THE MINISTRY OF HEALTH OF TURKEY

GLOBAL ADULT TOBACCO SURVEY

TURKEY REPORT - 2010

Ministry Of Health
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Preface

It is a great pleasure to have this report of the Global Adult Tobacco Survey (GATS) 2008 in Turkey. It is the product of a long, sincere effort of GATS Turkey team. This survey was designed to produce internationally comparable data on tobacco use and tobacco control measures using a standardized questionnaire, sample design, data collection and management procedures.

The Ministry of Health designated the Turkish Statistical Institute (TurkStat) as the implementing agency for the survey. I am happy that they have completed the survey within the stipulated time. In this regard, I am also grateful to the Bloomberg Philanthropies for their financial support, and to the World Health Organization and the Centers for Disease Control and Prevention (CDC), United States, for their technical assistance. I also thank to Professors Nazmi Bilir and Hilal Özcebe from Hacetepe University for their effort to prepare the report for publication.

The present Government is committed to building a “Smoke Free Turkey”, and the GATS was the first ever survey to estimate the prevalence of tobacco use in Turkey. This brings Turkey one step closer toward its goal. I trust that this report will contribute to the monitoring of the MPOWER policy package for tobacco control in Turkey.

Prof. Recep Akdağ
Minister of Health

Ankara – 2010

Tobacco is the world's leading killer, causing more than 5 million deaths each year. Experts predict that if current smoking patterns continue, smoking will kill about 10 million people every year by 2020 and 7 million of these deaths will occur in developing nations.

The Global Adult Tobacco Survey was applied in order to derive data on use of tobacco and tobacco products by adults and to compose data source for decision makers and researchers. The survey was carried out within the context of a project with the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC). The survey was realized as synchronous in 14 countries that are Bangladesh, Brazil, China, Philippines, India, Mexico, Egypt, Poland, Russian Federation, Thailand, Turkey, Ukraine, Uruguay and Vietnam. A basic questionnaire was developed for all countries in order to form a common database.

By this survey, data was derived on use of tobacco and tobacco products, exposure to tobacco smoke, desire to quit use of tobacco and information of individuals' attitudes and perceptions on media and health warnings. The results of the survey are presented to the users as Turkey, urban and rural level.

With the idea of that this publication will be beneficial for decision-makers, researchers and all other users, I would like to express my special thanks to households providing information, managers and advisors of WHO Country Office and CDC, all related institutions who gave valuable contribution and support, also Turkish Statistical Institute's staff for their self-sacrificing for this survey.

A. Ömer TOPRAK
Acting President
Turkish Statistical Institute (TurkStat)

DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service
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July 2, 2010

On behalf of the U.S. Centers for Disease Control and Prevention (CDC), I congratulate Turkey in publishing its first Global Tobacco Survey results. This report marks a milestone in Turkey's participation in the first global survey to track adult tobacco use and related trends using standardized methods. This report has a potential to further improve tobacco use prevention and control efforts in Turkey.

Turkey faces a serious tobacco epidemic. Nearly 16 million of the nation's adults are smokers. But there is promising news: the report shows that most of Turkey's adult population recognize the dangers of tobacco use and support some restrictions on tobacco.

Fighting tobacco in Turkey will require a strong commitment to the World Health Organization's MPOWER strategies. These include continuing to **M**onitor tobacco use and prevention policies; **P**rotecting people from secondhand smoke; **O**ffering help to those who want to quit; **W**arning about the dangers of tobacco; **E**nforcing bans on tobacco advertising, promotion, and sponsorship; and **R**aising taxes on cigarettes. These are proven strategies that can help avert unnecessary illness and death.

Turkey has taken bold steps in combating tobacco. It is one of the world's leaders in tobacco control legislation to protect its people from tobacco industry advertising, sponsorship and promotion. I thank the Ministry of Health and the Turkish Statistical Institute for their leadership in making the Global Adult Tobacco Survey a success. As one of the 14 countries participating in the survey, Turkey has shown a vision for saving lives and improving health. The global tobacco epidemic is predicted to kill 8 million people a year by 2030 and remains one of the biggest challenges our world faces.

The U.S. Centers for Disease Control and Prevention looks forward to ongoing collaboration with you in a mutual mission to prevent the needless toll of tobacco on your country and all countries of the world.

Samira Asma
Branch Chief
Global Tobacco Control Branch
Office on Smoking and Health
National Centers for Disease Prevention
and Health Promotion

World Health Organization

On behalf of the World Health Organization (WHO), I congratulate Turkey in publishing its first Global Adult Tobacco Survey (GATS) results. Turkey was the very first country in the world to have completed the collection of GATS data, and this report marks yet another milestone to Turkeyís strong commitment towards tobacco control and fulfilling its obligations as a signatory of the WHO Framework Convention on Tobacco Control, (FCTC) which Turkey had ratified in 2004.

This report has great potential in improving tobacco prevention and control efforts in Turkey. An alarming finding from this report is that approximately16 million adults in Turkey smoked tobacco. What this also translates into is that nearly 56 million adults are non-smokers. As this survey was conducted in late November 2008, prior to the implementation of the complete ban of smoking in public places, we see that exposure to secondhand smoke in restaurants and bars had been extreme at the time of the survey. We highly congratulate the government of Turkey in recognizing the need to protect its large non-smoking population and for taking this great initiative. Even more recently, Turkey has joined only a few countries in the European Region that have introduced pictorial warnings on cigarette packages.

The 2008 GATS results serves as a very important benchmark for the country to continue monitoring its progress in tobacco control and the impact of the recent policy measures taken to protect its people from exposure to second-hand smoke and implementation of the pictorial warning labels.

WHO is grateful for the fruitful collaboration of all partners (U.S. Centers for Disease Control and Prevention (CDC) United States, CDC Foundation, Bloomberg Philanthropies, the Turkish Statistical Institute (TurkStat) and Hacetteppe University, as well as the crucial support by the Ministry of Health. WHO looks forward to continuing working together in our mutual mission to curb the global tobacco epidemic, which is predicted to kill 8 million people a year by 2030.

Dr Maria Cristina Profili
The World Health Organization Representative in Turkey

Preface

Tobacco use is the world's leading cause of premature deaths causing more than 5 million deaths every year. In Turkey, more than 100,000 people die each year due to smoking, a number estimated to increase to 240,000 deaths by 2030. To effectively respond the crises, the Ministry of Health has undertaken a series of bold policy measures to protect its people from unnecessary disease and deaths caused by tobacco use. The first anti-tobacco law came into force in 1996 followed by Turkey becoming a party to the WHO Framework Convention for Tobacco Control (FCTC) and further expanding the provisions of the anti-tobacco law in 2008 and July 2009 respectively.

To effectively monitor the tobacco epidemic, the Global Adult Tobacco Survey (GATS) was conducted in 2008 in Turkey as a nationally representative household survey of persons 15 years of age and older using a consistent and standard protocol. The survey was implemented by the Turkish Statistical Institute in 2008 and data released in April 2009. This report provides an in-depth analysis and reviews of the findings from the survey in light of tobacco control policies and proposes recommendations for future action.

We would like to extend our gratitude and appreciation to the Ministry of Health for leading this effort, the Turkish Statistical Institute for implementing the survey, U.S Centers for Disease Control and Prevention for its technical support and the World Health Organization for coordination and support. We hope that this report will serve as a baseline on status of tobacco use and related control activities in Turkey and that it will be used to monitor future developments in tobacco control in the country by both public and policy makers.

Prof. Nazmi Bilir
Prof. Hilal Özcebe

Ankara July 2010

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Executive summary

Tobacco use is a major preventable cause of premature death and disease, presently causing over 5 million deaths each year and expected to cause over 8 million deaths yearly by 2030. Within the European Region, tobacco is responsible for approximately 1.6 million deaths. The World Health Organization (WHO) – Tobacco Free Initiative (TFI) aims to reduce the global burden of disease and death caused by tobacco, thereby protecting present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke. This will be accomplished by providing global policy leadership -- promoting the WHO Framework Convention on Tobacco Control (FCTC), as well as the MPOWER package of tobacco policies as a key entry point to the FCTC. Within the European Region, 46 countries and the European Community have ratified the Treaty. Turkey ratified the WHO FCTC in 2004.

In August 2006, the WHO and the United States Centers for Disease Control and Prevention (CDC) convened an expert consultation to discuss adult tobacco surveillance and made recommendations for the development of a standard survey protocol. The Global Adult Tobacco Survey (GATS) enables countries to collect data on key tobacco control measures in the adult population. The aim of the GATS is to collect data on tobacco use and tobacco control measures using a standardized questionnaire, sample design and data collection/management procedures among adults aged 15 years and older. Results from the GATS will assist countries in the formulation, tracking and implementation of effective tobacco control interventions, and countries will be able to compare results of their survey with results from other countries implementing the GATS.

Methods

The GATS survey was implemented in Turkey in November 2008. The sample design included all settlements in Turkey, except for villages with a population less than 200. Based on the results of the 2006 Turkey Time Use Survey, a sample of 11,200 households was made for the GATS. The sampling method of the survey is a three-staged stratified systematic cluster sample. In the first stage, a total of 400 primary sampling units (PSUs) were selected - 200 PSUs from urban areas and 200 PSUs from rural areas. In the second stage, 28 households were selected systematically within each selected PSU. In the last stage, one eligible individual aged 15 years and over was selected randomly within each selected household by using a listing from the household roster that constituted all eligible individuals by gender. The overall household response rate was 93.7%; 94.8% urban and 92.7% rural. In total, the household roster was completed in 9,322 households. The individual response rates were 97.0% overall, 97.7% urban, and 96.3% rural. In total, 9,030 persons completed the survey.

Tobacco use

A total of 31.2% of adults (approximately 16 million) aged 15 years and older were currently smoking in Turkey. Men (47.9%) were more likely to smoke tobacco than women (15.2%). Approximately 12 million men and 4 million women smoked tobacco. Almost half of men (43.8%) and 11.6% of women were current daily smokers (11 million men and 3 million women).

Over 9 in 10 current smokers smoke manufactured cigarettes (92.6% men, 98.0% women).

Almost two-thirds (66.1%) of current daily cigarette smokers consumed more than half a pack of cigarettes (11 cigarettes) per day; 15.5% consumed more than 20 cigarettes daily. On average, men consume more cigarettes per day (19.3) than women (12.2).

The minimum age for purchasing tobacco products is 18 years of age in the current legislation. Nevertheless, more than half (58.9%) of the daily smokers started smoking on daily basis before this legal age. Men (62.5%) were more likely than women (48.9%) to initiate daily smoking before age 18. The average age of initiation for men was 16.6 and women 17.8.

The number of cigarettes smoked per day, and having the first cigarette within 30 minutes after awakening were possible measures of tobacco dependency included in the GATS. Nearly half (45.4%) of the men smoke a pack a day, and one in five (17.7%) smoke more than a pack of cigarettes daily (heavy smokers), 7.6% of the women smoke more than a pack a day. Overall, 41.1% of daily smokers smoked tobacco within 30 minutes of awakening – 12.8% within 5 minutes of waking. Men (42.6%) were more likely than women (35.6%) to have their first cigarette within 30 minutes after waking.

Smoking tobacco in water pipes (2.3%) is an emerging form of tobacco use in Turkey, especially among young adults. Use of water pipe was highest for men age 15-24 (8.1%) and those living in urban areas (4.9%)

Smoking cessation

Slightly more than one fourth (26.5%) of ever daily smokers have quit smoking. Almost half (44.8%) of smokers (current and former smokers who quit in the past 12 months) made a quit attempt in the past year. However, only 15.8% of those who made a quit attempt in the past 12 months were able to successfully quit.

Approximately half (46.9%) of smokers visited a health care provider in the past 12 months Having visited a health care provider was higher among women smokers (63.9%) than men (41.0%). Nearly half (49.0%) of the smokers who visited a health care provider were asked by the provider if they smoked. Over 8 in 10 (83.1%) of those asked about their smoking status by their health care provider were advised to quit. Only 8.3% of those advised to quit were successful in their attempt to quit.

Over half (53.0%) of current cigarette smokers stated they were interested in quitting; but only 10.0% stated they planned to quit in the next month. In total, 8.4 million current cigarette smokers were interested in quitting – 6.4 million men and 2 million women.

Exposure to second hand smoking (SHS)

At the time of the GATS, November 2008, over 6 million adults (38.5%) who work indoors reported that they were exposed to SHS in indoor workplaces. An estimated 5 million men and 1 million women who work indoors were exposed to SHS at their work. Over 2.6 million (31.6%) non-smokers were exposed to SHS at their work.

For adults in Turkey, 30.5 million (59.7%) live in homes where smoking is allowed. Almost 20 million of Turkey's non smokers live in homes where smoking is allowed. Over 10 million non-smokers live in homes where someone smokes at least daily inside the home.

SHS exposure continues to be high, mostly in restaurants prior to implementation of the smoke free law. More than half of the men (57.7%) and 52.3% of the women exposed to SHS in restaurants. Despite the smoking ban that covers all public places (excluding the hospitality sector), one in six (16.5%) people were exposed to SHS while using public transportation and one in ten (11.3%) were exposed to SHS in public buildings and state offices. Six percent of the group stated that they were exposed to SHS in health care establishments.

Tobacco economics

Those who purchased manufactured cigarettes were most likely to make their most recent purchase in a shop (92.5%), followed by a kiosk (5.8%). On average, current manufactured cigarette smokers spent 86.7 Turkish Lira (TRL) on cigarettes in the past month and they purchased 31.3 cigarettes, on average, at their last purchase.

Advertising, sponsorship and promotion

Among adults in Turkey, 88.8% noticed an anti-cigarette smoking message during the past 30 days; with highest exposure on television (85.5%), followed by newspapers and magazines (46.3%), billboards (36.0%), and radio (23.0%). Those living in urban areas were more likely than those in rural areas to have noticed anti-cigarette messages in newspapers and magazines, on the radio, or on billboards.

Among current smokers of manufactured cigarettes, 95.1% noticed text health warnings on cigarette packages during the past 30 days, and almost half (46.5%) of the smokers thought about quitting because of the warning.

Although pro-cigarette marketing has been banned since 1996, 13.3% of adults in Turkey still noticed some type of pro-cigarette marketing (advertisement, sponsorship or promotion) in the past 30 days.

Advertising (7.1%) was the most common type of pro-cigarette marketing compared to promotions (5.3%) and sports sponsorship (3.3%). Advertising was highest on television (3.4%) and in shops (2.7%) compared to all other media. Cigarette promotions were highest on clothing items with a brand name or logo (2.8%) and receiving free samples (2.5%). The 15-24 age group (5.3%) was more than two times more likely than the 25 and over group (2.1%) to have a clothing item with a brand name or logo on it.

Knowledge, Attitudes, and Perceptions

Overall, 95.5% of adults believe breathing other people's smoke causes serious illness and 97.2% believe smoking causes serious illness. Of those believe smoking causes serious illness, 98.0% believe smoking causes lung cancer, 95.5% believe smoking causes heart attacks, and 83.7% believe smoking causes stroke.

Policy Implications

Turkey has alarmingly high rates of cigarette smoking - 16 million adults smoke. Smoking is the leading cause of death among men in Turkey, and Turkey has one of the highest male smoking rates in the WHO European Region.

- Adult smokers in Turkey want to quit: Over half said they wanted to quit and 45% made a quit attempt.
- Tobacco control policies measuring banning advertising, promotion and sponsorship have been successfully implemented in Turkey (we congratulate the government). Only 7% of adults are exposed to tobacco industry advertising (one of lowest in the world) (Turkey has strong penalties and they are enforced)
- Policy measures must be enforced to protect the people from the harms of tobacco and exposure to second hand smoke. The government has done a great thing in passing the law. The law must be enforced by the municipalities and other agencies at the local level.
- Smokers spend a large percentage of their income on cigarettes. Increased taxes are needed to help reduce the consumption of tobacco products in Turkey.

