The Effect of Health Advertising on University Students

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Abstract

This research aims to identify the effect of the recent pictorial cigarette pack's health warning that was imposed at the beginning of the year 2013 on smoking packs in terms of convincing smokers to quit or cut down the cigarette smoking habit. A qualitative approach of expert interviews is used to evaluate the impact of health advertising on the awareness about the risks of smoking habit for universities' students in Jordan. Focus group and observations are also used in this research. The findings have indicated that there is a theoretical link between the effect of advertising and decision making through affective and cognitive responses. The research has highlighted that the new health warning has no direct or indirect influence over Jordanian university students in terms of cutting down or quitting smoking, although it was described by the interviewees and the media as "scary and terrifying". This is one of few studies that explore the effect of the picture health warning on the university students in Jordan. To the authors' knowledge, this is the first paper that provides an empirical evidence about the influence of health advertising in a developing country.

Keywords: health advertising, pictorial health warning, university student cigarette, developing country.

1. Introduction

Pictorial health warning (PHW) on cigarette packs was clearly introduced by the World Health Organization's Framework Convention on Tobacco Control. Jordan became a member of the WHO Framework Convention on Tobacco Control in August 19, 2004. The Jordanian health laws were amended in 2008 so as to include the provisions of the WHO tobacco framework.

The Jordanian cigarette market have witnessed a dramatic increase during the year 2012, according to a research conducted by the Institute for Health Metrics and Evaluation at the University of Washington the rate of Jordanian men smokers was (41.3 percent) during the year 2012, according to the WHO 2012 report the Jordanian young males smoking cigarettes only rate was (17.1 percent) and young females (6.6 percent), those results and the growth of this social habit lead the Jordanian Ministry of health to introduce a new pictorial warning during the first week of 2013 to try to urge smokers to cut down smoking levels or quit smoking, the objective was to influence smokers behavior to reflect a healthier life style. The new warning that was examined is a picture of a dead person, who is enshrouded according to the Muslim religion rituals and laying over a stack of cigarettes, although tobacco advertisement are banned in both electronic and print media, and it is prohibited to smoke in public places according to articles(53) and (54) of the Public Health Law number (47) for the year 2008, the Ministry sensed a need to change the warning from a picture of a lung affected by cancer to the new dead person warning among other PHW, it is mandatory for cigarette producers in Jordan and importers to place the new pictorial warning on the packs according the article (56) of the Public Health Law. The new PHW that will be examined is introduced in Figure 1.

Figure 1.Pictorial Health Warning of an Enshrouded Person over a Stack of Cigarettes

The study is structured as follows. Section 2 provides a review on pictorial health warning and smoking changes literature is undertaken. Section 3 presents the research methodology. In Section 4, findings and discussions are provided, highlighting the conceptual framework for the effect of health advertising on smoking changes. The last section includes conclusions and clarifies contributions made by this study in addition to the authors' recommendations.

2. Literature Review

Many studies have indicated that pictorial health warning as an advertising tool is more effective than plain text warning (Thrasher et al., 2007, Alaouie, 2013).Advertising is about creating awareness and urging actual and potential customers to take action (Imber and Tofler 2000 Wolfgang, 2005, Sharma, 2012) in order to make or remake or stop a purchase. For example, an advertising for a sport product (e.g. a T-shirt for instance) is designed to make the targeted audience take action to buy or inquire about the product, and another example is pictorial health advertising that is aimed at driving the audience to take action by stopping the purchase. Hence, advertising is about influencing consumers and their behavior (Robbins, 2005).

In order to make pictorial health warning more effective it should create fear that smokers will become sick if they do not take action to stop smoking, and hence create an attitude and consequently behavioral change. This is how smokers should become aware that by quitting smoking the risk danger will disappear or become less harmful (Kees et al., 2010).Global Cancer Control report on graphic health warning (2013) indicated that pictorial heath advertisements are being currently used in over sixty countries in the world to create health awareness and stimulate cigarette quitting and warn smokers and non-smokers of smoking health risks. A study conducted by Azagba and Sharaf (2012) concluded that graphic warnings in general had a significant effect on smoking prevalence and quit attempts in Canada. The phrase "quitting attempt" does not actually mean quitting but it means trying to quit and no evidence of success has been shown yet. To our knowledge, there was no research which has provided evidence that pictorial health warning helped to urge cut down or quit smoking in the developing countries. This research is considering Jordan as a context of research, and more specifically the university students in Jordan. Earlier research was conducted on university students in Jordan by Haddad and Malak (2002) revealed that there is an addition problem among university students in Jordan which is that some smokers refused the criticism that is directed towards smoking, as they believed that smoking is a social habit.

