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Pictorial Health Warnings in Croatia

Borna Dolezil
bxd4215@rit.edu

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Pictorial Health Warnings in Croatia

By

Borna Dolezil

A Capstone Project Submitted in Partial Fulfillment of the
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Department of Service Systems
College of Applied Science and Technology

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Jennifer Matic   Date

Capstone Advisor

Abstract

This research aims to discover how pictorial health warnings impact young female adults in comparison to currently used written health warning in Croatia. In order to assess the impact, research is using a small-scale quantitative research method, to be more precise a survey. Pictorial health warning regulation is a fairly new method of reducing number of smokers in countries of the European Union and is currently in the phase of assessment. As Croatia faces high smoking incidence, especially among the female population, the purpose of this research is to investigate what are the effects of pictorial health warning in terms of reducing number of smokers among this age group. Results of the survey show promising results in favour of pictorial health warning regulation. According to survey results pictorial health warnings divert smokers' attention from the brand, elicit more fear in comparison to written health warnings and encourage a smoker to think about quitting.

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Introduction

History of Tobacco Industry

There are some indications that tobacco usage dictates from the 9th century, although cigarettes as we know them today were introduced in France during the 19th century. In those days people were convinced that cigarettes were a healthy thing to consume. Then there were even "asthma" cigarettes that falsely relieved asthma patients of their troubles. Until the early 20th century cigarettes were categorized as medicine and later they got regulated and grouped with alcohol and firearms. According to Stanford Research Into the Impact (n.d.) one of the first marketing campaigns was done by American Tobacco Company in 1932. It was called "Do you inhale?" With this campaign Lucky Strike cigarettes were marketed as the only brand that was safe to inhale. This campaign lasted for about a year, but its impact was huge in terms of its influence on the industry. This can in a way be labelled as a beginning of cigarette marketing as it encouraged other companies to compete in that field. In 1942 Philip Morris started with almost identical campaign, using their spokesperson Little Jonny. They used print advertisements and television commercials in order to deliver the message to consumers. During this period there were also various other campaigns from different cigarette producers (P. Lorillard, R.J. Reynolds etc.). Multiple themes were used during those campaigns such as doctors smoking, movies stars, sports, science and many more. Slogans such as "Chesterfield is best for you!", "Fatigued? Get a lift with a camel.", "Inhale to your heart's content." contributed to those themes. What was common to all campaigns was the fact that they all strongly targeted people's emotions. "By 1944 cigarette production was up to 300 billion a year" ("History & Economics of Tobacco," n.d.).

Until 1964 tobacco companies were untouchable, they did what they wanted without any restrictions although they were selling a product that harms human body. But that same

year U.S. Congress passed a bill called Labelling and Advertising Act that stated that every pack has to have a warning label that informed the consumer of a health threat. Tobacco companies needed to adapt. According to History & Economics of Tobacco (n.d.) by the 1980's many new cigarette brands came out with lower tar and nicotine levels in order to create a perception that cigarettes aren't that harmful. Soon after U.S. Congress passed another bill that there needs to be multiple health warning shown on the pack, actually they had to change every three months. Since then many organisations, states, governments started to take action against cigarettes. Next step in tobacco regulation was to ban cigarette smoking in public places and forbid advertising on television or radio. These restrictions were introduced by U.S. Congress in 1971. Suddenly there were many restaurants and public places that did not allow smoking. Enforcement of this law made consumers recognize cigarette smoking as something harmful. In addition to all of that taxation on cigarettes also increased due to the fact that tobacco companies were highly profitable. This all made pressure on tobacco companies in the U.S. so they decided to make a logical step forward, export. South America, Africa and Asia were firstly targeted markets as many countries on those continents did not develop tobacco restrictions including taxations. At that time American tobacco companies exported about 50% of their total cigarette production to these markets." In 1992 the tobacco industry reported a $5.65 billion dollar trade surplus. In the first half of 1992, tobacco exports were $2 billion more than imports. The taxes that the tobacco companies pay provide a lot of money for the U.S. government. In 1992, Philip Morris alone paid $4.5 billion in taxes. This makes it the largest tax payer in the U.S" ("History & Economics of Tobacco," n.d.).

As industry was restricted to advertise on television and radio, companies decided to promote their product via magazines, newspapers, billboards, and through various other channels. We all remember the "Marlboro Man" campaign. The effects of that campaign are

still visible today. According to History & Economics of Tobacco (n.d.) industry was spending 11 million dollars each day to get people to buy cigarettes. Additionally companies sponsored many sport, art and music events, contributed to different scholarships and made donations to various organizations.

