Richards and Krugman [5] found that small text warnings are hooked up with low level of awareness to the warnings. Therefore, based on Shanahan and Elliott [4] it can be suggested that greater is the size of the ad, the greater is its impact. Hence, the bigger is the ad, much more effective it is. The Australian research examined local cigarette packs where 90 percent of the front side and 30% of the backside are covered with graphical warnings and found that the effectiveness of warning depends on the size of the ad [1,4].

However, the size is also crucial in text warnings. Hammond [1] suggested, based on Fathelrahman et al's. research [6], that large warning text is increasing the perceptions of risk and the message is more informable when it is bigger and easier to read. Pictorial warnings also increase the perceptions of the warning credibility [7].

Health warnings with pictures attract much more attention than the textual warnings since it is the first thing that the smoker is looking at, thus supplying him more information. The pictorial warnings are better remembered than the textual warnings and therefore the health information is remembered better for a long term period [1,7]. Researches in countries where the pictorial warnings have been implemented showed that the smokers can identify more smoking risks than in the countries with textual warnings [7,8]. For example, a research on Chinese smokers in 2008 showed that the smokers rated

the pictorial warnings as a much more effective tool than the textual warnings for motivating smoking cessation and for preventing smoking in general [9]. In a later research, Hammond [1] also claimed that "health warnings with pictures are rated by smokers and non-smokers as more effective than text only warnings". The pictorial warnings help to understand the message and therefore have a greater impact than the regular textual warnings. Gospodinov [10] who investigated the effects of the pictorial warnings in Canada three years after its implementation, found that the graphical warnings are helping in reducing the daily consumption of cigarettes. Evans et al. [7] suggested that "the presence of graphic images (compared to text-only) caused more negative affect toward smoking, a process that indirectly influenced risk perceptions and quit intentions". Moreover, they found in their research that text elaborated messages, reducing the credibility of the warning while the graphical warnings increased the knowledge about the smoking risks. The graphical warnings will be remembered better than textual warnings when the pictorial warning will contain more detailed information than is available in short textual warning [7]. Here, it can be suggested that by having more detailed information, the pictorial warning becoming to be more "scary" than the textual warnings. That's to say, that amount of information in the picture, increasing or decreasing the level of the fear that the threat causing.

Slovic et al. [11] argued that emotional reaction to danger evoking quick perception and reaction to the risk. That's to say, that the emotions can influence behavior directly and to motivate the target audience for the required changes [7].

Besides the mentioned above, both, the pictorial and the textual warnings motivate people to use cessation services [1]. However, the appearance of a helpline on the packages is increasing the calls for these centers [1,12]. But the appearance of the graphical warnings is highlighting the health-risk information and promoting greater processing and acceptance of the information comparing to the textual warnings [7].

Pictorial warnings and youth

According to Hammond [1], the pictorial warnings, are effective also among the youth. A Canadian research found that the local youth said that the pictorial warnings are providing them important information about health and the smoking risks, and that the warnings made smoking less attractive [1]. An Australian research found that the youth who were exposed to the graphical warnings were more aware to the risks and attended to look for more information to the results of the smoking [13]. Another research [14] found that in 2008 about 80 percent of youth smokers in the UK noticed that the pictorial warnings led for smoking cessation [1].

The advantages of using threats in warnings - the case of anti-smoking campaigns

The warnings on the cigarette packs increased the awareness of the smokers when the main information about

the risks and the dangers of smoking came directly from those warnings [1]. This can be explained by the fact that the government and its anti-smoking policy is the responsible authority for these warnings. As a result, the smokers are seeing in the country as a reliable source of information and therefore, it can be assumed that the warnings are true and the smoker can trust them. Also, several researches suggested that fear emotions may play an important role in the effectiveness of the pictorial warning ads and helping in message acceptance, thinking about the health risks and helping to quit from the dangerous addiction [1,15,16].