The size and design of pictorial health warning advertisements play stronger role than text-only warning advertisements for both smokers and non-smokers, and therefore can promote quitting among youth as it is more emotional (Hammond, 2011).On the other hand, stout (2009) emphasizes that there is no effect of pictorial health warning no matter what the size of warning is. Research conducted by Cameron et al. (2013) concluded that pictorial health warning ads are easy to understand. Despite the fact that no research provided actual number of quitters or cut downers due to being exposed to cigarette pack health warning advertisements. McAfee et al. (2013) indicated that a three month television advertising campaign increased the number of quitters and quitting attempts among U.S smokers. According to (Reddy, 2009) pictorial health warning advertisements influence the knowledge and attitudes of tobacco smokers and non-smokers.

Fear is used in marketing communication; the audience will try to avoid the object that is creating the fear factor, fear has been used in heath advertising including smoking leading to behavioral change (Williams, 2012). A very early research conducted by Greenwald (1968) reached the result that communication can influence attitudes, knowledge and feelings, hence creating cognition. Earlier Zanna et al. (1970) identified attitudes are motivators to respond in a particular way, and thus leading to cognitive, affective, and/or behavioral response. Later research carried out by O'Brien (1971) to identify the sages for decision making process concluded that awareness came before attitude, intention, and the last stage afterwards was making a purchase.

Volchane et al. (2013) revealed that women, smokers and those with lower levels of education recognize pictorial warning as more aversive than men, non-smokers and those having higher education. Their research also found that pictorial heath warning had strong impact leading to the intentions to quit, the research again and similar to other research did not provide information on the actual number or ration of quitters or those who cut down smoking. Tobacco addiction is considered to be one of the main reasons facing different types of health warnings. A survey conducted by Maziak et al (2004) on a sample composed of 587 university students studding at Aleppo University indicated that most cigarette smokers were daily regular smokers (78%), and a large number of them showed signs of tobacco addiction, and therefore failure in quitting attempts was the main reason for not being able of quitting. According to Hawari et al., (2011), the majority of youth whether smoking or non-smoking indicated that smoking was harmful. The research targeted the Jordanian youth aged between 17-26 including university students who are usually aged between 18-22, and it found no actual number or ration of quitters and cut downers was mentioned. A combined text and pictorial health warnings on cigarette packs was seen to be more effective than text only according to research conducted by (Hoek *et al.,* 2011; Kahnert, 2013; Zhao, 2014) a review conducted by(Kahnert*et al.,*2013) and included 94 studies only three studies concluded that pictorial health warning was not more effective than text warnings. The study also found out that pictorial health warnings prevented non-smokers and former smokers from starting or restarting smoking, the studies did not provide accurate data of actual quitters and those who were able to cut down smoking.

According to the WHO, tobacco fact sheet number 399 (2013), pictorial health warning reduced in home smoking and increased tobacco harm awareness in Brazil, Canada, Singapore and Thailand. The report does not provide actual data about quitting and cutting down smoking in general. Therefore, understanding the advertising role in pictorial health warning enables business and societies to be more aware of the effects of this type of warning on the behavior of people especially university students, which gives rise to better awareness and depth understanding for various sides. Overall, the previous research on health warning and the actions of consumers have been highlighted in this literature review. There has been a lack of studies or detailed studies on the theoretical link between the health advertising and consumer behavior, which narrows the exploring of the various sides who call protection of people health mainly youth. The present research will therefore attempt to combine the high-order themes in a novel framework.

3. Research Methodology

The research followed exploratory philosophy using 20 expert interviews in order to examine potential similarities and differences amongst the interviews in a comparative case study. A triangulation method is adopted as a corroboratory mode to ensure findings are more convincing and involved multiple sources of data collection and analysis to prevent subjective bias (Miles and Huberman; 1994).