Current Situation of Tobacco Industry

Today more and more countries are deciding to face the problem of smoking. Majority of countries have banned any form of advertising and promotion of tobacco products. "Smoking bans are gaining widespread support. Most European and many other countries have recently enacted partial smoking bans. This trend has become apparent in all over the world"(Hofmann & Nell, 2012, p. 227). Therefore according to Hofmann and Nell (2012) smoking bans were firstly introduced by Italy, Ireland, Malta and Norway in 2004, while up to 2009 fifteen more European countries followed their steps. Furthermore smoking in public places is forbidden in almost every developed country and taxation on cigarettes is growing each day while many organisations are directly confronting the tobacco industry such as World Health Organization (WHO). Additionally there is a "World No Tobacco Day" that is celebrated every year, on 31 May which creates mass awareness of the health risks and effective regulations regarding tobacco industry. For example in 2014 the focuses of this activity were taxations on tobacco products. All this contributes to lowering smoker share worldwide. But as previously said tobacco industry is quite adaptable therefore it again made necessary steps to ensure its growth. They decided to switch their focus on countries that still didn't fully implement tobacco regulation and by doing so create outstanding results. "Asia has the highest number of tobacco users and is the prime target of transnational tobacco companies. The future of global tobacco control rests in this region and the challenges are clear"(Mackay, Ritthiphakdee, & Reddy, 2013, p. 1581). But not to be mistaken tobacco

companies are also adapting to strict tobacco regulations in developed countries but in a different way. Their main tool for marketing in such countries is a cigarette pack. WHO has done its best to inform countries and suggest further action regarding this matter but tobacco companies do all their best to avoid pack restrictions. Therefore we can see multiple variations of pack restrictions in developed countries; different health warning sizes, pictorial warnings, banned point of sale visibility etc. The first country to really make a difference in the world regarding cigarette packaging control is Australia. They made a radical decision and embraced "plain" packaging law that is explained in Extreme Health Warning Regulation section of the paper.

Smoking in Europe

According to Bernhard (2011), one of the most important events regarding smoking in Europe happened in February 2005. That was the date when Framework Convention of Tobacco Control (FCTC) started to be enforced. In short FCTC is a control measure. Its main purpose is to help future generations by protecting them from health, social, environmental and economic consequences that are created by tobacco consumption. This regulation has been ratified in 160 countries to date. This treaty became the most accepted one in UN history. According to World Health Organization Europe (n.d.), one of the most important organizations regarding tobacco control, about 16% of all deaths in adults over the age of 30 in the European region are due to tobacco related diseases, in contrast to the global average of 12%. Katalinic & Plestina (2010) state that there are 6000 Europeans diagnosed with cancer daily while 3000 of them die. In total 11 million people are diagnosed with cancer in the world every year which accounts to 8 million deaths. This is more than AIDS, malaria and tuberculosis combined. Furthermore World Health Organization Europe (n.d.) states that in many countries there is no difference between male and female smokers although tobacco use

in history was predominately a male phenomenon. 22% of women smoke in the European region and this is very high if we compare it to Africa, Asia and the Middle East where the average smoker share among female smokers is 3-5%. The World Health Organization (WHO) has used FCTC regulation to make successful results regarding tobacco control but the numbers are still high. For example, on World No Tobacco Day WHO is always very active in promoting smoking prevention and regulation proposals. There are many other suggestions proposed by WHO but it takes a lot of time and effort to get to the implementation phase.

Smoking in Croatia

According to the Croatian Customs Directorate (2013) there are 199 brands of cigarettes available in Croatia. Most brands come from 5 main producers: TDR (Tvornica Duhana Rovinj) that is the only local producer, and four international producers, JTI (Japan Tobacco International), BAT (British American Tobacco), IT (Imperial Tobacco) and finally PMI (Philip Morris International). The Croatian Parliament (2008) created a set of rules and regulations that are imposed on producers and resellers of cigarettes. These regulations are limiting the industry in terms of promotion and product manipulation and are considered as quite strict. For example, displaying cigarettes on point of sale is forbidden, and this regulation is only implemented in a few other European countries. Tobacco regulation in Croatia is very important as according to Dzono-Boban (n.d.) as every third person in Croatia is a smoker. Unlike most countries in the world, according to World Health Organization Europe (n.d.) Croatia has more women daily smoker than men. On average each smoker smokes from 20-30 cigarettes per day. As it is scientifically proven that each cigarette reduces your life by 8 minutes (source), each smokers that smokes 30 cigarettes per day loses in a day 4 hours and yearly up to two months. From financial point of view this would mean

that each smoker spends about 7300 HRK (according to Croatian Bureau of Statistics. (n.d.)

