ASSESSING TOBACCO CONTROL STRATEGIES IN TURKEY

Final Project Report prepared by
Hacettepe Public Health Foundation

Prof. Nazmi BİLİR
Assoc. Prof. Bahar GÜÇİZ DOĞAN
Ali Naci YILDIZ, MD, PhD

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Project team:

Prof. Nazmi BİLİR
Assoc. Prof. Bahar GÜÇİZ DOĞAN
Ali Naci YILDIZ, MD, PhD

Field Coordinator :

Özlem ATLI, MD

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Executive Summary

This report describes the results of a study conducted in 1998 and 1999 by researchers at Hacettepe Public Health Foundation in Turkey with the aid of a grant from Research for International Tobacco Control (RITC). The researchers examined the smoking behavior of different segments of Turkish society and their knowledge and opinions of the *Law on Prevention of the Harm Induced by Tobacco Products*, which came into force in Turkey on November 26, 1996. They also examined the level of compliance with various provisions of the law since its promulgation in 1996.

The study was carried out in 17 of 80 provinces in seven geographic regions of Turkey (Marmara, Aegean, Mediterranean, Black Sea, Central Anatolia, East Anatolia and Southeast Anatolia), including the metropolises of Ankara, Istanbul and Izmir.

Smoking Prevalence and Behaviour

The researchers interviewed students in Grades 7 and 10 and adults in the following occupational groups: physicians, teachers, police/gendarmes, religious leaders, and drivers. The distribution of interview subjects by group and by year is shown in Table 1 in the report. To determine their smoking behavior, a questionnaire was administered and respondents were asked to self-identify as current smoker, former smoker, or never smoker. Prevalence of ever, former and never smoking was calculated for each group as shown in Table 3 of the report.

The key findings with regard to smoking prevalence among the students included the following:

- Smoking prevalence among Grade 7 current smokers was 2.1% in 1998 and 0.9% in 1999. Among Grade 10 current smokers, the rates were 16.3% in 1998 and 14.8% in 1999 (Table 3).

- The percentage of current smokers was higher among Grade 10 students than among Grade 7 students. In both years of the survey, there was a statistically significant difference in smoking prevalence between the two grades of students.

- The percentage of current smokers decreased between 1998 and 1999 among both Grades 7 and 10 students, although the decrease was statistically significant for Grade 7 students only. Considering the difficulty in generating behavioral change, the slight decrease in the percentage of current smokers in both grades between 1998 and 1999 is encouraging.

- The percentage of ever smokers in both grades decreased between the first and second years of the survey, but the decrease was much more pronounced among Grade 7 students.

- Smoking was less prevalent among female than male students in both grades in both years. The difference in the smoking rates between male and female students was statistically significant in both years of the survey (Appendix Table 5).

- Among male students, the percentage of current smokers decreased in both grades between 1998 and 1999, although only the decrease among males in Grade 7 was statistically significant.

- Among female students, the percentage of current smokers increased in both grades between 1998 and 1999, although the increase was not statistically significant for either grade. Nevertheless, this finding indicates a need to closely monitor the smoking behaviour of female students in the coming years.

- In both Grades 7 and 10, the percentage of ever smokers increased with age and this finding was statistically significant (Appendix Tables 7 and 8).

- In all three age groupings of Grade 7 students, there was an observed decrease in the percentage of both current and ever smokers between 1998 and 1999.

- In Grade 10, it was statistically significant that between 1998 and 1999, the percentage of current smokers decreased among students under 17 years of age. However, among those aged 17 or over, the percentage of current smokers remained constant at about 27% in both years of the survey. Almost half of those students aged 17 or older were ever smokers.

- The age of smoking initiation among students was estimated to be about 11-12 years of age. According to the calculations, 33.3% of the Grade 7 smokers in 1998 and 62.5% of the Grade 7 smokers in 1999 had started smoking at this age.

- The average duration of smoking among Grade 7 students increased from 1.3 years in 1998 to 2.3 years in 1999. For Grade 10 students, the average duration of smoking increased from 2.2 years in 1998 to 2.6 years in 1999 (Table 4).

- The average number of cigarettes smoked per day by Grade 7 students decreased from 4.3 cigarettes in 1998 to 3.7 cigarettes in 1999. There was no change for Grade 10 students, who smoked an average of 7 cigarettes per day in both years. Grade 10 students smoked about twice as much as Grade 7 students over both years of the study (Table 4).

The key findings with regard to smoking prevalence among the adult groups included the following:

- Smoking prevalence among adult current smokers ranged from 25% to 74% within the various occupational groups (Table 3).

- Smoking prevalence was higher among adult men than adult women. Nevertheless, the percentage of female smokers was very high, ranging from 34% to 44% among female physicians, teachers and police/gendarmes (Appendix Table 6). This finding indicates that smoking is becoming more common among women in Turkey and this should be reflected in anti-smoking campaigns.

- Between 1998 and 1999, the percentage of current smokers among both women and men increased slightly in all groups surveyed, with the exception of female police/gendarmes whose rates decreased, although the decrease was not statistically significant (Appendix Table 6).

- Contrary to the findings in the student groups, the rates of current smokers increased in all adult groups between 1998 and 1999, which indicates that it takes longer to change the smoking habits of adults. While the increase in adult smoking prevalence between the two years was not statistically significant, the difference in smoking prevalence between the occupational groups was statistically significant in both years of the survey.

- In both years of the survey, the ranking of the adult groups in order of smoking prevalence, from highest to lowest, was as follows: drivers, police/gendarmes, teachers, physicians and religious leaders.

- The percentage of current smokers generally tended to decrease with age among the adult groups, but the difference in smoking rates between the age groups in each specific occupation group was statistically significant only for religious leaders (Appendix Table 9).

- There was no consistent trend observed in terms of the relationship between education level and smoking (Appendix Tables 10, 11 and 12). Smoking prevalence was high among the most educated groups, such as teachers, physicians and police, all of whom may be considered as role models in the community. Only a paucity of research currently exists on the distribution of smoking status among population sub-groups in developing countries. Some evidence suggests, as reinforced by the findings in this study, that the inverse relationship between education and smoking in developed countries may not necessarily hold in developing countries.

- In both years of the survey, the drivers had been smoking the longest for about 18 years, while those in other adult groups had been smoking an average of 13 years (Table 4).

- Police/gendarmes and drivers were found to smoke the most cigarettes per day, smoking on average more than a pack per day. Physicians, teachers and imam/müezzins smoked more than a half a pack per day.

- The study evaluated the effect of the tobacco control law on the frequency of smoking and number of cigarettes smoked per day. The analysis determined that the adoption index of the law did not have a statistically significant effect on being a smoker, but the probability of smoking was lower among subjects who supported the law than among those who did not. The analysis also indicated that as the adoption index of the law increased, there was a statistically significant decrease in the number of cigarettes smoked per day by adults, but no significant effect among children. This may be due to the confounding effect of the prohibition of selling cigarettes to minors. Smokers who supported the law smoked fewer cigarettes than smokers who did not. With the

implementation of the law, the number of cigarettes smoked per day decreased, even though the percentage of smokers did not.

Knowledge of Turkey's Tobacco Control Law

Of the adults surveyed, between 80%-93% of the respondents in the various occupational groups had heard of the law. In both years of the survey, knowledge of the existence of the law was highest among teachers and physicians and lowest among drivers.

The findings from the student surveys were not as encouraging. Students were considerably less aware of the law than the adults. Less than 50% of Grade 7 students and less than 60% of Grade 10 students had heard of the law in 1998, and by 1999 the percentages fell to less than half for Grade 10 students and only 35% for Grade 7 students. The observed decrease in their knowledge of the law was statistically significant for both grades.

When asked to spontaneously identify various provisions of the law, among their most frequent responses, both students and adults identified the prohibition on smoking in enclosed public places and the banning of cigarette sales to children under 18 years of age.

Opinions of the Law

The most accepted provision was the requirement to broadcast on television and radio educational programs on the hazards of smoking. The provision that was least acceptable to all respondents in both years of the survey was the prohibition of smoking in bus/train stations and waiting rooms. However, respondents indicated that this provision would be acceptable if designated smoking areas were provided. Raising peoples' awareness of the harmful effects of secondhand smoke could help to increase their acceptance of a complete ban on smoking in these places over the medium to long-term. In the short-term, the provision of designated smoking areas, as required by law, would be a positive step forward for restricting smoking in waiting rooms.

In general, the acceptance ratings of the students were much lower than the adults' ratings. Among the students, the only provision to receive an acceptance rating of 90% or higher in either year of the survey was the requirement to broadcast education programs on the hazards of smoking. The next most acceptable provision was the prohibition on smoking in schools and in health establishments.

Among physicians, 90-95% of the respondents favored the prohibition on cigarette sales to children, the no-smoking restriction in public transportation vehicles, the prohibition on smoking in schools, the ban on cigarette advertising, and the requirement to broadcast educational programs on the hazards of smoking. However, a lower percentage of physicians (only 85%) found the prohibition on smoking in health establishments to be acceptable and only 80% found the prohibition on smoking in public places acceptable.

Teachers strongly supported most provisions of the law in the range of 85%-95% acceptance levels. However, only about 75% of teachers favored the prohibition on smoking in schools, and slightly less than that favored the ban on smoking in public institutions. In the second year of the survey, only two provisions received acceptance ratings of 90% or higher from the

teachers: the prohibition on cigarette sales to minors (93.4%) and the ban on cigarette advertisements (90.3%).

The police/gendarmes gave most provisions 85% or higher acceptance rates, except for smoking in public institutions, which received only 75% acceptance.

Of all the groups, imam/müezzins were the most supportive of all provisions of the law. This group indicated well over 90% acceptance ratings for every provision of the law, except for the prohibition on smoking in waiting rooms. These high acceptance ratings were not unexpected, considering that smoking prevalence was considerably lower among this occupational group than among the other adult groups surveyed.

The opinions of the drivers were surprising and unexpected. Among all adult groups surveyed, this group had the highest smoking rates, the lowest socioeconomic status, and the least knowledge of the existence of the law. Despite this, when each provision of the law was brought to their attention, the drivers were extremely supportive, indicating acceptance levels of about 90% and over for most provisions. The acceptance levels of drivers were often higher than those of other occupational groups, such as teachers and physicians. Their encouraging responses may be an indication that this vulnerable group of adults would be receptive toward a smoking intervention targeted directly at them sometime in the near future.

Overall, the opinions expressed about the various provisions of the law indicate that people are often less favorable toward specific tobacco control measures that directly impact their own lives. For example, the students were somewhat less favorable to the ban on selling cigarettes to children than other provisions. Similarly, the teachers were less favorable toward the prohibition on smoking in schools than other provisions. On the other hand, the respondents in all groups were overwhelmingly in favor of the requirement to broadcast education programs on the hazards of smoking, a provision that does not restrict their daily lives in any way.

Compliance with the Law

The researchers examined the level of compliance with the prohibition on smoking in public institutions, which included health centers, hospitals, police/gendarmes stations, tax offices, sports facilities, courthouses, banks and inter-city bus terminals in both years of the survey. The findings revealed that smoking was occurring in all restricted areas of the public buildings and smoking in these institutions tended to increase between the first and second years of the survey, indicating that the effect of the prohibition had weakened with time. With respect to health centers and hospitals, while the no-smoking prohibition was respected more often in these institutions than in other public institutions, smoking was still frequently occurring in health establishments, particularly in the second year of the survey. While the researchers had expected that smoking in health establishments would decrease by the second year of the survey, smoking actually increased in all areas of the health centers and hospitals in 1999, with the exception of hospital waiting rooms. The researchers also noted that in all public institutions, including health centers and hospitals, the staff were more likely to disobey the no-smoking law than visitors. This finding clearly indicates that any planned intervention should be targeted at staff and stricter enforcement of the no-smoking restrictions in workplaces is required.

People were least likely to obey the law in inter-city bus stations, which is consistent with the finding that the least acceptable provision of the law to all study groups was the prohibition on smoking in bus/train stations and waiting rooms.

The researchers also noted the presence or absence of warning signs in these public institutions, and whether the signs complied with the requirements of the law. In general, while most institutions with the exception of bus terminals had warning signs posted, the signs frequently did not meet the requirements of the law. The findings are detailed in Table 12 in the report.

The study also revealed that very few institutions provided designated smoking areas in either year of the survey as required by law. For example, less than a third of hospitals and health centers provided designated smoking areas. The findings are summarized in Table 13 in the report.

To assess the level of compliance with the ban on selling cigarettes to children under 18 years of age, the researchers made observations in 170 grocery stores, buffets and mini-markets located close to schools in both years of the survey. The findings were startling: 98.6% of children's requests to purchase cigarettes were met in 1998, and 96.9% were met in 1999. The law also requires a sign to be posted stating that selling cigarettes to children is prohibited. In 1998, 76.5% of the grocery stores had signs posted, but only 20.6% of the signs met the legal requirement. The situation deteriorated dramatically by 1999, when a mere 28.2% of grocery stores had a sign posted, and only 12.9% of those signs complied with the requirements of the law.

Another important provision of the law is the banning of all cigarette advertising in the visual and print media. The researchers found no evidence of direct cigarette advertising in the print media, which included four national daily newspapers from the archives of the National Library, but did find evidence of indirect advertising in the form of tobacco product price change announcements. There were 303 articles on smoking or cigarettes in the four daily newspapers. The researchers observed that more than half of the articles on smoking were illustrated, most often by a picture of person smoking a cigarette. Approximately four-fifths of the articles on smoking were found on the inside pages of the newspaper. The percentage of items that appeared on the front or back pages — those that are most likely to be read — was only 5.9% each. In the visual media, it was observed that public television stations broadcast educational information on the hazards of smoking and the duration of such broadcasts can reach 90-minutes per month, as required by law. In the case of private television stations, however, such programming usually occurred late at night or early in the morning when children are not likely to be watching television.

Recommendations

Based on the study findings, the following recommendations were developed:

1. Changing people's behaviour, especially behaviour that is addictive and generally accepted in the community, requires raising public awareness and this takes time. It is therefore necessary to continue anti-smoking activities aimed at increasing the number of smoke-free indoor spaces and decreasing smoking through tobacco control activities conducted by either governmental or nongovernmental institutions. It is also necessary to carry out long-term studies to ascertain the trends in smoking and the level of adoption and enforcement of the various provisions of the law.

2. An important emphasis should be placed on preventing youth from starting smoking, especially children under 18 years of age, rather than getting youth to quit. This will require increased awareness on the part of occupation groups such as physicians and teachers, who are in a position of leadership in the community and serve as role models for children.

3. The complete removal of cigarette advertisements is a very important development. However, special care should be taken to ensure that newspaper articles not be accompanied by pictures of people smoking, as this can potentially have an encouraging and stimulating effect on children. As well, the practice of announcing tobacco price changes in newspapers should be discontinued, as this is a form of indirect advertising.

4. There are new achievements with regard to the implementation and promotion of the anti-smoking law in Turkey. World Nonsmoking Day (May 31) is being more actively observed than in previous years. The Ministry of Health, the Ministry of National Education and the Turkish Medical Association have undertaken various activities. Campaigns and training activities aimed at decreasing smoking are being implemented in different cities, coordinated by the National Committee for Tobacco and Health. Activities aimed at creating a "smoke-free environment" and "smoke-free universities" are being carried out. It is recommended that these initiatives be continued to help increase the number of young people who are anti-smoking advocates, draw public attention to the issue, and contribute to changing societal norms around smoking.

5. It is unlikely that the prevention of cigarette sales to children can be achieved in the short run. However, as a first step, it is recommended that education programs be developed to encourage parents to stop asking their children to purchase cigarettes on their behalf. The question of how cigarette purchasing might be related to the initiation of smoking in children should be taken into consideration in education programs targeting adults. Stricter enforcement of the law among store-owners is recommended as a later step, when they should be monitored and warned by municipal inspectors and, if necessary, penalized for selling cigarettes to children.

6. It was observed that staff, in particular, did not comply with the no-smoking regulation in most of the public institutions surveyed. However, it was also observed that very few designated smoking areas were provided in these institutions. Designated smoking areas as required by law should be provided for staff to keep them from smoking in no-smoking areas of the buildings.

7. The section of Law No. 4207 on the application of fines to people who smoke in nonsmoking areas is not very clear. The sanction power of the law can be improved by clarifying this provision.

8. In order to make students aware of the existence of Turkey's tobacco control law, this topic should be added to the curricula of primary and secondary schools, within health-related subjects.

9. Special education programs on the provisions of Law No. 4207 should be organized for police officers/gendarmes. Related institutions should collaborate in enforcing the law.

10. Television and newspapers should produce more detailed programs and articles about the content and provisions of the Law No. 4207.

11. Relevant institutions should take every opportunity to make non-smokers aware of their right to a smoke-free environment.

12. Although the Directorate of Religious Affairs arranges that speeches regarding the hazards of tobacco be given periodically during noon prayers on Friday in mosques, this topic should be discussed more frequently and in everyday conversation between imams and the public.

1. INTRODUCTION

More than 1 billion people smoke worldwide. Studies show that approximately half of all smokers will die from smoking-related diseases, suggesting that half a billion smokers will lose their lives prematurely. Worldwide, about 4.5 million tobacco-related deaths occur each year, and approximately 1.5 million of these deaths are in developing countries. Based on current global smoking patterns, the number of annual deaths from tobacco use is estimated to reach 10 million by 2025, of which 7 million will occur in developing countries (Abedian 1998).

Smoking is a common habit and a very important public health problem in Turkey, which has one of the highest smoking rates among European countries (WHO 1997). The only countrywide smoking prevalence study in Turkey was conducted in 1988, which revealed that 43.6% of individuals aged 15 years and over were smokers: 62.8% of men and 24.3% of women (PIAR 1988). Smoking prevalence is higher among men than women in almost all segments of Turkish society.

The main target groups for the tobacco industry are women and children, therefore, one of the primary goals of tobacco control activities is to prevent these vulnerable groups from taking up smoking. Banning tobacco advertisements and prohibiting tobacco sales to children can help to achieve this goal. Another key aim of tobacco control activities is to protect nonsmokers from the dangers of second-hand smoke. It is now known that not only smokers but also nonsmokers who are exposed to cigarette smoke face health risks, such as certain cancers and cardiovascular diseases.

States are responsible for protecting the health of their citizens. When a society faces an endemic and/or pandemic disease, state intervention is necessary and inevitable. Smoking causes a number of lethal diseases, premature death, and important production losses. Smoking interacts with some health risks and plays a role in accelerating their effects. In this context, state involvement in combating the tobacco epidemic is inevitable.

In Turkey, activities aimed at protecting people from the harmful effects of smoking were limited to individual tobacco control initiatives until Law No. 4207, *Prevention of the Harm Induced by Tobacco Products*, came into force on November 26, 1996. The main goal of the law is to take measures to protect people from the harmful effects of tobacco and tobacco products and its advertisement and promotion. The law prohibits smoking in public transportation vehicles and their waiting rooms, sports facilities, educational and cultural institutions, health establishments, and offices providing public services that are staffed by five or more employees. It also prohibits all types of advertisement and promotion of tobacco products in the media, and people may be fined for not obeying the law. Cigarette sales to children under 18 years of age are banned. The law also details the context and format of public health messages, where they should be placed (for example, billboards, places open to the public, cigarette packages), persons responsible for implementing warnings, and the fines for failing to comply. The law requires public and private television stations to broadcast no less than 90 minutes each month of educational programming on the hazards of smoking.