Besides fear, the pictorial warnings, such those in the current German anti-smoking campaign can cause to a disgust. This feeling may also play an important role in message acceptance. The goal of the warning ads that are causing to a shock, disgust, fear and other strong emotions is to evoke these exact emotional feelings that will lead to a cessation [1].

Millar and Millar [17] in their research about fear as a tool for changing behavior found that fear might increase the elaboration of the message and even to reduce the anxiety. The threat is helping in understanding the danger and motivating the person to control the danger by engaging in behaviors and by that reduces the threat [17]. The threats and the fear that they are causing can create some negative emotional reactions to the warning. However, "negative emotional reactions to cigarette health warnings have been associated with increases in key outcomes such as intentions to quit, thinking about health risks, or engaging in cessation behavior" [1]. Similar results were found in Evans et al. research [7] where they concluded that these negative emotions increase risk perceptions and evoke quit intentions.

In a research that carried out by Millar and Millar [17] it was found that messages that are causing high anxiety are associated with behavior changing. According to the parallel process model, increasing the anxiety for the target audience about their health will increase their concern about their behaviors [18]. However not necessarily increasing the threat will increase the message acceptance [19]. A later expectancy-valence model suggesting that the effectiveness of fear-arousing communications is based on four variables: the understanding of the severity of the threat, the perceived probability of its appearance, the efficacy of the protective response, and the perceived self-efficacy to accept the response. This model claims that these variables are interacting, thus it produce the level of motivation that calibrates the level of change in the recommended behavior [20,21].

As it will be presented later, one of the critiques to the use of fear is that it is working for short term period. However, Evans et al. [7] argued that this short exposure of the smoker to the ad may cause to emotional impacts that would change smoker's feelings about smoking and may motivate him for a better processing procedure of the risk information that will lead to a faster cessation.

Threats as a strategy in anti-smoking campaign - the critique

Despite that threats and fear is the main tool of persuasion in the written and graphical anti-smoking campaigns on cigarette packs it seems that there is no clear evidence that these threats are serving the goal. Also, several ethical questions are raised during the analysis of such campaigns when the pictorial warnings are increasing the questions. Hastings, Stead and Webb [20] suggested that ads that are causing to fear can cause to a chronic heightened anxiety and instead of preventing the danger, the ad can increase it. Also, fear and anxiety can cause to different effects such as sadness and confusion regarding the danger, and as a result the message is wrongly accepted [22].

Here, it is also important to note the limitations of the researches that examined the efficacy of fear. The first issue is that the majority of these researches have been done in laboratories and the results have never been examined in a "real world". Also, in most of the cases the examined audience was students in colleges and universities when the reaction of non-academic audience to the threats hasn't been measured enough. Another aspect that should be scrutinized is the long term effect of the fear appeal ads [20]. Hence, it can be suggested that the efficacy of pictorial warnings on cigarette packs has never been examined deeply and the question about its efficacy remained to be unanswered.

Another issue that should be mentioned as a limitation is a lack of tuition for correct and healthy behavior. Hastings and MacFadyen [23] who examined the limitations of fear messages suggested that those, such as youngsters, who are able to recognize that the anti-smoking ad is trying to scare and to convince by that not to smoke finding it personally irrelevant and are trying to ignore and avoid the messages.

It was suggested, that fear arousing campaigns are effective in raising awareness to the danger and helping to change the attitudes [24], however, only few researchers have found that campaigns that are raising fear showed changes in behavior in target audience [20].

Moreover, it was suggested that "it is unlikely that a response to a repeated fear ad remains static" [20]. After prolonged exposure to the same ad, it becomes predictable, boring and sometimes laughable to the target audience and by losing its efficacy [23]. To wit, the threatening ads are working only in short term period while after numerous exposure, the effectiveness of the ad and the message is decreasing. Hastings, Stead and Webb [20] suggested in their research that long term exposure to the same warnings can give rise to habituation, annoyance and to tune out the message itself. Schoenbachler and Whittler [25] suggested that fear appeals with physical threat are effective only for a short term period in the beginning, and during the time the efficacy of those ads will diminish. As a result of long expose to health warnings on cigarette packs, the smokers become to be inured to the messages and developing adepts at avoiding the messages [26].