The authors used interviews with academic and health staff whom are responsible for students' affairs from five universities in Jordan which are: The American University of Madaba (AUM), The University of Jordan (UoJ), Al-Balqa Applied University (BAU), The University of Petra(UoP), Princess Sumaya University for Technology(PSUT) in 2014 (Appendix 1). The authors used their wide experiences to adopt a self-selection technique in order to identify non-probability sampling. Interviewees were selected from each university to have high response rates, and replication logic was also used to validate and cross-check the information (Miles and Huberman, 1994; Perry, 1998).Following an agenda, semi-structured interviews were conducted with four interviewees in each university (Appendix 1). The topic was introduced at each university site-visit and then each interviewee viewed the pictorial health warning advertisement that represents an enshrouded dead person lying over a stack of cigarettes before starting the interview. Secondary data technique was also applied using universities' websites, documents of students' affaires, and medical centers at each university, annual reports, and historical data. Interviews were the primary data collection method of open-ended questions (Yin, 2007).

The interviews used information related to the interviewee description, the university, the various themes related to students' behavior related to smoking and warning advertising concept. Interviewers explained any unclear questions based on their knowledge of the interview topic. An iterative is followed as procedure of moving backward and forward in time in order to know further the situation of smoking actions and issues related to policies and regulations.

All interviews were tape-recorded and followed the ethical standards of collecting data in Jordan. The authors used thematic analysis to analysis the collected data and text via a conceptual network for the main themes and sub-themes (Attride-Stirling, 2001). The first step of analysis was that the interview transcripts and the focus group feedbacks and other sources were analyzed using coding process. These initial codes were developed based on the categories that emerged as relevant from the literature review, and then a set of significant themes was highlighted to facilitate the final display for results. The second step of comparison analysis was used amongst the interviewees in order to provide first-order concepts, consolidating categories into second-order themes, identifying overarching dimension. In order to ensure content validity and research reliability, the authors identified similar themes and interactions across the interviewees and also provided an outsider perspective to assess reliability for the themes and their interrelationships (Figure 2).
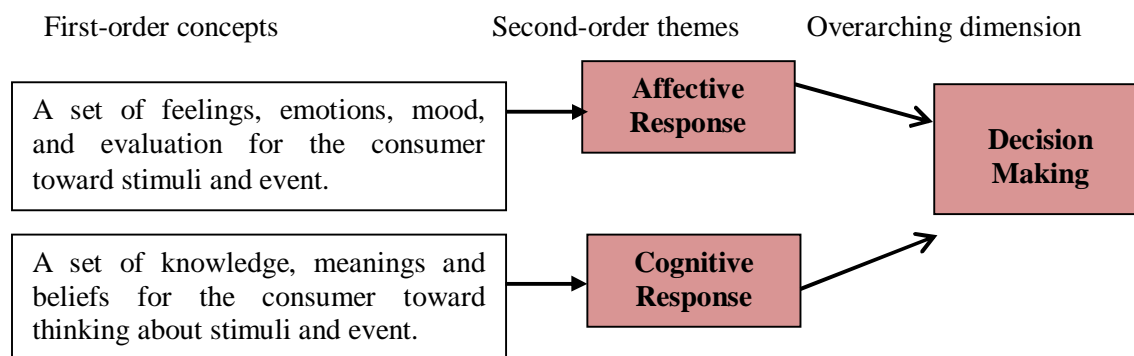
First-order concepts   Second-order themes   Overarching dimension

Figure 2.A structure of Cross Comparisons

4. Results and Discussion

The current research resulted in a comparative case study amongst the five universities namely, the American University of Madaba (AUM), The University of Jordan (UoJ), Al-Balqa Applied University (BAU), The University of Petra (UoP), Princess Sumaya University for Technology (PSUT) in Jordan in 2014. The 20 interviewees indicated the importance of the pictorial health warning advertisement as a concept in general and especially the enshrouded dead person laying over a stack of cigarettes in this research. They also highlighted that this kind of health warning is important to create awareness especially for students' behavior related to smoking and warning advertising concept. However, the overall results in this research importantly provided a general agreement from the experts that there is no direct effect from health advertising on the student practical decision "real actions or applications" towards taking decisions for quitting or cutting down smoking. This is due to the fact that students have no real understanding for their responses if it is affective or/and cognitive and this create unstable process of making decisions towards quitting or cutting down smoking.