average net salary in Croatia is 5558 HRK) on cigarettes yearly taken into account that

average price is 20 HRK. Additionally Ministry of Health Croatia (2013) states that

medication, treatments, sick leaves etc. connected with smoking burden the healthcare system

for 1.5 billion HRK. But all this would not be as important if human health was intact. As

Dzono-Boban (n.d.) states there are 14.000 people that die from smoking related diseases

each year. 95% of lung cancer patients are smokers. This data is devastating. But although

regulations are quite harsh, smoking incidence is fairly stable. People seem not be aware or

underestimate the risk of tobacco usage. Gazdek and Samardzic's (2013) research, for

example, focused on investigating health care facilities and their employees in terms of

smoking habits. Results showed that 26.4% of employees were in fact smokers, and health

care employees should be the ones that serve as an example. Among many other factors this

surely contributes to such a high percentage of smokers in Croatia but what is important is

recognition of the problem on a state level and implementation of drastic prevention

measures.

Pictorial Health Warnings

One of the FCTC proposed measures in Article 11 that deals with packaging and

labelling measures is the usage of pictorial health warnings on cigarette packs. The pictures

used for this purpose are mostly shocking, showing different health issues related to smoking

and are grouped into different areas such as addiction, aesthetic effects, death, multiple health

effects (targeting heart, lung, mouth/oral cancer and stroke/brain implications), impotence,

quitting/cessation, second-hand smoke (targeting children and babies implications), toxins

and some others. These warnings need to be "large, clear, visible, tangible and should be 50%

or more of the principal display areas but shall be no less than 30% of principal display

areas" (World Health Organization, 2003, p. 10).

According to Oswal, Pednekar, and Gupta (2010) Canada was the first country to

introduce this regulation in 2001 while Brazil, Thailand and New Zealand introduced it

shortly after. According to World Health Organization (n.d.) placing pictorial health warnings

on tobacco products is a practical and cost effective way of raising awareness of health risks

regarding smoking. Furthermore guidelines for implementation of Article 11 state that

combination of text and pictures as a form of a health warning is much effective than only

text ones. Additionally citizens with low level of literacy are in that way also better informed

about the threats of cigarette smoke. Haeran and Madhubalan (2012) explain that consumers

with low level of literacy heavily rely on pictorial information. Moreover when comparing

text-only to those with pictures, evidence gathered by World Health Organization. an (n.d.)

show that packs with pictorial health warnings are more noticeable, more effective according

to smokers, much more effectively communicate health threats, disrupt product/brand image,

cause smokers to think more about what they are doing and finally lead towards increased

motivation/attempts to quit smoking. But as history repeats itself, the tobacco industry again

found ways to interfere with the implementation of this law in countries who decided to

enforce this WHO recommendation. For example, India has struggled with implementation of

pictorial health warnings. The tobacco industry used many different methods that "constantly

diluted, delayed, and deferred" (Oswal et al., 2010, p. 101) packaging and labelling rules.

Extreme Health Warning Regulation

The term "plain packaging" is relatively new and unknown to most people. This term

represents a rigorous regulation of tobacco products, more precisely cigarettes. This specific

regulation totally limits tobacco industry to use the cigarette pack for marketing purposes by

standardising all products, removing any branding such as colour or imagery, and putting

them in unappealing brown plain package (with both textual and pictorial health warning).

There are multiple indications in different parts of the world that show that cigarette pack

represents a strong marketing tool that makes cigarettes more appealing. Expectations from

this regulation are high in terms of reducing smoker share, especially among young adults.

There is much research done with the purpose of assessing plain packaging effectiveness. For

example research done by Gallopel-Morvan, Jacques, Mathias, and Pino (2012) shows that

plain packaging reduces product appeal in terms of quality, taste and attractiveness and

purchase interest. Additionally their research emphasizes the importance of pack colour.

Another study done by Germain, Wakefield, and Durkin (2010) shows that when branding is

removed from the cigarettes pack it reduces positive brand image; additionally, increased

pictorial health warning reduces the risk of becoming a smoker.

     Only one country in the world so far implemented this regulation and that is Australia

in December 2012. Therefore a few years more need to pass to gather hard evidence to

examine whether the previously mentioned expectations have been met. According to Halton

(2013) Australia expects that its smoker share will drop from the current 16% to 10% because

it is estimated that each year 15 000 Australian citizens die due to smoking related diseases.

This is not the only cause but is one most visible. There are also financial (cost of treating

smoking related diseases) and social (second hand smoking) implications. Almost all leading

tobacco companies decided to sue the Australian government. Both the results of plain

packaging and lawsuits still remain to be seen.