Tobacco control laws similar to Law No. 4207 are currently in force around the world and many studies have examined the effects of the provisions of these laws[1]:

- Two years after the approval of a law banning tobacco sales to children under 18 years of age in Illinois, United States, the percentage of students aged 12-14 who had tried smoking decreased from 46% to 23%, and the rate of regular smokers decreased from 16% to 5%.

- After banning tobacco advertising in four countries, tobacco consumption declined by 9% in Norway, 6.7% in Finland, 5.5% in New Zealand and 4% in Canada.

- The smoking rate among Norwegian children aged 13-15 years increased continuously between 1957 and 1975, ranging from 1.5% in girls and 17% in boys in 1957, to 17% in girls and 15% in boys in 1975. Smoking rates began to decrease after the approval of a tobacco control law in 1975. By 1995, the rates had fallen to 8% in girls and 9.5% in boys. Tobacco sales decreased after the price of cigarettes went up in Norway and in Canada.

- Smoking frequency among adults in the United States was about 40% in the 1960s. Following the implementation of effective tobacco control policies in the following decades, adult smoking prevalence decreased to 29% by 1987. Similarly, the adult smoking rate in Canada fell from 46% in 1965 to 26% in 1991.

- A longitudinal study in England revealed that approximately half of all physicians smoked, but 50 years later the rate had declined to 5% (Peto 2000).

This report describes the results of a study conducted in 1998 and 1999 by researchers at Hacettepe Public Health Foundation in Turkey, who examined the smoking behavior of various segments of Turkish society, their knowledge and opinions of the law and its provisions, and the level of compliance with various provisions of the Turkish tobacco control law since its promulgation in 1996. The study was carried out with the support of Research for International Tobacco Control (RITC).

The researchers also carried out an earlier RITC-supported study in 1996 that examined smoking prevalence rates for different groups who are role models in Turkish society or special target groups of the tobacco industry. Although the 1996 study was designed to learn about the smoking attitudes and behaviors of these groups, another important goal was to increase public awareness of smoking and gain support for the draft tobacco control bill that was on the agenda of Parliament at the time. After the study was completed, the *Law on Prevention of the Harm Induced by Tobacco Products* was passed, published in the Official Gazette, and entered into force on November 26, 1996.

Although the major credit for passing the law belongs to the Turkish Grand National Assembly, the RITC-supported study in Ankara contributed to its promulgation by increasing public awareness. RITC decided to support a new study to be conducted in 1998 and 1999 to assess the level of compliance with various provisions of the law, two and three years following its adoption in 1996.

[1] The first four bullet points are all taken from Richmond 1996 (see reference section).

2. OBJECTIVES

The objectives of this study were to determine the following:

- the knowledge and attitudes of people from different segments of society towards the law and their smoking behaviour;
- the level of compliance with the prohibition on smoking in public places as indicated in the law;
- the level of compliance with the ban on tobacco sales to children under 18 years of age;
- the level of compliance with the prohibition on tobacco advertising;
- the time and duration of televised educational programs on the hazards of smoking; and
- the fit between public expectations and various provisions of the law.

3. METHOD

3.1 Working Plan

To reach the aforementioned objectives, the study included the following:

- Descriptive survey of
  - the level of compliance with the ban on tobacco advertising
  - the time and duration of televised educational programs on the hazards of smoking that are required under the law
  - the knowledge and attitudes of people from different segments of society towards the law, and their smoking behaviour.

- Cross-sectional survey
  - to determine the fit between public expectations and various provisions of the law
  - to investigate compliance with the ban on tobacco sales to children under 18 years of age
  - to investigate compliance with the ban on smoking in public places as indicated in the law.

One year after completion of the cross-sectional survey, a second one was conducted to determine whether smoking rates had changed between 1998 and 1999.

3.2 Study population, sampling and data collection

The study was carried out in 17 of 80 provinces in seven geographic regions of Turkey (Marmara, Aegean, Mediterranean, Black Sea, Central Anatolia, East Anatolia and Southeast Anatolia), including the metropolises of Ankara, İstanbul and İzmir. The Human Development Index (UNDP 1995) was used in the selection of the cities to be surveyed. Another criterion used in the city selection was the availability of transportation facilities.

Another socioeconomic index, which was developed by the State Institute of Statistics (SIS), was used in the selection of study districts. This index classifies all 858 administrative districts in Turkey into six groups according to their level of socioeconomic development. Some of the variables used in the study were: population, employment, education, health status, production, financial indicators, agriculture and construction. In each province in the sample, two districts were selected, one classified as developed and the other as less developed. Therefore, 34 districts in 17 provinces constituted the study area.

Different data collection methods were used for each objective. The same information was collected twice at a one-year interval, in 1998 and again in 1999.

Analysis of the fit between public expectations and the provisions of the law was assessed and compared with the results of public opinion and attitudes on smoking from the previous RITC-supported study (Bilir 1997).

Data on compliance with the ban on tobacco advertising were collected by examining some of the most popular daily newspapers in Turkey for a year.

Grocery stores and small markets were used as the sampling unit in assessing compliance with the ban on cigarette sales to children. Field coordinators in each sample district sought out grocery stores and buffets located close to schools. Observations were made between 07:30 and 17:30 hours when children were most likely to shop. All goods purchased by children (including cigarettes) were written on an observation form. Should a child ask for cigarettes, the observer noted by means of a special code whether the owner acquiesced or refused the request. At the same time, the observer noted whether a sign had been posted stating that "Selling cigarettes to children under 18 is forbidden," as required by law. The grocery store observation form is presented in Appendix 2.

The law bans smoking in health establishments, public transportation vehicles and their waiting rooms, sports facilities, educational and cultural institutions, and offices providing public services with five or more employees. To assess the level of compliance with the ban on smoking in public places, lists of all health, sports, education and art institutions in the sample districts were obtained from the relevant ministries. Observations were made at inter-city bus terminals, and drivers of arriving and departing buses were interviewed.

Public institutions were randomly selected as observation sites from lists provided by the appropriate ministry. These included: courthouses, police/gendarme stations, tax offices, banks, hospitals and health centres. Sports facilities and inter-city bus terminals were also observed. Actual compliance with the law was determined by direct observation and recorded on the institution observation form.

To determine the opinions of people from different segments of society towards the law, drivers, police/gendarmes and religious leaders were interviewed. Students, teachers and physicians were also interviewed, and since these three groups were included in the previous 1996 study, an attempt was made to determine changes in either their smoking behavior or opinions about the law since 1996. When investigators went to police/gendarme stations, mosques or health centres, they interviewed all the police/gendarmes, physicians and imam/müezzins (religious leaders) who were present at the time. In secondary schools and high schools selected by the field coordinator, a questionnaire was administered to one Grade 7 and one Grade 10 class. Teachers who were present at the time were also interviewed.

The data collection process for the first survey was completed in December 1998 and the second was completed one year later in December 1999. Questionnaires and observation forms used in the study can be seen in Appendix 2.

Two major data collection methods were used: a questionnaire for face-to-face interviews and a form for direct observation. The questionnaire included items on socio-demographic characteristics, smoking behavior and opinions of Law No. 4207. The observation form included items on smoking restrictions and regulations. Both forms were pre-tested in groups similar to the sampled groups in Ankara.

4. FINDINGS

This study aimed to ascertain the smoking behavior of different segments of Turkish society and their opinions of the *Law on Prevention of the Harm Induced by Tobacco Products*, which came into force on November 26, 1996. The study also aimed to determine the level of compliance with various provisions of the law, two and three years after its adoption. The findings are examined in this section.

4.1 Description of the Study Groups

Investigators interviewed students, physicians, teachers, police/gendarmes, imam/müezzins (religious leaders) and drivers in 34 districts in 1998 and 1999. Approximately half of those interviewed were students. The distribution of interview subjects by group was similar in both years of the study as shown in Table 1. The socio-demographic characteristics of the study groups are shown in Table 2.

Table 1. Distribution of subjects by group and year

	1998		1999	
Group	Number	%	Number	%
Student (Grade 7)	1 505	25.6	1 728	25.6
Student (Grade 10)	1 351	22.9	1 505	22.3
Physician	987	16.7	1 129	16.7
Teacher	908	15.4	1 046	15.5
Police/gendarmes	618	10.5	718	10.6
Driver	265	4.5	338	5.0
Imam/muezzin	242	4.1	280	4.1
Total	5 876	100.0	6 744	100.0

TABLE 2. Distribution of study groups according to selected socio-demographic characteristics (Turkey, 1998, 1999)

Group	1998				1999			
	n	Age (mean ± SD)	Gender M/F	Education (year/person)	n	Age (mean ± SD)	Gender M/F	Education (year/person)
Student (Grade 7)	1 455	12.9 ± 0.8	1.7	7.0	1 728	12.8 ± 0.8	1.3	7.0
Student (Grade 10)	1 318	15.9 ± 1.0	1.5	10.0	1 505	15.9 ± 1.1	1.2	10.0
Physician	985	36.1 ± 7.8	2.5	17.0	1 127	36.0 ± 7.8	1.9	17.0
Teacher	907	34.6 ± 8.1	1.3	15.0	1 039	35.1 ± 7.9	1.2	13.8
Police/gendarmes	618	31.9 ± 7.4	14.5	11.3	716	31.2 ± 7.3	11.8	11.2
Driver	265	38.7 ± 9.3	131.5	7.4	338	36.9 ± 9.1	82.8	7.2
Imam / müezzin	242	37.8 ± 9.8	NA*	10.9	279	38.6 ± 10.0	NA*	11.5

* NA: Not applicable – There are no female imam.

Appendix Table 1 shows that approximately one-third of the students surveyed during 1998 were female, while approximately half of them were female in the 1999 survey. Female representation varied in the adult groups. There were no female religious leaders in the study, because in Turkey this occupational group is comprised only of males. The number of female physicians was higher in 1999 than 1998, while the proportion of female-to-male teachers was similar in both years. Most of the police/gendarmes and drivers surveyed were male in both years, reflecting the fact that these are male-dominated occupations. The rate of male-to-female participants reached to 14.5 among the police/gendarmes and 131.5 among the drivers (Table 2).

The age distribution of the students was similar in the first and second surveys (Appendix Table 2). Adult study groups had an average age in the thirties in both years of the study:

- approximately half of the physicians interviewed were 30-39 years of age;
- approximately one-third of the teachers were under 30 years, one-third were aged 30-39 years, and one-third were 40 years and over;
- over 80% of the police/gendarmes interviewed were under 40 years of age;
- approximately two-thirds of the drivers and imams were in the 30-49 year age group (Appendix Table 3).

Among the adult groups, drivers were the oldest in the 1998 survey and imams were the oldest in the 1999 survey. Police/gendarmes were the youngest in both years of the survey (Table 2). Women were younger than men in all groups.

As shown in Appendix Table 4, all physicians and almost all teachers interviewed during both surveys had university degrees, while much fewer of those in other occupational groups had attended university. The average number of years of education varied between groups, with the lowest among drivers and the highest among physicians (Table 2).

4.2 Smoking Behavior of the Study Groups

Table 3 shows the smoking status of the survey groups by year.

Table 3. Distribution of smoking status of surveyed groups (Turkey 1998, 1999)

Group	1998 Total* Number	1998 Smoking Status: Never Smoker	1998 Smoking Status: Former Smoker	1998 Smoking Status: Current Smoker	1999 Total* Number	1999 Smoking Status: Never Smoker	1999 Smoking Status: Former Smoker	1999 Smoking Status: Current Smoker	p**
Student									
Grade 7	1 455	87.0	10.9	2.1	1 672	93.0	6.1	0.9	0.0000
Grade 10	1 318	69.1	14.6	16.3	1 466	70.1	15.1	14.8	0.5376
Physician	986	41.7	17.2	41.1	1 128	39.2	17.7	43.1	04989
Teacher	905	38.2	14.5	47.3	1 044	37.0	14.4	48.6	0.8321
Police/gendarmes	617	26.4	12.8	60.8	718	22.1	13.2	64.7	0.1883
Driver	265	17.4	12.5	70.1	338	14.8	10.9	74.3	0.5368
Imam / müezzin	242	53.7	21.5	24.8	279	49.8	25.1	25.1	0.5758

* Total numbers are different from Table 1 since some subjects did not indicate their smoking status.
** Chi square tests were performed.

Respondents were asked to self-identify as ever smoker, former smoker, or never smoker. As shown in Table 3, the percentage of current smokers in Grade 7 and Grade 10 decreased between 1998 and 1999. The decrease was statistically significant for the Grade 7 students only (p= 0.0000). The percentage of ever-smokers in both grades, which includes current and former smokers, also decreased between 1998 and 1999, but the decrease was more pronounced among Grade 7 students (13.0% in 1998 to 7.0% in 1999) than among Grade 10 students (30.9% in 1998 to 29.9% in 1999). In both years, there was a statistically significant difference in smoking prevalence rates between the two grades: smoking was much less prevalent among Grade 7 students than among Grade 10 students (p=0.000 for both analyses).

Contrary to the findings in the student groups, the smoking rates increased among current smokers in all adult groups between 1998 and 1999 (Table 3). The ranking of the different adult groups in order of smoking prevalence was the same in both years of the survey. The highest rate was found among drivers, followed by police/gendarmes, teachers, physicians and imams. The increase in adult smoking prevalence from 1998 to 1999 was not statistically significant, however, the difference in smoking prevalence between the adult groups was statistically significant in both years (p=0.0000). Table 3 shows that imams had the highest cessation rate in 1998 and 1999.

In both years of the survey, smoking was less prevalent among female than male students in both grades, and the difference in the smoking rates between male and female students was statistically significant in both years. To illustrate, Appendix Table 5 shows that the current smoking rate among Grade 7 male students was 3.0% in 1998 compared to 0.4% among female students. This trend continued in 1999, with a current smoking rate of 1.1% for males and 0.7% for females.

The findings also revealed that while current smoking rates among male Grade 7 and Grade 10 students decreased between 1998 and 1999, the percentage of current female smokers increased during that period in both grades. For example, 21.2% of male Grade 10 students were current smokers in 1998, but the percentage decreased to 17.6% in 1999. In contrast, the percentage of current smokers among female Grade 10 students increased from 9.0% in 1998 to 11.2% in 1999 (Appendix Table 5). However, only the decrease in prevalence rates among male current smokers in Grade 7 from 1998 to 1999 was statistically significant (p=0.000). The other recorded changes in smoking prevalence by gender between the first and second year of the survey were not significant (p=0.155 for female Grade 7 students; p=0.130 for male Grade 10 students; p=0.046 for Grade 10 female students).

Similar to the findings in the student groups, the current smoking rate was higher among men than women in all occupation groups surveyed, with the exception of drivers (p value ranged from 0.000 to 0.007). It was also observed that the percentage of current smokers among both women and men increased slightly in parallel in all groups, except among female police/gendarmes, whose smoking rates decreased from 42.5% in 1998 to 37.5% in 1999 (Appendix Table 6), but this decrease was not statistically significant.

The distribution of smoking status by age of Grade 7 and Grade 10 students is shown in Appendix Tables 7 and 8 respectively. As can be seen in both tables, the increase in the percentage of students in each grade who had tried smoking was statistically significant with age (p=0000). The older students were observed to have higher smoking rates than the younger students in the same grade. For example, the percentage of current and ever-smokers

in 1998 among 12 year-old Grade 7 students was 1.0% and 7.5% respectively, but the percentages were considerably higher among 14 year olds in Grade 7: 7.0% were current smokers and 29.8% were ever-smokers. Among Grade 10 students, the percentage of current smokers also increased with age in both years of the survey. For example, 9.3% of students aged 15 years and under were smokers in 1998, compared to 27.0% of students aged 17 years and over. Close to half of the students in Grade 10 aged 17+ years had tried smoking in 1998 and 1999.

In terms of comparing the smoking behavior of each age group individually by year, a decrease was observed between 1998 and 1999 in the percentage of current smokers in all age groups in Grade 7. For the Grade 10 students, while the percentage of current smokers among students under 17 years of age decreased between 1998 and 1999, there was no change among those aged 17 years and over.

In both of the student groups surveyed (Grades 7 and 10), the overall percentage of smokers decreased in the second year of the study.

Appendix Table 9 shows the distribution of smoking status by age of each of the adult groups. In the first year of the survey, the percentage of current smokers decreased with age in all occupation groups except for police/gendarmes. For example, 41.7% of physicians aged 29 years or under were current smokers in 1998, but this rate decreased to 27.8% among those aged 50 years and over. Similar patterns were revealed for teachers, drivers and imams. However, among the police/gendarmes, those aged 29 years or under had a slightly lower percentage of current smokers than those aged 30 years and over. While the percentage of current smokers tended to decrease with age in the adult groups, the percentage of ever smokers had increased as a result of a rise in the number of those who had quit. The difference in smoking rates between age groups in each occupation was only statistically significant for the imam/müezzins.

Appendix Tables 10, 11 and 12 show the distribution of smoking status by education level among police/gendarmes, drivers and imams. Since physicians and teachers fall into one education group (almost all are university educated), the relationship between education and smoking could not be examined within these two groups.

Although two-thirds of the police/gendarmes smoke, the percentage of smokers within this group decreased with higher education, as expected. In 1998, for example, the current smoking rate among police/gendarmes with less than high school education was 77.7%, falling to 59.3% among those with university education. Findings gathered in 1999 were similar (Appendix Table 10).

The education level of the drivers was similar in both years. Only two of five drivers had high school or more education. There was no observed difference in smoking status by education level among the drivers in either year of the survey (Appendix Table 11).

With respect to imams, 81% in 1998 and 84.1% in 1999 were high school or university graduates. In the first survey, only 15.0% of university graduates were current smokers, but this percentage increased slightly to 18.6% in 1999. Contrary to the police/gendarmes, in the second year of survey smoking rates did not decrease with higher education; the lowest smoking frequency was found among primary school graduates (12.5%) in this group. This unexpected finding may be due to the small sample number in this educational level (Appendix Table 12).

Appendix Table 13 shows the duration of smoking among students who are current smokers. Among Grade 7 smokers in 1998, 37.5% had been smoking for the last 6 months and 16.7% for the last 6-12 months. In 1999, no Grade 7 smokers indicated that they had been smoking for less than a year. Of the 209 Grade 10 current smokers, 43.1% indicated that they had been smoking for more than 2 years in 1998 and one in 10 stated that they had started to smoke during last 6 months. In 1999, none of the 180 Grade 10 smokers indicated that they had started to smoke within the last 6 months. The percentage of those who had been smoking for more than 2 years was 53.9% in this group.

Appendix Table 14 shows the duration of smoking among students who are former smokers. In 1998, 56% of the former smokers in Grade 7 and 41.0% in Grade 10 indicated that they had smoked for less than 6 months. In 1999, however, approximately half of the former smokers in both grades had smoked for 6-12 months. In 1998, the average duration of smoking among Grade 7 former smokers was 1.13±1.66 years, and among Grade 10 former smokers was 1.25±1.37 years. In 1999, the figure for Grade 7 former smokers was 1.72±0.79 years and for Grade 10 former smokers was 1.85±1.30 years.

Appendix Table 15 shows the number of cigarettes smoked per day by students who are current smokers. In 1998, 62.5% of the Grade 7 smokers indicated that they smoked less than six cigarettes per day. In 1999, the percentage was 66.8%. One of four Grade 10 smokers indicated that they smoked more than half a pack per day. While 19.4% of Grade 10 smokers reported smoking between one and three cigarettes per day in the 1998 survey, this percentage increased to 26.1% in the 1999 survey.

