

# The Attitudes About Law Number 4207 Among Health Administration Students

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## ABSTRACT

**Aim:** ‘National Tobacco Control Program’ had developed in Turkey by the Ministry of Health in 2009 with amendment of Law 4207 and all closed places became smoke-free. The National Media Campaign has been initiated with the “Smoke Free Air-Zone” slogan for raising public awareness. The aim of our study is to determine the smoking status and attitude of Health Management students about Law 4207 in a university in Turkey, four years after the application of Smoke Free Air-Zone.

**Methods:** In this study we used a questionnaire with 33 questions, which was developed by researchers and Fagerstrom Nicotine Dependent Test to obtain the addiction level of the smokers.

**Results:** Sixty-two percent of 244 students were female. 3.3% were ex-smokers and 10.7% were active smokers. 5.2% of females and 19.3% of males were smoking. 87.5% of smokers think smoking habit is harmful. 41.4% of the students thought that Law 4207 was generally accepted by the society.

**Conclusion:** Reducing the smoking prevalence and increasing the awareness about the Law 4207 among health administrators is very important for the implementation of health policy. So our research has an importance to highlight this subject and increase the awareness of the campaign.

**Keywords:** administrators, Law 4207, smoking cessation, tobacco use cessation

## Sağlık Yönetimi Öğrencilerinin 4207 Sayılı Kanun Hakkındaki Tutumları

### ÖZ

**Amaç:** “Ulusal Tütün Kontrol Programı”, Sağlık Bakanlığı tarafından 4207 sayılı kanunda değişiklik yapılarak 2009 yılında geliştirildi ve tüm kapalı alanlar dumanlı hale getirildi. Halkın bilinçlendirilmesi için “Dumanlı Hava Sahası” sloganıyla ulusal medya kampanyası başlatıldı. Çalışmamızın amacı, “Dumanlı Hava Sahası” uygulamasından dört yıl sonra Türkiye’deki bir üniversitede, sağlık yönetimi bölümü öğrencilerinin sigara kullanma durumlarını ve 4207 sayılı kanun hakkındaki tutumlarını belirlemektir.

**Yöntem:** Bu çalışmada araştırmacılar tarafından geliştirilen 33 sorudan oluşan bir anket ve sigara kullananların bağımlılık düzeylerini saptamak için Fagerstrom Nikotin Bağımlılık Ölçeği kullanıldı.

**Bulgular:** İkiyüz kırk dört öğrencinin %62’si kadındı. Öğrencilerin %3,3’ü sigarayı bırakmıştı ve %10,7’si aktif sigara kullanıcısıydı. Kadınların %5,2’si ve erkeklerin %19,3’ü sigara kullanmaktaydı. Sigara kullananların %87,5’i sigara kullanma alışkanlığının zararlı olduğunu düşünmekteydi. Öğrencilerin %41,4’ü 4207 numaralı yasanın genel olarak toplum tarafından kabul edildiğini düşünüyordu.

**Sonuç:** Sağlık yöneticilerinin sigara içme sıklığının azaltılması ve 4207 sayılı kanun hakkında farkındalıklarının artırılması sağlık politikasının uygulanabilmesi için çok önemlidir. Bu nedenle araştırmamızın bu konuyu vurgulaması ve 4207 sayılı yasa hakkında farkındalığı artırması önem taşımaktadır.

**Anahtar kelimeler:** idareciler, 4207 sayılı kanun, sigarayı bırakma, tütün kullanımını kesme

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## Introduction

Tobacco use is one of the leading causes of preventable diseases and death. While 5.4 million people die annually due to health problems related to smoking, it is predicted that the number of deaths caused by tobacco use will exceed 8 million by 2030 (1). Tobacco products are used by 1.5 billion people across the world and by 14.8 million people in Turkey (2).

World Health Organization (WHO) adopted the Framework Convention on Tobacco Control (FCTC) during the general assembly of 2013 and opened it to signature of participated countries. Thereby, the tobacco control efforts of WHO moved to the international level. Turkey is one of the first countries to sign the convention. In parallel with the FCTC framework, in 2008, WHO prepared the MPOWER policy package that contains six practices that are proven to be effective in tobacco control (3).