Purpose Statement

As Croatia faces high smoking incidence rate, where every third person smokes and where women smoke more than man, some control mechanism that would bring those numbers down needs to be introduced. The goal of this research is to examine the effects of pictorial health warnings on young female adult smokers in Zagreb, Croatia. The focus of this comparative analysis will be on investigating if pictorial health warning can reduce smoker share among that population. If proven effective this study can become supportive material for the implementation of such a regulation in Croatia.

Literature Review

Cigarettes today represent a global health issue. Although this product is very harmful for the human body, it is still legally sold and used all over the world. There are many producers, manufactures, farmers, resellers, and cigarette brands and altogether they play an important role in the world's economy. But it is not all that easy for them. There are many laws that limit the industry and the final product itself. In addition to that there are a lot of organisations that fight against the tobacco industry. They are constantly trying to lower the number of smokers using various methods and raise awareness of harmful effects that smoking does. This is why it is very important to investigate which methods are most efficient and cost effective to implement on a country (state) level. Previously mentioned FCTC has some regulations that are mandatory to implement after signing the treaty, but there are also many other regulations that are being recommended. One of the World Health Organization (n.d.) recommendations is placing pictorial health warnings on cigarette packs while it is mandatory to have standard textual health warnings. According to the European Commission (n.d.) there are pictorial health warnings developed for 25 state members of the European Union. But still, not all of those countries implemented this regulation. To support the implementation researchers around the world have investigated the pros and cons of this regulation by examining it from different angles to understand its efficiency and necessity.

Therefore Volchan et al. (2013) investigated emotional reactions and drives induced by pictorial health warnings, more precisely how those labels affect a person's intention to quit, provoke health risk awareness and cessation behaviour. Their purpose was to support WHOs recommended regulation with substantial evidence. Using two different experiments conducted in Brazil on both smokers and non-smokers (young adults between the ages of 18 to 24 years old) they managed to get results that support the need for implementation of such

regulation. The first experiment tested whether pictorial health warnings can undo the appeal of cigarette pack, having in mind that cigarette packs attracts consumers and lowers their perception of its harmful effects. Results of this experiment showed that all pictures with pictorial health warnings were rated as unpleasant. Moreover "women judged the warning prototypes more aversive than men" (Volchan et al., 2013, p. 3). Furthermore the second experiment focused on examining how participants react on branded pack in comparison to those with pictorial health warnings. To be more precise, researchers focused on what was participants' reaction time to pick up a pack and bring it closer to them. This behavioural test showed that participants had a much slower reaction when asked to bring the pack with pictorial warning towards them than when given a branded one. Additionally there was an evaluative test that showed how smokers' aversion was correlated with prevention and cessation. "These results indicate that the more aversive a warning, the more it is perceived as effective against smoking"(Volchan et al., 2013, p. 4). The main conclusion drawn from those two experiments is that pictorial health warnings contribute to smokers' behavioural change and that those warnings play a key role in reducing the appeal of cigarettes. To further support this research Reddy and Arora (2009) in their editorial explain how this behaviour change in fact "brakes" the automaticity of using tobacco and encourages a smoker to think about quitting. Therefore there is support for the notion that pictorial health warnings have a strong impact on the consumer in terms of reducing the appeal of the cigarette pack and encouraging him/her to think about quitting. We cannot say that few studies are conclusive but given the fact that this topic is just starting to be researched these results can be seen as indicatory.

Another study done by Schneider, Gadinger, and Fischer (2011) concentrated on exploring how pictorial health warnings affect addicted and non-addicted smokers in terms of their motivation to quit. The purpose of this research was to collect relevant evidence

regarding pictorial warning effectiveness to contribute to the ongoing discussions of EU

members regarding implementation of this regulation. The research was done in Germany,

and participants were students between the ages of 18 to 30 that smoke. The first thing that

the research investigated was the self-affirmation and level of nicotine dependence of the

participants. This was done using a short questionnaire. Then researchers divided participants

into two numerically identical groups and each group member received either a branded pack

a with written health warning or a pack with a combination of written and pictorial warnings.

What Schneider et al. (2011) wanted to measure was the motivation to quit, level of threat

and self and response efficacy, fear intensity and vulnerability of participants from both

groups after seeing the cigarette pack. Motivation to quit was assessed in a way that

participants needed to disclose to what extent the health warnings made them: "(1) consider

ceasing their cigarette consumption, (2) consider reducing their cigarette consumption, (3)

think about the health risks associated with smoking, or (4) refrain from smoking a cigarette

at the moment" (Schneider et al., 2011, p. 79). The other previously mentioned measures

were assessed using a ranged scale (*not at all* to *completely*). The main takeaway of this study

and its results is that pictorial health warnings induce a higher level of fear and generate a

stronger motivation to quit among smokers in contrast to written warnings. Was there any

difference between addicted and non-addicted smokers?