1. Introduction

1.1. Global Tobacco Control Policies

Tobacco use is a major preventable cause of premature death and disease, presently causing over 5 million deaths worldwide each year and expected to cause over 8 million deaths yearly by 2030[1]. Unless current trends are changed, the vast majority of these deaths are projected to occur in the developing world. The World Health Organization's (WHO) – Tobacco Free Initiative (TFI) aims to reduce the global burden of diseases and deaths caused by tobacco, thereby protecting present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke. The WHO Framework Convention on Tobacco Control (FCTC)[2] stresses the following major points:

1. The definition of "child" from the Convention on the Rights of the Child is used and includes minors under 18.
2. Smoking and problems developing as a result of smoking are considered "public health problems".
3. Special emphasis is placed on the poor and the heavier health, economic and social burden that smoking places on the poor.
4. The number of women who are smokers is increasing and gender-specific control mechanisms are necessary.
5. Cigarettes and other tobacco products cause dependence, which has been classified as a specific disease at international platforms.
6. People exposed to tobacco smoke and tobacco products need protection under tobacco control, in addition to those who consume tobacco.
7. A major comprehensive campaign against the tobacco industry is needed, empowered by implementation of the Framework Convention on Tobacco Control.
8. Sponsorships by the tobacco industry must be prevented.
9. Local cultural, social, economic, political and legal factors need to be taken into account to achieve effective tobacco control.
10. Intersectoral collaboration is needed in the fight against tobacco use.

The WHO FCTC encourages countries to adhere to its principles, and TFI supports countries in their efforts to implement comprehensive tobacco control programs through MPOWER[1]. MPOWER is a package of effective tobacco control policies in support of the implementation of the WHO FCTC. MPOWER employes six effective strategies:

Monitor tobacco use and interventions,

Protect people from tobacco smoke,

Offer help to quit tobacco use,

Warn about the dangers of tobacco,

Enforce bans on tobacco advertising, promotion and sponsorship,

Raise on taxes tobacco and develop sustainable alternatives to tobacco growing.

Monitoring the tobacco epidemic through an efficient surveillance system is one of the essential components of a comprehensive tobacco control program.

In August 2006, the WHO and the United States Centers for Disease Control and Prevention (CDC) convened an meeting of experts to discuss adult tobacco surveillance. The experts recommended that a standard survey protocol be developed for adult tobacco surveillance. The expert consultation also recognized the challenges of limited funding and methodological complexities when conducting systematic adult tobacco surveys and identified a lack of comparability in current ongoing national surveys.

The Bloomberg Initiative to Reduce Tobacco Use (BI) offered resources to fill the data gap for measuring adult tobacco use globally and to optimize the reach and results of the ongoing Global Tobacco Surveillance System (GTSS), which originally comprised three school-based surveys for youth and selected adult populations: the Global Youth Tobacco Survey (GYTS), the Global School Personnel Survey (GSPS), and the Global Health Professions Students Survey (GHPSS)[3].

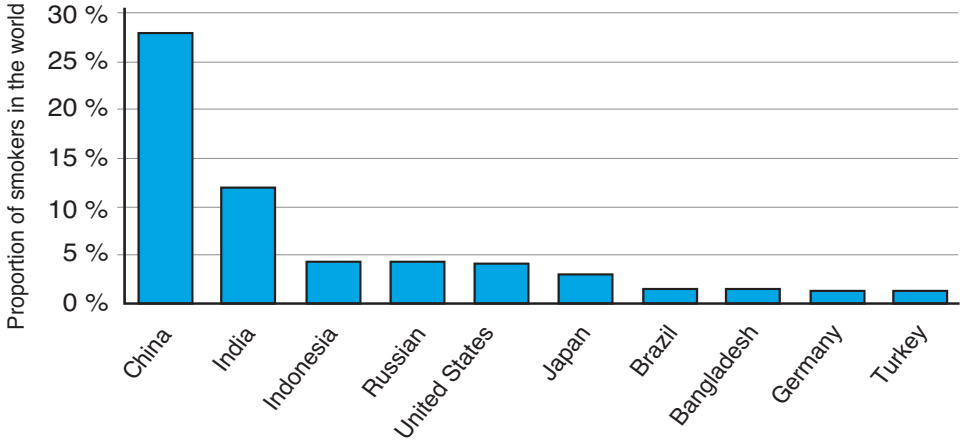
The Global Adult Tobacco Survey (GATS) is a household survey launched in February 2007 as a new component of the ongoing GTSS. The GATS will enable countries to collect data on key tobacco control measures for adult's age 15 and older. Results from the GATS will assist countries in the formulation, tracking and implementation of effective tobacco control interventions, and countries will be able to compare results of their surveys with those from other countries implementing GATS.

The GATS is being implemented initially in 14 countries where more than half of the world's smokers live and that bear the highest burden of tobacco use: Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Poland, Russian Federation, Thailand, Turkey, Ukraine, Uruguay and Vietnam.

1.2. Tobacco use in Turkey

Turkey is a tobacco-producing country. Although the total amount of tobacco produced has shown a decreasing trend during the last 15 to 20 years, Turkey is still providing some 2% of the world's total production. During the 1980's, the amount of tobacco produced annually was around 300 thousand tons, but in the early 1990's this amount began to decrease to about 135 thousand tons in 2005 and only 80 thousand tons in 2007. High rates of tobacco production in Turkey have gone hand-in-hand with high consumption rates. Turkey is among the top 10 tobacco-consuming countries in the world (Figure1.1). Presently, Turkey consumes about 2% of tobacco worldwide and 14% in the WHO European Region.

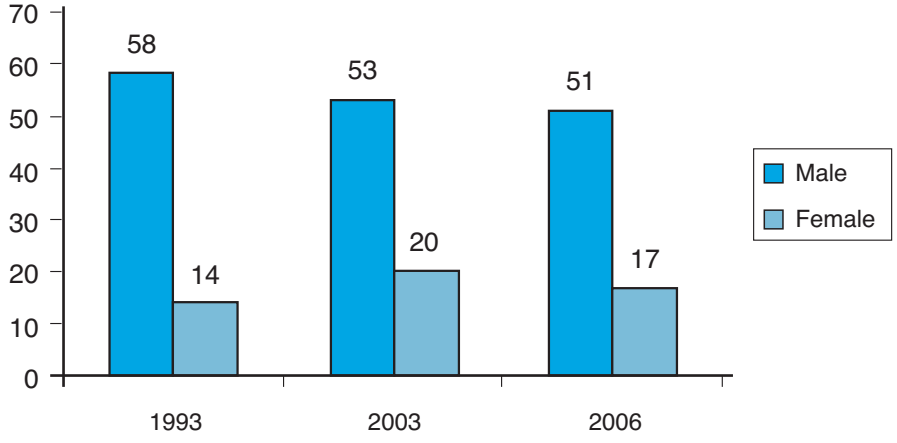
Figure 1.1. Top 10 tobacco consumer countries in the world



a. Smoking prevalence among adults

Tobacco use is quite common in Turkey. One of the first nation-wide studies of tobacco use was in 1988, based on a representative sample of adults aged 15 years or older. This study revealed that adult smoking prevalence was 44% (63% in males and 24% in females)[4]. This first survey was followed by several other studies. In the Health Services Utilization Survey done in 2003 revealed that 58% of the males and 14% of the females were smoking[5]. The National Household Survey (2003)[6] revealed that 33.8% of adults in Turkey (aged 18 years and over) were daily smokers; the rate of ever smokers was significantly higher among men (52.9%) than among women (19.5%) (Figure 1.2). Smoking was slightly more common among those living in urban areas (32.6%) than in rural areas (29.5%). Also the number of cigarettes smoked daily was higher for males (19.4 cigarettes) than females (12 cigarettes). The average age of starting smoking was 19 years. The study indicated that 52.4% of the respondents were exposed to secondhand smoke, mostly from spouses smoking (25.4%)[6]. A more recent study by the General Directorate of Family Research Organization and Turkish Statistical Institution in 2006 indicated that 33.4% of adults (18 and over) were daily smokers; the rate was significantly higher among men (50.6%) than among women (16.6%)[7].

Figure 1.2. Smoking prevalence among adults, Turkey



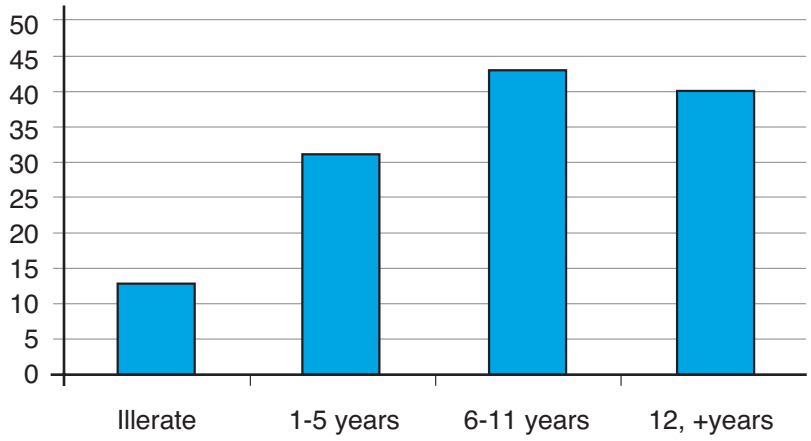
Although smoking is a major concern for the population as a whole, some population sub-groups have special roles and responsibilities regarding tobacco use, especially those who are role models, such as physicians, teachers, sports figures, artists, and politicians. Based on this premise, several surveys were performed among specific role-model groups in Turkey. A 1995 survey in Ankara found that 50.8% of teachers, 43.9% of physicians, and 34.9% of sports figures were smoking. In 1998 and 1999, two country-wide surveys covering a total of 12,500 people from various occupational groups showed that smoking prevalence ranged from 24.8% to 74.3% in different occupational groups, such as drivers, artists, policemen, teachers, physicians, journalists, parliamentarians, and religious leaders. The lowest rates belonged to religious leaders (imams) and the highest were among drivers. Prevalence was found to be higher among males, when gender breakdown was possible (Table 1.1)[8].

Table 1.1. Adult smoking prevalence among some selected groups (1995-1999)

Participants Gender (M = Males, F = Females)	Age (Mean ± SD, years)	Year	Number of Participants	Prevalence (%)
Teachers (M+F)	35.1 ± 7.9	1999	1,039	48.6
Policeman (M)	31.2 ± 7.3	1999	716	64.7
Driver (M)	36.9 ± 9.1	1999	338	74.3
Religious leader (M)	38.6 ± 10.0	1999	279	24.8
Physicians (M+F)	39.0 ± 7.8	1999	1,127	43.1
Journalists (M)	30.9 ± 7.6	1996	108	63.9
Artists (M + F)	37.7 ± 10.5	1996	130	46.2
Parliamentarians (M)	47.2 ± 8.5	1996	59	27.1
Sportsmen (M)	23.7 ± 5.4	1996	146	34.9

An interesting finding regarding smoking behavior in Turkey is its relation to educational attainment. In contrast to most developed countries, smoking is more prevalent among educated groups in Turkey. Nearly half (53%) of the secondary school graduates smoked, whereas only 13% of the illiterates smoked (Figure 1.3)[8]. Only those with university degrees had lower rates than high school graduates, but they were still higher than the illiterate group.

Figure 1.3. Smoking prevalence in adults by level of education, Turkey, 2003



b. Smoking Prevalence among Health Professionals

Given the importance of non-smoking behavior among health professionals, tobacco prevalence studies were performed in this group. These studies indicated that smoking prevalence among medical professionals was quite similar to that of the general population. A pioneering 1988 study showed that almost half of physicians (41% to 50%) and nurses/midwives (50.8%), and more than half of health technicians (54.2%) and dentists (68.2%) were smoking[8]. Female professionals smoked slightly less (34.4 %) than their male counterparts (47.8%) among all health professionals (Table 1.2).

In 2007 Marakoğlu et.al. examined the frequency of smoking among physicians working at the Faculty of Medicine of Meram University of Selçuk (n=500)[9]. The rate of ever-smokers was 28.7% (13.4% in

females and 35.6% in males); the rate of ex-smokers was 9.9%, and the prevalence of never-smokers was 61.4%. The mean age at starting smoking was 21.7, ± 4.9 years. The rate of smoking by family members (p=0.003) and close friends (p<0.001) was higher among smokers than among non-smokers.

In 2008, a collaborative study, which included WHO, CDC, the Turkish Ministry of Health and the Turkish Society of Public Health Specialists (HASUDER), examined the frequency of smoking among health professionals working at health care institutions in the Turkish Ministry of Health (MoH)[10]. Based on a representative sample of 4,761 health professionals, current smoking prevalence was found to be 30.5% in general practitioners, 22.1% in specialists, 29.5% in nurses and midwives, and 33.8% in health technicians (Table 1.2).

Table 1.2. Smoking prevalence among health professionals, Turkey

	Never Smokers		Former Smokers		Occasional Smoker		Regular smoker		Total	
	N	%	N	%	N	%	N	%	N	%
Practitioner (GP)	190	29.2	97	14.9	165	25.4	198	30.5	650	100.0
Specialist	173	27.4	124	19.6	196	30.9	140	22.1	633	100.0
Dentist and Pharmacist	206	28.7	120	16.7	205	28.5	188	26.1	719	100.0
Nurse and Midwife	445	32.3	212	15.4	315	22.8	406	29.5	1,378	100.0
Health Technician	168	23.9	103	14.6	195	27.7	239	33.8	705	100.0

c. Smoking prevalence among adolescents

Adolescence is a vulnerable period for initiation of smoking, and thus adolescents are the major target group for the tobacco industry. A number of studies have looked at the smoking behavior of adolescents, mostly among high shool and university students[8]. Smoking prevalence has been found to be 0.9%-9.1% for seventh graders and 15.9%-41.2% for tenth grade students[8].

The large variation in smoking rates, particularly among high school students, could be partially explained by differences in data collection practices and/or definitions/indices used. Nevertheless, smoking is quite common among adolescents, and the “peer effect” on initiation of smoking is of crucial importance in this age group.

Akpinar et al. (2006) investigated smoking prevalence and its determinants among fourth- and fifth-year students at Cukurova University in Southern Turkey[11]. Among 2200 participants, smoking prevalence was quite high and increased with age (ranging from 26.6% to 43.7%). The smoking behavior of “best friends” was the most powerful determinant of smoking and this was consistent across age groups. Best friends’ attitudes towards smoking and family members’ smoking behavior were also important determinants of smoking.

Two nationwide studies were conducted among adolescents in Turkey in 2003 and 2004. One study, which included 6,012 schoolchildren aged 13-17 in 15 cities throughout the country, found smoking prevalence to be 13.3%[12]. The other study, the 2003 Global Youth Tobacco Survey, (GYTS), covered about 16,000 students aged 13-15[13]. The 2003 GYTS includes data on smoking prevalence among young people and adolescents’ knowledge about and attitudes towards tobacco use.

Almost 3 in 10 (26.3%) students in Turkey had ever smoked cigarettes, with a significantly higher rate in boys (31.7%) than in girls (19.7%) . Of ever-smokers, 30.7% initiated smoking before the age of 10,

with a significantly higher rate among boys (34.9%) than girls (23.7%). Overall, 6.9% of students stated that they currently smoked cigarettes, again with a significantly higher rate among boys (9.4%) than girls (3.5%). Overall, 3.4% of students currently used tobacco products other than cigarettes; the rate for boys (4.4%) was about 3 times the rate for girls (1.5%). Over 1 out of 10 (13.1%) currently smoking students reported they "felt like having a cigarette first thing in the morning" (suggesting tobacco dependency). Among never smokers, 7.0% indicated that they were liable to initiate smoking during the next year (8.2% of boys and 5.3% of girls)[13].

Among students who currently smoked cigarettes in Turkey, over 6 in 10 (65.3%) reported that they "wanted to stop smoking now"; 61.4% stated that they had "tried to stop smoking during the past year but failed"; and 71.5% reported that they "had received help to stop smoking". Among current smokers, boys were significantly more likely than girls to have tried to stop smoking or to have ever received help to stop smoking[13].

Over 3 in 10 students in Turkey reported that they had seen advertisements for cigarettes on billboards during the month prior to the survey. About 28% reported that they had seen advertisements for cigarettes in newspapers or magazines in the month prior to the survey. Boys (29.9%) were significantly more likely than girls (25.1%) to be exposed to pro-tobacco advertising in newspapers and magazines. Approximately 1 in 10 reported that they had an object (e.g., hat, t-shirt, pen, backpack) with a cigarette brand logo on it. Boys (12.4%) were significantly more likely than girls (6.7%) to own such an object[13].

Almost half (46.5%) of current smokers reported that they "usually" bought their tobacco from a store. Current smokers who usually bought their cigarettes from a store were asked if they had ever been refused purchase because of their young age. Almost 9 in 10 reported they had never been refused. It is important to note that all study participants were 15 years old or younger (i.e., minors) and thus were not allowed by law to purchase tobacco. Students were asked if they had been offered "free" cigarettes by any tobacco company representative at any time. Overall, 7.6% of students had been offered "free" cigarettes, with a significantly higher rate for boys (9.1% vs. 5.6% for girls). Students were also asked if during the past school year they had been taught about the dangers of tobacco in class, discussed the reasons "why young people smoke", or been taught about the effects of tobacco on their health. Half of the students reported that they had been taught about the dangers of tobacco; only 21.1% had discussed the reasons why young people use tobacco and 40.1% had been taught about the effects of tobacco on their health[13].

