

# The Effect of Warning Images and Texts on Cigarette Packages on Smoking Behavior Among Healthcare Professionals

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## ABSTRACT

**Objectives:** The opinion of health staff working at hospitals connected to Gaziantep Province Public Hospitals Union on the effects of warning purposed pictures and texts on cigarette packages on smoking behavior was searched.

**Methods:** 458 health staff participated in the research. Percentage, frequency and chi-square test were used in the data analysis.

**Results:** 42.8% of the participants were midwife nurses, 22.5% were specialist physicians, 19.9% were laboratory-anesthesia-X-ray technician and 14.8% were general practitioners. The smoking rate of the participants was found to be 41.4%. The rate of the ones who want to give up smoking was determined as 52.6%. The health staff were highly affected by the united warnings on the cigarette packages (61.5%). Most of the participants think that this application may be effective in fighting smoking (43.9%). The most important factor in giving up smoking was the health problems caused due to smoking (56.5%). Prohibition of smoking in enclosed spaces was seen as the most effective method in fighting smoking. The united warnings on the cigarette packages were seen as the least effective method both among giving up smoking reasons and in fighting smoking, differences were determined among the groups according to demographic features and smoking habits ( $p > 0.05$ ). The most effective warnings were like this in order; “smoking during pregnancy gives harm to the baby” (72.1%), “protect your children, don’t let them breathe your smoke” (66.8%), “smoking causes fatal lung cancer” (59.6%) and the least effective warnings were like this in order; “ask for help from your doctor and the closest cottage hospital to give up smoking” (31.7%), “health institutions help you to give up smoking” (38.2%) and “smokers die young” (41.3%).

**Conclusion:** As a result of this study, it was put forth that the health staff whose smoking rate is high should primarily be taken to education programs on giving up smoking and then their support should be taken to fight smoking. On smoking behavior, the content of the warnings placed on cigarette packages shown effective for pictures and texts should be further enhanced.

**Keywords:** Health staff, cigarette packages, warning purposed pictures and texts.

## INTRODUCTION

Tobacco use is a significant and preventable public health issue both globally and in Turkey due to its highly addictive nature and the serious negative effects of its chemicals on human

health [1]. It is estimated that 100 million people died from tobacco-related products in the 20th century worldwide, and one billion people may die in the 21st century. However, the complete prevention of these deaths by eliminating tobacco use

represents an unprecedented success in the history of public health. The World Health Organization (WHO) emphasizes that the health catastrophes caused by tobacco and its products can be prevented, and therefore, efforts should be made to eliminate this problem and change the future [2].

Tobacco and tobacco products alone constitute the leading cause of death. Approximately 1.25 billion people worldwide are smokers, and about 4 million people die each year due to tobacco-related health problems. If no action is taken, it is estimated that one billion people will die in the 21st century due to smoking-related health issues [3].

According to the Global Adult Tobacco Survey Report, 16 million adults in Turkey use tobacco, and approximately 100,000 people die each year from tobacco-related diseases [4]. This mortality rate is 15-20 times higher than that of traffic accidents [1]. It is estimated that smoking-related deaths could reach 240,000 by 2030. Smoking prevalence is higher among men than women, with an estimated 12 million men and 4 million women being smokers [5]. The WHO Global Tobacco Report has reported that nearly half of tobacco users will die from tobacco-related diseases.

Tobacco use is predicted to cause more deaths in low- and middle-income countries [6].

Health professionals, as key figures in the healthcare sector, play a crucial and influential role in gaining the trust of society and reaching a broader audience [7]. Numerous studies have observed that individuals tend to emulate the behavior of physicians. Therefore, it is recommended that healthcare professionals should not smoke, and if they do, they should refrain from smoking in healthcare facilities where patients can see them. Healthcare professionals are in a prime position to

lead and encourage smoking cessation or prevention within the community [8, 9].

Smoking prevalence among healthcare professionals in Turkey is still relatively high, although there has been a recent decline. In a study conducted in Turkey in 2008, smoking rates; 30% in nurses, 20% in specialist physicians, 31% in general practitioners, 25% in dentists and 34% in technicians. Healthcare personnel are in a position to set an example for the society, but with the smoking rate being so high, it is inevitably necessary to question the smoking behaviors of healthcare professionals, which should be addressed first, and to take initiatives for quitting and to get their support for the community to quit smoking. Their support in smoking cessation efforts within the community is crucial. Specifically, physicians should actively engage in anti-smoking campaigns, raise awareness of the health risks associated with smoking, and take an active role in educating patients about the dangers of smoking [10].

