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Pictorial Warning Labels and Quit Intention in Smokers Presenting to a Smoking Cessation Clinic

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ABSTRACT

Background: *At present, cigarette smoking results in the death of more than 5 million people annually and if the current trend of smoking continues in the 21st century, tobacco-related deaths are projected to grow to one billion. Pictorial warning labels on cigarette packaging are amongst the most effective tools for educating smokers and non-smokers alike about the health risks of tobacco use. Article 11 of the International Tobacco Control Treaty and article 5 of the National Comprehensive Law on Tobacco Control in Iran have discussed this issue. This study aimed at evaluating the correlation between pictorial warning labels on cigarette packaging and quit intention in smokers.*

Materials and Methods: *In this cross sectional study, 581 smokers presenting to a smoking cessation clinic (affiliated to the Tobacco Control Society) in the year 2009 were evaluated. Smokers were asked to fill out a questionnaire including personal information, history of smoking, number of cigarettes smoked per day, brand of cigarette smoked, whether or not the cigarette used had pictorial warning label, smoking rate before the placement of pictorial warnings compared to after, whether or not they support the placement of such images, and role of these pictures in their quit intention. Data were analyzed using SPSS ver.15 software.*

Results: *A total of 581 smokers participated in this study out of which 512 were males with a mean age of 41±14 yrs and 69 were females with a mean age of 42±9.9 yrs. The mean history of smoking was 20 yrs. Six months after placement of pictorial warning labels on some cigarette packets, 67.6% of smokers still purchased packets with no such labels. A total of 62% of smokers supported the placement of pictures and 8% stated that seeing the pictorial warning motivated them to quit smoking.*

Conclusion: *Pictorial warning labels play a role in motivating smokers to quit. Although most smokers presenting to the clinic used packets without pictorial warnings, most of them supported the placement of these pictures.* ***(Tanaffos2010; 9(4): 48-52)***

Key words: *Pictorial warning labels, Cigarette packets, Cigarette, Tobacco products*

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INTRODUCTION

Tobacco consumption in any way is lethal. Tobacco smoke not only causes physical and mental harms to the smoker himself but also affects others exposed to it (passive smokers). Every step aiming at decreasing the consumption of tobacco products increases the health status of the community. However, tobacco consumption has a growing trend in the world and it is estimated that in the year 2030, 2 billion people will consume tobacco products. When the smoking rate increases in the developing countries, its hazardous consequences will rise subsequently. The morbidity and mortality due to smoking in the developed countries has been twice the rate in developing countries during the previous decades. Therefore, 80% of the mentioned morbidity and mortality will occur in the developing countries in the next 20 years. This means an increase in supply, sell, and consumption of tobacco products in the developing instead of developed countries (1).

Tobacco consumption resulted in the death of more than 100 million people in the 20th century. If effective and preventive measures are not applied and smokers are not encouraged and assisted to quit, this rate will reach 1 billion in the 21st century (2).

According to the most recent statistics reported by the WHO, the rate of consumption of tobacco products among the age group of 15-64 yrs in Iran was 14.2% in the year 2005 out of which 24% were males and 4.3% were females. The growing trend of smoking among the Iranian youth is worrisome. According to GYTS (Global Youth Tobacco Survey) studies in 2003, smoking rate among the 13-15 year old Iranian teenagers was reported to be 13% out of which 17.9% were males and 8.9% were females (1).

For years, Cigarette manufacturers used cigarette packaging as a means to attract more consumers. This was reversed by the placement of pictorial health warning labels on the packaging (3). It is the best way for health authorities to communicate with smokers and their family members time and again during a day. If appropriate pictures are used, it can effectively decrease the rate of consumption (4, 5).

Article 11 of the International Treaty for Tobacco Control asks member countries to place pictorial warning labels on cigarette packets in order to educate smokers about the health hazards of smoking and also fight the appealing look of cigarette packs to adolescents (6). Canada was the first country to introduce pictorial warnings in 2001 and, over the past nine years, 27 other countries have introduced similar Canadian-style pictorial warnings on tobacco packaging.