The GYTS was repeated in 2009 in Turkey[14]. The study used a two-stage cluster sampling method. Data were collected from 5,045 students, mainly aged 13–15 years, at 69 schools in 27 provinces. Data collection was carried out using an internationally standardized questionnaire. The first results of this second survey indicated that smoking was increasing among adolescents.

Table 1.3. Global Youth Tobacco Survey, Turkey, 2003 and 2009

Prevalence	2003			2009 **		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
Ever smoker	31.7	19.7	26.3	32.5	25.4	29.6
Started smoking before age 10	34.9	23.7	30.7	31.6	31.7	30.5
Current smoker	9.4	3.5	6.9	10.2	5.3	8.4
Think of starting next year	8.2	5.3	7.0	10.6	9.8	10.2

According to the 2009 GYTS, 8.4% of students were smokers (10.2% of males and 5.3% of females). These figures showed that the prevalance or incidence of smoking of adolescents had increased among adolescents, especially among girls. Among never smokers, 7.0% indicated that they were liable to initiate smoking during the next year (8.2% of boys and 5.3% of girls) in 2003; the percentage of those thinking of starting smoking during the next year were much higher in 2009, especially among girls (Table 1.3)[13-14].

Various small-scale cross-sectional studies conducted among youth of different ages and regions have indicated that the rates of ever-smokers ranged from 0.7% to 21.1% among girls and from 1.1% to 52.4% among boys. The main results of the studies among Turkish students and adolescents are presented in Table 1.4.

Some studies were also conducted among university students, including medical school students[15]. Smoking prevalence among university students ranged between 7.8% and 58.0%. Among university students, smoking prevalence was much lower among first-year students and increased as the years passed.

Table 1.4. Smoking prevalence among high school students and university students

Year	Place	Participants (M= Males, F= Females)	No. of participants	Prevalence (%)
Primary and High School Students				
1997	Turkey, 17 provinces, schools	13-15 (7th class) M+F	1,455	2.1
1997	Turkey, 17 provinces, schools	15-17 (10th class) M+F	1,318	16.3
1999	Turkey, 17 provinces, schools	13-15 (7th class) M+F	1,672	0.9
1999	Turkey, 17 provinces, schools	15-17 (10th class) M+F	1,466	14.8
2004	Turkey, 15 cities, schools	13-17 M+F	6,012	13.3
University Students				
2005	Hacettepe University Medical school	University students (first and third year)	2.588	25.7
2000	Faculty of Literature, Hacettepe University	1-4 classes	First year 143 Second year 147 Third year 131 Fourth year 200	First year 29.4 Second year 35.4 Third year 46.8 Fourth year 58.0
2006	Faculty of Medicine Hacettepe University	1-5 classes	First year 98 Second year 129 Third year 112 Fourth year 106 Fifth year 135	First year 10.2 Second year 7.8 Third year 8.9 Fourth year 10.4 Fifth year 10.4

Similar to the adult population, cigarettes are the most commonly used tobacco product in younger groups. Recently, “nargile” (water pipe) use, a long forgotten tradition of elderly men in Turkey, has been surprisingly regenerated and marketed to youth and women. The exact prevalence of nargile use is not known, but observations point to increasing use, particularly among adolescents and young adults. More importantly, most nargile users are not aware of the health hazards. In a study carried out in Ankara involving 273 nargile users aged 14-44 years (55% were 18-24 years old) in 2004, 27.1% were not aware of any health hazards, and 18.3% stated it was not harmful to their health at all[16]. Of those study participants, 27.9% reported that they did not smoke cigarettes - only nargile, suggesting that nargile use threatens the public’s health in Turkey as a new tobacco product, and its health hazards should be emphasized more in national tobacco control activities.

d. Passive exposure to secondhand smoke (SHS)

Passive exposure to tobacco smoke is an important issue in Turkey, however there are inadequate data on the prevalence of passive smoking and further studies are clearly warranted. Based on several studies performed in different cities, in 59.9% to 81.5% of homes at least one family member smoked, mostly fathers. In one study, about 90% of the smokers in different occupational groups indicated that they smoked at home, 60% to 95% smoked at work, and 50% to 85% smoked in the presence of their children[8].

In the 2003 GYTS, over 8 in 10 students in Turkey reported that they were exposed to SHS produced by others in their homes (81.6%) and in public places (85.9%)[13]. Despite the fact that exposure to SHS is quite common in Turkey, it is not easy to measure the level of exposure accurately due to methodological difficulties, such as inaccuracy of self reports or unavailability of cotinine measurements at all settings.

A study of passive smoking among 188 school children, based on parental self-reports, which were compared and contrasted with SHS exposure rates based on urinary cotinine levels. Parental self-reports indicated that 72.3% of children came from households with smokers, and 34.6% experienced daily exposure to SHS. When urine cotinine levels of >10 ng/mL were used as the indicator of exposure, 76% of the children were identified as SHS- exposed. Study results suggested that levels of SHS exposure in children cannot be reliably estimated based on parental reports and should be verified by biological markers[17].

Another study examined the SHS exposure status of primary school students in grades 3 to 5 (aged 9-11 years) attending 347 primary schools, using self-reports and further verified with data from urinary cotinine tests[18]. According to questionnaire data, 59.9% of the study group (208 of 347) was exposed to SHS. Urinary cotinine measurements of children were highly consistent with self-reported exposure levels ($p > 0.001$). A similar cross-sectional study of 131 children aged 9-12 years old, examined urinary cotinine levels compared to parental self-reported smoking behavior, and investigated the effects of passive smoking on pulmonary function and respiratory health in these children[19]. In contrast, this study suggested that the reliability of the declarations of the parents in the estimating SHS exposure of children was quite low.

Urinary cotinine levels among pregnant women who agreed to a follow-up examination in a maternal hospital in Ankara (n=89) were examined in a recent study[20]. When interviewed about their smoking behavior, 19% of pregnant women said they smoked and 74% of pregnant women said they were exposed to secondhand smoke during their pregnancy (n=176). The same study examined urinary cotinine levels of women who believed that they were exposed to SHS (n=45) and women who believed that they were not exposed to SHS (n=44). The average urinary cotinin level of the pregnant women exposed to SHS was 64 ng/ml, while it was 25.9 ng/ml for pregnant women who said they had not been exposed to SHS. In Turkey, the prevalence of SHS exposure was more common than expected.

2.3. Tobacco-related health problems

There are no nationwide morbidity figures in Turkey attributed to tobacco smoking specifically. Nevertheless, disability-adjusted life years (DALY) were calculated for some diseases and some risk factors in 2000[6]. Perinatal conditions took first place with 8.9%, ischaemic heart disease was in second place at 8.0%, and cerebrovascular disease ranked third with 5.9%, in all age groups. As seen in Table 1.5, ischaemic heart disease (8.9%) was the first cause for males, and perinatal conditions (8.9%) was the first for females. The second cause for males was perinatal conditions at 8.8% and for females it was ischaemic heart disease at 6.9%. The third cause for both genders was cerebrovascular disease, with 6.3% for males and 5.5% for females.

Table 1.5. Percentage distribution of the first 20 diseases causing DALY by gender at national level in Turkey, (NBD-CE Project, 2000,Turkey)6

Males	%	Females	%
Ischaemic heart disease	8.9	Perinatal conditions	8.9
Perinatal conditions	8.8	Ischaemic heart disease	6.9
Cerebrovascular disease	6.3	Cerebrovascular disease	5.5
Lower respiratory infections	3.8	Unipolar depressive disorders	5.4
Road traffic accidents	3.3	Iron deficiency anemia	3.8
Congenital anomalies	3.1	Lower respiratory infections	3.7
COPD	3.0	Osteoarthritis	2.9
Osteoarthritis	2.9	Congenital anomalies	2.8
Unipolar depressive disorders	2.6	COPD	2.6
Diarrhoeal diseases	2.1	Maternal conditions	2.5
Trachea, bronchus and lung cancer	1.9	Diabetes mellitus	2.1
Alcohol use disorder	1.8	Diarrhoeal diseases	2.0
Hearing loss, adult onset	1.7	Hearing loss, adult onset	1.7
Diabetes mellitus	1.6	Road traffic accidents	1.5
Violence	1.4	Breast cancer	1.3
Inflammatory heart disease	1.3	Rheumatoid arthritis	1.3
Asthma	1.3	Hypertensive heart disease	1.2
Tuberculosis	1.2	Rheumativ heart disease	1.2
Leokemia	1.1	Asthma	1.2
Schizophremia	1.0	Migraine	1.2

In addition to knowing which diseases are causing death, risk factors that impact the burden of disease must also be understood in order to determine strategies for improving population health levels.

Table 1.6. Prevention of deaths, YLLs and DALYs through the prevention of selected risk factors for Turkey overall (NBD-CE Project, 2000, Turkey)

Prevented Deaths	Male	Female	Both
Risk factor			
High blood pressure	47,643	60,825	108,468
High BMI (>30)	26,006	31,136	57,143
Smoking	52,905	1,794	54,699
High cholesterol	26,487	22,542	49,029
Physical inactivity	22,515	22,605	45,120
Low fruit and vegetable intake	21,668	17,066	38,734
Alcohol use	10,850	2,585	13,435
Water and sanitaton	2,807	2,812	5,619
Prevented YLLs			
High blood pressure	384,659	413,694	798,353
High BMI (>30)	278,008	281,024	559,032
Smoking	573,573	23,110	596,684
High cholesterol	306,362	186,079	492,441
Physical inactivity	212,190	172,633	384,823
Low fruit and vegetable intake	223,356	141,241	364,597
Alcohol use	165,550	38,231	203,781
Water and sanitaton	84,668	79,016	163,683
Prevented DALYs			
High blood pressure	443,788	485,162	928,950
High BMI (>30)	379,980	407,203	787,183
Smoking	870,603	61,306	931,909
High cholesterol	345,993	220,688	566,681
Physical inactivity	254,555	210,072	464,627
Low fruit and vegetable intake	250,660	166,216	416,876
Alcohol use	388,526	73,492	462,018
Water and sanitaton	94,401	88,381	182,781

As seen in Table 1.6, prevention of smoking would prevent 54,699 deaths, 52,905 in males and 1794 in females. The main finding from this study was that smoking was the most important risk factor for preventable deaths, YLLs and DALYs in Turkey.

Approximately 928,950 DALYs could be prevented through reduction of high systolic blood pressure, 931,909 DALYs by preventing smoking, 787,183 DALYs by reducing obesity, 566,681 DALYs through prevention of high cholesterol, 464,627 DALYs by increasing physical activity, 462,018 DALYs by reducing alcohol consumption, 416,876 DALYs through increased fruit and vegetable consumption, and 182,781 DALYs by improving water and sanitation conditions.

The 2003 National Burden of Disease study[6] revealed that 8.6 percent of total DALY's (Disability Adjusted Life Years) were attributable to diseases related to smoking. The attributable fractions were15.4 percent for males and 1.2 percent for females. Cardiovascular diseases, chronic obstructive pulmonary diseases (COPD) and lung cancer constituted the major proportion (Table 1.7).

Table 1.7. Burden of diseases attributed to tobacco smoking

Disease	Attributed Deaths	Attributed YLL	Attributed DALYs	Proportion of Attributed DALYs
Cardiovascular diseases	21,317	274,770	321,237	3.0
COPD	12,902	72,689	150,406	1.4
Lung cancer	10,510	107,075	112,634	1.0
Other cancers	4,681	58,756	62,302	0.6
Other respiratory diseases	2,105	33,387	58,377	0.5
Other "selected" diseases	3,185	50,006	226,953	2.1
All "selected" diseases	54,699	596,684	931,909	8.6

Another important source of information about tobacco-related morbidity is the considerable increase in hospital admissions for selected diseases[21]. Lung cancer has shown the most rapidly increasing trend during last 40 years. Between 1964 and 2004, the number of hospital admissions due to lung cancer increased by a factor of 45, from little more than 1,200 cases in 1964, to over 50,000 in 2004. During the same period, the population increased only by a factor of 2.5. Although repeat hospitalizations of the same patients were included the figures, the increase was still quite considerable, and was more prominent during the last 10-year period. While not as large as lung cancer, similar increases were seen in COPD and cardiovascular diseases during the same period.

Currently available data do not allow accurate estimates of tobacco-related mortality in Turkey. Nevertheless, the leading causes of death are cardiovascular diseases, cancers, pulmonary diseases and cerebrovascular diseases (responsible for over half of all deaths), and tobacco smoking is the major risk factor for these diseases[6]. More than 90,000 people died from cardiovascular diseases and nearly 30,000 from malignancies in provincial and district centers in 2005. Of these 120,000 deaths, 50,000 could be attributed to tobacco smoking. When other tobacco-related health problems are considered, the estimated number of people killed by tobacco smoking could be about 100,000[21].

4.4. Tobacco Control Program in Turkey

Although tobacco control in Turkey has a long history, the official milestone was the anti-tobacco law, which entered into force in 1996[22]. With this law, many achievements have been realized, including:

a. Ban on selling tobacco to people under the age of 18 (children),

b. Ban on all kinds of tobacco promotion and advertisements, such as TV, newspaper advertising, movies, billboards, etc.

c. Importation of vending machines into the country, which were very popular abroad.

d. Compulsory informing of consumers via messages on cigarette packs saying “cigarette is dangerous to your health”.

e. Public education against smoking via television required by law.

f. Ban on smoking in public transportation. This was one of the major success stories of the law, since it helped to internalize “non-smoking” and “smoke-free” norms among the Turkish population. Today, the younger generation cannot imagine smoking on public transportation.

Concurrently, the need for an international strategy to prevent smoking was growing due to the global influence of the tobacco industry. The growing health consequences of tobacco use pushed the WHO to prioritize tobacco use as the most threatening public health problem in the world. This movement culminated in the adoption of the WHO FCTC by the World Health Assembly in May 2003[2]. This was the first globally binding public health treaty, and as such is crucially important for international action against the tobacco epidemic and for global public health in general.

Article 3 of the WHO FCTC declares that the objective is to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke. The WHO FCTC measures would be implemented by the participating parties at the national, regional and international levels in order to reduce the prevalence of tobacco use and exposure to tobacco smoke, continually and substantially. The WHO FCTC was signed by the Turkish Minister of Health on 28 April 2004, adopted on 25 November 2004, and put into force in Turkey on 27 February 2005.

After Turkey ratified the WHO FCTC, national work on tobacco control moved forward. The National Tobacco Control Program and Action Plan (2008-2012) is a well-written guide based on the efforts of over 100 professionals from governmental and non-governmental organizations, organized by Ministry of Health[23]. Essential elements of the Action Plan are listed below:

1. Measures to reduce the demand for tobacco products
    1. Public information-education
    2. Smoking cessation
    3. Pricing and taxation
    4. Environmental tobacco smoke
    5. Advertising, promotion and sponsorship
    6. Product control and consumer information
2. Measures to reduce the supply of tobacco products
    1. Illicit trade
    2. Accessibility to young people
    3. Tobacco production and alternative policies
3. Monitoring, evaluation and reporting tobacco use, and the national tobacco control program

A major achievement was the revision of the anti-tobacco law, aimed mainly at the prevention of youth smoking and exposure to environmental tobacco smoke[24]. Smoke-free environments are accepted as a very effective tobacco control policy because they make it easier for smokers to cut down (or quit) and reduce smoking initiation. Laws creating smoke-free environments are strongly supported by the public, with high compliance when properly implemented. In Turkey the new legislation entered into force in January 2008 in two phases. The first phase started in May 2008, excluding smoking in bars, restaurants, cafes, and traditional coffee houses. Since July 2009, Turkey has been totally smoke-free in public places, including previous exceptions. The law basically aims to protect the public from exposure to tobacco smoke in the following places:

1. Indoor public workplaces,
2. Indoor education, health, marketing, social, cultural, sports, and entertainment sector buildings,
3. Public transport, including commercial taxis,
4. Indoor and outdoor public and private education buildings,
5. Restaurants, bars, cafes, and traditional coffee houses.

With this legislation, Turkey became one of the first six countries in the world (UK, Ireland, New Zealand, Uruguay, Bermuda, and Turkey) with such a powerful anti-tobacco law.