Appendix Table 16 shows the number of cigarettes smoked per day among students who are former smokers. The number of cigarettes smoked per day by Grade 7 former smokers showed a declining trend. The percentage of those who reported smoking six or more cigarettes per day was much lower than those who smoked only one or two cigarettes each day. The average number of cigarettes smoked per day by Grade 7 former smokers decreased from 4.20±5.33 in 1998 to 3.05±3.65 in 1999. While 27.0% of Grade 10 former smokers indicated that they had smoked six or more cigarettes per day in the first survey (1998), this percentage decreased to 20.6% in the second survey (1999). In both surveys, more than half of the Grade 10 former smokers stated that they smoked one to three cigarettes per day in the past. The average number of cigarettes smoked per day by Grade 10 former smokers was 4.95±4.83 in 1998 and 4.67±5.93 in 1999.

As shown in Table 4, in both surveys drivers had the highest proportion of both ever and current smokers of all groups surveyed, while imam/muezzins had the lowest in the adult groups. In both surveys, approximately one of three Grade 10 students stated that they had tried smoking. It was noted that the percentage of student smokers declined slightly from the first to second year of the survey, while the percentage of adult smokers increased.

Table 4 also shows that in the 1998 survey, the average duration of smoking was 1.3±1.7 for Grade 7 students and 2.2±2.1 for Grade 10 students. The 1998 survey also revealed that the average duration of smoking among physicians, teachers and police/gendarmes was 13 years. The average duration for drivers was 18 years.

Police/gendarmes and drivers were found to smoke the most cigarettes per day in both surveys, the average being 21.3±12.1 for police/gendarmes and 25.4±13.4 for drivers in 1998, and 20.9±11.3 police/gendarmes and 26.6±14.53 for drivers in 1999. Physicians, teachers and imam/müezzins smoked more than half a pack per day in both years (Table 4).

Table 4. Average duration of smoking and average number of cigarettes smoked by study group (Turkey, 1998, 1999).

	1998					1999				
	Smoker					Smoker				
Group	Total*	Ever %	Current %	Average duration of smoking ** (year)	Average number of cigarettes smoked per day	Total*	Ever %	Current %	Average duration of smoking ** (year)	Average number of cigarettes smoked per day**
Student (Grade 7)	1 455	13.0	2.1	1.3 ± 1.7	4.3 ± 5.1	1 672	7.0	0.9	2.3 ± 2.0	3.7 ± 4.9
Student (Grade 10)	1 318	30.9	16.3	2.2 ± 2.1	7.3 ± 6.4	1 466	29.9	14.8	2.6 ± 1.8	7.1 ± 7.8
Physician	986	58.3	41.1	13.1 ± 8.0	16.7 ± 10.3	1 128	60.8	43.1	13.3 ± 7.8	17.6 ± 11.5
Teacher	905	61.8	47.3	13.2 ± 8.1	15.7 ± 8.9	1 044	63.0	48.6	13.3 ± 8.0	16.1 ± 9.6
Police/gendarmes	617	73.6	60.8	13.1 ± 8.2	21.3 ± 12.1	718	77.9	64.7	12.3 ± 7.5	20.9 ± 11.3
Driver	265	82.6	70.2	18.6 ± 9.3	25.4 ± 13.4	338	85.2	74.3	18.3 ± 9.3	26.6 ± 14.5
Imam/müezzin	242	46.3	24.8	12.7 ± 8.8	13.6 ± 7.5	279	50.2	25.1	12.8 ± 8.9	16.3 ± 12.2

* Total numbers are different from Table 1 since some subjects did not indicate their smoking status.
** Current and former smokers

In order to determine the factors that influence smoking among students, the investigators used binary logistic regression analysis with backward elimination. Two models were examined: in the first model, the dependent variable was defined as *ever versus never smoking;* in the second model, the dependent variable was *current versus never-smoking.* The factors considered as determinants were the same for both models: grade (7 or 10), year of study (1998 or 1999), place of residence (urban or not), developmental level of place of residence (developed or not) and gender.

The results are summarized in Table 5. Among students, it was found that grade, year of study, gender and place of residence had a statistically significant effect on *ever-smoking.* The odds ratio (OR) for being in Grade 10 is 4.3 (CI= 3.74-5.00) and being male is 3.0 (CI= 2.54-3.46). It is interesting that the year of the study had a positive effect on *never-smoking* (OR is 0.8, CI= 0.71-0.93). When the analysis was repeated for the second model (*current* versus *never smoking*), three determinants of *current smoking* remained: not living in an urban area (OR=1.5, CI= 1.08-1.98), being in Grade 10 (OR=13.0, CI= 9.48-17.72) and being male (OR= 2.2, CI= 1.74-2.68).

Table 5. Determinants of *ever* and *current* smoking status among students (Turkey 1998:1999)

Variables	Odds Ratio	Confidence Interval (95.0 %)	Significance
Dependent variable: ever versus never-smoking			
Gender			
Female	Reference		
Male	2.97	2.54 – 3.46	0.000
Grade			
Grade 7	Reference		
Grade 10	4.33	3.74 – 5.00	0.000
Date of the survey			
1998	Reference		
1999	0.82	0.71 – 0.93	0.013
Dependent variable: current versus never-smoking			
Type of place of residence			
Urban	Reference		
Other	1.46	1.08 – 1.98	0.015
Grade			
Grade 7	Reference		
Grade 10	12.96	9.48 – 17.72	0.000
Gender			
Female	Reference		
Male	2.16	1.74 – 2.68	0.000

4.3 Knowledge of Law No. 4207

Study subjects were asked whether they had heard of the Turkish tobacco control law and the findings are shown in Table 6.

Table 6. Distribution of study subjects who have heard of the tobacco control law (Turkey, 1998, 1999)

	1998		1999		
Group	Total* Number	Heard %	Total* Number	Heard %	p**
Student (Grade 7)	1 476	47.9	1 711	35.6	0.0000
Student (Grade 10)	1 342	57.2	1 488	48.9	0.0000
Physician	984	93.2	1 128	93.4	0.8835
Teacher	906	91.9	1 043	92.2	0.8120
Police/gendarme	617	89.8	713	86.0	0.0344
Driver	265	80.4	338	66.9	0.0002
Imam/muezzin	242	90.9	279	83.5	0.0124

* Total numbers are different from Table 1 since some subjects did not indicate their knowledge of the law.
** Chi square tests were performed.

In 1998, about 90% of physicians, teachers, imam/muezzins, police/gendarmes and 80% of drivers had heard of the law. One year later, the level of awareness had decreased among drivers, imam/müezzins and police/gendarmes. In both years of the survey, knowledge of the existence of the law was highest among teachers and physicians, and their percentages were virtually unchanged from 1998 to 1999.

Students were the least aware of the tobacco control law: only 47.9% of Grade 7 students and 57.2% of Grade 10 students had heard of the law in 1998, and these rates fell one year later to 35.6% and 48.9%, respectively. This finding was statistically significant (for both groups, p=0.0000).

Subjects who had heard of the law were asked to indicate which provisions they knew about. A summary of all groups' responses is shown in Tables 7a and 7b; the detailed tables are given in Appendix Tables 17-23.

The three provisions most frequently mentioned by Grade 7 and Grade 10 students in 1998 were as follows:

- the law indicates that tobacco is hazardous for health;
- the law prohibits smoking in enclosed public places;
- the law prohibits selling cigarettes to children under 18 years (Table 7a).

The students' responses in the 1999 survey differed only slightly from the first survey. Grade 7 students reversed the ranking of their first two responses, but their third response was the same as in 1998. Grade 10 students repeated the first two responses they had given in 1998, but changed their third response to "subject to fine" (Table 7b).

The ranking of the adults' responses was the same in both years of the survey. The three provisions most frequently mentioned by the adults in both the 1998 and 1999 surveys were as follows:

- the law prohibits smoking in enclosed public places;
- the law prohibits smoking in buses and transportation vehicles;
- the law prohibits selling cigarettes to children under 18 years (Tables 7a and 7b).

When subjects were asked to spontaneously name the various provisions of the law, they sometimes personalized or changed the wording, such as: "law prohibits smoking in teachers' room," "law prohibits smoking by children under 18 years," "law prohibits drinking and drugs," and "law prohibits smoking by pregnant women."

Table 7a. Distribution of known provisions of the law by study group (Turkey, 1998)

Group	Indicates that tobacco is hazardous for health	Prohibits smoking in closed places	Prohibits smoking in transportation vehicles	Prohibits selling cigarettes to children under 18 years	Protects nonsmokers from the hazards of smoking	Subject to fine	Prohibits smoking in hospitals, schools	Prohibits tobacco advertising	Other
Grade 7 students (n=707)	19.8	19.1	4.0	9.9	3.7	6.5	3.8	0.4	0.3
Grade 10 students (n=767)	13.8	56.5	7.8	20.5	3.8	10.4	4.6	1.8	-
Physicians (n=917)	2.0	100.0	20.4	11.3	2.3	5.6	4.5	3.3	0.5
Teachers (n=833)	0.9	98.0	17.4	12.8	3.2	9.7	4.0	2.4	1.4
Police/gendarmes (n=554)	2.0	99.6	23.3	9.7	2.0	7.6	1.6	2.2	2.2
Drivers (n=213)	1.4	81.7	38.0	1.4	0.5	2.8	1.9	0.5	0.9
Imam/müezzins (n=220)	-	100.0	31.8	11.8	1.8	8.6	2.3	0.9	1.4

Table 7b. Distribution of known provisions of the law by study group (Turkey, 1999)

Group	Indicates that tobacco is hazardous for health	Prohibits smoking in closed places	Prohibits smoking in transportation vehicles	Prohibits selling cigarettes to children under 18 years	Protects nonsmokers from the hazards of smoking	Subject to fine	Prohibits smoking in hospitals, schools	Prohibits tobacco advertising	Other
Grade 7 students (n=609)	23.3	26.4	4.1	14.3	3.0	10.7	8.5	0.7	8.4
Grade 10 students (n=728)	15.1	67.4	12.4	26.0	2.6	16.1	6.5	1.1	4.1
Physicians (n=1053)	0.9	100.0	21.3	8.8	0.8	11.5	4.4	0.8	1.2
Teachers (n=962)	1.0	92.8	12.6	7.2	2.9	13.5	2.4	1.1	2.5
Police/gendarmes (n=613)	3.1	92.5	17.5	9.1	1.0	10.6	2.1	0.2	1.6
Drivers (n=226)	1.8	69.5	35.8	2.5	2.7	1.8	3.1	-	0.4
Imam/müezzins (n=233)	1.3	95.2	24.9	6.0	2.1	9.5	2.6	0.9	0.9

4.4 Level of Compliance with Law No. 4207 with Respect to Prohibiting Smoking in Public Institutions

The level of compliance with the prohibition on smoking in public institutions was investigated 2 and 3 years after approval of the law. Investigators made observations at health centres, hospitals, police/gendarme stations, tax offices, sports facilities, courthouses, banks and inter-city bus terminals. The same public institutions were visited in both phases of the study (1998 and 1999). However, the number of institutions surveyed increased in 1999 due to the establishment of new institutions in the study area or because the opportunity arose to visit an institution that was not available in 1998. The distribution of the various institutions visited in 1998 and 1999 is shown in Table 8.

The investigators noted whether people were smoking in the corridors, rooms, buffets, canteens and tearooms of the institutions under study. Due to lack of time, observations were conducted only once each year. It was not possible to conduct observations at the same time and on the same day of the week at every institution. Since health institutions have special importance, they were subject to more detailed observations. Smoking in patient waiting rooms, emergency and examination rooms, clinics, nurses' offices, laboratories and secretariats was noted.

Table 8. Distribution of study institutions (Turkey, 1998, 1999)

	1998		1999	
Institutions	Number	%	Number	%
Health centres	115	23.0	117	21.0
Hospitals	55	11.0	57	11.0
Police/gendarme stations	78	15.0	82	15.0
Tax offices	40	8.0	50	9.0
Courthouses	34	7.0	34	6.0
Banks	144	29.0	161	30.0
Bus stations	15	3.0	23	5.0
Sports facilities	18	4.0	17	3.0
Total	499	100.0	541	100.0

Table 9 shows the results of observations on smoking in all except for healthcare institutions, which are discussed later in this section. It was noted that both staff and others smoked in the corridors, buffets, canteens and tearooms of public buildings in both 1998 and 1999, although smoking tended to occur less frequently in the corridors than in the other areas. People were least likely to obey the no-smoking prohibition in inter-city bus stations, which is consistent with the finding that the least acceptable provision of the law to all study groups was the prohibition on smoking in bus/train stations and waiting rooms. In sports facilities, people smoked in about half of the corridors, in 55.6% to 76.5% of the rooms, and in 66.7% to 85.7% of the buffets/canteens/tearooms in these facilities.

Another important finding was that smoking in prohibited areas tended to increase in the institutions under study from 1998 to 1999. For instance, smoking was observed in 62.5% of the corridors of tax offices in 1998, rising to 65.3% in 1999. It was noted that while staff smoked in their offices, they did not allow visitors to their offices to smoke.

Table 9. Observations on smoking in selected areas of public institutions (Turkey, 1998, 1999)

Place	Smoking status	Police/gendarme station		Tax office		Courthouse		Bus station		Bank		Sports facility	
		1998 (n=78)	1999 (n=79)	1998 (n=40)	1999 (n=49)	1998 (n=34)	1999 (n=33)	1998 (n=15)	1999 (n=20)	1998 (n=144)	1999 (n=138)	1998 (n=18)	1999 (n=17)
Corridors	Nonsmoking	35.9	25.3	37.5	34.7	64.7	60.6	7.1	5.0	38.9	41.3	50.0	47.1
	Smoking	64.1	74.7	62.5	65.3	35.3	39.4	92.9	95.0	61.1	58.7	50.0	52.9
	Personnel	41.0	57.0	15.0	16.3	14.7	18.2	7.1	10.0	14.6	31.2	11.1	11.8
	Others	-	-	2.5	-	2.9	3.0	7.1	-	5.5	3.6	11.1	-
	Both	23.1	17.7	45.0	49.0	17.7	18.2	78.7	85.0	41.0	23.9	27.8	41.1
Rooms	Nonsmoking	12.8	3.8	17.5	20.4	11.8	11.8	-	10.0	24.1	20.3	44.4	23.5
	Smoking	87.2	96.2	82.5	79.6	88.2	88.2	100.0	90.0	75.9	79.7	55.6	76.5
	Personnel	69.2	70.9	50.0	53.1	70.6	73.5	33.3	25.0	37.6	44.4	44.5	41.2
	Others	2.6	2.5	-	-	-	-	-	-	2.8	-	-	-
	Both	15.4	22.8	32.5	26.5	17.6	14.7	66.7	65.0	35.5	35.3	11.1	35.3
Buffet, canteen, tearoom	Nonsmoking	35.8	13.7	23.3	17.6	14.3	3.8	6.7	-	28.6	18.6	33.3	14.3
	Smoking	64.2	86.3	76.7	82.4	85.7	96.2	93.3	100.0	71.4	81.4	66.7	85.7
	Personnel	40.3	64.7	33.3	58.9	53.6	69.3	13.3	16.7	44.6	64.6	20.0	35.7
	Others	-	3.8	-	-	-	3.8	6.7	-	-	-	13.4	7.1
	Both	23.9	17.6	43.4	23.5	26.5	23.1	73.3	83.3	26.8	16.8	33.3	42.9

* Column percentage.

The results of observations in health centres and hospitals are shown in Tables 10 and 11 respectively. It was noted that the smoking prohibition was much more likely to be respected in health centers and hospitals than in other public institutions. However, smoking was still frequently occurring in health centers and hospitals, particularly in the second year of the survey. While it was expected that smoking in health establishments would decrease with time, smoking actually increased in all areas of the health centers and hospitals between the first and second years of the survey, with the exception of hospital waiting rooms where compliance with the law increased from 73.6% in 1998 to 82.1% in 1999. In all these institutions, it was the staff more often than the clients who disobeyed the law.

Within health centers, the researchers paid special attention to whether the smoking prohibition was respected in examination rooms, laboratories, and patient waiting rooms. In all three cases, smoking increased in these areas from the first year to the second year of the survey. People respected the law in 91.1% of examination rooms in 1998, but that number fell considerably to 78.6% in 1999. People did not smoke in 88.7% of the laboratories in 1998, but that fell to 69.5% in 1999. Similarly, the law was respected in 80.5% of health center waiting rooms in 1998, compared to 78.3% a year later. Staff in nurses' offices and secretariats of health centers paid the least attention to the smoking prohibition. Smoking in corridors of health centers was 21.9% in 1998, increasing to 27% in 1999.

Within hospitals, the smoking prohibition was respected in about 90% of hospital emergency rooms in 1998, but by 1999 compliance fell to 68.5%. The researchers also considered it important that personnel still smoked in patient examination rooms: 11.1% of personnel smoked in these rooms in 1998, rising to 30.4% in 1999. It was found that people smoked in just under half of the hospital clinics surveyed. Smoking in corridors of hospitals was 29.6% in 1998, increasing to 33.3% in 1999.

The investigators noted the presence or absence and adequacy of the warning signs required by law. Their findings are shown in Table 12. Inter-city bus terminals had the least warning signs posted in both surveys; 60% of the bus stations had no warning signs posted. It was noted that while the percentage of public institutions having warning signs increased between 1998 and 1999, the signs frequently did not meet the requirements of the law.