As life expectancy increases, there is a rise in chronic diseases. Many chronic diseases are caused by preventable risk factors, with tobacco use being one of the most important. The performance of healthcare professionals in combating this significant risk factor is crucial for the preservation and improvement of health [11]. Countries with the lowest smoking rates among physicians have been the most successful in the fight against smoking, highlighting the potential for success in addressing this important and preventable public health issue [12]. To effectively combat smoking, it is important to understand the smoking status and attitudes towards smoking cessation among healthcare professionals. Tobacco use is a serious public health problem globally and at the country level, and while everyone shares the responsibility to address this issue, healthcare personnel have a special role. They can serve as role models by not smoking themselves and provide support to patients in quitting smoking. Furthermore, healthcare professionals can play a leading role in the regulation and legislation efforts aimed at tobacco control [8].

There has been an increase in anti-smoking campaigns worldwide, including in our country, in recent years. The aim of this study is to explore the knowledge, attitudes, and opinions of healthcare professionals, who have direct interaction with the community and serve as role models, regarding the written and pictorial health warnings on cigarette packages used in these campaigns.

### Main Points;

- This study was conducted to evaluate the success of warning images and texts placed on cigarette packages for the purpose of combating smoking, in convincing health professionals, who are always regarded as role models in preserving and promoting health, to quit smoking.

## MATERIALS AND METHODS

This is a descriptive study conducted to determine the smoking status of health professionals working in hospitals affiliated to the Gaziantep Province Public Hospitals Association, the impact of combined warnings on cigarette packages on smoking behavior, and their knowledge and attitudes about these warnings. The Survey of Health Care Professionals on the Effects of Warning Pictures and Texts on Cigarette Packs on Smoking Behavior was applied between April 15 and October 31, 2013 on health professionals working in hospitals affiliated to the Gaziantep Provincial Public Hospitals Association, and the completed questionnaires were collected by the researcher and the data set was created. Survey questions have been created through a literature search. In these surveys, questions were asked to measure the demographic characteristics of health care professionals, their smoking status, the effects of combined warnings on cigarette packs on smoking behavior, and the importance of the pictures and warning texts on cigarette packs for health care workers (Additional-1) [13-16].

The universe of the research consists of health personnel working in hospitals affiliated to the General Secretariat of Gaziantep Provincial Public Hospitals Union. The sample of the study, on the other hand, was used to determine the number of health personnel to be sampled in the study, and the Specific Sample Selection Method was used.

The sample size was calculated with the following formula.

$$n = t^2 pq / d^2$$

( $t = 1.96$  for  $\alpha = 0.05$ ) [17].

The sample size was calculated with the 95% confidence interval, the prevalence of smoking in 37% (84) healthcare workers, and a minimum of 358 was found. The questionnaires of 196 midwives-nurses, 103 specialist physicians, 68 general practitioners and 91 health technicians were evaluated.

The data was entered into the computer using the SPSS 18.0 statistical package program. The data was evaluated in the SPSS package program using percentages, frequencies, and chi-square tests. Additionally, to determine the variations of each item of opinion according to independent variables, "independent samples t-test" was performed based on the nature of the variable. Moreover, ANOVA was conducted to determine the variations of each item with more than two sub-categories of independent variables.

For the research, necessary permissions were obtained from the General Secretariat of the Public Hospitals Association and the ethics committee approval with the decision number 05.03.2013/92 from Gaziantep University.

## RESULTS

The average age of the participating healthcare professionals was  $32.30 \pm 6.78$  (min: 18, max: 53). Among the participants, 62.0% were female and 38.0% were male, with 60.1% being married. Of the healthcare professionals included in the study, 40.5% were university graduates, 42.8% were nurses-midwives, 22.5% were specialist physicians, 19.9% were laboratory-anesthesia-radiology technicians, and 14.8% were general practitioners. More than half of the participants lived in the city center, and the education level of their parents was mostly primary school. 67.3% of the participants stated that their monthly income was at a moderate level. The smoking rate among the participants was found to be 41.4%, and 48.8% of healthcare professionals smoked fewer than 10 cigarettes per day. Furthermore, more than half of the participants (52.6%) expressed a desire to quit smoking, while 26.3% had no intention to quit. When asked about the smoking status of their families, it was found that fathers (41.9%) smoked the most, followed by siblings (39.7%). Among the healthcare professionals who had quit smoking, the most common reason for quitting was the emergence of health problems related to smoking (56.5%). Warning images and texts were found to be the least effective method in quitting smoking (8.7%). The study found that graphic warnings on cigarette packages influenced 62.1% of active smokers, and 43.9% reported that these warnings effectively combat smoking. The ban on smoking in enclosed spaces was considered the most effective method, with 72.4% agreement. In addition, the graphic warnings on cigarette packages were seen as the least effective method in the fight against smoking, with 44.7% agreement (Table 1).