The milestone of tobacco combat in Turkey is the implementation of the Law on Prevention and Control of Hazards of Tobacco Products (Law No. 4207) in 1996. The law was reinforced with MPOWER policies in 2008 (4). Under Law No. 4207, advertisements related to tobacco products, the sale of cigarettes to children under 18 years of age and smoking in public places is prohibited (5). With the amendment to law number 4207 the "National Tobacco Control Program Action Plan" was launched; with this law, all enclosed spaces have been converted into "Smoke-free Air Zone". A national media campaign was launched with the slogan "Smoke-free Air Zone" to increase public awareness. This campaign reduced smoking among the population older than 15 years of age from 31.2% to 27.1% over a period as short as four years between 2008 and 2012. Study results indicate a total decline of the prevalence of tobacco use by 13.5% (4).

The inclusion of training programs to the scope of formal education to change the attitudes of university student among the relevant legislation is one of the struggle strategies located in National Action Plan (4). With consideration of the role of health administrators in planning and implementing health policies, it is observed that they are an important part of the

"Smoke-free Air Zone" campaign launched within the context of the National Tobacco Control Program Action Plan which is one of the most significant health policies actualized in recent years.

The objective of this study is to determine the health knowledge about tobacco, the smoking habits, smoking cessation attempts/successes and the barriers to smoking cessation expressed by those who are still smoking; identifying the perceptions and awareness levels about the harms of cigarettes four years after the launch of the "Smoke-free Air Zone" campaign among the students of the Selçuk University Health Sciences Faculty Health Administration Department.

## Methods

There were 346 students at Department of Health Administration in Selcuk University. The minimum sample size with 83.3% prevalence, 80% power and 5% type 1 error was calculated as 133 (5). The sample of our study is comprised of 243 students that agreed to participate in our cross-sectional study.

The questionnaire consisting of 33 questions was prepared by the researchers and questions the participants' sociodemographic characteristics and their opinions and attitudes towards law number 4207 which is about the control of tobacco and tobacco products. The socio-demographic questionnaire was developed using the Ministry of Health's questionnaire and consisted of the content of the law number 4207 (6). Besides this, the Fagerström Scale for Nicotine Dependence was used to determine the levels of dependence among participants (7).

The questionnaire and scale were administered to students that agreed to participate in the study by the researchers between December 2014 and January 2015. Participation in the study was strictly on a voluntary basis. Before the data collection process, the researchers explained the study and students were asked to complete the questionnaire under supervision after they agreed to participate in the study. It took approximately 15 minutes to complete the questionnaire.

Individuals were asked "whether they ever had smoke or are still smoking. The independent variables

included sociodemographic characteristics. Participants' smoking was categorized into 2 groups as smoker and non-smokers. The ex-smokers was evaluated as smoker. Educational level of parents was coded into 3 levels of highest educational level attained: less than primary school or primary school, secondary school, and high school or university. Smoking status of parents was grouped as none of them, mother, father and both of them. Also, the number of friends who smoke was categorized into 4 groups as none, a few, some and most.

The descriptive data were presented as number, percentage, median (minimum, maximum) and mean  $\pm$  standard deviation. The chi-square test and the Fisher's exact test were used to perform statistical analyses, and the significance level was set at  $p < 0.05$ . SPSS 20.0 was used to analyze the data.

## Results

A total of 243 students were contacted to participate in the study; only 1 student did not complete the questionnaire. Of the participants, 103

(42.6%) were grade 1, 62 (25.6%) were grade 2, and 77 (31.8%) were grade 3; 62% (n=150) were female, and 38% (n=93) were male; 49.2% graduated from an Anatolian High School and 40.9% from a regular high school. Regarding the distribution of the students' living spaces, 56.2% lived in dormitories, 25.2% shared houses with flatmates and 13.2% lived with their families.