Table 10. Observations on smoking in health centers (Turkey, 1998, 1999)

Place	Smoking status	1998 %	1999 %
		(n=114)	(n=113)
Corridor	Nonsmoking	78.1	73.0
	Smoking	21.9	27.0
	Personnel	14.0	13.0
	Others	2.6	6.2
	Both	5.3	7.8
		(n=113)	(n=106)
Waiting room	Nonsmoking	80.5	78.3
	Smoking	19.5	21.7
	Personnel	11.6	11.4
	Others	3.5	7.5
	Both	4.4	2.8
		(n=112)	(n=117)
Examination room	Nonsmoking	91.1	78.6
	Smoking	8.9	21.4
	Personnel	8.0	19.7
	Others	0.9	-
	Both	-	1.7
		(n=113)	(n=113)
Nurses' office	Nonsmoking	39.8	24.8
	Smoking	60.2	75.2
	Personnel	55.8	69.9
	Others	0.9	-
	Both	3.5	5.3
		(n=106)	(n=95)
Laboratories	Nonsmoking	88.7	69.5
	Smoking	11.3	30.5
	Personnel	10.4	30.0
	Others	-	-
	Both	0.9	0.5
		(n=110)	(n=110)
Secretariat	Nonsmoking	36.4	20.0
	Smoking	63.6	80.0
	Personnel	50.9	69.1
	Others	0.9	1.8
	Both	11.8	9.1

Table 11. Observations on smoking in hospitals (Turkey, 1998, 1999)

Place	Smoking status	1998 %	1999 %
		(n=54)	(n=57)
Corridor	Nonsmoking	70.4	66.7
	Smoking	29.6	33.3
	Personnel	7.4	21.1
	Others	5.6	1.7
	Both	16.6	10.4
		(n=53)	(n=56)
Waiting room	Nonsmoking	73.6	82.1
	Smoking	26.4	17.9
	Personnel	5.7	3.6
	Others	9.4	5.4
	Both	11.3	8.9
		(n=54)	(n=56)
Patient examination	Nonsmoking	85.2	67.9
Room	Smoking	14.8	32.1
	Personnel	11.1	30.4
	Others	3.7	1.8
	Both	-	-
		(n=53)	(n=54)
Emergency	Nonsmoking	90.6	68.5
	Smoking	9.4	31.5
	Personnel	9.4	22.2
	Others	-	3.7
	Both	-	5.6
		(n=54)	(n=55)
Clinics	Nonsmoking	51.9	50.9
	Smoking	48.1	49.1
	Personnel	37.0	36.4
	Others	-	3.6
	Both	11.1	9.1

Table 12. Distribution of study institutions by existence of "No smoking" warning signs (Turkey, 1998, 1999)

Institution	1998 Warning sign				1999 Warning sign			
	Total number	Yes, adequate	Yes, inadequate	No	Total Number	Yes, adequate	Yes, inadequate	No
Police/gendarme station	78	15.4	64.1	20.5	80	23.8	46.2	30.0
Tax office	40	30.0	60.0	10.0	50	32.0	54.0	14.0
Courthouse	34	20.6	64.7	14.7	34	35.3	55.9	8.8
Bus terminal	15	20.0	20.0	60.0	23	13.0	26.1	60.9
Bank	144	18.1	47.2	34.7	159	28.3	44.0	27.7
Sports facility	18	27.8	61.1	11.1	17	35.3	64.7	-
Health centre	114	22.8	39.5	37.7	115	23.5	49.5	27.0
Hospital	55	34.5	49.1	16.4	56	55.4	33.9	10.7

The investigators noted whether there was a separate room for smokers in the institutions under study. The findings are summarized in Table 13. Very few institutions had separate smoking rooms in either year of the survey. Smoking rooms were available in only 27.2% of health centres in 1998 and 24.1% in 1999. The numbers were lower for hospitals: 23.6% had smoking rooms in 1998, down to 14.3% in 1999. While no bus station had a separate smoking room in 1998, only 4.3% had one in 1999. The availability of smoking rooms also fell considerably in police/gendarme stations during the two years of the survey: 23.1% had separate smoking rooms in 1998 compared to only 7.4% in 1999.

Table 13. Distribution of institutions with smoking rooms (Turkey, 1998, 1999)

	1998			1999		
		Smoking room			Smoking room	
Institution	Total Number	Yes, separate	No	Total number	Yes, separate	No
Police/gendarme station	78	23.1	76.9	81	7.4	92.6
Tax office	40	25.0	75.0	50	20.0	80.0
Courthouse	34	8.8	91.2	34	11.8	88.2
Bus terminal	15	-	100.0	23	4.3	95.7
Bank	144	20.8	79.2	158	13.9	86.1
Sports facility	18	16.7	83.3	17	17.6	82.4
Health centre	114	27.2	72.8	116	24.1	75.9
Hospital	55	23.6	76.4	56	14.3	85.7

4.5. Level of Compliance in Grocery Stores, Buffets and Mini-markets with the Prohibition on Selling Cigarettes to Children

To assess the level of compliance with the prohibition on selling cigarettes to children under 18 years of age, the investigators made observations in 170 grocery stores, buffets and mini-markets located close to schools in each year of the survey. Special attention was paid to grocery stores located within 500 m of a school (Appendix Table 31). The researchers also noted whether adequate warning signs were posted in these establishments.

Investigators observed whether children asked to buy cigarettes and whether their request was met. The findings are shown in Table 14. Children made 5,881 purchases in 1998 and 4,636 in 1999. Of these purchases, 18.3% involved a request for cigarettes in 1998 and 19.8% in 1999. Of the 1,076 requests made for cigarettes in 1998, 98.6% were met, and of the 918 requests made in 1999, 96.9% were met.

Table 14. Cigarette sales to children under 18 in grocery stores, buffets and mini-markets (Turkey, 1998, 1999)

	1998		1999	
Cigarettes	Number	%	Number	%
Not requested	4 805	81.7	3 718	80.2
Requested	1 076	18.3	918	19.8
Sold	1 061	98.6	890	96.9
Not sold	15	1.4	28	3.1
Total	5 881	100.0	4 636	100.0

The law also requires a sign to be posted stating that selling cigarettes to children under 18 years of age is forbidden. The sign has to be posted where it can easily be seen in establishments selling cigarettes. The presence of such a sign was evaluated in 170 grocery stores in each year of the survey (Table 15). It was found that 76.5% of grocery stores had signs posted in 1998, but only 20.6% of the signs met the legal requirement. The situation had deteriorated dramatically by 1999: a mere 28.2% of the grocery stores had a sign posted and only 12.9% of the signs met the legal requirement.

Table 15. Percentage of signs in grocery stores indicating cigarette sales to children under 18 is forbidden (Turkey, 1998, 1999)

	1998		1999	
Sign	Number	%	Number	%
No	40	23.5	122	71.9
Yes	130	76.5	48	28.2
Adequate	35	20.6	22	12.9
Inadequate	95	55.9	26	15.3
Total	170	100.0	170	100.0

4.6 Level of Compliance with the Prohibition on Cigarette Advertisements and the Requirement to Broadcast Public Service Messages in the Media

Another important provision of the *Law on Prevention of the Harm Induced by Tobacco Products* was the banning of all cigarette advertising in the visual and print media. The law also obliges television stations, whether public or private, to broadcast educational programs on the hazards of smoking. Unfortunately, it was not possible to obtain any information through interviews with managers of television stations located in Ankara. The investigators attempted to get information from the Higher Council of Radio and Television, which is the central institution for radio and television broadcasting, but were told that the Higher Council did not maintain that kind of a record system. Therefore, compliance of television stations to this provision of the law could not be evaluated. Nevertheless, it can be stated that public television stations in particular broadcast educational information on the hazards of smoking, and that the duration of such broadcasts can reach 90-minutes per month. In the case of private television stations, however, such programming mostly takes place late at night or early in the morning.

The investigators examined four national daily newspapers from the archives of the National Library. All articles on the subject of smoking were compiled during a one-year period (January 1 to December 31, 1999) and some characteristics of the articles were evaluated (i.e., location, number of columns and lines, with or without a picture, type of article, etc.).

From the four daily newspapers and their supplements, a total 303 news articles and announcements were found during the 1999 calendar year. Distribution of the news on smoking is shown in Appendix Tables 32a-32b.

There was no significant difference in terms of distribution of articles on smoking by month. However, it was found that there were fewer articles in July, August, October and November. Days of the week did not show any difference in terms of distribution of articles on smoking. However, throughout the year, the highest percentage of items on smoking occurred on Tuesday (17.8%) and the lowest on Friday (10.9%). Approximately four-fifths of the articles on smoking were found on the inside pages of the newspaper. The percentage of items that appeared on the front or back pages — those that are most likely to be read — was 5.9% each.

More than half of the articles on smoking (52.0%) were illustrated, most often by a picture of a person smoking a cigarette. More than one-third of the articles were less than two columns long, and approximately one-third were two columns. In 87.1% of the articles, regardless of the number of columns, the length of the article was half of the column or less. The number of lines was more than 10 in 90.3% of cases. The 303 articles on smoking consisted of general information on cigarettes (37.0%); magazine features on smoking (23.8%); news concerning the health hazards of smoking (23.0%); announcements of changes in the price of cigarettes (15.2%); and items on smoking in the sports news (1.0%) (Table 16). No direct cigarette advertisements were found in the newspapers.

Thirty-one point three percent of the articles took up one column or less and covered between one-eighth and one-quarter of a page. Only 5.6% of the articles were more than two columns and covered more than half a page (Appendix Table 33).

Table 16. Distribution of articles on smoking in four newspapers by type (1999)

Type of article		Newspaper No.1	Newspaper No.2	Newspaper No.3	Newspaper No.4	Total Number	Total %*
General		14.6	53.7	13.4	25.0	112	37.0
Feature		0.8	-	29.8	-	72	23.8
Price Announcement		36.2	11.9	31.3	3.1	70	23.0
Health		35.3	42.0	35.8	31.2	46	15.2
Sport		12.9	7.9	16.4	40.6	3	1.0
Total	Number	116	88	67	32	303	
	%	38.3	29.0	22.1	10.6		100.0

- Column percentage; others are line percentage.

4.7 Fit between Law No. 4207 and Public Expectations

The *Law on Prevention of the Harm Induced by Tobacco Products* consists of 10 articles. Some of these articles are examined in this section.

The first article identifies the purpose of the law: "*to take preventive measures to protect individuals from the hazards of tobacco and its products, and advertisements and promotional campaigns that encourage the tobacco smoking habit.*"

Article 2 lists the places where smoking is prohibited: "*smoking is forbidden in health, education and culture establishments, and in confined sport halls, in public transportation vehicles and their waiting rooms, in places where five or more people work in public service institutions*". Article 2 also stipulates that: "*separate places where smoking is permitted [be] designated in the aforementioned places. Measures such as isolation and ventilation [be] taken so that tobacco smoke in the designated smoking places cannot enter non-smoking places*".

According to the results of the RITC-supported study that was carried out in Ankara in 1996, students, teachers, physicians, journalists, sportsmen, artists and parliamentarians — whether smokers or nonsmokers — agreed that smoking in hospitals and schools was improper (Bilir 1997). Despite their unfavorable attitude towards smoking in these institutions, and despite the inclusion of a provision in the law banning smoking in health and education establishments, the results of the current study indicate that smoking is still a very common occurrence in health establishments (schools were not included among the institutions surveyed in 1998/1999). Interestingly, however, the results of the current study indicate that all survey groups overwhelmingly find the ban on smoking in health establishments and schools to be acceptable, as did the groups in 1996. This finding may indicate a window of opportunity for implementation of stricter enforcement of the no-smoking regulation in these institutions, and suggests that such enforcement would likely be acceptable to most people.

In the 1996 survey, smokers thought that if suitable conditions were provided, smoking could be allowed in confined places such as buses, trains, planes and restaurants. The survey found that smoking was most likely to be approved in restaurants and offices; even some nonsmokers were prepared to tolerate smoking in these places. Most nonsmokers indicated they would like to prohibit smoking in all confined places, but some smokers were against a complete ban by percentages that varied from 6.8% to 25.4%. Smokers did indicate, however, that they would not mind using designated smoking areas if such areas were provided. According to the results of the current study, very few designated smoking areas exist – in fact, the findings showed that the availability of separate smoking areas in almost all institutions surveyed actually declined between 1998 and 1999 (see Table 13). Given that prior to the law being passed, smokers had indicated their willingness to use designated smoking areas, the provision of such areas as required by law should be actively enforced in all public institutions.

Article 3 of the law indicates: "*the law forbids all kinds of advertisements and campaigns using names, brands and logos of tobacco products or usage of them that encourages smoking*". According to the findings of the study that was conducted in 1996 before the law

was passed, nonsmoking mothers, artists and parliamentarians were the groups most strongly opposed to tobacco advertising. Nonsmokers in other groups had more moderate opinions about tobacco advertising. Secondary (73.3%) and high school (68.1%) students and artists (55.4%) who smoked did not support a ban on tobacco advertisements. Other groups, in percentages varying from 12.5% to 48.9%, indicated that tobacco products should be freely advertised just like any other commercial good (Bilir 1997). In contrast, the adult groups surveyed in the current study overwhelmingly favored the ban on tobacco advertising, in percentages ranging from 87.5% to 98%. Although the approval rate was somewhat lower among the students surveyed in 1998/1999 than the adults, on a positive note, more than two-thirds of the students did favor the advertising ban (the percentages ranged from 68% to 74%). These results appear to indicate that bans on tobacco advertising have become much more acceptable to the Turkish people since the law was passed in 1996.

Some of the groups that were surveyed in 1996 were interviewed again during the present study, namely, students, teachers and physicians. It is noted with cautious optimism that the smoking prevalence rate for each of these groups was lower 2-3 years after promulgation of the law than they were prior to the law being passed in 1996:

	1996	1998	1999
Secondary school students (Grade 7)	3.5%	2.1%	0.9%
High school students (Grade 10)	28.3%	16.3%	14.8%
Teachers	50.8%	47.3%	48.6%
Physicians	43.9%	41.1%	43.1%

4.8 The Effect of Law No. 4207 on Smoking Frequency and Number of Cigarettes Smoked

This part of the study evaluated the effect of the tobacco control law on the frequency of smoking and number of cigarettes smoked per day. Smoking frequency was estimated using a logit model, controlling for age, educational status, gender and the level of development of the subject's district and province. The implementation level of the law was measured using an index developed according to the adoption of the law in public places. As a result of the analysis it was determined that the adoption index of the law had no statistically significant effect on being a smoker. The probability of smoking was lower among subjects who supported the law than among subjects who did not.

The effect of the implementation of the law on the number of cigarettes smoked per day was analyzed using a similar regression model. As the adoption index of the law increased, there was a statistically significant decrease in the number of cigarettes smoked per day by adults, but no significant effect among children. This may be due to the confounding effect of the prohibition of selling cigarettes to minors. Smokers who supported the law smoked fewer cigarettes than smokers who did not. With the implementation of the law, the number of cigarettes smoked per day decreased, even though the percentage of smokers did not. [2]

[2] This chapter was evaluated by the assistant professor Dr Zeynep Önder.

5. DISCUSSION

The study aimed to investigate the smoking behavior of selected population groups and their knowledge and opinions of Law No. 4207 on the *Prevention of the Harm Induced by Tobacco Products*, and to determine the level of compliance with various provisions of the law. Investigators interviewed students, teachers, physicians, drivers and police/gendarmes, and visited hospitals, health centres, police/gendarme stations, courthouses, tax offices, bus stations, bank branches, sports facilities, grocery stores and restaurants in 34 districts of Turkey in 1998 and 1999.

5.1 Smoking Behaviour and Knowledge of Law No. 4207 in the Study Groups

5.1.1 Introduction of Study Groups

The number of subjects interviewed by group is shown in Table 1. One thousand more people were interviewed in 1999 than in 1998. However, when the groups are considered individually, the number of persons in each group is almost the same in both years of the study.

In the first year of the survey, the majority of Grade 7 and Grade 10 students were male, as were physicians. In the second year, the number of male and female students was approximately equal, and more than one-third of physicians interviewed were female. There was no significant difference in the male-to-female ratio among teachers from the first year to the second year of the survey, and slightly more male than female teachers were interviewed. Almost all of those interviewed in the three remaining occupational groups (police/gendarmes, drivers and imams) were male. Policing has become an acceptable occupation for women in the last few years in Turkey, but there were no female military personnel in the gendarme stations, resulting in a very low number of females in this occupational group in both years of the survey. There are very few women working as bus drivers and there were no women in the imam/müezzin group because the Muslim religion does not allow women to become religious leaders. (Appendix Table 1)

Most Grade 7 students were 13 years old and most Grade 10 students were 16 years old in both surveys (Table 2). Among the adults, the mean age was similar among all occupational groups - most were in their thirties.

All physicians and almost all teachers interviewed had a university degree, police/gendarmes and imam/müezzins were mostly high school graduates, and most drivers had finished primary school. The average number of years of education for drivers, who had the lowest level of education of all the adult groups surveyed, was 7.4 in 1998 and 7.2 in 1999. (Appendix Table 4)

5.1.2 Smoking Behaviour in the Study Groups

The smoking behavior of the subjects by study group is shown in Table 3. In the adult groups, the percentage of current smokers was highest among drivers in both years of the study (70.1% in 1998 and 74.3% in 1999), followed by police/gendarmes (60.8% and 64.7%), teachers (47.3% and 48.6%), physicians (41.1% and 43.1%) and imam/müezzins (24.8% and 25.1%).

The current smoking rates among Grade 7 students were found to be very low in both years of the survey (2.1% in 1998 and 0.9% in 1999) and the rates declined between 1998 and 1999, a finding that was statistically significant. The smoking rates for Grade 10 students were considerably higher: 16.3% in 1998 and 14.8% 1999. The rates of current smokers also decreased for Grade 10 students between 1998 and 1999, although this decrease was not found to be statistically significant. While two out of 100 children smoked in Grade 7, the rate increased 20 times within 3 years when approximately two of ten Grade 10 students smoked.

The results on smoking behavior in the 1998 and 1999 surveys are consistent with other findings:

- A study conducted in Algeria in 1990 found that 18% of students aged 15-19 years smoked (WHO 1997). Smoking prevalence in the same age group was 24% in Canada (1994) and 10.8% in children aged 12-17 in the United States (1991) (WHO 1997). A study carried out in Barcelona, Spain, found that 28.6% of students aged 13-18 years smoked every day (WHO 1997).

- The World Health Organization (WHO) conducted a study in some European countries in 1993-1994. In that study, 9.3% to 48.5% of the 15-year-old boys questioned indicated that they had smoked at least one cigarette in the week prior to the survey; the corresponding figure for girls was 4% to 46.1% (WHO 1997).

- In the study conducted to evaluate smoking habits of different segments of society in Ankara in 1996, it was found that 3.5% of secondary school students, 28.3% of high school students, 30.2% of mothers, 50.8% of teachers, 43.9% of physicians, 34.9% of sportsmen, 46.2% of artists, 63.9% of journalists and 27.1% of parliamentarians smoked (Bilir 1997).

- A study carried out in Gerede, Bolu, revealed that 95.0% of inter-city bus drivers and 90.6% of assistant personnel smoked (Yilgeç 1995).

It is important that smoking is very prevalent in Turkey among people who are role models for students and children, such as teachers and physicians. Although the percentage of current smokers was very low among Grade 7 and Grade 10 students compared to the adults, approximately one of three Grade 10 students and one in ten Grade 7 students had tried smoking, and the number of current smokers in Grade 10 was considerably higher than in Grade 7. However, it is encouraging that there was a decrease in the number of current smokers among Grade 7 and Grade 10 students between 1998 and 1999, although the findings were statistically significant for Grade 7 students only. One disturbing finding revealed in this

study was the increase in current smokers among female students between 1998 and 1999 in both Grades 7 and 10. Although this finding was not statistically significant, it indicates a need to monitor closely the smoking behavior of female students in the coming years.

The study carried out in Ankara in 1996 — before the approval of the tobacco control law — found that 3.5% of secondary school students (Grade 7) and 28.3% of high school students (Grade 10) were smokers (Bilir 1997). A comparison of the 1996 findings with the current findings suggests the possibility that smoking is decreasing among students in these grades. One possible explanation for the lower smoking rates found in the present study could be that youth are less exposed to tobacco advertising following the passage of the tobacco control law in 1996. However, more research is required to monitor the smoking patterns of students in these grades over time to confirm or deny the possible declining trend in smoking, and to identify concrete reasons for any changes in their smoking behavior.

Research suggests that changing the behaviour of young people through education and various restrictions may be faster and easier than changing adult behaviour. This is consistent with the findings of this study, which found that students' smoking rates decreased in 1998/1999, 2-3 years after the passage of the tobacco control law in 1996, while adult rates did not. Over time, however, the implementation and enforcement of effective tobacco control measures, such as prohibiting smoking in public places and banning cigarette advertisements, can be expected to lead to decreases in adult smoking. This is particularly true when such restrictions are accepted and implemented nationwide, and form part of a comprehensive tobacco control program. In order to change social norms and achieve measurable reductions in the number of adult smokers in Turkey, it will be necessary to ensure compliance with all provisions of the law.

As revealed in Appendix Tables 5 and 6, in all study groups and in both study years, the percentage of female smokers was lower than male smokers and the percentage of women who had never-smoked was higher than male never-smokers. The study also found that the percentage of former smokers was consistently higher among men than among women in all groups.