Ethical issues in using threats and provoking fear

As it was mentioned above, the main tool using the textual and the pictorial warnings on cigarette packs is a threat that provokes fear when the main goals of it is to prevent smoking and to cause to smoking cessation. However, threatening ads use the fear as a manipulating tool in order to change human behavior [20]. Moreover, the manipulation limiting the rational and free choice. In the case of graphical warnings, the target audience (and anyone who is exposed to the warnings) is unwillingly exposed to those upsetting and even shocking images [20]. Allen and Witte [27] suggested that a target person who is "catching" the manipulation and feeling that he is forced to change his behavior unwillingly, may ignore the messages and behave in an opposite way to the one suggested. Hence, it can be suggested that the pictorial warnings should also contain motivating messages that will cause to a positive feelings among the target audience and will evoke self-efficacy.

Other issues to be discussed are the unintended audience who is exposed unwillingly to the threats and may cause psychological damage by creating unnecessary anxiety. The graphical anti-smoking campaigns that contain hard-hitting images are likely to be seen by the children of the smokers that can be affected by those images [20]. The non-smokers and even the smokers who are exposed to these ads may evoke a dread scenario about their own or their family members' death as a result of smoking [20,28].

Also, using threats on cigarette packs may cause to the demonization of the target audience by those who are not smoking and seen them by the society as a public enemy and as a social deviants that are damaging and harming to the public health [20,29]. As a result of the social blaming, the smoker can feel loneliness and that he is abandoned by the society and even by his family, who sees him as a threat to the other non-smoking members of the family. This can cause to mental weaknesses and other psychological disorders among the smokers and it's helping for creating stigmas about the smokers that are cause by themselves to personal blaming among the smokers [29].

The anxiety that caused by the threats can cause to the very same behavior that the message is trying to prevent [28]. Mayne [30] suggested that the anxiety can cause to increase the risky behavior. That is to say, that the smokers who were treated by the ads that can cause to a hard feelings that they have to take a cigarette.

The government, the limitations and the society

According to the basic laws, the government is the responsible authority for the public health, it is responsible for preventing disease, to supply medical assistance and health information for the citizens. Hence, the government is also the responsible authority for the anti-smoking campaigns. The government, perceived as an authority which is supplying

correct and truthful information. In Australia, for example, about 85% considered that it is important that the government is promoting the pictorial health warnings on cigarette products [1,31].

However, Flakerud [32] arguing that by preventing us to live unhealthy, the "nanny state" is restricting our liberty and freedom. Moreover, Flakerud raising a question "When did we lose our right to be lazy, unhealthy, and politically incorrect?" [32]. However, it is also important to raise another critical issue that asks at what point the personal freedom and the well-being of the group are conflicting? The government, as the responsible body for public health in the most of the cases will prefer the general well-being and by that will enforce the individuals to flex with the rules and the obligations [32,33]. However, the anti-smoking campaigns due to their preventions and warnings have been controversial. Flakerud [32] who examined the anti-smoking campaigns claimed that long term strategies are required for changing smoking behavior and has to be followed by increased taxes, extensive media campaigns, large written and graphical warnings on tobacco products, bans on smoking in public area, etc. All these, according to the jurisdictions and supporters are the required steps for preventing smoking and for improving the public health rates. However, the opponents are claiming that these limitations are harming to the individual freedom and limiting their personal responsibility for their personal health. Their main worry is that the government may take more and more individual and private choices in the service of better population health [32]. However, the common good is coming first when the government, that is playing the role of a "nanny", as it was mentioned above, the government is the responsible authority for the common good and this is allowing for the state to limit the minorities in the name of the common good. Andre and Velesquez [34] who investigated the common good, concluded that in our period when each and every person is free to achieve his goals and to promote itself freely, the individual is steel obligated to sacrifice some if its freedom and self-interests for the sake of the common good [32,34]. Therefore, it can be suggested that the newest pictorial anti-smoking campaign in Germany that is supported by the national health ministry, is serving the goals of the common good despite that it can be uncomfortable for those who are smoking and feeling harmed by the new anti-smoking campaign. As it was mentioned above, the common good in the case of the public health is coming first to the private freedom and responsibility. The goal of public health is "to protect and promote the health of communities or groups of people" [32].