The findings indicated that not all cigarette packs in the market has the pictorial health warning as there are packs that were imported illegally and hence did not contain the warning on the packs. The interviewees also indicated that the presence of the new pictorial heath warning "enshrouded dead person" was not a reason for not buying the cigarette pack. Another finding has been that pictorial warning is still stronger than text warning even though it did not achieve the anticipated objective of cutting down or quitting smoking according to the interviewees. The experts from all universities seemed to understand the importance of effect factors of advertising, but lack adequate examinations of how to apply these factors on their strategies of awareness to students in order to take practical action to stop or cut down smoking to protect their health. One expert at AUM said that:

"Smoking is spreading faster than expected among university students, students are smoking both cigarettes at universities and Hubbly Bubbly (Shesha) at homes and coffee shops, I believe advertising can help in limiting this social habit" (AUM)Another expert at the University of Jordan (UoJ) explained the fact that:

"Advertising is very important to make people especially the youth to be aware of the health dangers of smoking, students might start talking about health ads if they saw an effective ad" (UoJ)

Therefore, this research examined the effect factors across the five universities using the 20 expert interviews to reveal two primary patterns. First, the factors of affective response were in most interviews high level-focused, while the factors of cognitive response in most cases, were medium-low level-focused. Second, the research identified that there is an effect of health advertising on students behavior "the process of decision making" in just the response decision and not the practical decision.

In interviews done with 18 experts, factors of affective response were high level-focused. The other 2 experts showed that affective response factors were low level-focused. Universities highlighted that they need to have underpinning understanding for these factors (Affective response) for developing the awareness program for their students using concepts of feelings, emotions, mood, and evaluation for the students toward stimuli and event. In the same interviews done with the 18 experts above, factors of cognitive response were medium level-focused. The other 2 experts showed that cognitive response factors were low level-focused. The highlighted factors of cognitive response were concepts of knowledge, meanings and beliefs for the students toward thinking about stimuli and event. Table 3 shows the cross comparisons amongst the interviews.

Table 3: Cross Comparisons for 20 Interviews –Effect Factors

Effect Factors of Advertising on Decision Making		
High Level-Focused	*Medium Level-Focused*	*Low Level-Focused*
*"The warning is very disturbing students talk about it all the time, it makes them **feel**badly about death….." (AUM)* *".... I remember when this warring was first used it created a talking topic and **deep evaluation** among students but as time passed by the fear faded, maybe it could be more fruitful to change the pictures from time to time….." (AUM)*	*"…..some of them were able to quit because the meaningsbut unfortunately they went back to smoking….."(AUM)*	*"Maybe it could be more effective to distribute brochures at universities, the pictorial health warming is strong and expressive but more data is needed, the new generation " our students" have **noreal evaluation** for this….(AUM)*
*"Students fear the dangers of smoking, both the text and picture health warning which **parley feel** to evaluate this event ….."* *(UoJ)* *…….but I have heard from my experience that some students have changed **their moods** in deciding to quit or cut down smoking motivated by the fear or emotional aspect of warnings as new event" (UoJ)*	*….. for smokers and passive smokers, they believe it is better to quit, surprisingly the number of smokers is increasing dramatically"(UoJ)*	
*"We at the university provide lectures about the health risks of smoking, students know that smoking is unhealthy…but it is most of them **just feel** they cannot stop…"(BAU)* *"Students perceive the importance of having a healthier life, the fear of ending dead at a young age creates **emotions** of stopping and no further actions…"(BAU)*	*"Due to my experience I believe many students tried or had knowledge of quitting or cutting down smoking as a result of the pictorial health warning…."(BAU)*	*"………It needs to know why does smoking kill and then I think they **mightn't feel** there is a need to quit smoking" (BAU)*
*Warning motivates them to think of quitting smoking, things do not go further than **just feelings** or maybe **bad mood** to quit….." (UoP)* *Definitely students **feel** of the dangers associated with smoking whether they see the health warning or not, in general students need to **evaluate** a lot before taking decisions*	*"…..when students asked about the reason for keeping smoking the answers were mainly their beliefs in smoking or they were not ready to quit yet"(UoP)*	*"Students reactions to pictorial health advertising vary based on the studying year, few like to acknowledge about the health concerns many do not have any response……"(UoP)*
*"……the most important response that students care about is when friends talk to them about smoking, that is the strongest **emotional response** I have ever seen"(PSUT)* *"I have seen cases where students decided to quit smoking as a group as they influence each other **emotions** but those were only attempts, the new ad is shocking, is it **meaningful** to make them quit I don't think so" (PSUT)*	*"The most important response to quit smoking is creating actual fear among smoking students, if they start searching for more data and knowledge then this might lead to quitting smoking…"(PSUT)*	*"I don't think that awareness might lead students to quit smoking. Smoking, drinking alcohol are unhealthy habits but we rarely see people gain meanings or beliefs to quit those habits especially if they suffer from addiction"(PSUT)*