Among the students, 10.7% (n=26) stated that they were active smokers, 85.5% (n=207) had never smoked, and 3.3% (n=8) ex-smokers. Statistically significant difference was detected regarding smoking in relation to gender, 64.7% (n=22) of the smokers were female and 66.8% (n=139) of the non-smokers were male ( $p < 0.001$ ) (Table 1).

The number of cigarettes smoked daily by active smokers was 15 (2-21), and by ex-smokers was 8 (1-25). While 87.5% of the participants said that smoking was harmful to health, 12.5% expressed they had never given any thought whether smoking is harmful to health or not.

**Table 1.** Demographic characteristics of students among smoking status

Properties	Smokers n (%)	Non-smokers n(%)	Total n(%)	p
<b>Gender</b>				
Male	12 (35.3)	139 (66.8)	151 (62.4)	< 0,001
Female	22 (64.7)	69 (33.2)	91 (37.6)	
<b>Age (Mean<math>\pm</math>SD)</b>	20.79 $\pm$ 1.07	19.89 $\pm$ 1.63	20.02 $\pm$ 1.59	< 0.001
<b>Student's year</b>				
1 <sup>st</sup> year	9 (26.5)	94 (45.2)	103 (42.6)	0.120
2 <sup>nd</sup> year	12 (35.3)	50 (24.0)	62 (25.6)	
3 <sup>rd</sup> year	13 (38.2)	64 (30.8)	77 (31.8)	
<b>Mother's education level</b>				
No school attendance	6 (19.3)	37 (18.0)	43 (18.2)	0.860
Primary/secondary school	22 (71.0)	141 (68.8)	163 (69.1)	
High school and over	3 (9.7)	27 (13.2)	30 (12.7)	
<b>Father's education level</b>				
No school attendance	7 (3.4)	1 (3.0)	8 (3.4)	0.813
Primary/secondary school	123 (60.0)	18 (54.5)	141 (59.2)	
High school and over	75 (36.6)	14 (42.4)	89 (37.4)	
<b>Smoking status of parents</b>				
None of them	19 (57.6)	112 (54.4)	131 (54.8)	0.556
Mother	0 (0.0)	7 (3.4)	7 (2.9)	
Father	12 (36.4)	81 (39.3)	93 (38.9)	
Both of them	2 (6.1)	6 (2.9)	8 (3.3)	
<b>Smoking status of friends</b>				
None of them	0 (0.0)	38 (18.5)	38 (15.9)	< 0.001
A few of them	3 (8.8)	94 (45.9)	97 (40.6)	
Some of them	9 (26.5)	32 (15.6)	41 (17.2)	
Most of them	22 (64.7)	41 (20.0)	63 (26.4)	

Among the students that were active smokers smoke or ex-smokers, 28.1% said their smoking increased at university, 28.1% said it decreased and 43.8% said it did not change; 75.8% considered that "stress" might be a factor that increased their need to smoke a cigarette. Of the participants, 88.5% expressed that the pictures and written facts about the harms of smoking displayed on cigarette packaging did not affect their smoking behavior at all, 11.5% said they felt more regret, but their smoking behavior was unaffected.

Regarding the reasons for smoking, 61.8% expressed they smoked to relax and 55.9% said they smoked because of stress. When the participants were asked why they wanted to quit smoking, 55.9% said it was because they were concerned about their health and 26.5% said it was to improve their self-control (Table 2).

**Table 2.** Why students want to smoke or quit smoking

Reasons for smoking	(%)
The pleasant smell and taste of cigarettes	20.6
Stress	<b>55.9</b>
The desire to enhance concentration	1.88
Relief	61.8
After dinner or with tea or coffee	44,1
Alcohol consumption	5.9
Depression	26.5
Wanting to become like friends, coveting	1.88
Reasons for cessation	(%)
Saving money	23.5
Health concerns	<b>55.9</b>
Improving my self-control	26.5
With someone else's encouragement	11.8
For my loved ones (not to cause passive smoking)	20.6
Because of projects such as "Smoke-free air zone, protect your air"	5.9
The "Alo 171" smoking cessation line	2.9
Billboards and banners about smoking cessation	2.9
Bans related to smoking	0

When the monthly expenses of the participants were questioned, it was seen that 31% spent more than 140 TL on cigarettes (Table 3).