The smoking rate among women (35.6%) was lower than that among men (51.2%), and the difference was statistically significant ( $p < 0.05$ ). Women expressed a higher desire to quit smoking (59.8%) compared to men (44.3%). Female healthcare professionals (66.9%) were more influenced by combined warnings on cigarette packages than male healthcare workers (54.3%), although the difference was not statistically significant ( $p > 0.05$ ). Both female and male healthcare professionals stated that the most effective method in influencing smoking behavior would be the ban on smoking in enclosed spaces (Table 2, Table 3, Table 4).

Although the smoking rate among university-educated healthcare professionals was lower (40.0%) compared to high school graduates (50.8%), the difference was not statistically significant ( $p>0.05$ ). As a result of the research, it was determined that both high school and university-educated healthcare professionals considered the ban on smoking in enclosed spaces as a more effective method in combating smoking, while warning images and texts on cigarette packages were perceived as less effective (Table 2, Table 3, Table 4).

Among the occupational groups, general practitioners had the highest smoking rate (57.3%). Specialist physicians were found to be the least frequent smokers (31.1%), and the difference was statistically significant ( $p<0.05$ ). Additionally, general practitioners consumed more cigarettes daily compared to other groups. Nurses expressed a higher willingness to quit smoking (66.7%) compared to general practitioners (33.3%), and the difference was statistically significant ( $p<0.05$ ). Health technicians were found to be the least influenced by warning

images and texts on cigarette packages, and the difference was statistically significant ( $p<0.05$ ). All occupational groups believed that the ban on smoking in enclosed spaces would be the most effective method. Among the participants who had quit smoking, the most common reason for quitting was health problems related to smoking, while warning images and texts on cigarette packages were perceived as the least effective (Table 2, Table 3, Table 4). Both smokers, non-smokers, and those who had quit smoking stated that the most effective method in combating smoking was the ban on smoking in enclosed spaces. The most important warning messages for the participating healthcare professionals were ranked as follows: “Smoking during pregnancy harms the baby” (71.2%), “Protect your children, don’t expose them to your smoke” (66.8%), and “Smoking causes deadly lung cancer” (59.6%). The least effective messages were ranked as follows: “Ask your doctor and nearest health center for help to quit smoking” (31.7%), “Health institutions can assist you in quitting smoking” (38.2%), and “Smokers die at a young age” (41.3%).

**Table 1.** Distribution of Participants’ Demographic Variables, Smoking Status, and Opinions on Methods Used in Combating Smoking.

Variables	n	%	Variables	n	%	Variables	n	%
<b>Gender</b>			<b>Smoking Status</b>			<b>Family Smoking Status</b>		
Male	174	38.0	Yes	190	41.4	Father	192	41.9
Female	284	62.0	No	245	53.5	Sibling/s	182	39.7
Total	458	100.0	Quit	23	5.1	Other**	69	15.1
<b>Marital Status</b>			Total	458	100.0	Mother	60	13.1
Married	275	60.1	<b>Years of Smoking (Active smokers and Quits)</b>			<b>Smokers’ Response to Combined Warning Messages on Smoking (Including Quitters)</b>		
Unmarried	169	36.8	Less than 5 Years	53	24.8	Impressed	131	62.1
Divorced	14	3.1	6-10 Years	80	37.6	Not Impressed	82	37.9
Total	458	100.0	11-15 Years	50	23.5	Total	213	100.0
<b>Educational Status</b>			16 Years and more	30	14.1	<b>Effectiveness of Combined Warnings in Fight Against Smoking</b>		
High School	62	13.7	Total	213	100.0	Yes	201	43.9
Associate Degree	105	23.1	<b>Number of Smoking per Day</b>			No	182	39.7
Undergraduate	184	40.5	10 and less	104	48.8	No Idea	75	16.4
Master’s	103	22.7	11-20	66	31.0	<b>Effective Method in Combating Smoking***</b>		
Total *	454	100.0	21 and more	43	20.2	Banning Smoking in Enclosed Spaces	332	72.4