This is also supported by another study. Kees, Burton, Andrews, and Kozup's (2010)

experiment with more than 500 participants also resulted in confirming that evoked fear had a

strong relationship with pictorial health warnings, while the "pattern of results indicates that

the measure of evoked fear fully mediates the effect of the pictorial warning on smokers'

intentions to quit smoking" (Kees et al., 2010, p. 271). These studies strongly support the idea

that pictorial health warnings evoke fear that arouses thinking about quitting smoking.

Research by Hammond et al. (2012) also had the purpose of investigating the effectiveness of pictorial health warnings by comparing text only and pictorial warning survey results, but with an emphasis on types of message content and socio-demographic effects. The research was done on both adults and youth in Mexico City. The reasoning behind the study was the fact that Mexico has almost 10.9 million adult smokers which makes Mexico one of the counties with the most smokers in the world. This face to face survey research was divided into two major parts. The first part asked questions regarding participants' socio-demographic background and smoking status/behaviour while the second part of the study involved showing the participant multiple health warnings on a computer screen. Each health warning was rated with a Likert scale. Results of this study showed that "pictorial warnings featuring "graphic" depictions of disease were significantly more effective than symbolic images or experiences of human suffering" (Hammond et al., 2012, p. 57). Additionally, socio-demographic group differences were not significant.

Similar research was done by Cantrell et al. (2013). Its purpose was to investigate the difference in impact between pictorial and text-only health warnings across different socioeconomic, race and ethnic groups. This web-based study showed that "1) the new FDA pictorial warnings are, as a whole, more effective than text-only versions of the warning; and 2) the stronger impact of pictorial warnings is similar across vulnerable population subgroups as compared to text-only warnings" (Cantrell et al., 2013, p. 7). There are also many other studies which indicate that pictorial health warnings are effective regardless of race, ethic or socioeconomic status (White/African America/Hispanic, high school/some college/college or more, federal poverty level). Overall there is much more research which needs to be done on a state level to support pictorial health warning regulation, in order for it to become a mandatory FCTC regulation unlike what it is today, a recommendation.

Although the tobacco industry strongly fights against this regulation there is not much empirical evidence that would support their position while the opposed side has collected evidence through various empirical studies to support theirs. According to the World Health Organization Europe (n.d.), the tobacco industry uses a few common arguments designed to counter the implementation of pictorial health warnings. The first argument challenges the effectiveness of those warnings and argues that this regulation will only scare smokers. The second argument states that the implementation of image-based warnings is too costly. The third argument focuses on implementation time. To be more precise, the tobacco industry considers a one year implementation period for pictorial warnings too short. Finally the fourth argument of the tobacco industry is that pictorial warnings violate freedom of speech and trademark rights. All these arguments were questioned and tested and not a single one proved to be valid according to World Health Organization Europe (n.d.) with the exception of a ruling from the U.S. Supreme Court that pictorial health warnings were unconstitutional and that they limit tobacco companies' freedom of speech. This was not the case in other countries such as Canada, Australia, Brazil or Thailand as lawsuits filed against this countries regarding freedom of speech were unsuccessful. Therefore we can consider the U.S. to be an isolated case.

However there are some studies that show that pictorial health warnings are not as effective as desired. Romer, Peters, Strasser and Lengleben (2013) recognize the fact that pictorial health warnings create smoker aversion that leads towards thoughts about quitting, but they disagree with the fact that thoughts consequently lead towards intention to quit. The results of their research show that pictorial health warnings have a stronger influence on smokers with stronger-efficacy beliefs towards quitting while much less influence on smokers with lesser-efficacy beliefs towards quitting. This result partially supports those health warnings but emphasizes the impact difference. Another study conducted in India by

Arora, Tewari, Nazar, Gupta and Shrivastav (2012) showed that smokers perceive pictorial health warnings as less adequate to convey the health impact in comparison to non-smokers. This result again partially supports pictorial warnings but again emphasizes impact difference. Furthermore Hoek et al. (2010) in their study summarized the key takeaways of New Zealand's implementation of pictorial health warnings. What they found out was that in order for health warnings to be as effective as desired, countries should consider "strengthening the link between image research and policy; (ii) requiring frequent image development and refreshment; (iii) using larger pictures (e.g. 80% of the front of the packet); (iv) developing themes that recognize concerns held by different smoker sub-groups; and (v) running integrated mass media campaigns when the warnings are introduced" (Hoek et al., 2010, p. 861).