**Table 3.** The distribution of the monthly cigarette expenses of students that smoke

Money spent on smoking monthly	(%)
0 - 20 TL	0.7
21 - 60 TL	<b>24.1</b>
61 - 100 TL	10.3
101 - 140 TL	13.8
141 TL and higher	31

Regarding the students' opinions about methods for smoking cessation, 60.7% believed that individual therapies would be effective, and 52.7% believed that nicotine therapy would be effective.

Regarding the implementation of the smoking ban under law number 4207, 93.2% believed it should be implemented in public transport vehicles, 78.9% believed it should be implemented in dining and drinking venues such as restaurants, patisseries, and coffee-shops (Table 4).

**Table 4.** The opinions about the implementation of the smoking ban in enclosed spaces within the framework of law number 4207

	I do not agree at all (%)	I do not agree (%)	Undecided (%)	I agree (%)	I agree completely (%)
A. The smoking ban should be implemented in public transport vehicles (such as trains, buses, and metros).	1.7	0.4	0.8	3.8	93.2
B. The smoking ban should be implemented in official institutions and workplaces.	2.5	0.4	1.3	4.6	91.1
C. The smoking ban should be implemented in hospitals.	1.7	0.4	1.7	3.8	92.4
D. The smoking ban should be implemented in public living spaces (such as schools, shopping centers).	1.7	1.7	2.5	4.6	89.5
E. The smoking ban should be implemented in dining venues such as restaurants, patisseries, and coffee shops.	5.1	1.7	5.5	8.9	78.9

Among the students, 51.5% believed that the law provided a right of protection for non-smokers and 37.4% did not agree with the view that the law limited the individual rights of citizens (Table 5).

**Table 5.** Their opinions about the law number 4207 on combat against tobacco and tobacco products

	I do not agree at all (%)	I do not agree (%)	Undecided (%)	I agree (%)	I agree completely (%)
A. The law limits individual rights of citizens	37.4	35.3	13.2	9.8	4.3
B. The law provides protection for non-smokers	3.8	7.7	5.5	28.5	51.5
C. The new tobacco law has been generally accepted.	3	15.1	40.5	29.3	12.1
D. The customers of places like diners and coffee shops have decreased.	17.4	31.9	36	17.4	7.2
E. After the new law, the diseases caused by cigarettes have decreased.	7.4	15.2	38.1	24.7	14.7
F. The rate of smoking cessation has increased after the new law.	9.4	25.8	30.9	21	12.9
G. After the new law, the pleasure that going to venues such as diners, coffee shops, and shopping malls gives has declined.	20.3	32.9	21.2	16	9.5
H. After the new law, people started to go to places like diners, coffee shops, and shopping centers less frequently.	21.7	31.5	25.1	14	7.7

According to the Fagerström dependence scale, 15.4% of the smokers had high, 11.5% had moderate, 23.1% had low, and 50% had very low levels of

dependence. None of the smokers had significantly high levels of dependence.

When the relationship between cigarette smoking and the sociodemographic characteristics of the participants was evaluated, smoking rates were significantly higher among males and the individuals who have an active smoker friend were more likely to smoke ( $p<0.05$ ) (Table 6).