<b>Occupation</b>			Total	213	100.0	Increasing Cigarette Prices	251	54.8
General Practitioner	68	14.8	Smoking Cessation Intentions of Current Smokers			Warning Images and Texts on Cigarette Packages	205	44.7
Specialist Doctor	103	22.5	Yes	100	52.6	Reasons for Quitting Smoking Among Quitters		
Nurse-Midwife	196	42.8	No	50	26.3	Health Problems Associated with Smoking	13	56.5
Laboratory-Radiology-Anesthesia Technician	91	19.9	In the Future	40	21.1	Aesthetic Concerns	4	17.4
Total	458	100.0	Total	190	100.0	Familial and Social Pressures	4	17.4
						Warning Messages on Cigarette Packages	2	8.7
						Total	23	100.0

\*4 individuals did not answer the education level question.

\*\*Represents other family members.

\*\*\*Multiple options were selected.

**Table 2.** Distribution of Participants by Gender, Education and Occupation, and Smoking Status

Variables	Smoking Status								X <sup>2</sup> /p
	Yes		No		Quit		Total		
	n	%	n	%	n	%	n	%	
<b>Gender</b>									
Male	89	51.2	79	45.4	6	3.4	174	100.0	11.136/0.004
Female	101	47.5	166	58.4	17	6.0	284	100.0	
Total	190	44.8	245	53.5	23	5.0	458	100.0	
<b>Education Level</b>									
High School	32	50.8	26	41.3	5	7.9	63	100.0	4.802/0.091
University	158	40.0	219	55.4	18	4.6	395	100.0	
Total	190	41.5	245	53.5	23	5.0	458	100.0	
<b>Occupation</b>									
General Practitioner	39	57.3	28	41.2	1	1.5	68	100.0	13.839/0.031
Specialist Physician	32	31.1	66	64.1	5	4.8	103	100.0	
Nurse-Midwife	78	39.8	106	54.1	12	6.1	196	100.0	
Anesthesia-Laboratory-Radiology Technician	41	45.0	45	49.5	5	5.5	91	100.0	
Total	190	41.5	245	53.5	23	5.0	458	100.0	

**Table 3.** Distribution of Participants by Gender, Education and Occupation, and Desire to Quit Smoking

Variables	Desire to Quit Smoking								X <sup>2</sup> /p
	Yes		No		Quit		Total		
	n	%	n	%	n	%	n	%	
<b>Gender</b>									
Male	39	44.3	27	30.7	22	25.0	88	100.0	4.553/0.103
Female	61	59.8	23	22.6	18	17.6	102	100.0	
Total	100	52.6	50	26.3	40	21.1	190	100.0	

Education Level									
High School	15	46.9	7	21.9	10	31.2	32	100.0	2.431/0.279
University	85	53.8	43	27.2	30	19.0	158	100.0	
Total	100	52.6	50	26.3	40	21.1	190	100.0	
Occupation									
General Practitioner	13	33.3	14	35.9	12	30.8	39	100.0	14.021/0.029
Specialist Physician	16	48.5	11	33.3	6	18.2	33	100.0	
Nurse-Midwife	50	66.7	15	20.0	10	13.3	75	100.0	
Anesthesia-Laboratory-Radiology Technician	21	48.8	10	23.2	12	27.9	43	100.0	
Total	100	52.6	50	26.3	40	21.1	190	100.0	

**Table 4.** Distribution of Participants by Gender, Education and Occupation, and Effectiveness of Methods in Fighting Against Smoking

Variables	Effective Methods in Smoking Control					
	Smoking Ban in Enclosed Spaces		Increase in Cigarette Prices		Warning Images and Text on Cigarette Packs	
	n	%	n	%	n	%
Gender						
Male (n=174)	70	40.2	97	55.7	129	74.1
Female (n=284)	135	47.5	154	54.2	203	71.5
Total (n=458)	205	44.8	251	54.8	332	72.5
Education Level						
High School (n=62)	26	41.9	36	58.1	46	74.2
University (n=392)	177	45.2	211	53.8	284	72.4
Total (n=454)	203	44.7	247	54.4	330	72.7
Occupation						
General Practitioner (n=68)	23	33.8	36	52.9	53	77.9
Specialist Physician (n=103)	37	35.9	49	47.6	78	75.7
Nurse-Midwife (n=196)	107	54.6	116	59.2	143	72.9
Anesthesia-Laboratory-Radiology Technician (n=91)	38	41.7	50	54.9	58	63.7
Total (n=548)	205	44.7	251	54.3	332	72.5