Article 5 of the National Comprehensive Law on Tobacco Control in Iran banned the use of words like “light” or “low tar” on cigarette packets and asked cigarette manufacturers whose products are administered in Iran to allocate at least half the front and back covers of the packets to pictorial warnings(7).

The Ministry of Health designed the pictures and asked cigarette manufacturers to print these pictures on their locally manufactured and imported products from February 2009. Since then, the Iranian Tobacco Company has been placing these pictures on all Iran-made and imported cigarette packets.

This study aimed to evaluate the correlation between printing pictorial health warning labels on cigarette packs and quit intention 4 to 6 months after their placement in smokers presenting to the mentioned smoking cessation clinic.

MATERIALS AND METHODS

This cross-sectional study was conducted on 581 smokers presenting to a smoking cessation clinic affiliated to the Society for Tobacco Control in 2009 (4 to 6 months after placing the pictorial warning labels). After obtaining consent and giving the instructions, questionnaires containing 10 questions were filled out by the participants. The questionnaire included questions regarding personal information, demographic data, history of consumption, brand of cigarette smoked, whether or not they are using cigarettes with pictorial warning labels, rate of consumption before and after the placement of these

pictures, whether or not they support this act and role of these pictures in their quit intention. Collected data were analyzed using SPSS Ver.15 software.

RESULTS

The mean age of participants was 42.2±13.8 yrs (range 17-78 yrs) and the mean history of consumption was 20.5 yrs (range 1-60 yrs).

A total of 62.4% of participants including 326 males and 34 females supported the placement of pictorial warning labels on cigarette packets.

A total of 187 participants (32.4%) used cigarettes with pictorial warning labels including 29% (20) of women and 32.9% (167) of men. No significant difference was detected between both sexes in using cigarettes with pictorial labels (P= 0.308).

Table 1 demonstrates the consumption of cigarettes with pictorial labels in different age groups. Chi-square test showed a significant correlation between age and use of cigarettes with pictorial labels (P<0.001). As seen in Table 1, by advancing age, using cigarettes with pictorial labels increases.

The mean number of cigarettes smoked per day by those using cigarettes with pictorial warning labels was 18.55±5.59 before the placement of pictures. This rate reached 17.79±5.4 cigarettes a day 6 months later and after using cigarettes with pictorial warning labels. The mean number of cigarettes smoked by those who did not use cigarettes with pictorial labels was 17.77±7.67 before the placement of pictures. This rate reached 17.05±7.5 after 6 months. Change in the amount of cigarettes smoked before and after the placement of pictures was evaluated and compared using independent t-test. A decrease in cigarette consumption (0.8±2.9) was observed in those using pictorial packets after the placement of pictures. The difference in consumption before and after the placement of pictures in those using packets with text-only warnings was -0.7±3.1 (Table 2). The smoking rate decreased in both groups after placement of the pictures.

Table 1. Consumption of cigarettes with pictorial warning labels based on the age group

		Using Pictorial Warning		Total
		NO	YES	
Age group	<30	93	16	109
		85.3%	14.7%	100.0%
	30-50	215	106	321
		67.0%	33.0%	100.0%
	>50	82	65	147
		55.8%	44.2%	100.0%
Total		390	187	577
		67.6%	32.4%	100.0%

A total of 48 participants (8.3%) with a mean age of 38.75±12.5 yrs including 40 males and 8 females reported that the only reason they signed up for smoking cessation programs was seeing the pictorial warning labels. The mean number of cigarettes smoked in these patients was 17.27±6 cigarettes per day before the placement of pictures and 13.98±5.84 after 6 months and following using packets with pictorial warnings. The important point to remember is that none of the participants increased their consumption.