Since July 2009, national and local authorities have been working on implementation of the law. Early results from scientific studies look very promising in many aspects. Indoor air quality has begun to improve, compliance with the law has been increasing day by day, and there is currently strong public support. These achievements were the result of strong collaboration between governmental bodies and non-governmental organizations (NGO)s. The National Coalition on Tobacco OR Health (NCoToH; SSUK), with its more than 40 member organizations, has been very active since its establishment in 1995. Grassroots movements at the local level, like many volunteer members in the NCoToH, have worked hard at the local, national and international levels. For almost 15 years, the NCoToH and its members have organized seminars, regular meetings, public announcements, official visits, congresses, conferences, and press conferences. Lobbying is a major and very successful mission for the NCoToH. Many scientists have taken an active role in these activities with their evidence-based research backgrounds and they have continuously produced scientific data to help push the movement even further.

At the local (provincial) level, the Provincial Tobacco Control Boards (PTCB) have led anti-tobacco activities. The anti-tobacco law mandates the establishment of PTCBs, led by the Governor with organizational and administrative support from the Health Directorate. The PTCB is expected to monitor and organize the implementation of the anti-tobacco law at the province level. In each province, the PTCB has an executive board with representation from other member organizations. It has an official directive that guides their work plans and must be approved by the Provincial Health Protection Board. The Provincial Inspection Team (PIT) was established as a sub-unit of the PTCB. PITs comprise the field inspectors who are responsible for monitoring implementation of the law in the province. PIT members regularly take standardized training courses in each province. The Ministry of Health also supports the PTCBs and PITs via various training activities and regular meetings for solving common problems and barriers to implementation of law. In March 2009, the Ministry of Health published guidelines for routine inspection of the process and program by the PIT[21].

2. Methodology

2.1. Study population

Coverage

All settlements in Turkey were covered in the sample selection, except for villages with populations less than 200. These small villages were not included in the survey because they had too few households to attain a sufficient block size. All persons aged 15 and over living in private households in Turkey were covered. Residents of schools, dormitories, hotels, kindergartens, rest homes for the elderly, hospitals and prisons, military barracks and recreation quarters for officers were not included.

Estimation level

The sample size was calculated according to the requirements of GATS Sample Design Manual (at least 8,000 completed respondent questionnaires, with 2,000 each for urban men and women, and rural men and women). Based on the results of the 2006 Turkey Time Use Survey, a sample of 11,200 households was used for GATS. Non-response was taken into account when calculating the sample size, thus GATS did not allow substitution for households or individuals.

2.2. Sampling design

Sampling method: The sampling method of the survey was a three-stage, stratified systematic cluster sampling method (see Appendix A: Sample Design for details).

In the first stage, 200 clusters from urban areas and 200 clusters from rural areas were selected, a total of 400 clusters (Primary Sampling Units (PSU)). For urban areas and rural areas with organized municipalities, the selection was done to yield a PSU size of approximately 300 addresses. These were selected with equal probability using a systematic sampling method. Of the 200 rural PSU, 104 PSU had organized municipalities and were selected using the systematic sampling method. The remaining 96 rural PSU were composed of villages selected by using PPS (probability proportional to size). Since population size was small, each village constituted a PSU.

In the second stage, 28 households were selected systematically within each selected PSU. The 28 households were divided randomly into two groups: 14 'men households' and 14 'women households'.

In the last stage, one eligible individual aged 15 years old or older was selected randomly via IPAQ from each selected household, using a roster of all eligible members of the household by gender.

Data collection

The GATS was applied to the selected 11,200 households throughout the country and results are shown in Table 2.1. The overall household response rate was 88.0%; 89.3% urban and 86.7% rural. The household roster was completed in a total of 9,322 households. From those 9,322 households, 9,030 individual interviews were completed – 4,584 urban and 4,446 rural. The individual response rates were 97.0% overall, 97.7% urban, and 96.3% rural. Fieldwork took place in November 2008.

Weighting:

Weighting is a method used to obtain parameters from the data set resulting from sampling so as to represent the universe. A three-step weighting procedure was used in accordance with the GATS Sample Weights Manual.

First stage of weighting: Base weights were calculated, which were inversely proportional to the overall selection probabilities for each sample respondent. Calculations at this stage included probabilities for the selection of PSU, households, and eligible individuals. Base weights were calculated using these probabilities, based on household and individual.

Second stage of weighting: In the second stage, base weights were adjusted to compensate for losses in the sample outcome due to non-response. In this stage, household-level non-response adjustment was made by using un-weighted data on the PSU base; individual-level non-response adjustment was made by using weighted data on eight cells, which took into account rural/urban, gender and tobacco use.

The household-level non-response adjustment was made by applying the following household-level response rate calculation formula, based on each PSU:

Household-Level Response Rate = (I+P) / [(I+P) + (R+NC+O) + (UH+UO)].

Where,

I = The number of fully completed households

P = The number of partially completed households

R = The number of refusals

NC = The number of non contacts

O = Any other reason for not obtaining household data from eligible households

UH = Households with unknown eligibility

UO = Any other reason for not obtaining household data from units with unknown eligibility

Household-level adjustment values were then calculated by using 1/(Household-Level Response Rate) for each PSU.

The individual-level non-response adjustment was made by applying the following individual-level response rate calculating formula to eight weighting classifications, which took into account rural/urban, gender and tobacco use, as determined by the household rosters:

Individual-Level Response Rate = (I+P) / [(I+P) + (R+NC+O) + (UH+UO)].

Individual-level adjustment values were then calculated by using 1/(Individual-Level Response Rate) for each weighting classification.

Final stage of weighting: In the final stage of weighting, calibration adjustments were carried out on weighted data to adjust weights to known population totals, using the “raking ratio method”. The variables used for calibration were age groups, the non-institutional projected population age 15 and older as of 15 November 2008, gender, rural/urban and *Nomenclature of Units for Territorial Statistics* ((NUTS)-Level 1). First, an adjustment was done on NUTS-Level 1 and rural/urban bases. Second, an adjustment was done on rural/urban, age groups and gender bases; a third adjustment was done on the NUTS-Level 1 and rural/urban bases; and there was a fourth adjustment on the gender base. Finally, weights were adjusted to the age 15 and older non-institutional population as of 15 November 2008. Thus, final weights were obtained. Education was not included as that population information was not available.

Assuring the quality of the weights

After the completion of weighting procedures, the multiplicative effect (Meff), which indicates whether there is a need to adjust the weights for minimum and maximum extreme values, was calculated. The multiplicative effect formula is defined in the GATS Sample Weights Manual as follows:

$$Meff_w = 1 + \frac{s_w^2}{\overline{w}^2}$$

where s_w^2 is variance of the weight, and $\overline{w}$ is the mean of the weights. Meff was found to be 1.5, using this formula. This value was within normal limits and less than the predicted maximum value of 2.0, so there was no need for any extreme value adjustment of calculated weights.

Producing the Estimates

All tables were created using weighted values. Standard error calculations, developed by SAS, were done based on desirable variables and are given with the confidence intervals in the tables. SAS codes were prepared by the GATS Committee. Standard error calculations were made by using the module in SAS/STAT 9.1(see Appendix B: Variance Estimation for details).

2.3. Questionnaire

The GATS Turkey questionnaire consisted of eight (8) sections. A general description of each section is described below (the full questionnaire is provided in Appendix C):

- **Background characteristics:** Gender, age, education, work status, possession of household items.
- **Tobacco smoking:** Patterns of use (daily consumption, less than daily consumption, not at all), former/past tobacco consumption, age of initiation of daily smoking, consumption of different tobacco products, (cigarettes, pipes, cigars and other smoked tobacco), nicotine dependence, frequency of quit attempts.
- **Smokeless tobacco:** Patterns of use (daily consumption, less than daily consumption, not at all), former/past use of smokeless tobacco, age of initiation of daily use of smokeless tobacco, consumption of different smokeless tobacco products (snuff, chewing tobacco, betel quid, etc.), nicotine dependence, frequency of quit attempts.
- **Cessation:** Advice to quit smoking by health care provider, method used to try to stop smoking. Similar questions were included about cessation of smokeless tobacco use as well.
- **Secondhand smoke (SHS):** Smoking allowed in the home; exposure to SHS at home; indoor smoking policy at the workplace; exposure in last 30 days in: workplace, government buildings/offices, health care facilities, restaurants, public transportation. There were some additional optional items on exposure that included schools, universities, private workplaces, bars, night clubs, etc., as well as knowledge about serious illness in non-smokers due to SHS.
- **Economics:** Type of tobacco product and quantity bought, cost of tobacco product (s), brand and type of product purchased, and source of tobacco products.
- **Media:** Exposure to tobacco advertising on television, radio, billboards, posters, newspapers/ magazines, cinema, Internet, public transportation, public walls, and others; exposure to sporting events connected with tobacco; exposure to music, theatre, art or fashion events connected with tobacco; exposure to tobacco promotion activities; reaction to health warning labels on cigarette

packages; and exposure to anti-tobacco advertising and information. Similar questions were included for smokeless tobacco as well. The reference period for the questions in this section was 30 days.

- **Knowledge, attitudes and perceptions:** Knowledge about the health effects of both smoking and smokeless tobacco.

2.4. Data collection

Trainings of staff for field application and pilot sStudies

Prior to the main field study, a two-step pilot test was planned. The first step was to check for the understandability of the questions, translation problems (if any), the appropriateness of the flow of the questions, and properness of the skip patterns on a number of individuals residing in rural and urban settings. The pre-test was conducted on 121 individuals residing in Ankara in August 2008. Following the pre-test field study, an evaluation meeting was held at TurkStat in August and each interviewer explained any problems faced in the field, detailed the issues regarding the understandability of the questions, and suggested alternative question styles. At the beginning of September, the second phase of the pilot study was conducted. The training of pilot study was completed at the end of August. The training course aimed to introduce the participants to the following subjects:

- Tobacco-related activities, legislation and working groups in Turkey
- The major health hazards of tobacco use and passive exposure to tobacco smoke
- International organizations and studies evaluating tobacco use
- The Global Tobacco Surveillance System and the GATS
- GATS partners at the national and international level
- TurkStat's responsibilities on the project and future steps
- The GATS questionnaire (in detail)
- Technical explanations of handheld devices (IPAQ) and how to use them for GATS

Following the training program in Ankara and during the first week of September, TurkState Regional Office staff members implemented the pilot field study using both IPAQ and paper questionnaires. A pilot study evaluation meeting was held in Ankara on September 11 and 12, 2008. The main objectives of the meeting were to get feedback concerning i) effectiveness of the training in regional offices, ii) the questionnaire design in general, iii) content and usability of the field manuals, and iv) IPAQ use.

After the pilot study evaluation meeting, GATS representatives, national tobacco control experts and TurkStat staff met to review the GATS process in Turkey and evaluate the results of the pretest and pilot testing. The participants also discussed technical issues regarding sampling and IPAQ use, and how to improve the field organizational scheme for the main field application to be held in November 2008.

Before the main survey began, there was training of trainers and all related participants for a total of six days in all 26 regional offices of TurkStat. The training included the following topics:

- Technical explanations on IPAQ and important points
- General overview of IPAQs (parts of the IPAQ, care of the IPAQ, charging and changing batteries, questions and answers about equipment)

- Using the keyboard
- Checking date and time
- Introduction of Case Management Systems
- Entering responses
- Household and Individual Questionnaire (using rosters)
- Range errors, validation checks
- Data management and aggregation
- Case transfer between IPAQs
- Creating case files
- Loading case files to IPAQs
- The purpose of GATS and future activities

Tobacco control programs in Turkey and the rest of the world:

- Tobacco use and its harmful effects, tobacco control practices and surveys
- Sampling plans
- Detailed explanations of the GATS questionnaire
- IPAQ data-entering program and practices
- Explanation of the organization of field applications
- Issues related to reporting and data transmission.

Field study

Controllers monitored the field work to check the interviewers' surveys and collected the surveys into notebooks. This was part of quality control. If the selected household member was not available during the first visit, second or third visits were made. The field work was carried out for nearly 30 days. The TurkStat central office requested regular reports each Monday on how the field work was proceeding, until the work was completed. The field study was completed December 5th, 2008 in all TurkStat Regional Offices.

2.5. Statistical analysis

Data entry was completed using the IPAQs in regional offices. Also data consistency analysis was carried out using SAS programs, which were developed with SAS 9.1.3 and Enterprise Guide 3.1, by the Training Assistance Team, Databases Group of the ICT Department. With the SAS program used in regional offices:

- CSV text files, which are formed according to the IPAQ serial numbers used during the data entry period, were integrated and transformed into SAS data sets
- The data consistency analysis program was run and error lists were acquired.

This work in regional offices allowed erroneous records be detected on the spot and corrected, and this work was continued until all erroneous records had been removed.

Error-free data were sent to the central office in a CSV format. All the data were integrated and transformed to SAS data sets. The results were compared to the household information collected by Household Survey Methods Team.

Consistency between the two data sets was analyzed by the Sampling-Quality Techniques Group, Methodology Department. A sample data set to control the quality of the data was gathered by the SAS program, using criteria determined by the Quality Control Group. However, the SAS analysis and reporting program was developed for the Health and Work Safety Statistics Team, Social Sectors Group, Social Statistics Department. This program

- provides consistency analysis for the whole data set
- forms groups according to predetermined criteria
- provides consistency analysis between groups
- produces error reports.

With the SAS program developed for the Quality Control Group,

- The Turkish character problem was removed from address information
- SAS data set variables were arranged.
- Sample house counts were calculated in accordance with regional offices' data capacity.
- The SAS data set was transformed into an Excel format.

2.6. Characteristics of the survey population

The 9,030 completed interviews were representative of an estimated 51.2 million adults aged 15 and older in Turkey (Table 2.1). The total population of Turkey was about 71.5 million in 2008. Because GATS calibrates the sample data by age, gender and residence, these distributions match those of 2008. Table 2.1 shows the number of households and individuals interviewed and response rates by place of residence. Of the 11,200 households selected for the survey, 9,322 (83.2%) households and 9,030 (93.7%) selected eligible individuals successfully completed the interview. The total response rate of the survey was 90.9%. The response rates were found to be nearly equal in both urban and rural areas (92.6% and 89.2%, respectively). The household response rate was 93.7%. There were no differences with respect to urban and rural household response rates. A total of 292 persons were missing due to various reasons, such as ineligibility, refusal or incapacitation. Out of 9,030 persons who completed the questionnaire, 4,584 were in urban and 4,446 in rural areas. The individual-level response rate was 97.0%, with 97.7% in urban and 96.3% in rural areas. Table 2.2 shows un-weighted sample counts and weighted population estimates. By this estimate, a total of 51,151,000 adults aged 15 and older were represented.

Table 2.1. Number of households and persons interviewed and response rates by domain and region – Turkey Global Adult Tobacco Survey (GATS), 2008.

	Urban	Rural	Total
Selected household			
Completed – one person selected	4,700	4,622	9,322
Completed – no one selected	286	316	602
Not complete – no appropriate screening respondent	115	60	175
Household refusal	18	4	22
Unoccupied/vacant	281	255	536
Selected address not a household	57	16	73
Household respondent incapacitated	8	10	18
Other household non-response	135	317	452
Total Number of Sampled Households	**5,600**	**5,600**	**11,200**
Household Response Rate	**% 94.8**	**% 92.7**	**% 93.7**
Selected person			
Completed	4,584	4,446	9,030
Not eligible	5	0	5
Selected person later determined ineligible	3	5	8
Refused	8	4	12
Incapacitated	21	31	52
Other	79	136	215
Total Number of Sampled Persons	**4,700**	**4,622**	**9,322**
Person-level Response Rate	**% 97.7**	**% 96.3**	**% 97.0**
Total Response Rate	**% 92.6**	**% 89.2**	**% 90.9**

Total Response Rate = Household Response Rate x Person-level Response Rate

Table 2.2. Unweighted sample counts and weighted population estimates by demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Unweighted Count	Weighted Population Estimates	
		Number (in thousands)	Percentage (95% CI[1])
Overall	9,030	51,151	100.0
Age (years)			
15-24	1,232	11,524	22.5 (21.1 - 23.9)
25-44	3,977	21,844	42.7 (41.4 - 44.0)
45-64	2,716	13,097	25.6 (24.3 - 26.9)
65+	1,105	4,686	9.2 (8.4 - 9.9)
Gender			
Men	4,269	25,096	49.1 (48.3 - 49.8)
Women	4,761	26,055	50.9 (50.2 - 51.7)
Residence			
Urban	4,584	35,640	69.7 (68.3 - 71.1)
Rural	4,446	15,511	30.3 (28.9 - 31.7)
Education Level §			
Not Graduated	1,805	8,720	17.1 (15.7 - 18.5)
Primary	4,079	19,982	39.1 (37.3 - 40.9)
Orta okul	1,126	8,543	16.7 (15.5 - 17.9)
High School	1,313	9,263	18.1 (16.8 - 19.4)
University of Higher	695	4,564	8.9 (7.7 - 10.1)

Note: The following observations were missing: [0] for age, [0] for gender, [0] for Residence, and [12] for education

1 95 % Confidence Interval

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

3. Findings

3.1 Tobacco use

3.1.1 Prevalence of tobacco use

Tobacco use prevalence is one the most important indicators of the effectiveness of a country's tobacco control program. Although many studies have been done among various groups in different areas of Turkey; only a few provide country-wide data on prevalence of tobacco use. The sampling methods and the questions about smoking are different, making it hard to compare the results of those surveys. The results of this GATS survey allow comparisons of the prevalence of tobacco use among regions, settlements, and other countries. This section presents data on tobacco use prevalence by various characteristics, such as age, gender, urban/rural residence, and educational level.