The cross comparative analysis suggests that these universities should pay more attention to the affect factors of advertising and their impact on the students decisions. Effect Factors include many themes related to affective and cognitive responses which play a role in leading people thinking and then their behavior in specific decisions. This understanding creates better understanding for universities and societies how to establish an awareness strategy for their youth and students towards unhealthy products, especially cigarette smoking. We need to highlight the fact that students consider unhealthy issues are habits and this is totally wrong as in the quotation below. The role of effect factors on student decisions should help in bringing things to the lights and changing behaviors and habits for better and healthy lifestyle.

"Students fear the warning at the beginning but after a week or so they become a part of the pack it doesn't terrify them in the end, I have asked a student once if warnings in general can make him quit, his answer was quitting is easy I was able to quit several times, they say they think of quitting and someday they will but when ,they never say....."(PSUT)

The findings suggest that the key themes are grouped as second-order factors: affective factors (feelings; emotions; mood; evaluation) and cognitive factors (knowledge, meanings and beliefs)to be linked to the main theme, decision making (rational behavior; irrational behavior) as an overarching factor in order to develop a novel conceptual framework. These themes of the effects of advertising will bring to the light innovated concepts to understand how universities might select a set of these concepts to generate a modern strategy of awareness in order to work side by side with students to change their decisions towards their health protection. It is our belief that the adaptation for such framework will let both universities and students is aware how to cooperate to understand things using real description for the unhealthy products such as cigarettes. It is also our believe that cutting down or stopping cigarettes are a hard mission to be done but by understanding the effect and the cause and how they lead to each other, it might lead for better results and decisions. In a nutshell, our current research is driven by the assumption that if the universities understand the importance of effect factors, they are keener to generate better strategies in dealing with student health issues. The research has provided concepts related to the over arching concept and the overall idea of this research, the effect of advertising. The novel conceptual framework is illustrated in Figure3.
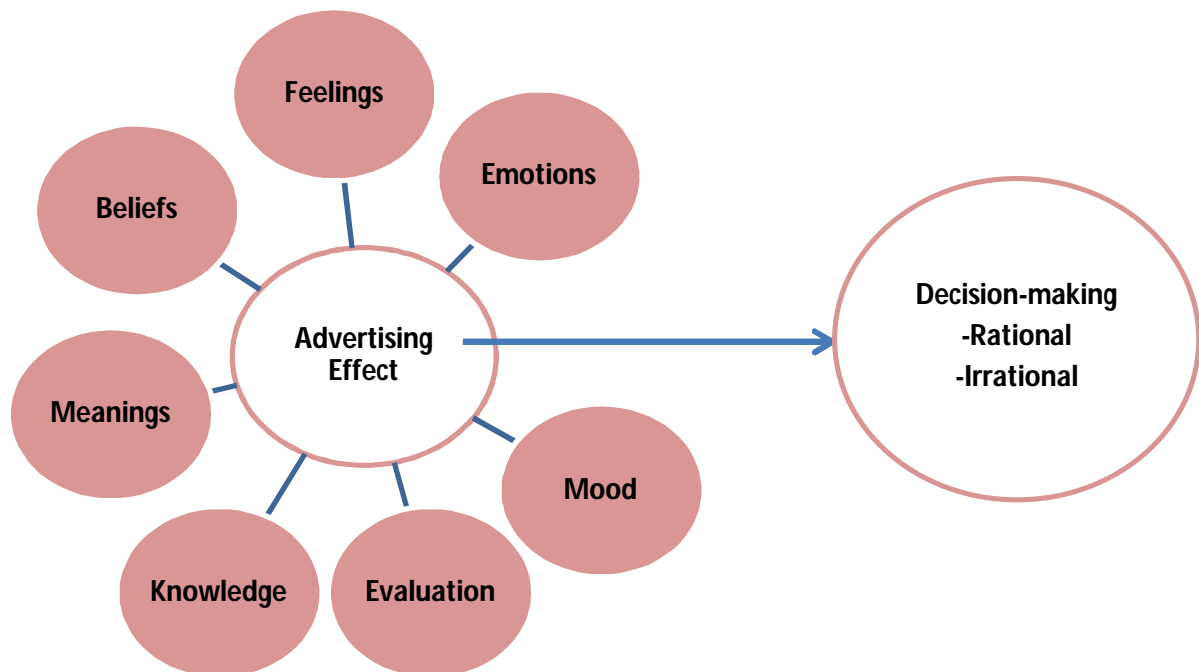