Discussion

The German anti-smoking warnings on cigarette packs combine two types of warnings: pictorial and textual. The pictorial warnings showing shocking pictures such as a dead body, blackened lungs and rotten teeth. The textual warnings together with a helpline are trying to shock as well with warnings such as: "Smoking harms your potency", "smoking causes fatal lung cancer", "smoking causes to heart diseases",

and “smoke contains benzene, nitrosamine, formaldehyde, and blue acid”. The appearance of a helpline on the packages is an important and positive way of persuasion for smoking cessation. The existence of the helpline is increasing the calls for centers and organizations that are helping in cessation progress [1,13]. The appearance of the helpline is important not only to the smokers themselves, but also to their family members and friends who are also exposed to the warnings and to the helpline. They are able to contact the organization which will give them relevant tips in helping in the cessation progress of the smoker.



Figure 1: Examples for graphical warnings in Germany.

The target audience of this campaign is the smokers in Germany, where about 120000 people are losing their lives each year as a result of smoking, when the more spotted target audience is the youth who are considered as potential smokers [2]. However, the ads that are covering the major part of the cigarette packs may also be viewed by unintended audience. As it was mentioned in the literature review, Hastings, Stead and Webb [20] arguing that this unintended expose can cause to unnecessary anxiety among those who were not targeted as an audience of the ad. Children and mentally weak persons may be affected by the shocking ads that are showing dying men (**Figure 1**) as a result of smoking and may associate it with their smoking family members and friends. This can lead to unintended anxiety. Black lungs and rotting teeth (**Figure 2**) evolving disgusting feelings that may scare children who will be unintendedly exposed to the warning. Also, it can be suggested that the disgust feelings may lead to avoidance from buying the “disgusting” cigarette packs. Additionally, using threats and causing to anxiety can lead to the very behavior that the warning is trying to prevent [28,30]. That's to say, a smoker who will be over-affected by the threat may take a cigarette in order to be relaxed after the shocking images.



Figure 2: Rotting teeth as an example for German shocking pictorial warning.

The decision of the German politics to implement pictorial warnings was based on researches. Shanahan and Elliott [31] argued that the graphical warnings have much more effect than the regular textual warnings. However, the textual warnings were added to the graphical. However, Fathelrahman et al. [6] suggested that large warning text increasing the perceptions of risk and the message is more informtable. Hence, it can be suggested that pictorial warnings have to come together with a text in order to gain its power as a warning. However, the pictorial warnings have more potential to be remembered better than the textual warnings [1]. As a result, the graphical warnings are more informative than the textual. Therefore, adding both of them allowed the German authorities to present two different warnings to the customer and by that to increase his knowledge about the smoking dangers. Being treated, the customer may use the helpline which is added near to the warnings. The existence of the helpline together with the warnings is a very positive notion. Gray, et al. [24] argued that fear arousing campaigns are effective in raising awareness to the danger while they are not suggesting ways for dealing with the threats. Therefore, it can be argued that the helpline can be seen as the next step after getting aware to the danger. The smoker doesn't need to look for a helpline after the shocking and the awareness progress that caused the graphical and the textual warnings; the phone number appears together with the warnings. Willemsen, et al. [12] argued that the appearance of the helpline increasing the calls for the centers of smoking cessation. This can be explained by instant moment. That's to say, as it was mentioned above, the smoker can call to the center at the same time that he is taking a cigarette, the smoker is exempted from looking for the phone on the internet or in the phone book. The instant moment is very critique in taking a decision of smoking cessation. Being shocked or scared by the ad, the smoker has more chances to get contact with the smoking cessation helpline. After a while, this effect is losing its power. Schoenbachler and Whittler [25] arguing that fear