After reviewing research material regarding the pros and cons of pictorial health warnings we can conclude that this regulation leads towards lowering smoker share, but what needs to be recognized is the impact difference. It seems that not every part of the populations is affected the same but this is something that is expected. Tobacco industry arguments regarding this law seem to be inadequate as they are not supported with empirical evidence. This is why each country should research the impact of pictorial health warning on its citizens, and if proven highly effective, consider implementation of such regulation.

Research Methods

In order to measure and evaluate the effectiveness of pictorial health warnings on young female adults in Zagreb, the research will use a quantitative research method, to be more precise a survey shown in Appendix C. The survey will be given in the Croatian language and will be administered to young adult female smokers between the ages of 18 and 24. This sample was selected due to the fact that Croatia has a high smoking incidence, especially among women. A smoker in this research is defined as a person smoking on a daily or weekly basis. Daily smoker in this study is defined as a person that smokes one or more cigarettes per day. A weekly smoker on the other hand is defined as a person that smokes up to 60 cigarettes in a week. According to Croatian Bureau of Statistics (2013) estimated population of this age/gender group in Croatia is 165,000 people. This is 7,5% of total female population in Croatia. Moreover in city of Zagreb there are 793,057 citizens, and 53,3% are women. Based on these statistical data we can estimate that there are 31,000 females between the ages of 18 and 24 living in Zagreb. In order to achieve confidence interval of 95% with the margin of error of 5% survey required sample size would need to be 380 (successful responses).

This research will be based on four main hypotheses:

- H1. Smokers that have intention to quit don't look for professional help
- H2. Pictorial health warnings divert smokers' attention from the brand towards health warning
- H3. Pictorial health warnings elicit more fear, consequently leading towards thoughts about quitting smoking
- H4. Pictorial health warnings are more effective in terms of smoking prevention than graphic only warnings and are more likely to stimulate health concerns

The first three questions in the survey are defined as prerequisite ones, due to the fact that any participant that doesn't fit the profile will not be asked to proceed with the survey. These questions are: Are you a smoker?, What is your current smoking status ? and What is your age? In order to test previously mentioned hypotheses the survey will have another two sets of questions; general and comparative. Therefore after checking eligibility of participant through the prerequisite questions, two general questions will be asked in order to gather relevant data: In the last 12 months have you tried to stop smoking and if YES did you try to get professional help (doctor or health care provider) in those 12 months? The purpose of these questions is to determine whether people look for professional help when wanting to quit smoking. Before asking the last set of questions the participant will receive one of two images provided by the surveyor shown in Appendix A and B. Appendix A represents the current pack design with written only health warning while Appendix B represents a pack with a randomly selected pictorial health warning from the WHO FCTC health warnings database created for members of European Union. The image will be presented facing down, hidden from participants' view. After uncovering and closely viewing one of the two images, the participant will be asked a set of comparative questions. These questions consist of five questions that determine smokers' behaviour, feelings and thoughts about the given pack/health warning. They are: What is the first thing you noticed when shown the picture, did the health warning make you think about health concerns, please rate the intensity of fear aroused by health warning, did the provided health warning make you think about quitting and finally overall how would you rate the effectiveness of this health warning in terms of smoking prevention, At the end of the survey, participant will be awarded with a small reward such as a chocolate bar for the effort of participating in this survey.

Results

Two hundred eighty out of three hundred and two participants fulfilled the eligibility criteria and completed the survey show in Appendix C. Twenty two participants were excluded from the survey due to the fact that they did not meet the eligibility criteria which required them to be daily or weekly female smokers between the ages of 18 and 24. In total there were two hundred twenty-four daily smokers and fifty five weekly smokers. Occasional smokers were also excluded from the survey. Therefore majority of surveyed people were daily smokers while approximately 20% were weekly smokers. Moreover results showed that 80.35% (two hundred twenty-five) survey participants had tried to stop smoking in last 12 months while only 4.44% (ten) of them decided to get professional help (doctor or health care provider) in same time period. This result can preliminarily confirm hypotheses 1 which states that smokers that have intention to quit don't look for professional help. Remaining fifty four participants did not even try to stop smoking in last 12 months.

After each eligible participant answered on first five prerequisite/general questions which results were just presented the survey went in two ways; one group of participants received a picture of cigarette pack with written health warning (Appendix A) while other group of participants received a picture of cigarette pack with pictorial health warning (Appendix B) before answering remaining survey questions. In total there were one hundred thirty-seven participants that were given a picture with written health warning while one hundred forty-three participants were given a picture with pictorial health warning before answering. The results of these questions are divided and presented in following sections.