The distribution of smoking by group and year among adult men and women was similar in all groups across both years of the survey. The ranking of current male smokers by occupation did not change between 1998 and 1999: drivers consistently had the highest smoking rates among males, followed by police/gendarmes, teachers, physicians and imams. Among females in 1998, police/gendarmes had the highest number of female smokers, followed by teachers and physicians. This ranking changed in 1999: female teachers were ranked first, followed by police/gendarmes and then physicians. These findings do not include female drivers, because the sample size was very low for this group. (Appendix Table 6)

The finding in this study that smoking is more prevalent among men than women is consistent with global smoking patterns. With few exceptions, smoking is more prevalent among men than women throughout the world. For example, studies from around the world reveal a higher percentage of smokers among school-age males than among school-age females. According to the results of data gathered by the WHO in 87 countries, smoking frequency was 50% or more among males in 22 of the countries investigated, and 60% or more among males in eight of the countries investigated. The smoking frequency was 25% or more among women in 26 of the countries investigated, and 30% or more among women in six of the

countries investigated (WHO 1997). The findings in this study are also consistent with previous studies conducted in Turkey, as these two examples illustrate:

- A study carried out in Gülveren Research and Training Area by Hacettepe University revealed a smoking prevalence of 68.1% in men and 23.6% in women (Tezcan 2000).

- A survey carried out in a suburban area of Ankara, Yenice, in 1992, revealed that 64.2% of the men and 7.8% of the women interviewed smoked during the study period (Bagci 1996).

Smoking status by age is shown in Appendix Tables 7, 8 and 9. While the percentage of never-smokers tended to decrease with age, the percentage ever-smokers increased with age among adults in all groups. The percentage of current smokers among physicians and drivers increased until age 40 in 1998. After age 40, the rates decreased among current smokers and increased among former smokers (50 years in teachers). Such a change in the percentage of smokers was not observed among police/gendarmes. The percentage of smokers in all groups began to decline at age 40 in the second survey (1999). It is during the forties that the negative health effects of smoking begin to emerge in long-term smokers. People may quit smoking for health reasons or on the advice of a physician. Moreover, the percentage of former smokers in all groups in both survey years was highest among respondents aged 50 years and over. (Appendix Table 9)

Among Grade 7 students, the percentage of current and former smokers increased with age in both grades and in both years of the survey (i.e., the smoking rates were higher among 13-year olds than 12 year-olds; similarly, the smoking rates of 14-year olds were higher than 13-year olds). However, the percentage of current smokers in Grade 7 in each age group decreased between 1998 and 1999, while the percentage of never-smokers increased in all age groups between the two years. (Appendix Table 7)

The relationship between age and percentage of smokers among Grade 10 students was similar to the Grade 7 students (i.e., older students in Grade 10 smoked more than younger students in the same grade). The percentage of Grade 10 students who had never smoked increased in the 15-year age group from 1998 to 1999 (from 75.0% to 84.2%), but decreased among students aged 16 and 17+ years (from 72.9% to 70.1% and from 54.3% to 52.6% respectively). It was statistically significant that the percentage of Grade 10 current smokers aged 16 years and under decreased from 1998 to 1999. However, there was a slight increase in the percentage of smokers among students aged 17 years and over. It seems that young people take on the values of adults at that age, and it may be necessary to use interventions intended for adults to reduce smoking among this age group. (Appendix Table 8)

All the physicians and most of the teachers were university educated, therefore, it was not possible to investigate the relationship between education level and smoking within these two occupational groups. Among police/gendarmes, it was observed that the percentage of current smokers decreased as education level increased (Appendix Table 10). To illustrate this point, the percentage of smokers was highest among police/gendarmes who had only primary or secondary education in both study years of the study (77.7% and 73.3%), but the finding was not statistically significant.

Among imam/muezzins, in the second year of the survey smoking rates did not decrease among those with a higher education – the rates were lower among primary and secondary school graduates than among university graduates (Appendix Table 12). The percentage of former smokers among imam/muezzins by education level did not show a clear trend in 1998, while one out of four imams in all education groups indicated that they had quit smoking in 1999.

More than two-thirds of the drivers were current smokers, regardless of their level of education. Contrary to the findings for police/gendarmes and imams, the smoking prevalence of drivers was high even among those who were the most highly educated in their occupational group.

The average duration of smoking among each study group is shown in Table 4. There was no clear difference in average smoking duration between groups, except for students in both study years. The average smoking duration among Grade 7 and Grade 10 students was about 2 years. As can be seen in Appendix Table 13, 37.5% of Grade 7 smokers in 1998 indicated that they had started smoking within the last 6 months; in 1999, none of the current smokers in Grade 7 had started within the last year. Similarly, while 9.1% of Grade 10 smokers had started smoking within the last 6 months in 1998, none of them had started smoking within the last 6 months in 1999. One of three Grade 7 smokers in 1998, and two of three smokers in 1999, stated that they had been smoking for 2 years or more. The percentages for Grade 10 smokers were 43.1% and 53.9%, respectively.

The researchers estimated the age of smoking initiation by subtracting the average duration of smoking from the average age of the students in each grade at the time of the survey.[3] According to the calculations, 33.3% of the Grade 7 smokers in 1998 and 62.5% of the Grade 7 smokers in 1999, had started smoking at the age of 11-12 years. Some students in Grade 7 claimed they had been smoking for 9 years, while others in Grade 10 claimed they had been smoking for 14 years. However, these claims are highly doubtful since it would imply that these particular Grade 7 students started smoking between 3-5 years of age, and these Grade 10 students would have started as early as 1, 2 or 3 years of age.

Among the adult groups, in both years the drivers had been smoking the longest (18.6 ± 9.3 years in 1998, 18.3 ± 9.3 years in 1999). Those in other groups had been smoking an average of 13 years.

The average number of cigarettes smoked per day was more than 20 among police/gendarmes and drivers in both years of the survey (Table 4), followed by physicians and teachers who smoked on average 15-16 cigarettes per day. The imam/müezzins averaged 13.6 ± 7.5 cigarettes per day, reaching as much as a pack. In the police/gendarmes group, the number of cigarettes smoked per day decreased from 21.3 ± 12.1 in 1998 to 20.9 ± 11.3 in 1999. The average number of cigarettes smoked per day was 4.3 ± 5.1 among Grade 7 students in 1998 and this number increased twofold in Grade 10. Although the average number of cigarettes smoked by students decreased in 1999, the difference between Grade 7 and Grade 10 students stayed approximately the same. It has long been known that the health hazards of smoking are directly proportional to duration of exposure and number of cigarettes smoked per day.

[3] Since most of the Grade 7 students were 13 or 14 years of age at the time of the survey, and had been smoking for 2 years on average, the age of initiation of smoking was estimated to be about 11 or 12 years.

5.1.3 Knowledge and Opinions of the Study Groups Regarding Law No. 4207

Another aim of the study was to find out whether the study subjects had heard of the *Law on Prevention of the Harm Induced by Tobacco Products*, and, if so, their level of knowledge and their opinions regarding the acceptability of the law's provisions.

In 1998, the number of respondents who had heard of the law ranged from a low of 47.9% among Grade 7 students to a high of 93.2% among physicians (Table 6). More than 80% of all occupational groups had heard of the law, except for drivers in year 2 of the survey, of whom only 66.9% were aware of the law. Although the level of awareness was quite high in all occupational groups, awareness did decrease in the second year among police/gendarmes, drivers, and imams. Awareness among teachers and physicians was virtually unchanged in the second year compared to the first year. Among the adult groups, drivers were consistently the least aware of the existence of the law, and teachers and physicians were the most aware.

The percentage of students who had heard of the law was considerably lower than the adults, and fewer students had heard of the law in 1999 than in 1998. By 1999, less than half of the Grade 10 students and only about one-third of the Grade 7 students had heard of the law, the lowest percentages among all groups surveyed. One possible explanation for the lack of awareness among a large number of students may be that this subject is not discussed sufficiently in class. Another possible reason could be that media programs designed to publicize the law and raise awareness of the harmful effects of smoking, which are required by law, are broadcast too late in the day at an hour when young people do not watch television or listen to radio. Another explanation could be that very few children read daily newspapers, and children are not interested in the same kind of news as adults.

Subjects in the student and adult groups who had heard of the law were asked to spontaneously name some of its provisions. The results are given in Appendix Tables 17-23. Among the respondents who had heard of the law, 2.9% to 28.1% indicated they had no idea of its provisions. The best-known provision was the prohibition or restriction on smoking in enclosed public places, followed by the prohibition on cigarette sales to minors, the banning of cigarette advertisements, and the provision stipulating that people who smoke in nonsmoking areas are subject to a fine. None of the groups mentioned the requirement for warning signs in areas where smoking is prohibited or the requirement to broadcast educational programs on radio or television about the hazards of tobacco products.

The study subjects were then shown all of the provisions of the law and asked whether they found the various provisions acceptable or unacceptable (Appendix Tables 24-30). The only provision that was fully supported by any group was "*broadcasting education programs on hazards of smoking on television*", with 100% of imams supporting this provision in 1998 (Appendix Table 30).

The provision of the law that was least acceptable to all respondents in both years of the survey was the prohibition on smoking in bus stations, train stations, and waiting rooms. However, in percentages varying from 12.0% to 36.2%, respondents indicated that this provision was acceptable if designated smoking areas were provided. Raising peoples' awareness of the harmful effects of secondhand smoke could help to increase their acceptance

of a complete ban on smoking in these confined places over the medium to long-term. In the short-term, the provision of designated smoking areas, as required by law, would be a positive step forward for restricting smoking in waiting rooms.

In general, the acceptance ratings of the students were somewhat lower than the adults' ratings. While the adults ranked most of the provisions at well over 80% acceptance levels, many of the provisions received less than 80% acceptance by the students. Among the Grade 7 students, the only provision to receive an acceptance rating of 90% or higher in either year of the survey was the requirement to broadcast education programs on the hazards of smoking. The next two most acceptable provisions were the prohibition on smoking in schools and in health establishments, with both receiving over 80% acceptance ratings, while all other provisions received less than 80% acceptance from the Grade 7 students. The least acceptable provision for both Grade 7 and Grade 10 students was the prohibition on smoking in bus/train stations and waiting rooms (which was also true for all adult groups). The next least acceptable provision for Grade 7 students was the prohibition on selling cigarettes to children. There was a slight increase in Grade 7 students' acceptance level of each provision from 1998 to 1999, with the exception of the ban on cigarette advertising, which fell slightly in approval.

Similar to the Grade 7 results, the only provision to receive an acceptance rating of 90% or higher among Grade 10 students was the requirement to broadcast education programs on the hazards of smoking. The next most accepted provisions were the prohibition on smoking in schools, in health establishments, and in public transportation vehicles, with all three provisions receiving about 80% acceptance ratings. Only two-thirds of the Grade 10 students favored the ban on selling cigarettes to children, the prohibition on smoking in public places, and the ban on cigarette advertisements. As mentioned earlier, the least favored provision was the prohibition on smoking in bus/train stations and waiting rooms. Comparing the 1999 responses of the Grade 10 students with the 1998 responses, their acceptance level increased slightly for the provisions on broadcasting educational programs, the ban on smoking in public transportation vehicles, in public institutions, and in health establishments. Their acceptance levels decreased in 1999 for the prohibition on smoking in schools, in bus/train stations and waiting rooms, and the ban on cigarette advertising, while their acceptance rating for the ban on selling cigarettes to children was virtually the same in both years of the survey.

As previously stated, most provisions received well over 80% acceptance rates from the adult groups, except for the prohibition on smoking in bus/train stations and waiting rooms. Among physicians, 90-95% of the respondents favored the prohibition on cigarette sales to children, the no-smoking restriction in public transportation vehicles, the prohibition on smoking in schools, the ban on cigarette advertising, and the requirement to broadcast educational programs on the hazards of smoking. It was disturbing to note that somewhat less physicians (only 85%) found the prohibition on smoking in health establishments to be acceptable and only 80% found the prohibition on smoking in public places acceptable.

Teachers strongly supported most provisions of the law in the range of 85%-95% acceptance levels (except for the prohibition on smoking in bus/train stations and waiting rooms). However, only about 75% of teachers favored the prohibition on smoking in schools, and slightly less than that favored the ban on smoking in public institutions. In the second year of the survey, only two provisions received acceptance ratings of 90% or higher from teachers:

the prohibition on cigarette sales to minors (93.4%) and the ban on cigarette advertisements (90.3%).

As was the case for all other groups, police/gendarmes found the prohibition on smoking in bus/train stations and waiting rooms to be the least acceptable provision of the law – only about half of them found this provision acceptable. However, 29.9% (1999) thought that if designated smoking areas were provided, smoking could be restricted in such places. All other provisions received 85% or higher acceptance rates from the police, except for smoking in public institutions, which received only 75% acceptance.

Of all the groups, imam/müezzins were the most supportive of all provisions of the law. This group indicated well over 90% acceptance ratings for every provision of the law, except for the prohibition on smoking in waiting rooms. These responses were not unexpected, considering that smoking prevalence among this occupational group was considerably lower than among the other groups surveyed. On the other hand, the responses from the drivers were surprising and unexpected. Among all adult groups surveyed, this group had the highest smoking rates, the lowest socioeconomic status, and the least knowledge of the existence of the law. Despite this, when each provision of the law was brought to their attention, the drivers were extremely supportive (except for the restrictions on smoking in waiting rooms), indicating acceptance levels of about 90% and over for each provision. In fact, the acceptance levels of drivers were often higher than those of other occupational groups, such as teachers and physicians. Their encouraging responses may be an indication that this vulnerable group of adults would be receptive toward a smoking intervention targeted directly at them sometime in the near future.

The responses to this part of the survey demonstrate that people are often less favorable toward tobacco control measures that directly impact their own daily lives. One example of this is reflected in the students' responses to the prohibition on cigarette sales to minors. While at first glance it may appear that their acceptance level of this prohibition is quite high (i.e., about two-thirds of students approve of this provision), it is actually somewhat low in comparison with their acceptance levels of other provisions of the law, which sometimes exceeded 80% or 85%. This point is underscored again if one considers the responses of teachers and physicians. About 85% of physicians favored the ban on smoking in health establishments, yet their approval levels of other provisions of the law were closer to 90% or 95%. Similarly, about 75% of teachers favor the ban on smoking in schools, yet their approval of other provisions was much higher (i.e., closer to 90%). On the other hand, the vast majority of respondents in all groups were extremely supportive of the provision requiring radio and television stations to broadcast educational programs on the hazards of smoking. This overwhelming acceptance may reflect the fact that this particular provision does not restrict their daily lives in any way. Yet the responses from the drivers do not follow the expected pattern. For example, 92% of drivers in 1999 expressed approval of the prohibition on smoking in inter-city buses and trains. This unexpected approval rating may be an indication that drivers have become accustomed to this provision of the law, since the prohibition on smoking in buses is now announced prior to each trip and therefore may be respected, although more research is required in this regard. The response of the drivers reinforces the positive benefits of sustained enforcement efforts, suggesting that attitudes can change over time, even among those who are directly impacted by specific tobacco control measures.

5.2 Compliance with Law No. 4207

5.2.1 Level of Compliance in Public Institutions

The study also investigated the level of compliance with the provision of the law that prohibits smoking in public institutions. In the first year of the survey, observations were conducted to ascertain the level of compliance with the law in places such as police/gendarme stations, tax offices, sports facilities, courthouses, banks and inter-city bus stations. In the second year of the survey, locations that were observed in the previous year were revisited and some new ones were added. Observations were carried out in a total of 499 institutions in 1998, and 541 institutions in 1999.

In hospitals and health centres, the highest level of conformity to the prohibition on smoking was found in patient examination rooms (85.2% and 91.1%, respectively) and emergency rooms (90.6%) in the first year of the survey. However, it was disturbing that smoking was still occurring in patient examination rooms in health institutions where smoking had been unequivocally forbidden. It was also noted that not enough attention was being paid to smoking in other parts of the hospital, such as the nurses' offices, the secretariat and clinics, where smoking was found to occur in almost two-thirds of nurses' offices and secretariats in health centres. In hospitals, there was smoking in approximately half of the patient clinics. Results of observations made a year later in 1999 showed that the situation had deteriorated. Nonsmoking in heath centres fell from 91.1% to 78.6% in examination rooms, and from 88.7% to 69.5% in laboratories. Smoking was observed in four of five secretariats, and in three of four nurses' offices. Findings were similar for hospitals. Nonsmoking fell from 90.6% to 68.5% in emergency rooms, and from 85.2% to 67.9% in patient examining rooms (Tables 10 and 11). The people who most often did not obey the prohibition on smoking in hospitals — where smoking should certainly be prohibited — were hospital staff. This finding clearly indicates that any planned interventions should be targeted at staff.

There was even less compliance with the prohibition on smoking in other public institutions (Table 9). Observations were made in corridors, offices and restaurants/cafeterias. According to the results of both years of the survey, the prohibition on smoking was least respected in offices of public institutions, followed by cafeterias. The least smoking was observed in corridors, compared to other parts of the institutions. Although there was no smoking in approximately two-thirds of courthouse corridors, the percentage was only 3.8% in offices/courtrooms, restaurants and cafeterias, in both study years. Smokers in inter-city bus stations were the worst offenders. In sports facilities, it was observed that people smoked in more than half of the corridors, in 55.6%-76.5% of the rooms, and in 72.2%-85.7% of the cafeterias. It is important to note that similar to what was observed in the health facilities, there was an increase in smoking in all observed public institutions between the first and the second surveys. The researchers observed that it was generally the staff who tended to disobey the no-smoking regulation in workplaces rather than the visitors. It is possible that insufficient time had elapsed at the time the survey was conducted for smoke-free workplaces to become the accepted norm. The finding indicates that stricter enforcement of the no-smoking law is required in workplaces and education programs should be directed at employees.

The results of observations on the presence of no-smoking signs in the study institutions are shown in Table 12. Compliance with the sign provision of the law was very low in all institutions. Inter-city bus terminals had the worst record: about 60.0% in both years of the

survey had no signs posted. Hospitals had the highest level of compliance, with 34.5% posting adequate signs in 1998, increasing to 55.4% in 1999. Even though the percentages of adequate signs increased in all institutions in 1999 except in bus terminals, the presence of adequate signs was still extremely low that year (percentages ranged from a low of 13% to a high of only 55.4%).

The researchers found it interesting that there was a decrease in non-smoking areas in all observed institutions, even though they had expected the provision of designated smoking areas to increase between the first and second years of the survey. The law specifies that there should be designated smoking areas in public buildings, but the study found very few institutions with separate smoking areas in either year (Table 13). Almost none of the inter-city bus terminals had separate smoking areas. Moreover, while separate smoking areas were observed in one-quarter of the institutions in 1998, the number declined in 1999. For example, 23.6% of hospitals had smoking rooms in 1998, compared to only 14.3% in 1999. The lack of designated smoking areas might at least partially explain why smoking is still occurring in places where it is prohibited.

5.2.2 Level of Compliance with the Prohibition on Selling Cigarettes to Children in Grocery Stores, Buffets and Mini-markets

The aim of this part of the study was to determine the level of conformity to the prohibition on cigarette sales to children under 18 years of age. The level of compliance with this provision of the law was observed in places where children shopped, such as groceries, buffets and mini-markets.