Figure 3.A Novel Conceptual Framework- Role of The Effect of Advertising

5. Concluding Remarks

This research has provided findings indicating that most of the experts have identified the factors of the effect of advertising, mainly high level focused factors (affective factors: feelings; emotions; mood; evaluation), and medium level focus factors (cognitive factors: knowledge, meanings and beliefs).

This research has concentrated on university students and the effectiveness of the new pictorial health warning advertisements in terms of shifting their smoking behavior towards quitting or cutting down smoking. This research contributed in providing a novel conceptual framework which reflects theoretical links between the effect of advertising and decision making. Managerial implications were highlighted by the findings of this research where universities and health management can adopt the new conceptual framework in order to benefit from applying new awareness strategies to change student's behavior and follow rational decisions instead of irrational behavior.

New researchers are recommended to focus more on how various health organizations and educational bodies must try to find more effective ways to urge university student smokers and other social segments to cut down or quit smoking. It is also our recommendations for future research to examine the effectiveness of pictorial health warning on those who never smoked before, perhaps younger ages than university students, and hence convince them not to begin smoking at the first place.

References

Alaouie H., A Afifi H., Haddad P., Mahfoud Z., Nakkash R. (2013) *"Effectiveness of pictorial health warnings on cigarette packs among Lebanese school and university students"* Tob Control doi:10.1136/tobaccocontrol-2012-050745

Cameron L. D, Pepper J. K., Brewer N. T. (2013) *"Responses of young adults to graphic warning labels for cigarette packages"* Tobacco Control doi:10.1136/tobaccocontrol-2012-050645

ElianeVolchan E, David I, Tavares G, Nascimento B. M, Oliveira J. M. , Gleiser S., Szklo A., Perez C, Cavalcante T., Mirtes G. Pereira, Leticia Oliveira (2013) *"Implicit Motivational Impact of Pictorial Health Warning on Cigarette Packs"*DOI: 10.1371/journal.pone.0072117

Greenwald, A. G. (1968). *"Cognitive learning, cognitive response to persuasion and attitude change"* .In A. G. Greenwald, T. C. Brock, and T. M. Ostrom (Eds.), Psychological foundations of attitudes (pp. 147-170). New York: Academic Press

Haddad ,L. G,Malakeh Z.(*2002)"Smoking habits and attitudes towards smoking among university students in Jordan"* International Journal of Nursing Studies 39 (2002) 793–802

Hammond D. (2011) *"Health warning messages on tobacco products"*: a review, Tob Control 20: 327–337

Hawari, F, Bader, R., Beano, H., Obeidat, N, A.; Ayub, H., Habashneh, M., Shtaiwi, A.; Shihab, R., ; Madanat, H., Novotny, T. (2011) *"Perceptions of young Jordanian adults to proposed anti-tobacco pictorial warning labels"*, BMC Public Health;2011, Vol. 11 Issue 1, p.414

Imber, J. & Toffler, B. (2000). *"Dictionary of Marketing Terms"*.Barron's Educational
Series, 3rd Ed."

Janet Hoek, Philip Gendall, Jordan Louviere, (2011) *"Rationalization as delusion: pictorial health warnings and tobacco industry arguments"*, Journal of Consumer Marketing, Vol. 28 Iss: 7, pp.476 – 483

Kahnert S., Schaller K., Pötschke-Langer M. *"Effectiveness of Pictorial Health Warnings on Cigarette Packages"* © 2013 German Cancer Research Center (DKFZ), Heidelberg

Kees, J., Burton, S., Andrews, J.C., and Kozup, J. (2010*) "Understanding how graphic pictorial warnings work on cigarette packaging"* Journal of Public Policy & Marketing, Vol. 29 (2) Fall 2010, 265–276

-McAfee T., MD, Davis K. C, Alexander R. L., Pechacek T. F., Bunnell R. (2013) *"The Effect of the first federally funded US antismoking national media campaign"*Lancet - 14 December 2013 (Vol. 382, Issue 9909, Pages 2003-2011)