The prevalence of smoking is shown among "current smokers", "former smokers" and "never smokers". Current smokers are divided into four sub-groups: "daily", "occasional", occasional but formerly daily" and "occasional and never daily". Similarly, former smokers are presented in two groups; "former daily smokers" and "former occasional smokers".

Almost one-third (31.2%) of adults aged 15 and older were currently smoking in Turkey, representing 16 million adults (Tables 3.1 and 3.2). Men (47.9%) were more likely to smoke tobacco than females (15.2%). Approximately 12 million men and 4 million women currently smoked tobacco. Almost half of men (43.8%) and one in nine of women (11.6%) were current daily smokers, i.e., 11 million men and 3 million women. More than 90% of men (43.8% out of 47.9%) and 76.3% of women (11.6% out of 15.2%) currently smoking were daily smokers. The percentages of occasional smokers were similar between men and women (4.1% and 3.6%). One in three men (30.0%) and three fourths of women (74.8%) reported that they had never smoked tobacco. The remaining 15.9% (22.1% of men and 10.0% of women) were former smokers (Figure 3.1).

Table 3.1. Percentage of adults 15 years and older, by smoking status and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

Smoking Status	Overall	Men	Women
	Percentage (% 95 CI)		
Current smoker	**31.2 (29.9 - 32.5)**	**47.9 (45.8 - 50.0)**	**15.2 (13.9 - 16.4)**
Daily smoker	27.4 (26.2 - 28.7)	43.8 (41.8 - 45.9)	11.6 (10.4 - 12.7)
Occasional smoker	3.8 (3.3 - 4.3)	4.1 (3.4 - 4.8)	3.6 (2.9 - 4.3)
Occasional smoker, formerly daily	1.8 (1.4 - 2.1)	2.1 (1.6 - 2.6)	1.5 (1.0 - 1.9)
Occasional smoker, never daily	2.0 (1.7 - 2.4)	2.0 (1.4 - 2.5)	2.1 (1.6 - 2.7)
Former Smoker	**15.9 (15.0 - 16.9)**	**22.1 (20.6 - 23.6)**	**10.0 (8.8 - 11.2)**
Former daily smoker	10.5 (9.8 - 11.2)	17.2 (15.9 - 18.5)	4.1 (3.4 - 4.7)
Former occasional smoker	5.4 (4.7 - 6.1)	4.9 (4.1 - 5.8)	5.9 (4.9 - 6.9)
Never smoker	**52.8 (51.5 - 54.2)**	**30.0 (28.1 - 31.9)**	**74.8 (73.1 - 76.6)**

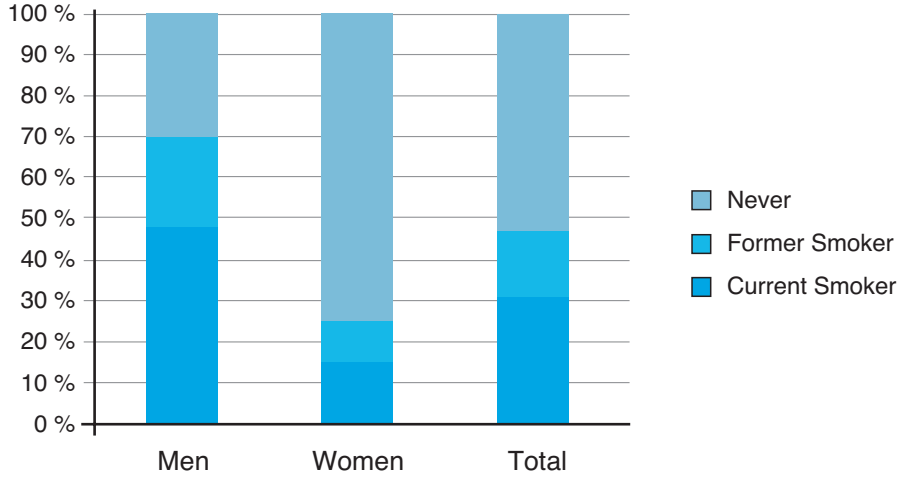
Note: Current use includes both daily and occasional (less than daily) use

Table 3.2. Number of adults 15 years and older, by smoking status and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

Smoking Status	Overall	Men	Women
	Number (in thousands)		
Current smoker	**15,980**	**12,026**	**3,954**
Daily smoker	14,023	11,003	3,019
Occasional smoker	1,958	1,023	935
Occasional smoker, formerly daily	909	531	379
Occasional smoker, never daily	1,048	493	556
Former Smoker	**8,146**	**5,546**	**2,601**
Former daily smoker	5,375	4,311	1,065
Former occasional smoker	2,771	1,235	1,536
Never smoker	**27,024**	**7,524**	**19,500**

Note: Current use includes both daily and occasional (less than daily) use

Figure 3.1. Percentage distribution of smoking status of adults Turkey Global Adult Tobacco Survey (GATS), 2008



Daily smoking rates increased until the age of 45, then showed a decreasing trend, both among men and women (Table 3.3). Daily smoking was very uncommon among elderly women (1.6%), whereas one in five (17.9%) elderly men were smokers. The percentage of smoking generally increases by educational level among women, but there was no clear pattern among men (Figure 3.2). There was a slight difference in smoking rates by residence (29.0% vs. 23.9% for urban and rural areas, respectively). The urban-rural difference was quite prominent among women (14.5% urban vs. 5.0% rural) but not among men (44.0% urban vs. 43.6% rural) (Figure 3.3).

Table 3.3. Percentage distribution of adults 15 years and older who are currently daily, occasional, or non-smokers, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Smoking status			Total
	Daily	Occasional[1]	Current Non-Smoker	
	Percentage (% 95 GI)			
Overall				
Age (years)				
15-24	21.7 (18.7 - 24.7)	3.6 (2.4 - 4.8)	74.7 (71.6 - 77.9)	100.0
25-44	34.7 (32.9 - 36.6)	5.2 (4.4 - 6.0)	60.1 (58.1 - 62.0)	100.0
45-64	27.0 (24.9 - 29.0)	2.5 (1.8 - 3.3)	70.5 (68.4 - 72.6)	100.0
65+	8.7 (6.9 - 10.6)	1.6 (0.8 - 2.4)	89.7 (87.7 - 91.6)	100.0
Residence				
Urban				
Rural	23.9 (22.1 - 25.6)	3.3 (2.6 - 4.0)	72.8 (70.9 - 74.7)	100.0
Education Level§				
Not Graduated				
Primary	30.4 (28.4 - 32.3)	3.6 (2.8 - 4.4)	66.0 (64.0 - 68.0)	100.0
Secondary	26.3 (23.3 - 29.4)	4.7 (3.2 - 6.2)	68.9 (65.7 - 72.2)	100.0
High School	36.8 (33.7 - 39.9)	3.9 (2.7 - 5.2)	59.3 (56.0 - 62.6)	100.0
University or Higher	27.3 (23.6 - 31.1)	4.4 (2.9 - 6.0)	68.2 (64.4 - 72.0)	100.0
Men				
Age (years)				
15-24	34.9 (30.0 - 39.7)	4.7 (2.8 - 6.6)	60.4 (55.4 - 65.4)	100.0
25-44	53.1 (50.1 - 56.1)	5.1 (3.9 - 6.3)	41.8 (38.8 - 44.9)	100.0
45-64	44.3 (41.0 - 47.5)	2.2 (1.3 - 3.2)	53.5 (50.2 - 56.8)	100.0
65+	17.9 (14.0 - 21.8)	2.6 (1.0 - 4.2)	79.5 (75.5 - 83.5)	100.0
Residence				
Urban				
Rural	43.6 (40.7 - 46.5)	4.4 (3.3 - 5.6)	52.0 (49.0 - 55.0)	100.0
Education Level§				
Not Graduated				
Primary	48.2 (45.2 - 51.2)	3.3 (2.3 - 4.3)	48.5 (45.5 - 51.6)	100.0
Secondary	36.1 (31.5 - 40.7)	6.4 (4.2 - 8.6)	57.5 (52.7 - 62.3)	100.0
High School	48.1 (43.9 - 52.4)	3.5 (1.9 - 5.0)	48.4 (44.1 - 52.7)	100.0
University or Higher	35.0 (29.7 - 40.3)	4.2 (2.1 - 6.4)	60.7 (55.3 - 66.2)	100.0

Table 3.3. continued...

Characteristic	Smoking status			Total
	Daily	Occasional[1]	Current Non-Smoker	
	Percentage (% 95 GI)			
Women	11,6 (10,4 - 12,7)	3,6 (2,9 - 4,3)	84,8 (83,6 - 86,1)	100,0
Age (years)				
15-24	9,1 (6,6 - 11,5)	2,5 (1,3 - 3,7)	88,4 (85,7 - 91,2)	100,0
25-44	16,2 (14,4 - 18,0)	5,3 (4,1 - 6,6)	78,5 (76,5 - 80,5)	100,0
45-64	10,3 (8,3 - 12,3)	2,8 (1,7 - 3,9)	86,9 (84,5 - 89,2)	100,0
65+	1,6 (0,4 - 2,8)	0,8 (0,0 - 1,6)	97,6 (96,2 - 99,0)	100,0
Residence				
Urban	14,5 (12,9 - 16,1)	4,2 (3,3 - 5,1)	81,3 (79,7 - 83,0)	100,0
Rural	5,0 (3,7 - 6,2)	2,2 (1,4 - 3,0)	92,8 (91,3 - 94,4)	100,0
Education Level[§]				
Not Graduated	4,0 (2,7 - 5,3)	2,9 (1,6 - 4,3)	93,1 (91,1 - 95,2)	100,0
Primary	12,4 (10,5 - 14,2)	3,9 (2,8 - 5,1)	83,7 (81,6 - 85,8)	100,0
Secondary	12,1 (9,0 - 15,3)	2,2 (0,6 - 3,9)	85,6 (82,1 - 89,1)	100,0
High School	21,0 (17,2 - 24,8)	4,6 (2,5 - 6,7)	74,4 (70,0 - 78,8)	100,0
University or Higher	15,5 (11,1 - 20,0)	4,7 (2,4 - 7,0)	79,8 (75,1 - 84,4)	100,0

1 Occasional refers to less than daily use

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Figure 3.2. Percentage distribution of smoking status of adults 15 years and older who are current smokers, by level of education Turkey Global Adult Tobacco Survey (GATS), 2008

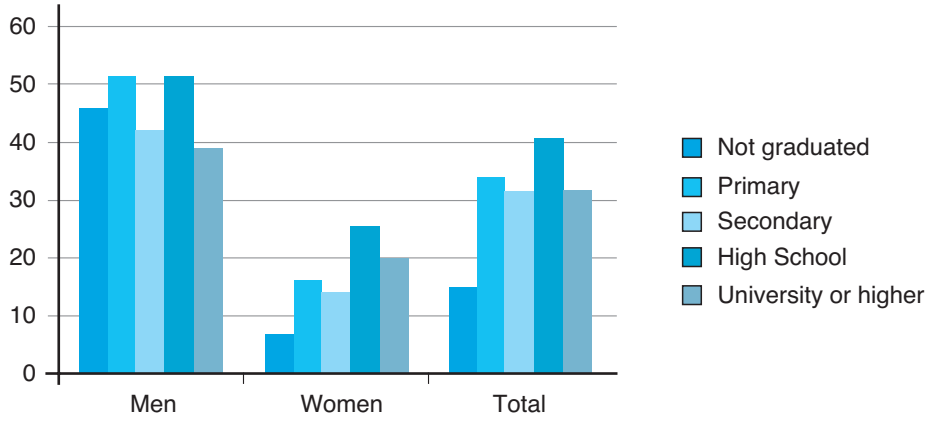
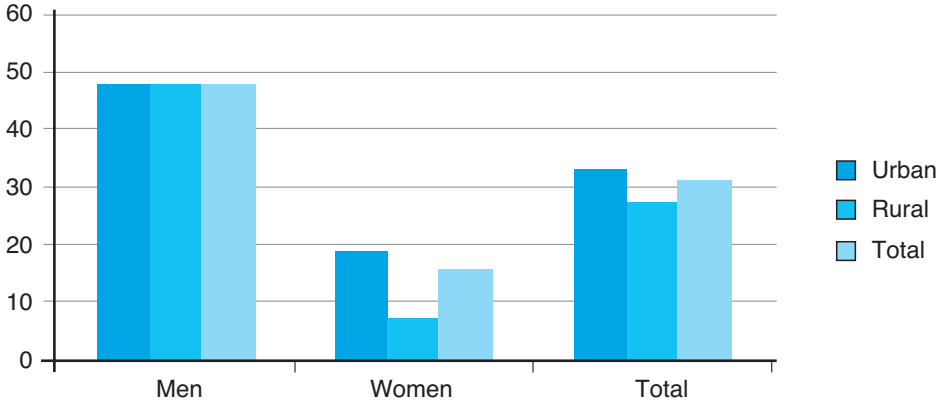


Figure 3.3. Percentage distribution of smoking status of adults 15 years and older who are current smokers, by residence Turkey Global Adult Tobacco Survey (GATS), 2008



Daily smoking was lowest among women who were not school graduates (4.0%) and highest among those with a high school diploma (21.0%). Particularly in urban areas, current smoking was lowest among women who were not school graduates (8.4%) compared to those with a high school diploma (27.4%). In urban areas, smoking prevalence decreased among university graduates, both men and women (Table 3.4 and Figure 3.2). Similarly, smoking prevalence decreased among young male university graduates (Table 3.5). As for employment status, daily smoking was more common among employed person and employable persons looking for a job, both men and women (Table 3.6).

Table 3.4. Percentage of adults 15 years and older who are current tobacco smokers by educatıon, resıdence, and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

Gender by Residence	Education Level §				
	Not Graduated	Primary	Secondary	High School	University +
Men					
Urban	46.8 (34.7 - 58.8)	51.5 (47.3 - 55.7)	42.2 (36.2 - 48.1)	52.5 (47.5 - 57.6)	38.9 (33.1 - 44.8)
Rural	45.4 (38.1 - 52.7)	51.5 (47.5 - 55.5)	43.3 (35.1 - 51.5)	47.9 (40.3 - 55.5)	41.4 (26.6 - 56.3)
Women					
Urban	8.4 (4.9 - 11.8)	20.0 (17.2 - 22.8)	17.0 (12.6 - 21.4)	27.4 (22.5 - 32.3)	20.3 (15.3 - 25.3)
Rural	5.3 (3.2 - 7.3)	8.1 (5.8 - 10.4)	6.7 (1.8 - 11.7)	11.4 (5.9 - 17.0)	19.7 (8.2 - 31.1)

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Table 3.5. Percentage of adults 15 years and older who are current tobacco smokers by educatıon, age, and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

Gender by Age	Education Level §				
	Not Graduated	Primary	Secondary	High School	University +
Men					
15-24	81.4 (67.7 - 95.2)	56.4 (39.9 - 73.0)	31.4 (24.4 - 38.3)	44.3 (35.0 - 53.5)	24.6 (10.8 - 38.5)
25-44	63.7 (45.9 - 81.4)	61.6 (57.2 - 66.0)	61.3 (53.0 - 69.6)	58.8 (53.0 - 64.6)	42.5 (35.1 - 49.8)
45-64	48.9 (36.9 - 60.9)	46.1 (41.6 - 50.6)	49.0 (38.8 - 59.2)	48.9 (40.0 - 57.8)	41.3 (31.4 - 51.2)
65+	22.1 (14.5 - 29.7)	20.3 (14.6 - 26.0)	*	*	*
Women					
15-24	9.4 (4.4 - 14.5)	20.8 (11.3 - 30.3)	7.2 (3.9 - 10.6)	14.7 (8.7 - 20.6)	12.0 (2.8 - 21.2)
25-44	14.5 (8.0 - 21.0)	18.6 (15.8 - 21.4)	30.2 (22.2 - 38.3)	32.5 (26.4 - 38.6)	21.8 (15.7 - 27.9)
45-64	6.5 (3.5 - 9.4)	12.4 (9.2 - 15.6)	23.5 (10.8 - 36.2)	40.2 (28.7 - 51.8)	25.1 (11.8 - 38.3)
65+	0.7 (0.0 - 1.5)	6.8 (1.3 - 12.3)	*	*	*

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

Table 3.6. Percentage distribution of adults 15 years and older who are currently daily, occasional, or non-smokers, by gender and employment status – Turkey Global Adult Tobacco Survey (GATS), 2008.