Observations were carried out in 170 grocery stores located near schools in both 1998 and 1999, with special attention to stores located within 500 m of schools (Appendix Table 31). Of the 5,881 purchases by children observed in 1998, 18.3% involved a request for cigarettes (19.8% in 1999). In both years of the survey, almost all requests by children to purchase cigarettes were met (98.6% in 1998 and 96.9% in 1999) (Table 14). Small markets in the streets are quite common in Turkey. They meet the daily needs of those who live in the neighborhood by supplying such necessities as bread, eggs, yogurt and salt — and especially cigarettes, since smoking is very common among men. Also, the children of the family usually do this kind of shopping. Therefore, market owners typically met the children's request for cigarettes despite the prohibition, since they were probably acquainted with the child's family and presumed that the cigarettes were for a parent (usually the father). Refusing the request because of the prohibition might cause the loss of an adult customer. Within the reality of this local Turkish context, the researchers suggest that tobacco control advocates should, as an initial step, encourage adults not to send their children to buy cigarettes for them at stores. After a period of time, when parents have gained a better appreciation of the inappropriateness of sending their children to buy cigarettes, only then would the researchers recommend the strict enforcement of the law among shopkeepers.

5.2.3 Compliance with the Banning of Cigarette Advertisements and the Requirement to Publicize the Law and the Hazards of Smoking in the Media

Compliance with the ban on cigarette advertisements and the requirement to publicize the tobacco control law and the hazards of smoking in the media were investigated. Investigators reviewed all issues of four national daily newspapers during the period of January 1 to December 31, 1999, which they obtained from the archives of the National Library. The newspapers were evaluated according to various features (Appendix Table 32a and 32b).

A total of 303 news articles about smoking were found in the four daily newspapers during the one-year period. No clear difference was observed in the number of news articles according to month of the year or day of the week. Approximately four out of five news articles appeared on the inside pages of the newspaper. The percentage of articles placed on the front or back page of the newspaper (the ones most frequently read) was 5.9% in each case.

It was found that half of the articles were accompanied by a picture, most often of a person smoking. The picture tended to draw attention to the person smoking, rather than to the content of the article. A picture of a person smoking may encourage children, who are open to external stimuli, to smoke.

Approximately half of the articles occupied a quarter of the page and two-thirds of the articles were two columns or less. In all, 37.0% of the articles contained general information on smoking; 23.8% magazine features on smoking; 23.0% news about the health effects of smoking; and 15.2% announcements on price changes of cigarettes. If all the articles were distributed equally among the newspapers throughout the year, there would be an article on smoking every week, but not necessarily on the health effects of smoking. Therefore, it can be concluded that press was not very attentive to publicizing the hazards of smoking.

No cigarette advertisements were found in the newspapers, conforming fully to this provision of the law. However, the practice of publicizing cigarette price changes should be discontinued as this is a form of indirect advertising. All signs carrying cigarette brand names had been removed from all types of shopping facilities covered by the law.

5.3 Contribution of the Study to Tobacco Control in Turkey

The contributions of the study can be listed as follows:

- A total of 12,620 study participants from different sectors of society were interviewed. Those who had not previously heard about Law No. 4207 were informed of its content and the restrictions on cigarette sales and smoking. A total of 1,040 administrators in public institutions heard about the law once more.

- Asking the directors of public offices and people from different sections of the population about the tobacco control law and its various provisions for the purpose of data gathering, drew their attention to the topic at least once in the years 1998 and 1999 and thereby raised their awareness.

- The results of the study were disseminated to the Ministry of Health, the Ministry of Education, the mayors and governors of the provinces and districts, universities and related public establishments, and nongovernmental organizations.

- Some of the results of the study were presented at the 7th International Conference on System Sciences in Health Care held in Budapest from May 28 to June 2, 2000.

- The results of the project were presented at the 11th World Conference on Tobacco or Health held in Chicago in August 2000, and at the International Public Health Congress held in Istanbul, October 8-12, 2000.

6. CONCLUSIONS

6.1 Smoking Behaviour and Knowledge of Law No. 4207

Smoking is still very common in Turkey. This study revealed that smoking prevalence ranges from 25% to 74% among adults in various segments of society (Table 3). The adult groups with the highest percentage of smokers were drivers and police/gendarmes. However, smoking was also very common among teachers and physicians, who act as role models in the community.

Smoking was more common among men than women in the study groups. However, the percentage of female smokers in the groups under study ranged from 34% to 44% (Appendix Table 6). Although there were fewer female than male smokers, the findings indicate that the habit is becoming more common among women and this should be reflected in anti-smoking campaigns.

It is significant that 13.0% of Grade 7 students in 1998 and 7.0% in 1999 had tried smoking. These students initiated smoking as early as 11 or 12 years of age and smoked four cigarettes per day on average (Table 4).

The percentage of smokers and the number of cigarettes smoked per day increased with age. Among Grade 10 students, who were only three years older than the Grade 7 students, 30.9% had tried smoking and 16.3% were current smokers in the first year of the study. In the second year, the percentage of Grade 10 students who had ever smoked was 29.9% and the percentage of current smokers was 14.8%. The Grade 10 children smoked seven cigarettes per day on average (Table 4).

Considering the difficulty in generating behavioral change, the slight decrease in the percentage of smokers in both Grades 7 and 10 between 1998 and 1999 is encouraging. The fact that there was no decrease in the percentage of adult smokers during the same period indicates that it takes longer to change the smoking habits of adults.

In terms of the relationship between smoking behavior and age, among the youth surveyed, the percentage of never smokers decreased and the percentage of those who had tried smoking increased with age. The opposite was true for the adult groups. The negative effects on health of long-term smoking emerge in the forties, yet the study found that the percentage of former smokers was highest in those aged 50 years and over in all groups and in both study years.

Although there was an increase in the percentage of smokers in all groups, one out of four subjects in all groups stated that they were former smokers in the second year of the study (1999).

Drivers were the group that had smoked the longest: 18.6 years in the first survey and 18.3 years in the second (Table 4). Smoking duration in other occupational groups averaged 13 years. The average duration of smoking among students increased during the study interval, from 1.3 years to 2.3 years among Grade 7 students and from 2.2 years to 2.6 years among Grade 10 students (Table 4). The first survey (1998) revealed that 37.5% of Grade 7 smokers

had started smoking within the last 6 months. In the second survey (1999), no Grade 7 students and no Grade 10 students had started smoking within the last year.
It is known that the harmful effects of smoking increase with the number of cigarettes smoked. The police/gendarmes and the drivers interviewed smoked on average more than a pack per day. The physicians and teachers smoked an average of 16-17 cigarettes per day and the imam/müezzins smoked an average of 13-14 cigarettes per day.

Both the percentage of smokers and the number of cigarettes smoked per day decreased among students between the two surveys. While Grade 7 smokers averaged 4.3 cigarettes per day in 1998, the number fell to 3.7 in 1999. The decline in smoking was not as remarkable in Grade 10 students: 7.3 in 1998 to 7.1 in 1999. Grade 10 students smoked twice as much as students in Grade 7 over both of the study years (Table 4). This meant that the number of cigarettes per day consumed by student smokers doubled within 3 years.

6.2 Knowledge and Opinions Regarding Law No. 4207

Approximately one in two students stated that they had heard of the law in the first year of the study, but this rate fell to one in three in the second year. Most of the adults interviewed had heard of the law. However, the percentage of drivers who indicated that they had heard of the law was only 66.9% in 1999 (Table 6).

When those who had heard of the law were asked to spontaneously name its various provisions, the percentage of those who had no idea varied from 2.9% among physicians (Appendix Table 19) to 28.1% among Grade 7 students in 1998 (Appendix Table 17). The best-known provisions of the law were the prohibition of smoking in public places and the prohibition of cigarette sales to children under 18 years. None of the respondents mentioned the requirement to place warning signs in public buildings.

After the study subjects were asked what provisions of the law they remembered spontaneously, they were given a list of all the provisions and asked whether they considered them acceptable. The provision that received the most approval — 100% in the imam/müezzin group in the first year of the study (Appendix Table 30) — was the provision requiring radio and television stations to broadcast education programming on the hazards of smoking. The provision that was found least acceptable by all the groups was the prohibition of smoking in inter-city bus terminals, train stations and waiting rooms. One-third of the teachers and one-quarter of the police/gendarmes considered the prohibition of smoking in public institutions unacceptable; 21.0% of the teachers found it acceptable to prohibit smoking in schools if designated smoking areas were provided.

6.3 Level of Compliance with Law No. 4207 in Public Institutions

The level of compliance with the smoking prohibition was very low in the public institutions observed in 1998 and observations conducted a year later indicated that the effect of the prohibition had weakened with time. Moreover, the people who disregarded the smoking prohibition were mostly staff of the public institutions surveyed.

It was observed that there were warning signs in 80% of the public institutions. However, most of the warning signs did not conform to the law, even though the percentage of adequate signs increased slightly in the second year of the study.

The number of institutions that had designated smoking areas was very low in 1998 and decreased in 1999. Almost none of the inter-city bus terminals had a designated smoking area.

6.4 Level of Compliance with Law No. 4207 in Grocery Stores, Buffets and Mini-markets

Owners of grocery stores, buffets and mini-markets did not refuse to sell cigarettes to children under 18 years of age. Cigarettes were sold to 98.6% of the children who requested them in the first year of the study and 96.9% in the second.

6.5 Compliance with the Banning of Cigarette Advertisements and the Requirement to Publicize the Hazards of Smoking and the Tobacco Control Law in the Media

There were 303 articles on smoking or cigarettes in one year in four daily newspapers with a national distribution. There were no direct cigarette advertisements. Only 23.0% of the cigarette-related articles pertained to the effects of smoking on health. Half of the articles were accompanied by pictures and the most frequently encountered picture was that of a person smoking. The presence of indirect advertising in the form of tobacco price change announcements was also noted.

7. RECOMMENDATIONS

Based on the study findings, the following recommendations were developed:

1. Changing people's behaviour, especially behaviour that is addictive and generally accepted in the community, requires raising public awareness and this takes time. It is therefore necessary to continue anti-smoking activities aimed at increasing the number of smoke-free indoor spaces and decreasing smoking through tobacco control activities conducted by either governmental or nongovernmental institutions. It is also necessary to carry out long-term studies to ascertain the trends in smoking and the level of adoption and enforcement of the various provisions of the law.

2. An important emphasis should be on preventing youth from starting smoking, especially children under 18 years of age, rather than getting youth to quit. This will require increased awareness on the part of occupation groups such as physicians and teachers, who are in a position of leadership in the community and serve as role models for children.

3. The complete removal of cigarette advertisements is a very important development. However, special care should be taken to ensure that newspaper articles not be accompanied by pictures of people smoking, as this can potentially have an encouraging and stimulating effect on children. As well, the practice of announcing tobacco price changes in newspapers should be discontinued, as this is a form of indirect advertising.

4. There are new achievements with regard to the implementation and promotion of the anti-smoking law in Turkey. World Nonsmoking Day (May 31) is being more actively observed than in previous years. The Ministry of Health, the Ministry of National Education and the Turkish Medical Association have undertaken various activities. Campaigns and training activities aimed at decreasing smoking are being implemented in different cities, coordinated by the National Committee for Tobacco and Health. Activities aimed at creating a "smoke-free environment" and "smoke-free universities" are being carried out. It is recommended that these initiatives be continued to help increase the number of young people who are anti-smoking advocates, draw public attention to the issue, and contribute to changing societal norms around smoking.

5. It is unlikely that the prevention of cigarette sales to children can be achieved in the short run. However, as a first step, it is recommended that education programs be developed to encourage parents to stop asking their children to purchase cigarettes on their behalf. The question of how cigarette purchasing might be related to the initiation of smoking in children should be taken into consideration in such education programs targeting adults. Stricter enforcement of the law among store-owners is recommended as a later step, when they should be monitored and warned by municipal inspectors and, if necessary, penalized for selling cigarettes to children.

6. It was observed that staff, in particular, did not comply with the no-smoking regulation in most of the public institutions surveyed. However, it was also observed that very few designated smoking areas were provided in these institutions. Designated smoking areas as required by law should be provided for staff to keep them from smoking in the no-smoking areas of the buildings.

7. The section of Law No. 4207 on the application of fines to people who smoke in nonsmoking areas is not very clear. The sanction power of the law can be improved by clarifying this provision.

8. In order to make students aware of the existence of Turkey's tobacco control law, this topic should be added to the curricula of primary and secondary schools, within health-related subjects.

9. Special education programs on the provisions of Law No. 4207 should be organized for police officers/gendarmes. Related institutions should collaborate in enforcing the law.

10. Television and newspapers should produce more detailed programs and articles about the content and provisions of the Law No. 4207.

11. Relevant institutions should take every opportunity to make nonsmokers aware of their right to a smoke-free environment.

12. Although the Directorate of Religious Affairs arranges that speeches regarding the hazards of tobacco be given periodically during noon prayers on Friday in mosques, this topic should be discussed more frequently and in everyday conversation between imams and the public.

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Appendix Table 1. Percent distribution of subjects by gender and group (Turkey, 1998, 1999)

	1998			1999		
Group	Male %	Female %	Total* Number	Male %	Female %	Total* Number
Student (Grade 7)	63.1	36.9	1 505	56.4	43.6	1 722
Student (Grade 10)	60.3	39.7	1 343	54.6	45.4	1 497
Physician	71.8	28.2	986	65.0	35.0	1 124
Teacher	56.8	43.2	907	55.4	44.6	1 045
Police/gendarmes	93.5	6.5	618	92.2	7.8	718
Driver	99.2	0.8	265	98.8	1.2	335
Imam/müezzin	100.0	-	242	100.0	-	280

*Total numbers are different from Table 1 since some subjects did not indicate their gender

Appendix Table 2. Distribution of students by age group (Turkey, 1998, 1999)

		1998		1999	
Grade	Age	Number	%	Number	%
Grade 7	≤ 12	400	26.8	537	31.3
	13	857	57.3	977	57.0
	14+	238	15.9	199	11.7
	Total*	1 495	100.0	1 713	100.0
Grade 10	≤ 15	412	30.7	467	31.3
	16	609	45.4	649	43.4
	17+	321	23.9	379	25.3
	Total*	1 342	100.0	1 495	100.0

**Total numbers are different from Table 1 since some subjects did not indicate their age.

Appendix Table 3. Distribution of study groups by age (Turkey, 1998, 1999)

		1998		1999	
Group	Age	Number	%	Number	%
Physician	≤ 29	216	21.9	225	20.0
	30-39	467	47.4	586	52.0
	40-49	248	25.2	243	21.5
	50 +	54	5.5	73	6.5
	Total*	985	100.0	1 127	100 0
Teacher	≤ 29	301	33.3	320	30.8
	30-39	299	33.1	356	34.3
	40-49	281	31.1	337	32.4
	50 +	23	2.5	26	2.5
	Total*	904	100.0	1 039	100.0
Police/gendarmes	≤ 29	290	46.9	357	49.8
	30-39	220	35.6	254	35.5
	40-49	98	15.9	86	12.0
	50 +	10	1.6	19	2.7
	Total*	618	100.0	716	100.0
Driver	≤ 29	49	18.6	77	22.8
	30-39	95	35.8	132	39.1
	40-49	82	30.9	101	29.8
	50 +	39	14.7	28	8.3
	Total*	265	100.0	338	100.0
Imam/müezzin	≤ 29	52	21.5	50	17.9
	30-39	95	39.3	116	41.6
	40-49	71	29.3	74	26.5
	50 +	24	9.9	39	14.0
	Total*	242	100.0	279	100.0

*Total numbers are different from Table 1 since some subjects did not indicate their age.

Appendix Table 4. Percent distribution of subjects by occupation and education level (Turkey, 1998, 1999)

Year	Education level		Group				
			Physician	Teacher	Police/ gendarmes	Driver	Imam/ müezzin
1998	Primary		-	-	0.6	47.0	7.8
	Secondary		-	-	8.1	30.7	11.2
	High		-	0.8	76.6	18.9	64.5
	University		100.0	99.2	14.7	3.4	16.5
	Total**	Number	985	907	618	264	242
		Percent	100.0	100.0	100.0	100.0	100.0
1999	Primary		-	-	4.3	51.2	2.9
	Secondary		-	-	6.1	28.4	12.9
	High		-	0.8	72.6	18.0	56.8
	University		100.0	99.2	17.0	2.4	27.4
	Total**	Number	1129	1046	718	338	278
		Percent	100.0	100.0	100.0	100.0	100.0

**Total numbers are different from Table 1 since some subjects did not indicate their education level

Appendix Table 5. Percent distribution of smoking status of students by gender (Turkey, 1998, 1999)

Grade	Smoking status	1998		1999	
		Male	Female	Male	Female
		n= 923	n= 532	n= 944	n= 723
Grade 7	Smoker	3.0	0.4	1.1	0.7
	Former smoker	15.4	3.2	9.4	1.7
	Never smoked	81.6	96.4	89.5	97.6
	Total	100.0	100.0	100.0	100.0
		n= 797	n= 513	n= 797	n= 661
Grade 10	Smoker	21.2	9.0	17.6	11.2
	Former smoker	19.1	7.6	18.3	11.0
	Never smoked	59.7	83.4	64.1	77.8
	Total	100.0	100.0	100.0	100.0

* Total numbers are different from Table 1 since some subjects did not indicate their smoking status and gender.

Appendix Table 6. Percent distribution of smoking status of adult groups by gender (Turkey, 1998, 1999)

Occupation	Smoking status	1998		1999	
		Male	Female	Male	Female
		n= 707	n= 278	n= 730	n= 393
Physician	Smoker	43.8	33.8	47.8	34.4
	Former smoker	17.7	16.2	20.5	12.7
	Never smoked	38.5	50.0	31.7	52.9
	Total	100.0	100.0	100.0	100.0
		n= 513	n= 391	n= 578	n= 465
Teacher	Smoker	51.3	41.9	52.1	44.3
	Former smoker	16.5	11.8	16.9	11.2
	Never smoked	32.2	46.3	31.0	44.5
	Total	100.0	100.0	100.0	100.0
Police/gendarmes		n= 577	n= 40	n= 662	n= 56
	Smoker	62.0	42.5	66.9	37.5
	Former smoker	13.0	10.0	13.3	12.5
	Never smoked	25.0	47.5	19.8	50.0
	Total	100.0	100.0	100.0	100.0
Driver		n= 263	n= 2	n= 331	n= 4
	Smoker	70.3	50.0	74.0	100.0
	Former smoker	12.6	-	10.9	-
	Never smoked	17.1	50.0	15.1	-
	Total	100.0	100.0	100.0	100.0
Imam/müezzin		n= 242		n= 279	
	Smoker	24.8		25.2	
	Former smoker	21.5	NA	25.2	NA
	Never smoked	53.7		49.6	
	Total	100.0	100.0	100.0	

*Total numbers are different from Table 1 since some subjects did not indicate their smoking status and age.