## DISCUSSION

In our study, the smoking rate among healthcare workers was found to be 41.4%. When various studies were examined, the smoking rates among healthcare workers were found to be between 36.6% and 49.3%, which is similar to the results of our study [18-20]. The high smoking rates in our study may be attributed to various factors, such as differences in socio-demographic characteristics, variations in the study environment, and the stressful working conditions of healthcare professionals. Additionally, smoking rates are higher in developing countries compared to developed countries [21]. It is believed that this factor may be related to the high prevalence of smoking.

When studies conducted on healthcare workers were examined, it was determined that they mostly smoked less than 10 cigarettes per day. In our study, nearly half of the healthcare workers smoked less than 10 cigarettes per day. This may be due to the fact that smoking a large number of cigarettes can cause health problems and they may not have time to smoke during working hours due to busy schedules.

When studies conducted on both healthcare workers and other segments of the population were examined, it was found that more than half of smokers want to quit smoking [22-24]. This rate was found to be 52.6% in our study. It is thought that

healthcare workers, due to their professions, frequently encounter individuals who have health problems caused by smoking and are aware of the prognosis of smoking-related diseases.

The motivation for people to quit smoking should come from a logical purpose for them. This often begins with recognizing and fearing the signs of health problems caused by or associated with smoking. Many studies in this field, including our own, have shown that smokers who quit smoking were mainly motivated by experiencing smoking-related health problems or having concerns about future health problems [25-27]. Based on these results, it can be said that healthcare workers are aware of the risks of smoking on health due to their professional knowledge and observations. The reason for the emergence of these results in other parts of the society can be explained by the fact that they witness the health problems that occur in smokers in their close circles. However, the number of healthcare personnel who quit smoking in our study was insufficient (n=23), so there is a limitation in interpreting the results.

In our study, the smoking rate among men was significantly higher than among women. The smoking addiction rate among men was found to be higher than among women, and when the literature was reviewed, it was seen that in many studies, men significantly smoked more than women [28-32]. The significantly higher smoking rate among men is thought to be influenced by the social environment.

While married healthcare personnel's desire to quit smoking is more concerned about having health problems, aesthetic appearance is seen as a more dominant reason for single health workers to quit smoking. It is thought that being married and having dependents who need care may influence their decision.

In our study, it was observed that the smoking rate decreased and the desire to quit smoking increased with the increase in educational level. Similar results were found in Ergeneilek's study [33]. It is possible that the education and professional lives of healthcare workers contribute to the change in these rates in favor of health professionals, as they frequently encounter the negative effects of smoking on health. In our study and in other similar studies, the smoking rate of general practitioners was found to be higher than that of specialist physicians [34, 35]. Additionally, our study found that general practitioners smoke more cigarettes daily compared to other healthcare workers. A study conducted on healthcare workers in Turkey in 2007 found

that general practitioners had a higher daily consumption of 15 or more cigarettes compared to other healthcare workers. Even though the number of cigarettes smoked may vary, the fact that health care workers smoke should be an issue that should be emphasized with sensitivity.

In our study, it was observed that nurses are more willing to quit smoking than general practitioners. It is thought that this may be related to the fact that the majority of nurses are women, being mothers and displaying a more emotional behavior in this regard.

When considering variables such as gender, profession, and education level, it is evident that the most effective method in combating smoking on all variable levels is the existence of smoking bans in enclosed spaces, followed by high cigarette prices. The warning images and texts on cigarette packages were found to be the least effective method [36, 37]. Arıkan et al.'s study also found that a significant number of healthcare workers quit smoking after the ban on smoking in enclosed spaces [38].