Gender by employment status	Smoking Status			Total
	Daily	Occasional[1]	Non-Smoker	
Men				
Paid Employees	49.4 (46.3 - 52.6)	4.6 (3.3 - 5.8)	46.0 (42.8 - 49.2)	100.0
Self Employed	51.3 (47.6 - 55.0)	3.4 (2.2 - 4.6)	45.3 (41.7 - 49.0)	100.0
Non-paid Farm Wrk	35.7 (23.6 - 47.9)	2.5 (0.0 - 6.3)	61.7 (49.5 - 74.0)	100.0
Student	22.2 (14.1 - 30.4)	3.7 (1.1 - 6.3)	74.0 (66.0 - 82.1)	100.0
Homemaker	*	*	*	100.0
Retired	30.2 (25.8 - 34.6)	2.3 (0.8 - 3.7)	67.5 (63.0 - 72.0)	100.0
Looking (employable)	51.2 (43.0 - 59.3)	7.9 (3.2 - 12.6)	40.9 (32.7 - 49.2)	100.0
Looking (unemployable)	35.0 (14.4 - 55.6)	11.3 (0.0 - 26.2)	53.7 (34.3 - 73.2)	100.0
Other	31.3 (19.8 - 42.9)	3.5 (0.6 - 6.5)	65.2 (53.5 - 76.9)	100.0
Women				
Paid Employees	22.0 (17.5 - 26.6)	4.7 (2.2 - 7.2)	73.3 (68.5 - 78.0)	100.0
Self Employed	16.9 (8.5 - 25.3)	4.8 (0.7 - 8.9)	78.3 (68.1 - 88.5)	100.0
Non-paid Farm Wrk	4.6 (2.7 - 6.5)	1.8 (0.4 - 3.2)	93.6 (91.4 - 95.8)	100.0
Student	2.4 (0.0 - 4.7)	1.0 (0.0 - 2.9)	96.7 (93.6 - 99.7)	100.0
Homemaker	11.2 (9.8 - 12.6)	3.9 (3.0 - 4.7)	85.0 (83.4 - 86.5)	100.0
Retired	16.8 (9.8 - 23.8)	5.1 (1.2 - 9.1)	78.1 (70.7 - 85.5)	100.0
Looking (employable)	18.6 (4.8 - 32.3)	0.0	81.4 (67.7 - 95.2)	100.0
Looking (unemployable)	*	*	*	100.0
Other	4.4 (0.0 - 9.4)	0.0	95.6 (90.6 - 100.0)	100.0

* Cell size less than 25

The overwhelming majority (30.1% out of 31.2%) of tobacco smoking was in the form of manufactured cigarettes, for both sexes and both urban and rural residence (Table 3.7). Almost 11.5 million males and 3.9 million females smoked manufactured cigarettes in Turkey (Table 3.8). In line with overall tobacco consumption, consumption of manufactured cigarettes increased up to age 45, then decreased. The highest rate was observed among those ages 25-44 (38.8%). Consumption of manufactured cigarettes was the most prevalent form of tobacco consumption at every educational level, and in both urban and rural areas.

Table 3.7. Percentage of adults 15 years and older who are current smokers of various smoked tobacco products, by gender and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Any smoked tobacco product	Any cigarette	Type of Cigarette		Water pipe	Other smoked tobacco [2]
			Manufactured	Hand-rolled		
	Percentage (95% CI)					
Overall	31.2 (29.9 - 32.5)	31.1 (29.9 - 32.4)	30.1 (28.8 - 31.4)	2.6 (2.1 - 3.2)	2.3 (1.7 - 2.9)	0.9 (0.6 - 1.2)
Age (years)						
15-24	25.3 (22.1 - 28.4)	25.2 (22.1 - 28.4)	24.5 (21.4 - 27.7)	2.5 (1.4 - 3.5)	4.3 (2.6 - 6.0)	1.0 (0.4 - 1.7)
25-44	39.9 (38.0 - 41.9)	39.9 (37.9 - 41.8)	38.8 (36.8 - 40.7)	2.9 (2.1 - 3.6)	2.5 (1.8 - 3.2)	1.0 (0.6 - 1.4)
45-64	29.5 (27.4 - 31.6)	29.4 (27.3 - 31.5)	27.9 (25.8 - 30.0)	2.7 (2.0 - 3.4)	0.9 (0.4 - 1.4)	0.7 (0.3 - 1.2)
65+	10.3 (8.4 - 12.3)	10.0 (8.1 - 12.0)	9.2 (7.3 - 11.1)	1.6 (0.7 - 2.5)	0.2 (0.0 - 0.4)	0.5 (0.0 - 0.9)
Residence						
Urban	33.0 (31.3 - 34.7)	32.9 (31.3 - 34.6)	32.4 (30.7 - 34.0)	1.8 (1.3 - 2.3)	2.9 (2.1 - 3.7)	1.0 (0.6 - 1.3)
Rural	27.2 (25.3 - 29.1)	27.0 (25.1 - 28.9)	24.8 (22.9 - 26.7)	4.5 (3.1 - 6.0)	1.0 (0.6 - 1.3)	0.7 (0.4 - 1.0)
Education Level [§]						
Not Graduated	15.0 (12.3 - 17.8)	14.9 (12.2 - 17.7)	13.1 (10.5 - 15.7)	2.7 (1.5 - 3.8)	0.0 (0.0 - 0.1)	0.2 (0.0 - 0.4)
Primary	34.0 (32.0 - 36.0)	33.9 (31.9 - 36.0)	32.7 (30.7 - 34.7)	2.9 (2.2 - 3.6)	1.4 (0.8 - 2.0)	0.6 (0.3 - 0.8)
Secondary	31.1 (27.8 - 34.3)	31.0 (27.7 - 34.2)	30.3 (27.0 - 33.5)	2.2 (1.2 - 3.1)	2.9 (1.6 - 4.2)	0.7 (0.2 - 1.2)
High School	40.7 (37.4 - 44.0)	40.7 (37.4 - 43.9)	39.9 (36.6 - 43.1)	2.8 (1.7 - 4.0)	5.1 (3.1 - 7.1)	1.7 (0.7 - 2.8)
University or Higher	31.8 (28.0 - 35.6)	31.6 (27.8 - 35.3)	31.3 (27.4 - 35.1)	1.8 (0.7 - 2.9)	3.9 (2.1 - 5.7)	2.3 (1.1 - 3.5)

Table 3.7. continued...

Men	47.9 (45.8 - 50.0)	47.8 (45.7 - 49.9)	45.8 (43.7 - 47.8)	4.7 (3.7 - 5.7)	4.0 (2.9 - 5.0)	1.6 (1.1 - 2.1)
Age (years)						
15-24	39.6 (34.6 - 44.6)	39.6 (34.6 - 44.6)	38.2 (33.2 - 43.1)	4.7 (2.5 - 6.8)	8.1 (4.8 - 11.4)	2.0 (0.7 - 3.3)
25-44	58.2 (55.1 - 61.2)	58.1 (55.1 - 61.1)	56.1 (53.1 - 59.2)	4.8 (3.5 - 6.1)	4.0 (2.8 - 5.2)	1.8 (1.0 - 2.5)
45-64	46.5 (43.2 - 49.8)	46.3 (43.0 - 49.6)	43.7 (40.4 - 46.9)	4.8 (3.5 - 6.2)	1.3 (0.5 - 2.2)	1.1 (0.4 - 1.7)
65+	20.5 (16.5 - 24.5)	19.8 (15.8 - 23.8)	18.0 (14.1 - 21.9)	3.6 (1.6 - 5.7)	0.4 (0.0 - 0.9)	1.0 (0.1 - 2.0)
Residence						
Urban	47.9 (45.2 - 50.5)	47.8 (45.1 - 50.4)	46.7 (44.0 - 49.3)	3.1 (2.2 - 4.0)	4.9 (3.5 - 6.4)	1.7 (1.1 - 2.3)
Rural	48.0 (45.0 - 51.0)	47.8 (44.8 - 50.8)	43.8 (40.8 - 46.8)	8.4 (5.8 - 11.0)	1.7 (0.9 - 2.4)	1.3 (0.6 - 1.9)
Education Level §						
Not Graduated	46.1 (39.1 - 53.0)	45.7 (38.7 - 52.7)	38.8 (32.0 - 45.7)	10.7 (6.1 - 15.3)	0.1 (0.0 - 0.3)	0.6 (0.0 - 1.4)
Primary	51.5 (48.4 - 54.5)	51.4 (48.3 - 54.4)	49.1 (46.1 - 52.1)	5.0 (3.7 - 6.3)	2.4 (1.4 - 3.5)	1.0 (0.5 - 1.6)
Secondary	42.5 (37.7 - 47.3)	42.4 (37.6 - 47.2)	41.3 (36.6 - 46.0)	3.3 (1.7 - 4.8)	4.3 (2.3 - 6.4)	1.1 (0.3 - 1.9)
High School	51.6 (47.3 - 55.9)	51.5 (47.1 - 55.8)	50.1 (45.8 - 54.4)	4.8 (2.9 - 6.8)	7.7 (4.5 - 11.0)	2.7 (1.2 - 4.2)
University or Higher	39.3 (33.8 - 44.7)	39.1 (33.6 - 44.6)	38.6 (33.1 - 44.2)	2.0 (0.5 - 3.5)	3.9 (1.6 - 6.3)	2.9 (1.1 - 4.7)
	Percentage (95% CI)					
Women	15.2 (13.9 - 16.4)	15.1 (13.9 - 16.4)	14.9 (13.7 - 16.1)	0.6 (0.4 - 0.9)	0.7 (0.4 - 1.0)	0.2 (0.1 - 0.4)
Age (years)						
15-24	11.6 (8.8 - 14.3)	11.5 (8.8 - 14.2)	11.4 (8.7 - 14.2)	0.3 (0.0 - 0.6)	0.7 (0.0 - 1.4)	0.1 (0.0 - 0.3)
25-44	21.5 (19.5 - 23.5)	21.4 (19.4 - 23.5)	21.2 (19.2 - 23.2)	0.9 (0.4 - 1.4)	1.0 (0.5 - 1.5)	0.3 (0.0 - 0.5)
45-64	13.1 (10.8 - 15.5)	13.1 (10.8 - 15.5)	12.8 (10.4 - 15.1)	0.7 (0.2 - 1.1)	0.5 (0.0 - 1.0)	0.4 (0.0 - 0.8)
65+	2.4 (1.0 - 3.8)	2.4 (1.0 - 3.8)	2.4 (1.0 - 3.8)	0.0	0.0	0.0
Residence						
Urban	18.7 (17.0 - 20.3)	18.6 (17.0 - 20.3)	18.6 (16.9 - 20.2)	0.5 (0.3 - 0.8)	0.9 (0.4 - 1.3)	0.3 (0.1 - 0.5)
Rural	7.2 (5.6 - 8.7)	7.1 (5.6 - 8.6)	6.6 (5.2 - 8.1)	0.9 (0.2 - 1.5)	0.3 (0.1 - 0.5)	0.1 (0.0 - 0.3)
Education Level §						
Not Graduated	6.9 (4.8 - 8.9)	6.8 (4.8 - 8.8)	6.3 (4.4 - 8.3)	0.6 (0.0 - 1.3)	0.0 (0.0 - 0.1)	0.1 (0.0 - 0.3)
Primary	16.3 (14.2 - 18.4)	16.3 (14.2 - 18.4)	16.2 (14.1 - 18.2)	0.8 (0.4 - 1.2)	0.3 (0.0 - 0.6)	0.1 (0.0 - 0.2)
Secondary	14.4 (10.9 - 17.9)	14.4 (10.9 - 17.9)	14.2 (10.8 - 17.7)	0.6 (0.0 - 1.1)	0.7 (0.0 - 1.5)	0.1 (0.0 - 0.4)
High School	25.6 (21.2 - 30.0)	25.6 (21.2 - 30.0)	25.6 (21.2 - 30.0)	0.0	1.3 (0.2 - 2.5)	0.4 (0.0 - 1.0)
University or Higher	20.2 (15.6 - 24.9)	20.0 (15.3 - 24.6)	20.0 (15.3 - 24.6)	1.4 (0.0 - 3.1)	3.8 (1.5 - 6.1)	1.4 (0.0 - 2.8)

Note: Current use includes both daily and occasional (less than daily) use

1 Includes manufactured and hand-rolled cigarettes, daily and occasional

2 Includes cigars, pipes, and other smoked products

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Table 3.8. Number of adults 15 years and older who are current smokers of various smoked tobacco products, by gender and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Any smoked tobacco product	Any cigarette	Type of Cigarette		Water pipe	Other smoked tobacco [2]
			Manufactured	Hand-rolled		
	Number (in thousands)					
Overall	15,980	15,933	15,384	1,342	1,173	456
Age (years)						
15-24	2,913	2,908	2,828	282	496	120
25-44	8,723	8,708	8,466	629	551	221
45-64	3,861	3,848	3,657	355	118	93
65+	483	469	432	75	8	21
Residence						
Urban	11,765	11,743	11,533	636	1,024	350
Rural	4,215	4,190	3,850	706	149	106
Education Level§						
Not Graduated	1,311	1,300	1,142	234	4	19
Primary	6,794	6,780	6,537	581	278	110
Secondary	2,653	2,647	2,585	184	245	60
High School	3,772	3,766	3,692	261	469	161
University or Higher	1,450	1,440	1,428	82	177	106
Men	12,026	11,991	11,492	1,178	992	394
Age (years)						
15-24	2,233	2,233	2,156	263	456	112
25-44	6,389	6,380	6,164	529	442	193
45-64	2,983	2,971	2,802	310	86	68
65+	421	407	370	75	8	21
Residence						
Urban	8,377	8,360	8,166	540	865	299
Rural	3,649	3,631	3,326	638	127	96
Education Level§						
Not Graduated	836	830	704	194	2	11
Primary	5,174	5,162	4,931	501	245	103
Secondary	2,152	2,146	2,089	165	220	55
High School	2,778	2,772	2,699	261	417	146
University or Higher	1,086	1,081	1,069	56	109	80

Table 3.8. continued...

Characteristic	Any smoked tobacco product	Any cigarette	Type of Cigarette		Water pipe	Other smoked tobacco [2]
			Manufactured	Hand-rolled		
	Percentage (95% CI)					
Women	3,954	3,942	3,892	164	181	61
Age (years)						
15-24	680	675	672	19	40	8
25-44	2,334	2,328	2,302	100	109	28
45-64	877	877	855	45	32	26
65+	62	62	62	0	0	0
Residence						
Urban	3,388	3,383	3,367	96	159	51
Rural	566	559	525	68	22	10
Education Level[§]						
Not Graduated	475	470	437	39	2	8
Primary	1,620	1,618	1,606	80	33	7
Secondary	501	501	496	19	26	5
High School	994	994	994	0	52	16
University or Higher	364	359	359	26	68	25

Note: Current use includes both daily and occasional (less than daily) use

[1] Includes manufactured and hand-rolled cigarettes, daily and occasional

[1] Includes cigars, pipes, and other smoked products

[§] Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

On average, men consumed more cigarettes per day (19.3 average) than women (12.2 average) (Figure 3.4). Almost two-thirds (66.1%) of current daily cigarette smokers consumed more than half a pack of cigarettes (11 cigarettes or more) per day; 15.5% consumed more than 20 cigarettes daily (Table 3.9). Almost 3 in 4 (74.0%) men who smoked daily consumed over 11 cigarettes daily; 17.7% consumed over 20 cigarettes daily. In contrast, 62.5% of women who smoked daily consumed fewer than 11 cigarettes per day.