**Table 6.** The relationships between cigarette smoking and the sociodemographic characteristics of the participants ( $p$  values)

Sociodemographic characteristic	$p$
Gender	<b>0.001</b>
Mother's education level	0.860
Father's education level	0.813
Whether the mother or father smoke	0.556
The high school attended	0.650
Whether friends smoke	<b>&lt; 0.001</b>

## Discussion

Tobacco use is an important threat to public health, and it is the most preventable cause of death. Globally, six million people die because of tobacco products and more than six-hundred-thousand people die due to passive smoking every year (8). As a response to this important public health problem, after September 2010, more than 170 countries adopted a national smoke-free air law which is a key policy according to the WHO Framework Convention on Tobacco Control (FCTC) (9). One of the first countries to sign the Framework Convention on Tobacco Control (FCTC) is Turkey. In 2006, the National Tobacco Control Program was prepared under the FCTC. Law 4207 was reinforced with the MPOWER policy package prepared within the context of FCTC in 2008, and the goal was set as making all enclosed spaces smoke-free by July 2009 (1). Turkey successfully reduced the prevalence of tobacco use by 13.5% over four years by means of the National Media Campaign launched as part of the "National Tobacco Control Program Action Plan" with the slogan "Smoke-free Air Zone" to increase public awareness and Ministry of Health was awarded with a Special Recognition Award for Contribution to Global Tobacco Control by the WHO on May 31<sup>st</sup>, 2013 (10).

Different countries have different attitudes towards smoking bans and effective implementation strategies. Laws vary across countries. Studies show that developed countries are more successful in the implementation of smoking bans than developing countries. The reason behind this may be the lack of awareness and knowledge about the negative effects of cigarette smoking and the lack of support for the bans (9). Therefore, it is of particular importance to conduct studies about the topic to increase the knowledge levels and awareness among the public and to change attitudes.

In literature, some studies examined the knowledge, attitudes, behaviors, and opinions about the law among students, health professionals, and the public; however, the number of studies conducted with health administrators/health politicians are less. When the role of health administrators in planning and implementing health policies is taken into consideration, it is noted that they can provide guidance for all segments of the public with their knowledge levels and their attitudes towards legal regulations and campaigns being conducted for tobacco control.

This study has been conducted among health administration students that will lead the efforts to combat tobacco and become health administrators in the future with the objective to determine their cigarette smoking levels and to assess their knowledge, awareness, and attitudes about the implementation and effects of the smoke-free air zone.

There is a limited number of studies conducted in our country among health professionals and administrators about the prevalence of smoking and opinions about the changes that occurred after the National Tobacco Control Program was launched. Our study has a particular significance because it sheds light on this subject.

The comparison of the results of the study conducted in 2007 with the participation of more than 4000 health workers, and results of the Health Workers Smoking Study repeated with the participation of approximately 6000 people in 2011 revealed that, the prevalence of cigarette smoking decreased among

specialized doctors by 42.5% and by 22.6% among general practitioners. The largest reduction of the prevalence of cigarette smoking occurred among health administrators (55.7%). While the prevalence of cigarette smoking was 39.5% among health administrators in 2007, it has decreased to 17.5% in 2011. It was reported that legal regulations and campaigns might have reduced the prevalence of cigarette smoking by half over the last four years (4). The prevalence of smoking among students in our study is lower than the smoking rates among health administrations in 2011. This may be because our study was conducted among students and due to the progressive enhancement of the effects of the ongoing implementation of the health policy in the long term.

Various practices are implemented within the context of tobacco control programs in many countries. The policy of not smoking on university campuses in America is one of the practices accepted. Such interventions have positive effects on reducing the number of students that smoke, on changing the attitudes toward students that smoke, and on smoking regulations. In the study conducted by Feldman and colleagues with 313 individuals in the "smoke-free health campus" of the Hebrew University Medical Faculty in Israel where a similar example is operated, it was reported that 8.3% of the students and personnel were active smokers and that 16.3% had quit smoking (8). In the same study, 8.6% of the students were still smoking. We believe that the prevalence of cigarette smoking can be reduced even further by implementing a similar practice in Selçuk University where the "smoke-free campus" policy has not yet implemented.