In our study, the most effective warning messages were, in order: "Smoking during pregnancy harms the baby," "Protect your children, do not expose them to your smoke," and "Smoking causes fatal lung cancer." Most studies conducted yield similar results to our study. Although the ranking may vary in some studies, it generally shows that texts and images related to health and children are more effective. The same applies to warning texts and images that are perceived as less effective [39, 40]. The majority of healthcare workers being married and female in our study are thought to contribute to the emergence of these results. In fact, a study argues that the presence of baby pictures may make parents feel guilty and therefore motivate them to quit smoking [41].

The relationship between smoking and lung cancer is now a well-known fact in societies, and the fact that the study group consists of healthcare workers also contributes to the perceived effectiveness of this warning text.

The least effective warning texts were: "Ask your doctor and the nearest health center for help to quit smoking," "Healthcare institutions will assist you in quitting smoking," and "Smokers die at a young age." The occurrence of these results in studies conducted outside of healthcare workers can be explained by individuals witnessing healthcare workers smoking and the high

smoking rates among healthcare professionals. The similarity of our study's results with the general population suggests that this issue needs further investigation.

The limitation of the study is that it was carried out between April 15 and October 31, 2013, the research was carried out only on the health personnel working in the hospitals affiliated to the General Secretariat of the Gaziantep Provincial Public Hospitals Union, and the entire universe could not be reached.

## CONCLUSION

This study was conducted to investigate the impact of warning pictures and texts on cigarette packages on the smoking behavior of healthcare professionals, as well as to evaluate their smoking status, thoughts about quitting smoking, opinions on methods that could be effective in combating smoking, and thoughts on warning pictures and texts on cigarette packages. It is crucial for healthcare professionals, who are expected to be role models in society, to demonstrate a non-smoking identity. It was observed that the smoking rates among the healthcare professionals included in the study were higher than the general population smoking rates. It has been observed that a significant majority of healthcare professionals expressed a desire to quit smoking, and the most important reason for this was the health problems associated with smoking or concerns about future health issues. The study also found that general practitioners had higher smoking rates compared to other healthcare professionals and were the least motivated group to quit smoking. When examined in terms of gender, occupation, and education level, it was understood that the most effective method in combating smoking for all healthcare professionals was the implementation of smoking bans in enclosed spaces, while the least effective method was the warning pictures and texts on cigarette packages.

Among the warning messages, the most effective ones according to healthcare professionals were "Smoking while pregnant harms your baby," "Protect your children, don't expose them to your smoke," and "Smoking causes fatal lung cancer." The least effective messages were "Ask your doctor and nearest health center for help to quit smoking," "Healthcare institutions can assist you in quitting smoking," and "Smokers die at a young age."

**Based on the results obtained from our study, the following recommendations can be made:**

- Healthcare professionals have an important role in smoking

cessation. However, healthcare professionals with high smoking rates should first be provided with effective training on quitting smoking and reminded of their significant roles in the community in order to obtain their support in combating smoking. These trainings should be provided during school years and maintained consistently thereafter.

- Healthcare professionals who have received training on the dangers of smoking and are willing to contribute should educate the entire community about the harms of tobacco and tobacco products, starting with their colleagues in their own institutions.
- Having healthcare professionals who do not smoke, have received training on smoking cessation, and possess effective communication skills to convince the community will contribute to the success of the fight against smoking in smoking cessation clinics.
- Despite the presence of statements on cigarette packages stating that healthcare professionals and healthcare institutions can assist in smoking cessation, the reasons why healthcare professionals and the community perceive these warnings as ineffective should be further investigated.
- The high prevalence of the desire to quit smoking among healthcare professionals is a facilitating factor for smoking cessation. Healthcare professionals should be supported in this regard.
- Studies generally indicate that the highest prevalence of smoking within families is among fathers. Therefore, supporting fathers in not smoking and encouraging them to quit, if they smoke, with the awareness that they serve as role models for their children, will greatly contribute to raising a smoke-free generation.
- Getting support from women with lower smoking rates in the fight against smoking can be an effective method. Women should be supported in this regard.
- The warnings placed on cigarette packages that are perceived as less effective can be presented in different ways.
- More impactful warnings should be added to cigarette packages, and these messages should be periodically changed.
- The control of smoking bans in enclosed spaces, which is found to be the most effective method in combating smoking, should be properly implemented, and an effective mechanism for the rapid detection of violations should be developed.



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**Ethical Approval:** The study was initiated following approval from the Ethics Committee of Gaziantep University (approval number 05.03.2013/92), and all procedures were conducted in accordance with the principles outlined in the Declaration of Helsinki.

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