NA: Not applicable - There are no female imams

Appendix Table 7. Percent distribution of smoking status of Grade 7 students by age (Turkey, 1998, 1999)

Smoking status	1998 Age			1999 Age		
	≤ 12	13	14 +	≤ 12	13	14 +
	n=398	n= 829	n= 228	n= 539	n= 942	n= 191
Smoker	1.0	1.2	7.0	0.2	0.4	5.2
Former smoker	6.5	9.8	22.8	4.5	5.9	11.5
Never smoked	92.5	89.0	70.2	95.3	93.7	83.3
Total*	100.0	100.0	100.0	100.0	100.0	100.0

*Total numbers are different from Table 1 since some subjects did not indicate their smoking status and age

Appendix Table 8. Percent distribution of smoking status of Grade 10 students by age (Turkey, 1998, 1999)

Smoking Status	1998 Age			1999 Age		
	≤ 15	16	17 +	≤ 15	16	17 +
	n= 408	n= 595	n= 315	n= 460	n= 637	n= 369
Smoker	9.3	15.5	27.0	6.5	13.7	27.1
Former smoker	15.7	11.6	18.7	9.3	16.2	20.3
Never smoked	75.0	72.9	54.3	84.2	70.1	52.6
Total*	100.0	100.0	100.0	100.0	100.0	100.0

*Total numbers are different from Table 1 since some subjects did not indicate their smoking status and age

Appendix Table 9. Percent distribution of smoking status of adult groups by age (Turkey, 1998-1999)

Group	Age	1998 Smoking status				1999 Smoking status			
		Total*	Current Smoker	Former smoker	Never smoked	Total*	Current Smoker	Former smoker	Never smoked
Physician	≤ 29	216	41.7	8.3	50.0	225	34.2	7.6	58.2
	30-39	467	43.0	13.7	43.3	585	47.5	13.8	38.7
	40-49	248	39.5	24.6	35.9	243	43.2	31.7	25.1
	50 +	54	27.8	50.0	22.2	73	34.2	32.9	32.9
Teacher	≤ 29	301	46.8	9.0	44.2	320	46.3	11.3	42.4
	30-39	297	45.5	13.8	40.7	354	50.6	14.4	35.0
	40-49	281	50.5	19.9	29.6	337	50.1	16.0	33.9
	50 +	23	39.1	30.4	30.5	26	30.8	30.8	38.4
Police/ gendarmes	≤ 29	290	57.6	10.0	32.4	357	63.3	9.2	27.5
	30-39	218	63.8	12.8	23.4	254	66.1	13.8	20.1
	40-49	98	63.3	20.4	16.3	86	65.1	25.6	9.3
	50 +	11	63.6	18.2	18.2	19	63.2	26.3	10.5
Driver	≤ 29	49	73.5	8.2	18.3	77	72.7	5.2	22.1
	30-39	95	77.9	6.3	15.8	132	80.3	4.5	15.2
	40-49	82	68.3	15.9	15.8	101	74.3	17.8	7.9
	50 +	39	51.3	25.6	23.1	28	50.0	32.1	17.9
Imam/ müezzin	≤ 29	52	32.7	19.2	48.1	50	36.0	14.0	50.0
	30-39	95	25.3	21.1	53.6	116	25.0	24.1	50.9
	40-49	71	25.4	18.3	56.3	74	18.9	31.1	50.0
	50 +	24	4.2	37.5	58.3	38	23.7	31.6	44.7

*Total numbers are different from Table 1 since some subjects did not indicate their smoking status and age.

Appendix Table 10. Percent distribution of smoking status by education level among police/gendarmes (Turkey, 1998, 1999)

		Smoking status				
					Total	
Year	Education level	Current smoker	Former smoker	Never Smoked	Number	%*
1998	Primary/secondary	77.7	16.7	5.6	54	8.7
	High school	59.1	12.1	28.8	472	76.5
	University	59.3	14.3	26.4	91	14.7
1999	Primary/secondary	73.3	10.7	16.0	75	10.4
	High school	64.5	13.4	22.1	521	72.6
	University	59.8	13.9	26.2	122	17.0

* Column percentage; others are row percentage.

Appendix Table 11. Percent distribution of smoking status by education level among drivers (Turkey, 1998, 1999)

		Smoking status				
					Total	
Year	Education level	Current Smoker	Former smoker	Never smoked	Number	%*
1998	Primary school	66.1	13.7	20.2	124	47.0
	Secondary school	77.8	9.9	12.3	81	30.7
	High school +	67.8	13.6	18.6	59	22.3
1999	Primary school	72.8	12.1	15.0	173	51.2
	Secondary school	74.0	11.5	14.5	96	28.4
	High school +	78.3	7.2	14.5	69	20.4

* Column percentage; others are row percentage.

Appendix Table 12. Percent distribution of smoking status by education level among imam/müezzins (Turkey, 1998, 1999)

		Smoking status				
					Total	
Year	Education level	Current Smoker	Former smoker	Never smoked	Number	%*
1998	Primary school	31.5	21.1	47.4	19	7.8
	Secondary school	29.6	14.8	55.6	27	11.2
	High school	25.6	23.7	50.7	156	64.5
	University	15.0	17.5	67.5	40	16.5
1999	Primary school	12.5	25.0	62.5	8	2.9
	Secondary school	16.7	25.0	58.3	36	13.0
	High school	30.4	26.6	43.0	158	57.0
	University	18.6	22.7	58.7	75	27.1

* Column percentage; others are row percentage

Appendix Table 13. Distribution of duration of smoking by student current smokers (Turkey, 1998, 1999)

		1998		1999	
Grade	Duration of smoking	Number	%	Number	%
Grade 7	≤ 6 months	9	37.5	-	-
	6-12 months	4	16.7	-	-
	1-2 years	3	12.5	3	37.5
	2 years +	8	33.3	5	62.5
	Total	24	100.0	8	100.0
		X = 1.93 ± 1.97		X = 4.59 ± 3.01	
		min-max = 0.08-6.00		min-max = 1.75-9.00	
Grade 10	≤ 6 months	19	9.1	-	-
	6-12 months	43	20.5	35	19.4
	1-2 years	57	27.3	48	26.7
	2 years +	90	43.1	97	53.9
	Total	209	100.0	180	100.0
		X = 2.87 ± 2.27		X = 3.04 ± 1.87	
		min-max = 0.08-14.00		min-max = 1.00-14.00	

Note: The total number of current smokers may differ from Table 4 because of some non-responses to this part of the survey.

Appendix Table 14. Distribution of duration of smoking by student former smokers (Turkey, 1998, 1999)

Grade	Duration of smoking	1998 Number	1998 %	1999 Number	1999 %
Grade 7	≤ 6 months	70	56.0	-	-
	6-12 months	19	15.2	12	48.0
	1-2 years	20	16.0	8	32.0
	2 years +	16	12.8	5	20.0
	Total	125	100.0	25	100.0
		X = 1.13 ± 1.66		X = 1.72 ± 0.79	
		min-max = 0.08-10.00		min-max = 1.00-3.00	
Grade 10	≤ 6 months	64	41.0	2	2.0
	6-12 months	35	22.4	47	47.5
	1-2 years	36	23.1	30	30.3
	2 years +	21	13.5	20	20.2
	Total	156	100.0	99	100.0
		X = 1.25 ± 1.37		X = 1.85 ± 1.30	
		Min-max = 0.08-10.00		min-max = 0.25-10.00	

Appendix Table 15. Distribution of number of cigarettes smoked per day by student current smokers (Turkey, 1998, 1999)

Grade	Number of cigarettes	1998 Number	1998 %	1999 Number	1999 %
Grade 7	1	2	8.3	2	16.7
	2	3	12.5	2	16.7
	3	6	25.0	2	16.7
	4-5	4	16.7	2	16.7
	6 +	9	37.5	4	33.2
	Total	24	100.0	12	100.0
		X = 5.13 ± 4.07		X = 7.42 ± 8.91	
		Min-max = 1-20		min-max = 1-30	
Grade 10	1	15	7.3	14	6.7
	2	11	5.3	25	11.9
	3	14	6.8	16	7.5
	4-5	44	21.4	39	18.6
	6-10	122	59.2	60	28.7
	11 +			55	26.56
	Total	206	100.0	209	100.0
		X = 9.13 ± 6.81		X = 9.18 ± 8.55	
		Min-max = 1-35		min-max = 1-60	

Note: The total number of current smokers may differ from Table 4 because of some non-responses to this part of the survey.

Appendix Table 16. Distribution of number of cigarettes smoked per day by student former smokers (Turkey, 1998, 1999)

Grade	Number of cigarettes	1998 Number	1998 %	1999 Number	1999 %
Grade 7	1	38	30.6	27	36.0
	2	33	26.6	21	28.0
	3	14	11.4	13	17.3
	4-5	18	14.5	7	9.4
	6 +	21	16.9	7	9.3
	Total	124	100.0	75	100.0
		X = 4.20 ± 5.33		X = 3.05 ± 3.65	
		Min-max = 1-30		min-max = 1-20	
Grade 10	1	36	22.1	38	21.3
	2	26	16.0	50	27.9
	3	20	12.4	30	16.8
	4-5	37	22.7	24	13.4
	6-10	31	19.0	23	12.8
	11 +	13	8.0	14	7.8
	Total	163	100.0	74	100.0
		X = 4.95 ± 4.83		X = 4.67 ± 5.93	
		min-max = 1-30		min-max = 1-40	

Appendix Table 17. Distribution of known provisions of the law by Grade 7 students (Turkey, 1998, 1999)

Provision	1998 (n= 707)		1999 (n= 609)	
	Number	%*	Number	%*
Indicates that tobacco is hazardous for health	140	19.8	142	23.3
Prohibits smoking in closed places	76	10.7	70	11.5
Prohibits selling cigarettes to children under 18 years	70	9.9	87	14.3
Subject to fine	46	6.5	65	10.7
Prohibits smoking in public places	39	5.5	19	3.1
Prohibits smoking in buses, transportation vehicles	28	4.0	25	4.1
Prohibits smoking in hospitals	17	2.4	36	5.9
Prohibits smoking in public offices	16	2.3	26	4.3
Prohibits smoking in places that children frequent	13	1.8	14	2.3
Prohibits smoking in schools	9	1.3	16	2.6
Protects nonsmokers from the hazards of smoking	5	0.7	-	-
Prohibits smoking where there are more than 10 people	4	0.6	-	-
Prohibits cigarette advertising	3	0.4	4	0.7
Prohibits smoking next to nonsmokers	2	0.3	1	0.2
Restricts tobacco production and use	2	0.3	-	-
Prohibits smoking in public service institutions	2	0.3	6	1.0
Prohibits smoking where there are more than five people	2	0.3	4	0.7
Prohibits smoking in teachers' room	1	0.1	-	-
Prohibits smoking next to a sick person	1	0.1	3	0.5
Prohibits smoking next to people who have had a heart attack	1	0.1	-	-
Prohibits smoking by children under 18 years	-	-	25	4.1
Prohibits smoking in certain defined places	-	-	3	0.5
Prohibits smoking	-	-	83	13.6
Encourages quitting	-	-	12	2.0
Prohibits drink and drugs	-	-	14	2.3
No idea/don't know	195	28.1	172	28.8

* There is more than one answer.

Appendix Table 18. Distribution of known provisions of the law by Grade 10 students (Turkey, 1998, 1999)

Provision	1998 (n= 767)		1999 (n= 728)	
	Number	%*	Number	%*
Prohibits smoking in closed places	255	33.2	258	35.4
Prohibits selling cigarettes to children under 18 years	157	20.5	189	26.0
Indicates that tobacco is hazardous for health	106	13.8	110	15.1
Prohibits smoking in public places	85	11.1	83	11.4
Subject to fine	80	10.4	117	16.1
Prohibits smoking in buses, transportation vehicles	60	7.8	90	12.4
Prohibits smoking in public offices	51	6.6	64	8.8
Prohibits smoking where there are more than five people	26	3.4	14	1.9
Prohibits smoking in schools	21	2.7	20	2.7
Prohibits smoking in places that children frequent	16	2.1	13	1.8
Prohibits smoking in public service institutions	15	2.0	17	2.3
Prohibits smoking in hospitals	14	1.8	27	3.7
Prohibits cigarette advertising	14	1.8	8	1.1
Prohibits smoking next to a sick person	4	0.5	-	-
Prohibits smoking next to a pregnant woman	4	0.5	1	0.1
Protects nonsmokers from the hazards of smoking	3	0.4	3	0.4
Prohibits smoking in conference halls	1	0.1	-	-
Prohibits smoking next to nonsmokers	1	0.1	-	-
Prohibits smoking where there are more than 10 people	1	0.1	2	0.3
Prohibits smoking by children under 18 years	-	-	10	1.4
Prohibits smoking in certain defined places	-	-	7	1.0
Prohibits smoking	-	-	55	7.6
Encourages quitting	-	-	9	1.2
Prohibits drink and drugs	-	-	4	0.5
No idea/don't know	130	16.9	129	17.7

*There is more than one answer.

Appendix Table 19. Distribution of known provisions of the law by physicians (Turkey, 1998, 1999)

Provision	1998 (n= 917)		1999 (n= 1053)	
	Number	%*	Number	%*
Prohibits smoking in closed places	462	50.4	521	49.5
Prohibits smoking in public places	278	30.3	290	27.5
Prohibits smoking in buses, transportation vehicles	187	20.4	224	21.3
Prohibits smoking where there are more than five people	126	13.7	93	8.8
Prohibits selling of cigarette to children under 18 years	104	11.3	93	8.8
Prohibits smoking in public offices	82	8.9	47	4.5
Subject to fine	51	5.6	121	11.5
Prohibits smoking in public service institutions	47	5.1	73	6.9
Prohibits cigarette advertising	30	3.3	8	0.8
Prohibits smoking in hospitals	29	3.2	39	3.7
Prohibits smoking in schools	12	1.3	7	0.7
Prohibits smoking where there are more than 10 people	10	1.1	4	0.1
Indicates that tobacco is hazardous for health	8	0.9	8	0.8
Prohibits smoking next to nonsmokers	5	0.5	-	-
Prohibits smoking in places that children frequent	2	0.2	2	0.2
Prohibits smoking next to a sick person	2	0.2	-	-
Protects nonsmokers from the hazards of smoking	2	0.2	2	0.2
Prohibits smoking	-	-	14	1.3
Provides special rooms for smokers	-	-	8	0.8
Knows the Law No. 4207	-	-	6	0.6
Restricts tobacco production and use	5	0.5	5	0.5
Prohibits smoking in certain defined places	-	-	4	0.4
No idea/don't know	27	2.9	77	7.5

* There is more than one answer.

Appendix Table 20. Distribution of known provisions of the law by teachers (Turkey, 1998, 1999)

Provision	1998 (n= 833)		1999 (n= 962)	
	Number	%*	Number	%*
Prohibits smoking in closed places	311	37.3	387	40.2
Prohibits smoking in public places	304	36.5	319	33.2
Prohibits smoking in buses, transportation vehicles	145	17.4	121	12.6
Prohibits selling cigarettes to children under 18 years	107	12.8	69	7.2
Prohibits smoking where there are more than five people	101	12.1	86	8.9
Subject to fine	81	9.7	130	13.5
Prohibits smoking in public offices	66	7.9	32	3.3
Prohibits smoking in public service institutions	33	4.0	53	5.5
Prohibits cigarette advertising	20	2.4	11	1.1
Indicates that tobacco is hazardous for health	17	2.0	10	1.0
Prohibits smoking in hospitals	18	2.2	11	1.1
Prohibits smoking in schools	15	1.8	12	1.2
Protects nonsmokers from the hazards of smoking	8	1.0	9	0.9
Prohibits smoking next to nonsmokers	8	1.0	1	0.1
Prohibits smoking in places that children frequent	5	0.6	2	0.2
Prohibits smoking in where there are more than 10 people	3	0.4	16	1.7
Prohibits smoking next to a pregnant woman	3	0.4	-	-
Prohibits smoking in conference halls	1	0.1	-	-
Prohibits smoking in teachers' room	1	0.1	1	0.1
Prohibits smoking in certain defined places	-	-	16	1.7
Restricts tobacco production and use	12	1.4	15	1.6
Prohibits smoking	-	-	14	1.5
Provides special rooms for smokers	-	-	9	0.9
Knows the Law No. 4207	-	-	5	0.5
No idea/don't know	41	4.9	74	7.7

* There is more than one answer.

Appendix Table 21. Distribution of known provisions of the law by police/gendarmes (Turkey, 1998, 1999)

Provision	1998 (n= 554)		1999 (n= 613)	
	Number	%*	Number	%*
Prohibits smoking in closed places	263	47.5	345	56.3
Prohibits smoking in public places	130	23.5	71	11.6
Prohibits smoking in buses, transportation vehicles	129	23.3	107	17.5
Prohibits smoking where there are more than five people	71	12.8	48	7.8
Prohibits smoking in public offices	63	11.4	34	5.5
Prohibits selling cigarettes to children under 18 years	54	9.7	56	9.1
Subject to fine	42	7.6	65	10.6
Prohibits smoking in public service institutions	25	4.5	41	6.7
Prohibits cigarette advertising	12	2.2	1	0.2
Restricts tobacco production and use	12	2.2	9	1.5
Indicates that tobacco is hazardous for health	11	2.0	19	3.1
Prohibits smoking in hospitals	6	1.1	10	1.6
Prohibits smoking in places that children frequent	4	0.7	1	0.2
Protects nonsmokers from the hazards of smoking	3	0.5	2	0.3
Prohibits smoking where there are more than 10 people	3	0.5	3	0.5
Prohibits smoking in schools	2	0.4	3	0.5
Prohibits smoking next to nonsmokers	1	0.2	-	-
Prohibits smoking	-	-	24	3.9
Knows the Law No. 4207	-	-	7	1.1
Provides special rooms for smokers	-	-	1	0.2
Prohibits smoking in certain defined places	-	-	4	0.7
No idea/don't know	34	6.1	48	7.8

* There is more than one answer.

Appendix Table 22. Distribution of known provisions of the law by drivers (Turkey, 1998, 1999)

Provision	1998 (n= 213)		1999 (n= 226)	
	Number	%*	Number	%*
Prohibits smoking in closed places	115	54.0	92	40.7
Prohibits smoking in buses, transportation vehicles	81	38.0	81	35.8
Prohibits smoking in public places	29	13.6	34	15.0
Prohibits smoking in public offices	11	5.2	9	4.0
Prohibits smoking where there are more than five people	11	5.2	10	4.4
Prohibits smoking in public service institutions	8	3.8	6	2.7
Subject to fine	6	2.8	4	1.8
Prohibits smoking in hospitals	4	1.9	6	2.7
Prohibits selling cigarettes to children under 18 years	3	1.4	8	3.5
Indicates that tobacco is hazardous for health	3	1.4	4	1.8
Restricts tobacco production and use	2	0.9	-	-
Prohibits smoking in places that children frequent	1	0.5	2	0.9
Prohibits cigarette advertising	1	0.5	-	-
Prohibits smoking	-	-	6	2.7
Prohibits smoking where there are more than 10 people	-		3	1.3
Prohibits smoking in schools	-	-	1	0.4
Knows the Law No. 4207	-	-	1	0.4
Provides special rooms for smokers	-	-	1	0.4
No idea/don't know	28	13.1	40	17.7

* There is more than one answer.