Table 3.9. Percentage distribution of cigarettes smoked per day among daily cigarette smokers 15 years and older, by gender and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Number of cigarettes smoked on average per day [1]					Total
	1 - 5	6 - 10	11 - 15	16 - 20	> 20	
	Percentage (95% CI)					
Overall	10.8 (9.0 - 12.5)	23.1 (21.1 - 25.1)	10.1 (8.7 - 11.6)	40.5 (37.9 - 43.1)	15.5 (13.6 - 17.4)	100.0
Age (years)						
15-24	9.5 (6.1 - 13.0)	29.7 (22.7 - 36.7)	11.2 (6.9 - 15.5)	38.7 (30.7 - 46.6)	10.9 (6.3 - 15.5)	100.0
25-44	12.5 (10.1 - 15.0)	22.8 (20.2 - 25.5)	10.1 (8.2 - 12.0)	40.1 (36.8 - 43.4)	14.5 (12.1 - 16.8)	100.0
45-64	7.3 (4.9 - 9.7)	19.5 (16.0 - 23.1)	10.0 (7.4 - 12.5)	43.1 (38.3 - 47.8)	20.1 (16.2 - 24.1)	100.0
65+	16.2 (5.6 - 26.9)	17.9 (9.7 - 26.2)	6.0 (0.0 - 12.1)	37.1 (25.5 - 48.7)	22.7 (13.1 - 32.2)	100.0
Residence						
Urban	11.7 (9.4 - 13.9)	23.8 (21.3 - 26.3)	10.6 (8.8 - 12.4)	40.2 (37.0 - 43.5)	13.7 (11.3 - 16.0)	100.0
Rural	8.3 (6.3 - 10.4)	21.1 (18.2 - 24.0)	8.8 (6.8 - 10.9)	41.2 (37.3 - 45.0)	20.6 (17.6 - 23.5)	100.0
Education Level[§]						
Not Graduated	11.5 (5.6 - 17.3)	27.5 (19.6 - 35.5)	5.1 (1.0 - 9.1)	31.5 (22.2 - 40.8)	24.4 (15.9 - 32.9)	100.0
Primary	10.4 (8.2 - 12.7)	22.3 (19.3 - 25.3)	8.2 (6.4 - 10.0)	40.7 (37.3 - 44.1)	18.3 (15.5 - 21.1)	100.0
Secondary	9.9 (6.4 - 13.5)	23.0 (17.4 - 28.6)	12.9 (8.5 - 17.3)	42.0 (35.4 - 48.5)	12.2 (7.6 - 16.7)	100.0
High School	11.1 (6.9 - 15.4)	23.3 (18.8 - 27.8)	11.2 (8.0 - 14.3)	41.4 (35.6 - 47.3)	13.0 (9.5 - 16.4)	100.0
University or Higher	12.5 (7.8 - 17.1)	22.8 (16.0 - 29.6)	15.8 (10.7 - 20.9)	41.8 (33.3 - 50.3)	7.1 (3.1 - 11.0)	100.0
Men	6.7 (5.1 - 8.3)	19.3 (17.1 - 21.5)	10.9 (9.3 - 12.6)	45.4 (42.3 - 48.4)	17.7 (15.4 - 19.9)	100.0
Age (years)						
15-24	5.0 (2.0 - 8.1)	25.4 (17.9 - 32.9)	13.4 (7.9 - 18.8)	42.9 (33.7 - 52.1)	13.3 (7.5 - 19.1)	100.0
25-44	7.7 (5.2 - 10.1)	18.5 (15.7 - 21.3)	10.8 (8.6 - 13.0)	46.5 (42.5 - 50.4)	16.6 (13.8 - 19.3)	100.0
45-64	4.9 (2.9 - 7.0)	17.1 (13.5 - 20.7)	10.2 (7.3 - 13.0)	45.7 (40.3 - 51.0)	22.1 (17.3 - 26.9)	100.0
65+	13.7 (3.0 - 24.3)	17.2 (8.7 - 25.7)	6.7 (0.0 - 13.5)	38.8 (26.4 - 51.2)	23.6 (13.4 - 33.8)	100.0
Residence						
Urban	6.9 (4.8 - 9.0)	19.4 (16.5 - 22.2)	11.7 (9.4 - 13.9)	46.2 (42.2 - 50.2)	15.9 (13.0 - 18.8)	100.0
Rural	6.2 (4.0 - 8.3)	19.3 (16.2 - 22.3)	9.3 (7.0 - 11.5)	43.5 (39.6 - 47.5)	21.7 (18.5 - 24.9)	100.0
Education Level[§]						
Not Graduated	6.0 (0.0 - 12.1)	21.0 (12.7 - 29.3)	4.9 (0.1 - 9.7)	37.6 (26.1 - 49.1)	30.5 (19.4 - 41.7)	100.0
Primary	5.9 (3.9 - 8.0)	18.2 (15.1 - 21.3)	9.1 (6.9 - 11.3)	45.3 (41.5 - 49.1)	21.5 (18.2 - 24.7)	100.0
Secondary	8.0 (4.4 - 11.7)	19.6 (13.4 - 25.9)	14.2 (9.0 - 19.4)	45.4 (38.0 - 52.8)	12.7 (7.3 - 18.2)	100.0
High School	6.9 (2.9 - 10.9)	18.9 (14.1 - 23.7)	12.5 (8.9 - 16.2)	47.1 (40.2 - 53.9)	14.6 (10.4 - 18.7)	100.0
University or Higher	7.8 (3.4 - 12.2)	24.2 (16.2 - 32.1)	14.7 (8.6 - 20.8)	47.5 (37.4 - 57.5)	5.9 (1.6 - 10.3)	100.0

Table 3.9. continued...

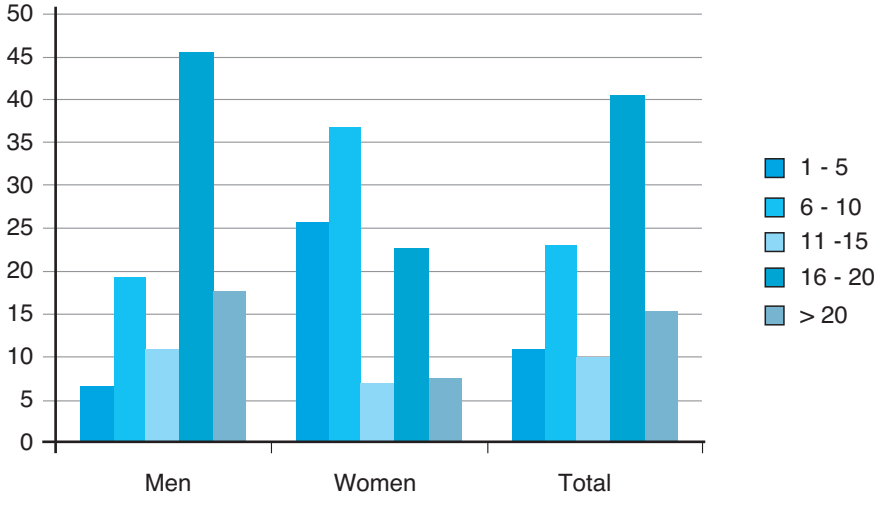
Characteristic	Number of cigarettes smoked on average per day [1]					Total
	1 - 5	6 - 10	11 - 15	16 - 20	> 20	
	Percentage (95% CI)					
Women	25.7 (21.2 - 30.2)	36.8 (31.8 - 41.8)	7.2 (4.7 - 9.7)	22.8 (18.2 - 27.4)	7.6 (5.0 - 10.2)	100.0
Age (years)						
15-24	26.2 (14.7 - 37.7)	45.7 (31.4 - 60.1)	3.1 (0.0 - 6.7)	23.0 (10.8 - 35.1)	2.0 (0.0 - 4.7)	100.0
25-44	28.5 (22.7 - 34.3)	37.2 (31.2 - 43.2)	7.9 (4.5 - 11.2)	18.9 (14.0 - 23.9)	7.5 (3.7 - 11.2)	100.0
45-64	17.2 (9.1 - 25.4)	29.6 (20.2 - 38.9)	9.1 (2.5 - 15.6)	32.3 (22.4 - 42.3)	11.8 (6.1 - 17.5)	100.0
65+	*	*	*	*	*	100.0
Residence						
Urban	25.5 (20.5 - 30.6)	36.8 (31.3 - 42.4)	7.5 (4.7 - 10.3)	23.0 (18.0 - 27.9)	7.1 (4.3 - 10.0)	100.0
Rural	26.4 (18.0 - 34.9)	36.5 (26.9 - 46.0)	5.1 (1.5 - 8.7)	21.3 (9.0 - 33.6)	10.6 (3.8 - 17.5)	100.0
Education Level[§]						
Not Graduated	26.6 (13.2 - 39.9)	45.9 (30.2 - 61.6)	5.6 (0.0 - 13.8)	14.6 (4.3 - 24.9)	7.3 (0.0 - 15.6)	100.0
Primary	28.2 (21.5 - 34.9)	38.3 (31.1 - 45.5)	4.9 (2.0 - 7.7)	22.6 (16.2 - 29.1)	6.0 (2.5 - 9.5)	100.0
Secondary	18.1 (8.3 - 28.0)	37.6 (24.6 - 50.6)	7.4 (1.0 - 13.8)	27.2 (14.5 - 39.9)	9.7 (1.7 - 17.6)	100.0
High School	24.4 (15.3 - 33.5)	37.3 (28.4 - 46.3)	6.8 (1.9 - 11.8)	23.6 (15.0 - 32.1)	7.9 (2.2 - 13.5)	100.0
University or Higher	28.7 (16.4 - 41.1)	18.3 (8.0 - 28.5)	19.7 (9.0 - 30.4)	22.2 (10.0 - 34.3)	11.1 (2.3 - 19.9)	100.0

[1] Among daily cigarette smokers. Cigarettes include manufactured and hand-rolled

[§] Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

Figure 3.4. Percentage distribution of smoking status of adults 15 years and older who are current smokers, by number of cigarettes daily smoked
Turkey Global Adult Tobacco Survey (GATS), 2008



The great majority of the current smokers smoked manufactured cigarettes. Only 2.6% (4.7% of men and 0.6% of women) smoked hand-rolled cigarettes; and 2.3% (4.0% of men and 0.7% of women) smoked water pipes (Table 3.7). Less than one percent (0.9%) smoked other forms of tobacco, such as pipes, cigars, etc. Most of the water pipe users (60.8%) started this behavior after age 20; the average age among men was 23.8 years, while women started 3 years later than men on average (26.4 years) (Table 3.10).

Table 3.10. Percentage distribution of age at initiation of water pipe smoking among water pipe smokers by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Age Started Smoking Water Pipe (years)				Total
	< 15	15 - 17	18 - 19	20 +	
	Percentage (95% CI)				
Overall	4.2 (0.4 - 8.0)	25.2 (16.8 - 33.6)	9.8 (5.3 - 14.3)	60.8 (52.0 - 69.6)	100.0
Gender					
Men	4.8 (0.5 - 9.1)	27.5 (18.2 - 36.9)	9.5 (4.6 - 14.3)	58.3 (48.8 - 67.7)	100.0
Women	0.0	8.8 (0.0 - 23.8)	12.5 (0.5 - 24.5)	78.7 (62.3 - 95.1)	100.0
Residence					
Urban	4.9 (0.4 - 9.4)	25.5 (16.1 - 34.8)	9.2 (4.4 - 14.0)	60.4 (50.5 - 70.2)	100.0
Men	5.6 (0.6 - 10.7)	27.7 (17.3 - 38.1)	8.8 (3.6 - 14.0)	57.8 (47.2 - 68.4)	100.0
Women	*	*	*	*	100.0
Rural	0.0	23.5 (4.7 - 42.3)	13.3 (1.3 - 25.3)	63.2 (44.7 - 81.7)	100.0
Men	0.0	26.5 (6.0 - 47.1)	12.8 (0.0 - 26.2)	60.7 (40.4 - 80.9)	100.0
Women	*	*	*	*	100.0

* Cell size less than 25

Overall, 77.7% of the water pipe sessions lasted longer than 20 minutes; 42.6% lasted over 45 minutes (Table 3.11). Men (80.0%) were more likely than women (62.4%) to have sessions lasting longer than 20 minutes; with respect to residence, those living in rural areas (88.3%) were more likely than those in urban areas (76.1%) to have long sessions.

Table 3.11. Percentage distribution of length of last water pipe session among current water pipe smokers 15 years and older, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Length of last water pipe session				Total
	10 minutes	11 - 20 minutes	21 - 45 minutes	> 45 minutes	
	Percentage (95% CI)				
Overall	9.8 (3.6 - 16.0)	12.6 (6.7 - 18.6)	35.1 (24.8 - 45.3)	42.6 (33.4 - 51.7)	100.0
Gender					
Men	8.1 (1.8 - 14.4)	11.9 (5.6 - 18.2)	33.8 (22.9 - 44.7)	46.2 (35.9 - 56.4)	100.0
Women	20.4 (1.7 - 39.1)	17.2 (3.2 - 31.2)	43.2 (24.4 - 61.9)	19.2 (4.6 - 33.8)	100.0
Age (years)					
15-24	9.7 (0.0 - 21.2)	11.7 (1.7 - 21.6)	39.6 (21.0 - 58.2)	39.0 (22.2 - 55.8)	100.0
25-44	8.0 (2.3 - 13.8)	16.0 (6.1 - 25.8)	32.0 (19.2 - 44.9)	44.0 (32.0 - 56.0)	100.0
45-64	*	*	*	*	100.0
65+	*	*	*	*	100.0
Residence					
Urban	10.5 (3.6 - 17.5)	13.4 (6.8 - 20.1)	32.9 (21.7 - 44.0)	43.2 (33.2 - 53.2)	100.0
Rural	4.6 (0.0 - 10.4)	7.1 (0.4 - 13.8)	49.9 (28.2 - 71.7)	38.4 (18.1 - 58.6)	100.0
Education Level §					
Not Graduated	*	*	*	*	100.0
Primary	17.0 (0.0 - 34.5)	14.6 (4.4 - 24.8)	21.9 (7.2 - 36.7)	46.5 (24.9 - 68.2)	100.0
Secondary	2.5 (0.0 - 6.7)	17.2 (0.0 - 35.1)	54.4 (33.3 - 75.5)	26.0 (7.0 - 44.9)	100.0
High School	10.3 (1.1 - 19.6)	8.4 (1.4 - 15.4)	31.7 (15.1 - 48.4)	49.5 (33.7 - 65.3)	100.0
University or Higher	*	*	*	*	100.0

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

The last water pipe session for men and women who currently smoked water pipe was most often in a café (for men: 60.9% in a water pipe café and 25.4% other cafés; for women: 53.7% water pipe café and 18.6% other cafés) (Table 3.12). However, 26.8% of women had their last session at home, compared to 9.7% for men.

Table 3.12. Percentage distribution of location of last water pipe session among current water pipe smokers 15 years and older, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Location				Total
	Home	Water Pipe Cafe	Other Cafe	Other	
	Percentage (95% CI)				
Overall	12.1 (6.3 - 18.0)	59.9 (49.7 - 70.1)	24.4 (16.2 - 32.7)	3.5 (0.7 - 6.4)	100.0
Gender					
Men	9.7 (3.6 - 15.8)	60.9 (49.8 - 72.1)	25.4 (16.4 - 34.4)	4.0 (0.6 - 7.4)	100.0
Women	26.8 (8.7 - 44.9)	53.7 (29.4 - 77.9)	18.6 (2.8 - 34.5)	0.9 (0.0 - 2.6)	100.0
Age (years)					
15-24	9.7 (0.0 - 19.6)	66.9 (50.0 - 83.7)	23.4 (7.8 - 39.1)	0.0	100.0
25-44	12.2 (3.7 - 20.7)	55.4 (43.3 - 67.5)	26.6 (15.9 - 37.2)	5.8 (0.6 - 11.0)	100.0
45-64	*	*	*	*	100.0
65+	*	*	*	*	100.0
Residence					
Urban	10.6 (4.3 - 16.8)	60.0 (48.7 - 71.2)	25.6 (16.3 - 34.8)	3.9 (0.6 - 7.2)	100.0
Rural	23.3 (6.9 - 39.7)	59.5 (40.2 - 78.8)	16.2 (4.7 - 27.7)	1.0 (0.0 - 3.0)	100.0
Education Level§					
Not Graduated	*	*	*	*	100.0
Primary	18.6 (6.2 - 30.9)	55.4 (39.0 - 71.7)	19.0 (8.3 - 29.6)	7.1 (0.0 - 16.4)	100.0
Secondary	9.4 (0.0 - 20.2)	61.3 (37.2 - 85.5)	26.9 (4.6 - 49.3)	2.3 (0.0 - 6.9)	100.0
High School	11.4 (0.5 - 22.2)	61.4 (45.7 - 77.1)	23.7 (9.5 - 37.9)	3.5 (0.0 - 8.6)	100.0
University or Higher	*	*	*	*	100.0

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

During the last few years, water pipe has been promoted largely to the young age groups, and its use has grown in popularity, particularly among male adolescents living in urban areas (9.9%) (Table 3.13).