Written Health Warning Results
After analysing hundred and thirty seven surveys, results are as following:

When participants were asked what was the first thing they noticed when shown the picture

89% of participants (one hundred and twenty two) said cigarette brand, while 9% (twelve)

said health warning and only 2% answered something other than those two. This result

clearly shows that smokers' attention is focused on a brand logo when a pack has only a

written health warning. After checking what participants saw first they were asked to answer

did the health warning make them think about health concerns. As the question was a yes/no

type the results showed that only 4% of participants answered yes while 96% answered no.

This clearly indicates that a strong majority is not affected by written health warning in terms

of thinking about health concerns related to smoking. Next question that participants were

asked to answer was to rate the intensity of fear aroused by health warning on a scale with

minimum value being -3 and maximum 3. The range of answers was between the minimum

values of -3 to maximum 1. The median and mode value were both -1 while the average

value was -0.64. These answers indicate that participants (smokers) were not threatened by

written health warning. Furthermore participants were asked to give another yes/no answer

to the question did the provide health warning make them think about quitting. The results

showed that 4% (six) participants answered yes while 96% (one hundred thirty-one) gave the

answer no. Seeing these results one may conclude that written health warning doesn't

contribute to smokers' intention to quit smoking. Finally the last question required

participants to answer on the scale from 1 to 10 to rate the overall effectiveness of health

warning in terms of smoking prevention. The range of answers was between the minimum

values of 1 to maximum 6. The median and mode value are both 4 while the average value

was 3.75. This result shows that smokers perceive written health warning as a measure with

low effectiveness in terms of smoking prevention.

Pictorial Health Warning Results

After analysing hundred and forty three surveys, results are as following:

Unlike participants that received cigarette pack with written health warning only, participants that received a picture with pictorial health warning when asked what was the first thing they noticed 88% (one hundred and twenty six) said health warning, while 9% (thirteen) said brand and 1% said something other than those two. This result clearly seems to show that pictorial health warnings divert smokers' attention from the brand logo towards health warning which contributes to second hypotheses. After checking what participants saw first they were asked to answer with yes/no to the question did the health warning make them think about health concerns and 92% of people said yes while 8% answered no. Next question that participants were asked to answer was to rate the intensity of fear aroused by health warning on a scale with minimum value being -3 and maximum 3. The range of answers was between the minimum values of -1 to maximum 3. The median and mode value were both 2 while the average value was 1.58. According to these results one may conclude that pictorial health warnings elicit more fear, consequently leading towards thoughts about quitting smoking. Moreover in order to confirm fourth hypotheses participants were asked to give a yes/no answer to the questtion did the provided health warning make them think about quitting where 85% (one hundred and twenty two) of people said yes while 15% said no. Lastly participants needed to answer on the scale from 1 to 10 to rate the overall effectiveness of health warning in terms of smoking prevention. The range of answers was between the minimum values of 3 to maximum 10. The median and mode value are both 7 while the average value was 7.11. This result shows that smokers perceive written health warning as a measure with high effectiveness in terms of smoking prevention and that result strongly contributes to confirmation of fourth hypotheses which states that pictorial health warnings are more effective in terms of smoking prevention than graphic only warnings and are more likely to stimulate health concerns.

Discussion

After analysing all data of this study it is obvious that the results are similar to former studies that dealt with same issue. But unlike other studies this one had a purpose of revealing general benefits of pictorial health warnings. Through four hypotheses this study has proven that pictorial health warnings unlike written only health warnings are more effective in terms of informing the consumer about health implications that cigarettes create.

Therefore first finding of this study is that smokers have an intention to quit but don't look for professional help. This conclusion was drawn from results of the study which showed that from total of 279 surveyors majority of 225 stated how they had an intention to quit during last 12 months, but only 10 out of those 225 surveyors looked for professional help.

This means that smokers need a different incentive to really try and stop smoking. Current written only health warning seem obsolete method of doing so and that is understandable since this warning has not changed much in fifty years and consumers don't even notice health warning as such rather focus on the branding details. This conclusion was drawn from research results which showed that 89% of surveyors when given a pack with written health warning first noticed brand details. On the other hand pictorial health warnings seem to divert smokers' attention from the brand towards health warning. This conclusion was drawn from the fact that 85% of surveyors when given a pack with pictorial health warning firstly noticed the health warning. This is very important since it triggers a thinking process in consumer mind about health concerns.