The results about the health professionals' smoking frequencies vary across national and international studies in literature. In studies conducted with health professionals in Turkey, the prevalence of cigarette smoking varies between 16-56.5% (11-17). While the prevalence of cigarette smoking is 29.4% in a study conducted in Pakistan with 180 health professionals; it is 32.5% among pediatricians, 37.5% among family physicians, and 50% among interns in a study conducted in Ukraine (18,19). While the prevalence of cigarette smoking is 32% in a study

conducted among 220 nurses in Greece, it is 45% in a study conducted in a large university hospital (20,21). The prevalence of cigarette smoking among 583 health professionals that work in a training hospital in Portugal was reported as 29.5%, and as 7% in a study conducted with 500 health professionals and students in the United Kingdom (22,23). These different results show that the prevalence of cigarette smoking may vary depending on the differences between the number of participants, demographic characteristics and where the study is conducted.

In a study about the national smoking ban in Spain conducted in 32 hospitals, it was reported that the implementation rate of the tobacco control policy had risen to 36.5% in two years (10). It is also expected from workers of the health sector in our country to improve their implementation of this policy and to set an example to the public.

Dependence is the state in which a person lose control over substance intake (21). While the dependence levels of 50% of the nurses was very low and the prevalence of cigarette smoking was 56.5% in the study conducted by Kutlu et al. using the Fagerström Test for nicotine dependence; our study reveals that, according to the Fagerström dependence scale, 15.4% of the students had high, 11.5% had moderate, 23.1% had low, and 50% had very low dependence levels (11). In our study, none of the cigarette smokers had very high levels of dependence. One criterion that reflects the level of nicotine dependence is the number of cigarettes smoked daily. While the average number of cigarettes smoked daily was 19.2 in the Global Adult Tobacco Survey performed in 2012, it was 10.92 in our study (4). This result also indicates that the students did not have high levels of dependence in our study.

Studies conducted on a national level have shown that the level of knowledge regarding the harm of smoking causes to health is rather high among health professionals and students; the fact that 87.5% of the participants of our study expressed that cigarettes were harmful to health is consistent with the literature (11,24). However, with consideration of the fact that the participants are individuals working in the health

field, these rates draw attention with being low. This can be interpreted as a reason to inform students and hold seminars about smoking and its harms.

In a survey conducted in 32 hospitals in Spain, it was discovered that the implementation of the law had increased by 36.7% over the two years following the implementation of the national tobacco ban (25). In a study conducted in Egypt that included 679 hospital workers, more than 90% of the participants stated that a smoke-free hospital would improve health quality. Doctors and nurses expressed that smoke-free air would positively affect work performance and the hospital's image. In the same study, 95.5% of the doctors, 95.2% of the nurses, and 92.7% of the administrators believed that it was necessary to recommend smoking cessation programs to health professionals (26). In our study, 92.4% of the participants also recommended implementing smoking bans in hospitals.

In a study conducted among 138 students of a Health Services Vocational School of Higher Education, 83.3% of the students and 51% of the smokers supported the new legislation. In the same study, more than 80% of the participants believed that the ban should be implemented in hospitals (5). In our study, 40.5% of the students stated that they were undecided about whether the new legislation was generally accepted by the public and 41.4% stated that they agreed with this statement. Besides this, 51.5% believe that the legislation provides protection for non-smokers and 37.4% believed that it does not limit human rights. This shows that despite the significant achievements since the implementation of the law, the law's acceptance by the public has not reached high levels yet. Conducting different and new activities and campaigns will ensure that the success of the health policy implemented will increasingly continue.

*Limitations:* One of the limitations is that, the survey conducted only in one university, so the representation of the sample is inadequate. Another limitation is that the participants of the study were only students; hence they may not have enough information about the Law 4207 and National Tobacco Control Program Action Plan.

## Conclusion

Health professionals have an important role in preventing smoking because they set an example to the public. Besides this, health administrators have a particular significance in planning and implementing health policies. To improve the knowledge on this subject among the future health administrators, policies to combat tobacco and the relevant law should

be integrated into their fundamental education.

Because there are not enough studies in the literature that examine the perspectives and attitudes of health administration students and health administrators in literature, we believe that our study will make a difference in this area and that it will benefit future studies about legal regulations regarding the use of tobacco among health administrators.

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