appeals with physical threats such as those that are appearing on the cigarette packs in Germany are effective only for short term period, only during the first exposures. During the time pass, the smoker may forget about the threat or to get used to it [26] and therefore to ignore the message in the future. Millar and Millar [17] suggested that the threat is helping in understanding the danger and motivating the person to control the danger. The appearance of the helpline is helping to the smoker in controlling the behavior and to get help and advices for changing his behavioral attitudes.

As it was mentioned above, the graphical threats can cause for unnecessary anxiety among the unintended audience [20], but it also can be a very effective tool that can cause to initiation to quit from smoking, and to bring the smoker for a better risk perception [1]. Here, it is important to note that it is one of the main goals of this campaign. Besides preventing smoking, this campaign is trying to cause for a better risk perception by adding the pictorial warnings. The previous textual warnings, besides being much smaller they failed in supplying the relevant level of risk perception [35]. Therefore, adding pictorial warning together with the textual one, enlargement of the ad's size, and finally adding a helpline, may be the optimal solution in case of cigarette warnings.

However, using positive and supporting pictorial and textual messages or role models may even increase the result [36]. It can be suggested that supporting message together with the shocking image may have a greater impact than two different warnings by evoking positive feelings that will lead to a phone call to a helpline.

Altogether, it seems that the dysfunction of textual warnings led the German authorities for this new campaign. As it was mentioned above, pictorial warnings together with textual warnings and a call for using the helpline, may lead to a better result among the target audience.

Theoretical Model

Hastings, Stead and Webb [20] argued that the effectiveness of fear ads is temporary and works only for a short term period. Based on this claim a simple model can be suggested here. The effectiveness of the threat is limited and shortly becomes to be familiar, predicted and even boring [26]. Schoenbachler and Whittler [25] also arguing that warnings which are using threats and fear are effective only for a short term period, only during the first exposures. Hence, those who are smoking less would be less exposed to the threats and therefore have more potential to be affected by the warnings. As it was mentioned above, smokers, who are smoking about a pack per day are exposed about 600 times per month and approximately 7000 times per year for these warnings. Based on this it can be suggested that the "heavy smokers" develop a habituation and "immunity" to the warnings due to their familiarity with the warnings. Therefore, it also can be suggested that those who are smoking less and also less exposed to the warnings may not evolve such "immunity" as those who are smoking a lot. Each time that they will take a cigarette, they may be exposed and be affected by the warning

as in the first time when they meet it. That's to say, that the warning may not be remembered by the smoker who is smoking less. As a result, this exposure to the shocking warnings can lead to a cessation among this type of smokers. Here, it can be suggested also that the high frequency of changing threats in the warnings may be more effective among the smokers which will get more health information and may not develop immunity to the warnings. This can also lead to a behavioral change. However, this model should be scrutinized in order to be valid.

Suggestions for Improving the Anti-Smoking Campaign

The new graphical anti-smoking campaign in Germany may lead to a reduction in the smoking rate. However, studies have found that adding names and ages of the individuals that are appearing in the graphical pictures on the packs will increase the effectiveness of the warning [1]. Besides that, scientific information on the packs near the graphical warnings can enhance the emotional reaction and to lead to a better message acceptance [1]. It was also assumed that pictorial warnings have to be periodically updated in order to have a greater impact. This update can be even the smallest one like a size change or position. Moreover, the health warning has its greater impact on the target audience shortly after its implementation [37,38]. Witte [18] suggested that messages with effective guidance how to cope with the danger are much more efficient. This can promote their self-efficacy for doing the required changes and giving to the target audience the required tools how to challenge the threat. Therefore, it can be suggested that adding motivating messages and advices for smoking cessation on the cigarette packs together with the pictorial warnings could be more effective than presenting the graphical warnings only.