Additionally pictorial health warnings elicit more fear and stimulate the consumer in thinking about quitting smoking. Compared to written only health warning results there is a huge difference in effect. This conclusion was drawn from comparing research results of both pictorial and standard written only health warning surveys. Results showed that smokers once

shown a written only health warning rated the intensity of fear from the scale of -3 to 3 with

an average of -1 and that only 4% of surveyors stated that the given health warning made

them think about quitting. In comparison when smokers were show a pictorial health warning

the intensity of fear was averagely rated with 2 and 85% of surveyors stated that the given

health warning made them think about quitting smoking.

Finally when the consumer was asked to rate the effectiveness of both health warnings

a vast majority rated pictorial health warnings as a more effective method in terms of

smoking prevention. This conclusion was drawn from research results that showed how

overall surveyors rated the effectiveness of pictorial with an average of 7 and written only

health warning with 4 on the scale of 1 to 10. Having these results in mind it is

understandable why tobacco companies don't support such regulation implementation. But

issue of smoking should not be considered from economic standpoint but rather from a

standpoint of wellbeing as human health is at stake. Therefore tobacco companies in order to

sustain their profits should think of ways how to reposition their product or look for

innovations that would reduce the harm of smoke on human body.

Research Limitations

As shown in results section pictorial health warnings encourage a smoker to think

much more about quitting in comparison to graphical only warnings but to quit smoking

motivation is not enough. Smoking is an addiction and to stop being addicted much more is

needed than simple motivation to quit. Furthermore research showed that pictorial health

warnings elicit more fear to smokers but this can simply just be an impulsive reaction. As

such this reaction can disappear once a consumer (smoker) gets used to such health warning

after certain period of time. Research also showed how pictorial health warnings divert

smokers' attention from the brand towards health warning but again this reaction may just be

an impulsive reaction to a shocking picture. Finally this research doesn't directly prove that

pictorial health warnings are truly effective, but research results indicate that such warnings are potentially effective measure in smoking prevention.

Recommendations for Further Research

In order to truly investigate pictorial health warning effects much more research is needed. Therefore recommendations for further research would be to discover long term effects of pictorial health warnings in countries where this regulation is put in use. The main purpose of such research would be to discover do pictorial health warnings reduce number of smokers after its introduction in a particular country. In addition to that do those reduced smoking numbers stay at that level or bounce back after certain period of time. In such process researchers should focus on visual and emotional impact of pictorial health warnings on smokers. Lastly there should be a comparative research that compares graphical, pictorial and plain package health warning regulations in order to truly asses the effects of each.

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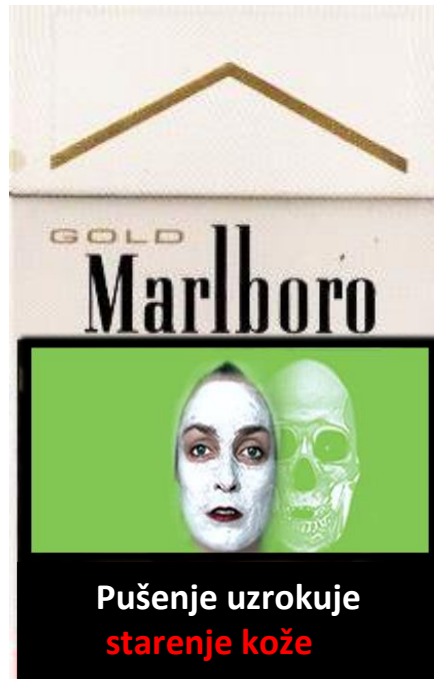
Appendix

Appendix A

Warning sign: "Smoking kills"

Appendix B

Warning sign: "Smoking causes ageing of the skin"

Questionnaire

Prerequisite Questions

Are you a smoker?

◯ **Yes**   ◯ *No*

What is your current smoking status?

◯ **Daily smoker**   ◯ **Weekly smoker**   ◯ **Occasional smoker**

What is your age?

◯ **Less than 18 years old**   ◯ **Between the ages 18 and 24**   ◯ **25 and over**

General Questions

In the last 12 months have you tried to stop smoking?

◯ **Yes**   ◯ **No**

If YES did you try to get professional help (doctor or health care provider) in those 12 months?

◯ **Yes**   ◯ **No**

Comparative Questions

What is the first thing you noticed when shown the picture?

◯ **Brand**   ◯ **Health Warning**   ◯ **Other**

Did the health warning make you think about health concerns?

◯ **Yes**   ◯ **No**

Please rate the intensity of fear aroused by health warning?

◯ -3 ◯ -2 ◯ -1 ◯ 0 ◯ 1 ◯ 2 ◯ 3

Low   **High**

Did the provided health warning make you think about quitting?

◯ Yes   ◯ No

Overall how would you rate the effectiveness of this health warning in terms of smoking prevention?

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 ◯ 8 ◯ 9 ◯ 10

Low   **High**