MaziakW.,Hammal F.,Rastam S.,Asfar T.,Eissenberg T.,Bachir M. E.,M.F. Fouad M. F,
and Ward K.D (2004) *"Characteristics of Cigarette Smoking and Quitting Among University Students in Syria"* Preventive Medicine 39, 330–336

O'Brien T. (1971) *"Stages of Consumer Decision Making"* Journal of Marketing Research, Vol. 8, No. 3 (Aug., 1971), pp. 283-289

Reddy K. S., Arora M. (2009) *"Pictorial health warnings are a must for effective tobacco control"* Indian J Med Res 129, May 2009, pp 468-471

Report Details Progress on Graphic Cigarette Package Labeling, available online at www.uicc.org

Sharma, P. (2012*). "Advertising Effectiveness: Understanding the Value of Creativity in Advertising",* a Review Study in India, online Journal of Communication and Media Technologies, Volume: 2 – Issue: 3

Stout, D. J. (2009)*"MARKETING CIGARETTES IN THIS HEAVILY REGULATED AGE?: EMBRACE THE RESTRICTIONS"* Brand Packaging. Oct2009, Vol. 13 Issue 9, p16-17. 2p. 1 Color Photograph

Thrasher JF, Hammond D, Fong GT, Arillo-Santillán E. (2007) *"Smokers' reactions to cigarette package warnings with graphic imagery and with only text: a comparison between Mexico and Canada"*. SaludPublica Mex. 2007;49Suppl 2:S233-40

Thrasher JF, Villalobos V, Szklo A, Fong GT, Perez C, et al. (2010) *"Assessing the impact of cigarette package health warning labels: a cross-country comparison in Brazil, Uruguay and Mexico"* Salud Publica Mex 52 Suppl 2S206–215. [PubMed]

WHO (2003) Framework convention on tobacco control. Geneva. Available online at http://www.who.int/tobacco/framework/en/.

WHO Report on the Global Tobacco Epidemic, (2013)

Williams K. C. (2012)*"Fear Appeal Theory"* Research in Business and Economics Journal"Mar2012, Vol. 5, p1-21. 21p

World Health Organization tobacco fact sheet number 399, (2013), available online at www.wto.int

Wolfgang G. , (2005) "*What's in a Name? Advertising and the Concept of Brands"* (2nd ed.)", Journal of Product & Brand Management, Vol. 14 Iss: 2, pp.137 – 139

Xiaoquan Zhao, Xiaoli Nan, Bo Yang, Irina Alexandra Iles, (2014*) "Cigarette warning labels: graphics, framing, and identity",* Health Education, Vol. 114 Iss: 2, pp.101 – 117

Zanna, M.P., Kiesler, C.A. and Pilkonis, P.A. (1970*),"Positive and negative attitudinal affect established byclassical conditioning"*, Journal of Personality and Social Psychology, Vol. 14 No. 4, pp. 321-8

Appendix 1.Classification of Interviewees

University Name	Interviewees	Number of Students	University Type
The American University of Madaba (AUM)	Two medical, two student affairs.	(1220)	Private
The University of Jordan (UoJ)	Two medical two student affairs	(45000)	Public
Al-Balqa Applied University (BAU)	Two medical, two student affairs.	(42996)	Public
The University of Petra(UoP)	Two medical, two student affairs.	(6052)	Private
Princess Sumaya University for Technology (PSUT)	Two medical, two student affairs.	(2727)	Public

Appendix 2: Agenda of Interview

Theme	Questions
Health Advertising	Q1: What do you think about the role of advertising on health issues? Q2: How can you describe the new cigarette pack pictorial health warning compared with the text warning in terms of being fearful? Q3: Which kind of response the students have (e.g. quitting or cutting down smoking) as a result of the new pictorial health warning?
Affective Response	Q1: How do you define affective response from the students' side? Q2: What are the responses for the students toward stimuli and event? Q3: Which response is the most important to quitting or cutting down smoking?
Cognitive Response	Q1: How do you define cognitive response from the students' perspective? Q2: What are the responses of students toward thinking about stimuli and event? Q3: Which response is most important for quitting or cutting down smoking?
Decision Making	Q1: How do students decide to quit or cut down smoking from seeing the new pictorial health warning as advertisement? Q2: How do students decide to quit or cut down smoking from the impact of their responses? Q3: What are the suggestions for increasing the impact of new cigarette pack pictorial health warning?