Table 2. Comparison of some measured parameters in the 2 understudy groups.

	Not using Pictorial	Using Pictorial	Total	P_ value
Duration of Consumption (mean ± SD)	19.7±13.5	23.7±13.06	25.56±13.5	<0.001
Agree with Pictorial Warnings	241 (61.8%)	119 (63.6%)	360(62.4%)	0.669
Consumption Before Printing (mean ± SD)	17.77±7.67	18.55±5.59	18.03±7.06	0.167
Consumption After Printing (mean ± SD)	17.05±7.5	17.79±5.4	17.3±6.9	0.181

DISCUSSION

Pictorial warning labels are an easy effective tool to raise the awareness of the public especially smokers about the hazards of cigarette smoking. O'Hegarty and his colleagues in 2003 in their study on 572 smokers in the US found that text plus graphic warning labels were more salient and potentially more effective than text-only labels (8).

In another study conducted by Hammond and colleagues in 2005 in 4 countries of the USA, Canada, United Kingdom and Australia, smokers' knowledge about tobacco risks was evaluated. Respondents were also asked whether the following chemicals were found in cigarette smoke: cyanide, arsenic and carbon monoxide. This study showed that smokers who noticed the warnings had a significantly higher level of knowledge about health risks of smoking than others. For example, in Canada, where package warnings include information about the risks of impotence, smokers were 2.68 (2.41-2.97) times more likely to agree that smoking causes impotence compared to smokers from the other three countries (9).

Graphic warning labels are not only effective in raising the awareness of smokers towards the health risks of smoking, but also can prevent the initiation of smoking in teenagers and young adults. A study conducted in 2008 on 574 non-smoker adolescents from Greece reported that the suggested EU graphic labels were more effective in preventing them from smoking in comparison to the existing EU text-only warnings (10).

In another study conducted in Malaysia on 2000 smokers in the year 2008, a significant number of participants believed that they were more likely to quit or stopped from having a cigarette when about to smoke one because of the warning labels (11).

Our study results showed that although most of our participants supported the placement of graphic warning labels on cigarette packages, only one-third of them use such packets and the majority of them are not willing to use cigarette packs with graphic labeling. This is in accord with the findings of the ITC project (International Tobacco Control Policy Evaluation Project) conducted in 10 different countries in 2006 (12). The ITC four-country survey demonstrated that quit attempts and quitting intentions increased after the placement of graphic health warnings on cigarette packets (13). This finding was in accord with our study result as well. However, further studies with larger sample size and exclusion of confounding factors are required to thoroughly evaluate the effect of graphic warning labels on smoking rate.

Another study was conducted in 2004 on cigarette packet warning labels and demonstrated that these warnings would be most efficient if a large image was printed in the front cover of the package along with a text warning and phone number of the smoking cessation clinic (14). In a study in New Zealand, phone number of a smoking cessation clinic was printed next to the pictorial warning label on the cigarette packets and they noticed that number of calls to the smoking cessation clinic increased (15). Our study also showed that in 8% of participants, the only reason for quit intention was pictorial warning labels.

This study, in accord with many others emphasized on the effectiveness of pictorial warning labels and supported article 11 of the International Tobacco Control Treaty. However, since our sample size was selected among those who intended to quit smoking, further studies are required to evaluate the effect of other factors in this regard. This study was conducted when only one image had been printed on the cover of packets. We can evaluate the effectiveness of these images more thoroughly when 1/various shocking disturbing pictures are used and 2/ these images are changed every six months. Further attention should be paid to these issues by the law enforcement units. This study was performed when packets with text-only warning labels were still available in the market. The effect of pictorial

warning labels would be better evaluated when packets with text only warning labels were no longer available in the market.

CONCLUSION

This study showed that graphic warning labels play a role in motivating smokers to quit. Although in our study more than half the smokers still used cigarette packets with text-only warning labels, most of them supported the placement of pictorial warnings.

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