Appendix Table 23. Distribution of known provisions of the law by imam/muezzins (Turkey, 1998, 1999)

Provision	1998 (n= 220)		1999 (n= 233)	
	Number	%*	Number	%*
Prohibits smoking in closed places	109	49.5	128	54.9
Prohibits smoking in buses, transportation vehicles	70	31.8	58	24.9
Prohibits smoking in public places	58	26.3	48	20.6
Prohibits smoking in public offices	27	12.3	15	6.4
Prohibits selling cigarettes to children under 18 years	26	11.8	14	6.0
Prohibits smoking where there are more than five people	23	10.5	19	8.2
Subject to fine	19	8.6	23	9.9
Prohibits smoking in public service institutions	6	2.7	13	5.6
Prohibits smoking in hospitals	4	1.8	6	2.6
Restricts tobacco production and use	3	1.4	2	0.9
Prohibits smoking in places that children frequent	2	0.9	1	0.4
Prohibits cigarette advertising	2	0.9	2	0.9
Prohibits smoking in schools	1	0.5	-	-
Protects nonsmokers from the hazards of smoking	1	0.5	-	-
Prohibits smoking next to nonsmokers	1	0.5	-	-
Prohibits smoking where there are more than 10 people	1	0.5	3	1.3
Indicates that tobacco is hazardous for health	-	-	3	1.3
Knows the Law No. 4207	-	-	1	0.4
No idea/don't know	13	5.9	23	9.9

* There is more than one answer.

Appendix Table 24. Percent distribution of opinions of Grade 7 students on provisions of the tobacco control law (Turkey, 1998, 1999)

Provision	1998 (n= 1 478-1 503)* Acceptable	If special conditions are provided	Un-acceptable	No idea	1999 (n= 1 704-1 725)* Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	68.8	5.5	23.2	2.5	72.7	6.3	18.9	2.1
Prohibits smoking on trains, inter-city buses	77.4	5.6	15.3	1.7	79.4	5.2	14.3	1.1
Prohibits smoking in public institutions	69.9	7.7	14.1	8.3	74.6	9.9	10.5	5.0
Prohibits smoking in health establishments	80.5	3.7	14.4	1.4	83.4	3.1	12.4	1.1
Prohibits smoking in schools	84.0	2.2	12.8	1.0	86.2	3.0	10.1	0.7
Prohibits smoking in bus/train stations and waiting rooms	66.8	12.0	14.0	7.2	68.8	13.0	13.6	4.6
Prohibits cigarette advertisements	74.4	10.6	13.8	1.2	73.1	10.3	16.6	0.1
Education on hazards of smoking on TV	90.8	2.7	6.1	0.4	92.7	2.4	4.9	0.1

* Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 25. Percent distribution of opinions of Grade 10 students on provisions of the tobacco control law (Turkey, 1998, 1999)

	1998 (n= 1 322-1 348)				1999 (n= 1 474-1 503)			
Provision	Acceptable	If special conditions are provided	Un-acceptable	No idea	Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	65.8	13.2	18.9	2.1	65.7	13.2	18.8	2.3
Prohibits smoking on trains, inter-city buses	78.3	9.3	11.4	1.0	79.4	10.6	9.1	0.9
Prohibits smoking in public institutions	65.5	20.0	10.1	4.4	66.6	19.2	10.3	3.9
Prohibits smoking in health establishments	81.8	6.0	11.1	1.1	83.2	7.1	9.1	0.6
Prohibits smoking in schools	80.0	6.4	12.6	1.0	78.8	7.7	11.7	1.8
Prohibits smoking in bus/train stations and waiting rooms	55.7	21.9	19.4	3.0	51.6	24.9	19.4	4.1
Prohibits cigarette advertisements	69.6	8.3	20.9	1.2	68.0	11.5	205	-
Education on hazards of smoking on TV	92.5	2.5	4.7	0.3	93.6	1.9	4.4	0.1

* Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 26. Percent distribution of opinions of physicians on provisions of the tobacco control law (Turkey, 1998, 1999)

Provision	1998 (n= 981-982) Acceptable	If special conditions are provided	Un-acceptable	No idea	1999 (n= 1 121-1 125) Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	94.5	1.3	4.1	0.1	94.0	0.7	5.2	0.1
Prohibits smoking on trains, inter-city buses	92.6	5.3	2.1	-	95.0	3.1	1.9	-
Prohibits smoking in public institutions	80.2	17.3	2.5	-	79.4	19.2	1.3	0.1
Prohibits smoking in health establishments	84.7	13.6	1.7	-	84.6	14.3	1.1	-
Prohibits smoking in schools	93.1	5.6	1.2	0.1	93.1	6.1	0.6	0.2
Prohibits smoking in bus/train stations and waiting rooms	61.9	29.9	7.9	0.3	66.6	25.6	7.5	0.3
Prohibits cigarette advertisements	90.2	2.2	6.7	0.9	91.9	0.5	6.4	1.2
Education on hazards of smoking on TV	97.0	0.8	1.9	0.2	89.2	0.4	10.2	0.2

* Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 27. Percent distribution of opinions of teachers on provisions of the tobacco control law (Turkey, 1998, 1999)

	1998 (n= 902-905)				1999 (n= 1 017-1 044)			
Provision	Acceptable	If special conditions are provided	Un-acceptable	No idea	Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	92.5	1.1	6.3	0.1	93.4	1.3	5.1	0.2
Prohibits smoking on trains, inter-city buses	86.0	7.6	6.4	-	89.7	5.2	5.1	-
Prohibits smoking in public institutions	68.3	26.1	5.5	0.1	73.1	22.6	4.2	0.1
Prohibits smoking in health establishments	85.0	10.3	4.7	-	89.2	8.1	2.6	0.1
Prohibits smoking in schools	74.0	21.0	5.0	-	75.2	21.8	3.0	-
Prohibits smoking in bus/train stations and waiting rooms	50.7	36.2	12.6	0.5	55.9	27.7	16.1	0.3
Prohibits cigarette advertisements	87.5	2.4	9.4	0.7	90.3	0.7	8.0	1.0
Education on hazards of smoking on TV	95.1	1.0	3.7	0.2	86.4	0.8	12.5	0.3

Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 28. Percent distribution of opinions of police/gendarmes on provisions of tobacco control law (Turkey, 1998, 1999)

Provision	1998 (n= 612-613) Acceptable	If special conditions are provided	Un-acceptable	No idea	1999 (n= 698-716) Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	93.8	1.0	4.9	0.3	91.1	1.3	7.5	0.1
Prohibits smoking on trains, inter-city buses	91.2	5.7	3.1	-	89.5	6.6	3.8	0.1
Prohibits smoking in public institutions	73.7	20.4	5.7	0.2	69.0	24.4	6.0	0.6
Prohibits smoking in health establishments	95.6	3.8	0.6	-	94.1	4.7	1.2	-
Prohibits smoking in schools	97.0	2.0	1.0	-	93.4	4.3	2.3	-
Prohibits smoking in bus/train stations and waiting rooms	50.0	32.7	17.2	0.1	49.3	29.9	20.4	0.4
Prohibits cigarette advertisements	93.5	0.5	5.0	1.0	90.6	0.3	8.1	1.0
Education on hazards of smoking on TV	95.1	0.5	3.9	0.5	84.8	0.7	14.5	-

* Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 29. Percent distribution of opinions of drivers on provisions of the tobacco control law (Turkey, 1998, 1999)

Provision	1998 (n= 263-264) Acceptable	If special conditions are provided	Un-acceptable	No idea	1999 (n= 327-338) Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	93.6	0.8	5.6	-	93.5	0.9	5.0	0.5
Prohibits smoking on trains, inter-city buses	89.8	4.5	5.7	-	92.0	3.3	4.4	0.3
Prohibits smoking in public institutions	89.4	6.8	3.4	0.4	92.3	5.9	1.8	-
Prohibits smoking in health establishments	94.7	3.4	1.9	-	97.6	1.2	0.9	0.3
Prohibits smoking in schools	97.3	1.1	1.6	-	97.3	1.8	0.6	0.3
Prohibits smoking in bus/train stations and waiting rooms	51.7	26.2	22.1	-	53.0	22.5	24.3	0.2
Prohibits cigarette advertisements	89.8	1.9	6.8	1.5	94.8	-	2.8	2.4
Education on hazards of smoking on TV	95.8	0.4	1.9	1.9	86.5	0.3	12.8	0.4

Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 30. Percent distribution of opinions of imam/müezzins on provisions of the tobacco control law (Turkey, 1998, 1999)

Provision	1998 (n= 242) Acceptable	If special conditions are provided	Un-acceptable	No idea	1999 (n= 268-280) Acceptable	If special conditions are provided	Un-acceptable	No idea
Prohibits selling cigarettes to children under 18	98.4	0.8	0.8	-	95.7	0.7	3.6	-
Prohibits smoking on trains, inter-city buses	96.3	2.9	0.8	-	96.8	1.8	1.4	-
Prohibits smoking in public institutions	92.2	7.4	0.4	-	89.3	8.9	1.8	-
Prohibits smoking in health establishments	95.5	4.1	0.4	-	99.3	0.7	-	-
Prohibits smoking in schools	98.8	1.2	-	-	98.2	1.1	0.4	0.3
Prohibits smoking in bus/train stations and waiting rooms	70.7	23.1	5.8	0.4	72.9	20.7	5.7	0.7
Prohibits cigarette advertisements	98.	-	0.8	0.8	97.0	-	2.6	0.4
Education on hazards of smoking on TV	100.0	-	-	-	85.1	0.7	14.2	-

Total numbers are different from Table 1 since some subjects did not indicate their opinions on provisions.

Appendix Table 31. Distribution of grocery stores and buffets by their distance to the nearest school (Turkey, 1998, 1999)

	1998		1999	
Distance (m)	Number	%	Number	%
< 100	93	54.6	118	69.2
101 – 500	69	40.6	51	30.2
501 +	8	4.8	1	0.6
Total	170	100.0	170	100.0

Appendix Table 32a. Distribution of articles on smoking in four newspapers by month, day and location (Turkey, 1999)

Article (n= 303)	Number	%
Month		
January	32	10.6
February	30	9.9
March	27	8.9
April	27	8.9
May	26	8.6
June	30	9.9
July	17	5.6
August	17	5.6
September	27	8.9
October	17	5.6
November	16	5.3
December	37	12.2
Day		
Monday	53	17.5
Tuesday	54	17.8
Wednesday	31	10.2
Thursday	48	15.8
Friday	33	10.9
Saturday	40	13.2
Sunday	44	14.5
Location		
Front page	18	5.9
Inside page	236	77.9
Back page	18	5.9
Supplement, first page	13	4.3
Supplement, inside page	18	5.9

Appendix Table 32b. Distribution of articles on smoking in four newspapers by certain characteristics (Turkey, 1999)

Article (n= 303)	Number	%
Picture		
No	145	48.0
Yes	158	52.0
Person smoking	117	38.7
Cigarette package	14	4.6
Cigarettes	10	3.3
Cigarette logo	3	1.0
More than one component	13	4.4
Number of columns		
≤ 1	104	34.3
2	92	30.4
3	70	23.1
4	23	7.6
5 +	14	4.6
Length of column (page)		
≤ 0.125 (1/8)	36	11.9
0.126 - 0.250 (1/8-1/4)	123	40.7
0.251 – 0.500 (1/4-1/2)	105	34.6
0.501 – 0.750 (1/2-3/4)	31	10.2
0.751 – 1.000 (3/4-1 page)	8	2.7
Number of lines		
≤ 10	19	9.7
11 +	176	90.3
Type of article		
General news	112	37.0
Feature	72	23.8
Health	70	23.0
Price announcement	46	15.2
Sport	3	1.0

Appendix Table 33. Distribution of articles in four newspapers by length and number of columns (Turkey, 1999)

Number of Columns		Column Length					Total	
		≤ 0.125	0.126-0.250	0.251-0.500	0.501-0.750	0.751-1.000	Number	%*
≤ 1		7.9	17.8	5.9	1.9	0.6	104	34.3
2		2.6	13.5	9.5	3.9	0.6	92	30.4
3		0.6	7.5	11.8	2.6	0.3	70	23.1
4		0.6	0.6	5.2	0.9	-	23	7.6
5 +		-	0.9	1.9	0.6	0.9	14	4.6
Total	Number	66	123	105	34	8	303	
	%	11.9	40.7	34.6	10.2	2.7		100.0

* Column percentage; others are line percentage.


TURKEY
SURVEY PROVINCES
Edirne
İstanbul
Bursa
Eskişehir
Ankara
Çorum
Yozgat
Afyon
İzmir
Antalya
Muğla
Gaziantep
Diyarbakır
Van

GROCERY STORES, BUFFETS and SMALL MARKETS

No:

Date: ..../...../199.....

City:

District:

Name of the grocer:..... Distance from the nearest school:.....m

Age	Shopping List	

Investigator:..... Field coordinator:.....

HOSPITALS

No:..... Date:...../...../199....
City:.....
District:.....

Name of the hospital:.....

INTERVIEW CONDUCTED WITH THE ADMINISTRATOR (MEDICAL CHIEF, HOSPITAL MANAGER):

What kind of activities are conducted under the nonsmoking policy in your hospital?

1. Nobody is allowed to smoke in the hospital
2. There is a separate smoking room
3. Relevant signs are posted
4. Other: (Please describe.....)
5. There is no policy implementation

Did any administrative changes occur in your hospital after November 1998?
1. Yes 2. No

OBSERVATION

Do people smoke?	No	Yes	
		Personnel	Other
In hospital corridors			
In waiting rooms			
In emergency			
In patient examination rooms			
In clinics			

Are there any warning signs relevant to the anti-smoking law?

1. Yes, adequate
2. Yes, inadequate
3. No

Is there a separate room for smokers?

1. Yes
2. No

Investigator..... Field coordinator:.....

PRIMARY HEALTH CARE CENTRES

No:..... Date:...../...../199.....
City:.....
District:.....

Name of the primary health care centre :.....

INTERVIEW CONDUCTED WITH THE ADMINISTRATOR (RESPONSIBLE PHYSICIAN):

What kind of activities are conducted under the nonsmoking policy in your health centre?

1. Nobody is allowed to smoke in the centre
2. There is a separate smoking room
3. Relevant signs are posted
4. Other: (Please describe.....)
5. There is no policy implementation

Did any administrative changes occur in your hospital after November 1998?
1. Yes 2. No

OBSERVATION

Do people smoke?	No	Yes	
		Personnel	Other
In corridors			
In patient waiting rooms			
In patient examination rooms			
In nurses' offices			
In laboratories			
In secretariat			

Are there any warning signs relevant to the anti-smoking law?

1. Yes, adequate
2. Yes, inadequate
3. No

Is there a separate room for smokers?

1. Yes
2. No

Investigator:..... Field coordinator:.....

COURTHOUSE, TAX OFFICE, POLICE STATION, INDOOR SPORTS FACILITY, BUS STATION, BANK

No:..... Date:...../...../199.....
City:.....
District:.....

Name of the institution:.....

INTERVIEW CONDUCTED WITH THE ADMINISTRATOR:

What kinds of activities are conducted as nonsmoking policy in your institution?

1. Nobody is allowed to smoke in the building
2. There is a separate smoking room
3. Relevant signs are posted
4. Other: (Please describe.....)
5. There is no policy implementation

Did any administrative changes occur in your institution after November 1998?
1. Yes 2. No

OBSERVATION

Do people smoke?	No	Yes	
		Personnel	Other
In corridors			
In rooms			
In restaurant, cafeteria			

Are there any warning signs relevant to the anti-smoking law?

1. Yes, adequate
2. Yes, inadequate
3. No

Is there a separate room for smokers?

1. Yes
2. No

Investigator:..... Field coordinator:.....

QUESTIONNAIRE FOR DETERMINING VIEWS ON ANTI-SMOKING LAW

1. Address: City..... District:.....

2. Sex:
   1. Male
   2. Female

3. Age (in years) .....

4. Occupation:

   1. Teacher
   2. Doctor
   3. Police/gendarmes
   4. Imam/müezzin
   5. Driver

5. Educational status

   1. Primary school
   2. Secondary school
   3. High school
   4. University

6. Have you ever smoked or do you smoke?

   1. Yes, I smoke
   2. Yes, I quit When did you quit?.....years ago
   3. No, I have never smoked (skip to question 9)

7. How long have you smoked/did you smoke?

.....months/.....years

8. How many cigarettes do/did you smoke per day?

.....

9. Is there a law in Turkey regulating smoking?

Have you ever heard something like that?
1. No, I have not (skip to question 11)
2. Yes, I have

10. This law forbids what?
1.....
2.....
3.....
4. I do not have any idea about the prohibitions of the law

ATTENTION! PLEASE READ THE FOLLOWING EXPLANATION FIRST, THEN ASK THE QUESTION. PLEASE ASK THE QUESTION FOR EACH PROVISION OF THE LAW IN THE SAME WAY, CHANGING ONLY THE PART WRITTEN IN ITALIC

A law aimed at preventing the harmful effects of smoking came into force on November 26, 1996, in Turkey. The law put some restrictions and/or prohibitions on smoking in various circumstances. I would like to know your opinion of these prohibitions.

11. According to you, is the prohibition of *"selling cigarettes to children under 18"* acceptable or not?

"smoking in trains, inter-city buses"

"smoking in public institutions such as banks, police stations, tax offices"

"smoking in hospitals, health centres"

"smoking in schools"

"smoking in bus stations, train stations and in waiting rooms"

"cigarette advertisements"

"educational TV programming on hazards of smoking"

Prohibition	Acceptable	Unacceptable	Acceptable if special conditions are provided	Don't know/ No idea
Selling cigarettes to children under 18				
Buses, trains				
Places serving the public				
Hospitals, health centres				
Schools				
Bus stations, train stations, waiting rooms				
Cigarette advertisements				
Educational TV programming on hazards of smoking				

SMOKING SURVEY
STUDENT QUESTIONNAIRE

Dear student:

Hacettepe University, Faculty of Medicine, Public Health Department, is conducting a survey on smoking among secondary and high school students. That is why you have been given this questionnaire. Your answers are very important for the reliability of the survey results. We thank you for your cooperation and contribution.

It is necessary to take into account some points when you are filling out the questionnaire. There are a total of 18 questions on the form. All questions should be answered. Answer the multiple choice questions by circling (O) the answer that applies to you. If there are no choices provided under the question, please write your answer in the blank space provided.

Thank you.

Hacettepe University
Faculty of Medicine
Public Health Department Research Team

SMOKING SURVEY
STUDENT QUESTIONNAIRE

1. Address: City..... District:.....

2. School:.....

3. Grade:.....

4. Sex:
   1. Male
   2. Female

5. Age (in years) .....

6. Have you ever smoked or do you smoke?

   1. Yes, I smoke
   2. Yes, I quit When did you quit?.....years ago
   3. No, I have never smoked (skip to question 9)

7. How long have you smoked/did you smoke?

.....months/.....years

8. How many cigarettes do/did you smoke per day?

.....

9. Is there any law in Turkey regulating smoking?

   Have you ever heard something like that?
   1. No, I have not (skip to question 11)
   2. Yes, I have

10. This law forbids what?
    1.....
    2.....
    3.....
    4. I do not have any idea about the prohibitions of the law

A law aimed at preventing the harmful effects of smoking came into force on November 26, 1996, in Turkey. The law put some restrictions and/or prohibitions on smoking in various circumstances. We would like to know your opinion on these prohibitions.

11. According to you, is the prohibition of selling cigarettes to children under 18 acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

12. According to you, is the prohibition of smoking on trains and inter-city buses acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

13. According to you, is the prohibition of smoking in public institutions such as banks, police stations, and tax offices acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

14. According to you, is the prohibition of smoking in hospitals and health centres acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

15. According to you, is the prohibition of smoking in schools acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

16. According to you, is the prohibition of smoking in bus stations, train stations and waiting rooms acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

17. According to you, is the prohibition of cigarette advertisements acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea

18. According to you, is educational TV programming on the hazards of smoking acceptable or not?

1. Acceptable
2. Unacceptable
3. Acceptable if special conditions are provided
4. Don't know/no idea