Another important issue is planning and suggesting helping actions to the target audience. Millar and Millar [17] investigated the effects of threat and anxiety in health warnings and found that "anxiety in the absence of a plan of action can motivate persons to defensively avoid thinking about the behavior". Therefore, messages that are promoting behavior change with supportive and directives will be more effective than a regular treating add.

Another suggestion for successful ad is to use a replacement method for persuasion instead of fear. The alternative to fear can be "positive reinforcement appeals aimed at the good behavior, the use of humor, and, for younger audience, the use of postmodern irony" [20]. Anderson [38] suggested that the level of fear should be moderated and the message should lead to a behavior changing. Hastings, Stead and Webb [20] suggested that positive emotions will presumably be equally effective as the ads that are using fear. Ads that are based on elements such as love, sex, excitement, hope and other that evoke positive emotions may be convincing at least at the same level as threats. Isen [39] argues that positive messages are remembered better due to his direct influence on the target audience compared to the negative message which

acceptance is harder. Therefore, positive messages such as positive advices together with the pictorial warning could be more effective. For example, ads which are describing smoking as an addiction that is not controlled by the smoker may be more effective than ads which are encouraging not to smoke due to dangerous and deadly diseases [31]. The less effective anti-smoking campaigns are those that based their ads on the negative results of the smoking as their main persuasion method for smoking cessation [40].

Another positive way for successful persuasion is the role models who are carrying out and acting by the suggested way of behavior (such as avoidance from smoking and doing sports instead of it) and giving positive advices. These role models may be imitated by the target audience and increasing the self-efficacy among them [36]. Also, using positive messages may decrease the number of ethical issues about the using of fear. For example, the unintended expose to a positive message will not decrease the chances for anxiety among children and mental week people.

Millar and Millar [17] also suggested that the efficacy of the warning messages is better when it calls for behavioral changings and not only informational about possible disease. However, as it was already mentioned in this paper, the warnings could be seen as a source of health information [1]. This information is produced by the government that may be seen as a source of a reliable one. Therefore, adding messages that are convincing for behavioral changings together with the helpline may be effective as well.

Also, short period of life of the threat may be more effective than using the same warning. The efficacy of the warning is short [20] and through the time becoming to be predictable and not effective [26]. Therefore, refreshing the warnings from time to time may give a better result.

Limitations

This research was based on literature review and the researches that were described and analyzed there. The suggestions and the observations which were presented during the work have never been examined by the author in reality and never been proven as well as the theoretical method which was constructed based on the literature review.

Conclusions

Graphical warning combined with textual threats and a helpline is the newest way of the German authorities to call for smoking cessation among the population. The decision of the local authorities to implement this change based on researches which supported the use of pictorial warnings. The pictorial ads are better remembered and are the first thing that the smoker will be looking at during the smoking action. However, despite being mentioned above, the opposite claim criticizing this way of persuasion claiming that it is increasing the awareness while it is not really helping in behavioral changings and that the effect of ads that are using fear is temporary [20].

Still, it is early to adjudicate the current anti-smoking campaign. It will have to be analyzed by researches in the future. However, it seems that more and more countries implementing the graphical warnings instead of the textual. This can hint about the advantages of the pictorial persuasion in the case of the health warnings on cigarette packs.

Based on the literature, it seems that there is no clear answer about the efficacy of fear in warning ads. The claims of the supporters and the protesters are also dependent on researches and their results. However, the limitations of the researches, such as the duration, the researchable, the experimented subjects, the place and time of the research. All these and other aspects are influencing the results. Therefore, it can be suggested that in this kind of research about the efficacy of pictorial warnings may never be answered. It can therefore also explain the decision of the German authorities to combine graphical and textual warnings together for getting the best impact on the target audience. However, as it was mentioned above, it is early to critique and to analyze the efficacy of the German anti-smoking campaign.

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