Table 3.13. Percentage of adults 15 years and older who are current water pipe users by age, residence, and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

Gender by Residence	Age			
	15 - 24	25 - 44	45 - 64	65 +
Men				
Urban	9.9 (5.3 - 14.5)	5.0 (3.4 - 6.6)	1.5 (0.3 - 2.7)	0.5 (0.0 - 1.4)
Rural	3.9 (1.2 - 6.5)	1.4 (0.5 - 2.3)	0.9 (0.3 - 1.6)	0.2 (0.0 - 0.6)
Women				
Urban	0.9 (0.0 - 1.9)	1.1 (0.5 - 1.8)	0.7 (0.0 - 1.4)	0.0
Rural	0.1 (0.0 - 0.4)	0.6 (0.1 - 1.2)	0.1 (0.0 - 0.3)	0.0

3.1.2 Age at smoking initiation

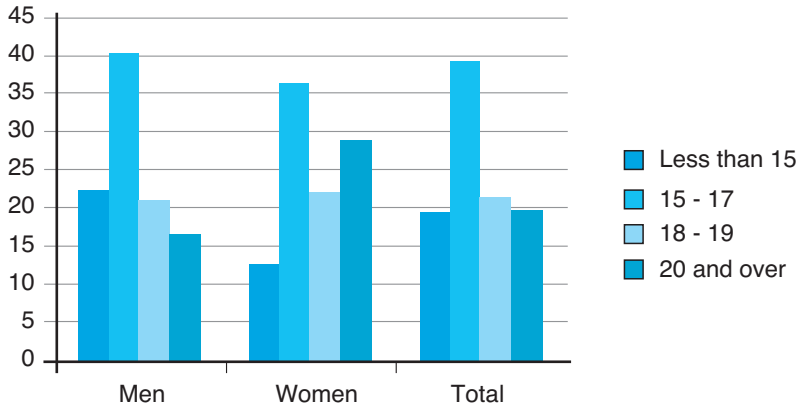
Men started daily smoking a little more than a year earlier than women on average (Figure 3.5). The average age of starting daily smoking was 16.6 years for men and 17.8 for women. The minimum legal age for purchasing tobacco products in Turkey is currently 18 years old. Nevertheless, more than half (58.9%) of the daily smokers started smoking daily before this legal age (Table 3.14). Men (62.5%) were more likely than women (48.9%), and those living at rural settlements (64.0%) than urban areas (57.3%), to initiate daily smoking before age 18.

Table 3.14. Percentage distribution of age at daily smoking initiation among ever daily smokers 18-34 years old, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Age at Daily Smoking Initiation (years) [1]				Total
	< 15	15 - 17	18 - 19	20 +	
	Percentage (95% CI)				
Overall	19.6 (16.7 - 22.5)	39.3 (35.8 - 42.9)	21.4 (18.3 - 24.5)	19.7 (17.2 - 22.2)	100.0
Gender					
Men	22.2 (18.5 - 25.8)	40.3 (36.0 - 44.6)	21.1 (17.5 - 24.7)	16.4 (13.5 - 19.2)	100.0
Women	12.4 (8.4 - 16.4)	36.5 (30.8 - 42.3)	22.1 (16.5 - 27.7)	28.9 (23.4 - 34.5)	100.0
Residence					
Urban	18.2 (14.9 - 21.6)	39.1 (34.8 - 43.3)	22.4 (18.6 - 26.2)	20.3 (17.3 - 23.4)	100.0
Rural	23.8 (18.7 - 29.0)	40.2 (34.4 - 46.0)	18.1 (13.7 - 22.6)	17.8 (13.8 - 21.9)	100.0

[1] Among respondents 18-34 years of age who are ever daily smokers and initiated daily smoking at 5 yrs and older

Figure 3.5. Age at initiation to daily smoking
Turkey Global Adult Tobacco Survey (GATS), 2008



Both men and women mostly started smoking daily at 15 to 17 years, but the starting age increased as age increased; i.e., young people had started at relatively younger ages (Table 3.15). Men who started smoking daily at 18 years of age and later represented 47.0% of the 30-34 age group, whereas only 25.1% of daily smoking men aged 18 to 24 years started after age 17. Similarly, two-thirds (64.8%) of women in the 30-34 age group started smoking after age 17, while the rate was 42.5% for ages 18-24.

Table 3.15. Percentage distribution of age at daily smoking initiation among ever daily smokers by age and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

Gender by age	Age at Daily Smoking Initiation (years)				Total
	< 15	15 - 17	18 - 19	20 +	
	Percentage (95% CI)				
Men					
18-24	24.4 (16.6 - 32.1)	50.6 (41.2 - 60.0)	18.7 (11.8 - 25.5)	6.4 (2.9 - 10.0)	100.0
25-29	26.4 (19.6 - 33.1)	36.0 (28.3 - 43.7)	19.1 (12.9 - 25.4)	18.4 (12.5 - 24.4)	100.0
30-34	17.7 (13.4 - 22.1)	35.3 (29.9 - 40.7)	24.3 (19.2 - 29.4)	22.7 (18.2 - 27.1)	100.0
Women					
18-24	11.8 (5.8 - 17.9)	45.6 (34.2 - 57.1)	19.8 (10.6 - 28.9)	22.7 (13.0 - 32.5)	100.0
25-29	14.3 (7.9 - 20.6)	38.9 (29.8 - 48.0)	24.0 (15.7 - 32.3)	22.9 (14.5 - 31.2)	100.0
30-34	10.8 (2.6 - 19.0)	24.5 (16.1 - 32.8)	22.4 (13.6 - 31.1)	42.4 (32.6 - 52.1)	100.0

3.1.3 Nicotine dependency

The only data used to show tobacco dependency were the number of cigarettes smoked per day and having the first cigarette shortly after awakening. In the whole group, daily smokers smoked an average of 17.7 cigarettes per day. The average number of cigarettes smoked per day among men (19.3) was much higher than for women (12.2) (Figure 3.4). Almost half (45.4%) of the men smoked 16-20 cigarettes per day, and one in five (17.7%) smoked more than a pack of cigarettes daily (heavy smoker), whereas one in four (25.7%) women smoked 5 or fewer cigarettes, and only 7.6% smoked more than a pack (Table 3.9). There was an inverse relation among men between education and heavy smoking, but the proportion of heavy smokers increased by education level among women. The proportion of heavy smokers was greater in rural areas, both among men and women.

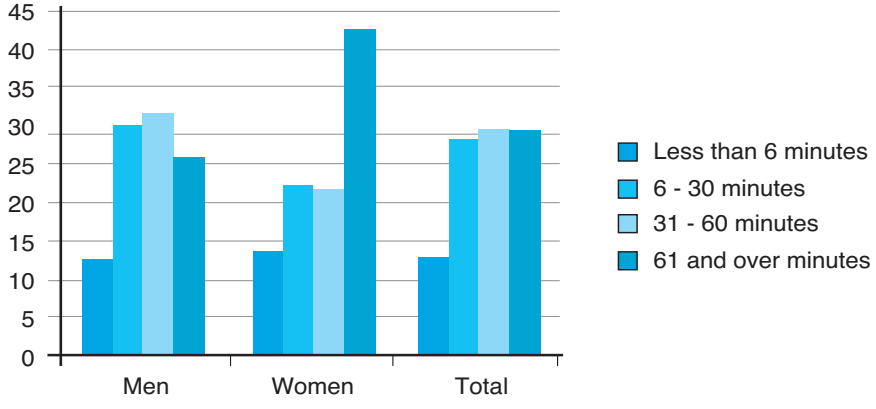
Overall, 41.1% of daily smokers smoked tobacco within 30 minutes of awakening – 12.8% within 5 minutes of waking (Table 3.16 and Figure 3.6). Men (42.6%) were more likely than women (35.6%) to have their first cigarette within 30 minutes after waking. Smoking their first cigarette within 30 minutes of waking was highest among those who had not graduated (47.3%) and lowest among those with a university degree or higher education (38.2%). The percentages of smokers who smoked first thing in the morning did not differ between urban and rural settlements.

Table 3.16. Percentage distribution of time to first tobacco use after waking among current daily smokers 15 years and older, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Time to first smoke				Total
	≤ 5 minutes	6 - 30 minutes	31 - 60 minutes	> 60 minutes	
	Percentage (95% CI)				
Overall	12.8 (11.1 - 14.5)	28.3 (25.8 - 30.7)	29.5 (27.1 - 31.9)	29.4 (26.8 - 32.0)	100.0
Gender					
Men	12.6 (10.7 - 14.6)	30.0 (27.3 - 32.7)	31.6 (28.9 - 34.2)	25.8 (23.1 - 28.5)	100.0
Women	13.5 (9.8 - 17.1)	22.1 (17.6 - 26.6)	21.9 (17.7 - 26.2)	42.5 (37.2 - 47.8)	100.0
Age (years)					
15-24	16.0 (11.3 - 20.8)	27.6 (21.9 - 33.4)	29.6 (23.2 - 36.0)	26.7 (20.4 - 33.0)	100.0
25-44	11.9 (9.9 – 14.0)	27.4 (24.2 - 30.6)	28.1 (24.7 - 31.5)	32.6 (28.9 - 36.2)	100.0
45-64	12.7 (9.8 - 15.6)	30.4 (25.7 - 35.2)	32.3 (27.9 - 36.7)	24.6 (20.8 - 28.4)	100.0
65+	10.5 (5.2 - 15.9)	30.4 (18.9 - 41.9)	30.7 (19.8 - 41.6)	28.4 (17.8 - 39.0)	100.0
Residence					
Urban	13.1 (11.0 - 15.2)	28.4 (25.5 - 31.3)	29.0 (26.0 - 32.0)	29.5 (26.2 - 32.7)	100.0
Rural	12.0 (9.5 - 14.5)	28.0 (23.6 - 32.4)	30.8 (27.0 - 34.7)	29.2 (25.2 - 33.1)	100.0
Education Level§					
Not Graduated	17.1 (10.2 - 23.9)	30.2 (21.3 - 39.1)	32.0 (23.2 - 40.8)	20.7 (13.1 - 28.4)	100.0
Primary	11.7 (9.3 - 14.1)	30.9 (27.4 - 34.3)	30.3 (26.8 - 33.8)	27.1 (23.5 - 30.7)	100.0
Secondary	16.4 (11.9 - 20.8)	27.8 (22.1 - 33.6)	28.2 (22.3 - 34.0)	27.7 (22.1 - 33.2)	100.0
High School	12.7 (9.4 - 16.0)	22.9 (18.5 - 27.3)	28.7 (23.8 - 33.6)	35.7 (30.7 - 40.7)	100.0
University or Higher	8.4 (4.1 - 12.7)	29.8 (21.8 - 37.7)	28.1 (21.0 - 35.3)	33.7 (26.2 - 41.2)	100.0

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Figure 3.6. Time to first tabocco use after waking, current daily smoking Turkey Global Adult Tobacco Survey (GATS), 2008



Heavy smokers, those smoking more than a pack of cigarettes daily (>20 cigarettes per day), were the most likely to have had their first cigarette within the first half hour after waking, both among men (69.3%) and women (81.3%) (Table 3.17). Almost three-quarters of heavy smoking men had their first cigarette within 30 minutes after waking, whereas only 16.8% of those smoking 5 or fewer cigarettes, and 20.2% of those smoking 6-10 cigarettes daily, had their first cigarette in the first 30 minutes. Figures for women were similar.

Table 3.17. Percentage distribution of time to first tobacco use after waking among current daily smokers 15 years and older, by number of cıgarettes smoked per day and gender – Turkey Global Adult Tobacco Survey (GATS), 2008.

No. Cıgs per Day	Time to first smoke				Total
	≤ 5 minutes	6 - 30 minutes	31 - 60 minutes	> 60 minutes	
	Percentage (95% CI)				
Men					
< 5	2.7 (0.0 - 6.5)	14.1 (6.0 - 22.2)	28.4 (18.2 - 38.7)	54.8 (41.6 - 68.0)	100.0
6-10	2.3 (0.7 - 3.8)	17.9 (13.3 - 22.5)	34.1 (27.8 - 40.3)	45.8 (39.3 - 52.3)	100.0
11-15	4.4 (0.9 - 7.9)	29.1 (22.1 - 36.0)	33.2 (26.2 - 40.2)	33.4 (25.9 - 40.8)	100.0
16-20	11.9 (9.3 - 14.6)	36.0 (31.6 - 40.4)	33.8 (29.6 - 38.1)	18.3 (15.1 - 21.4)	100.0
>20	34.7 (28.5 - 40.8)	34.6 (28.8 - 40.4)	23.2 (17.7 - 28.8)	7.5 (3.8 - 11.2)	100.0
Women					
< 5	0.9 (0.0 - 2.2)	12.2 (5.7 - 18.6)	16.4 (9.2 - 23.7)	70.5 (62.2 - 78.8)	100.0
6-10	8.4 (3.1 - 13.6)	14.7 (8.9 - 20.6)	28.8 (20.9 - 36.8)	48.1 (39.5 - 56.7)	100.0
11-15	6.8 (0.0 - 14.5)	38.4 (22.6 - 54.1)	29.8 (14.0 - 45.7)	25.0 (10.5 - 39.5)	100.0
16-20	25.5 (14.9 - 36.1)	37.2 (25.8 - 48.6)	20.7 (12.9 - 28.5)	16.6 (9.5 - 23.7)	100.0
>20	50.7 (31.4 - 69.9)	30.6 (14.3 - 46.9)	3.3 (0.0 - 8.6)	15.5 (0.0 - 31.8)	100.0

3.2 Smoking cessation

A little more than one fourth (26.5%) of the ever-daily smokers had quit smoking (Table 3.18). The quit rate did not differ for men (27.2%) and women (23.9%). The quit rate increased with age more than two-thirds (68.7%) of the elderly (65 years and over) had quit.

Table 3.18. Percentage of ever daily smokers 15 years and older who have quit smoking (quit rate), by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Former Daily Smokers (Among Ever Daily Smokers) [1,2]		
	Total	Men	Women
	Percentage (95% CI)		
Overall	26.5 (24.7 - 28.2)	27.2 (25.2 - 29.2)	23.9 (20.5 - 27.2)
Age (years)			
15-24	8.9 (5.1 - 12.7)	6.6 (2.3 - 10.9)	16.3 (7.4 - 25.2)
25-44	18.7 (16.5 - 20.9)	18.7 (16.0 - 21.4)	18.7 (14.9 - 22.6)
45-64	37.6 (34.4 - 40.8)	38.8 (35.2 - 42.3)	32.4 (25.8 - 39.0)
65+	68.7 (63.1 - 74.3)	68.4 (62.4 - 74.3)	70.9 (54.1 - 87.7)
Residence			
Urban	25.4 (23.3 - 27.6)	26.3 (23.7 - 28.8)	22.9 (19.1 - 26.6)
Rural	29.3 (26.4 - 32.2)	29.2 (26.3 - 32.2)	29.5 (22.5 - 36.5)
Education Level §			
Not Graduated	38.4 (31.7 - 45.1)	37.1 (29.2 - 45.1)	41.2 (29.5 - 53.0)
Primary	29.1 (26.4 - 31.7)	30.5 (27.5 - 33.6)	23.0 (17.7 - 28.3)
Secondary	20.9 (16.6 - 25.2)	21.1 (16.0 - 26.1)	20.1 (10.7 - 29.5)
High School	17.7 (14.5 - 21.0)	18.4 (14.7 - 22.1)	15.6 (9.9 - 21.3)
University or Higher	30.8 (25.2 - 36.3)	31.5 (25.0 - 38.1)	28.2 (18.8 - 37.7)

1 Current non-smokers

2 Also known as the quit ratio for daily smoking

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Almost half (44.8%) of smokers (current and former smokers who quit in the past 12 months) had attempted to quit in the past year (Table 3.19 and Figure 3.7). Over half of smokers aged 15-24 years (52.3%) reported they had made a quit attempt. Trying to quit was lowest among the non-graduates (35.0%) compared to over 40% for the other education levels. Attempting to quit was similar for men (44.1%) and women (46.9%). Attempting to quit did not differ for men by age, residence or education. For women, those aged 15-24 years (64.1%) were more likely than those in the older age groups to have made a quit attempt. Only 15.8% of those who attempted to quit were successful; women (21.9%) were more successful at quitting than men (13.5%), especially in urban areas.

Table 3.19. Percentage of smokers[1] 15 years and older who made a quit attempt and of those who made a quit attempt and successfully quit, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

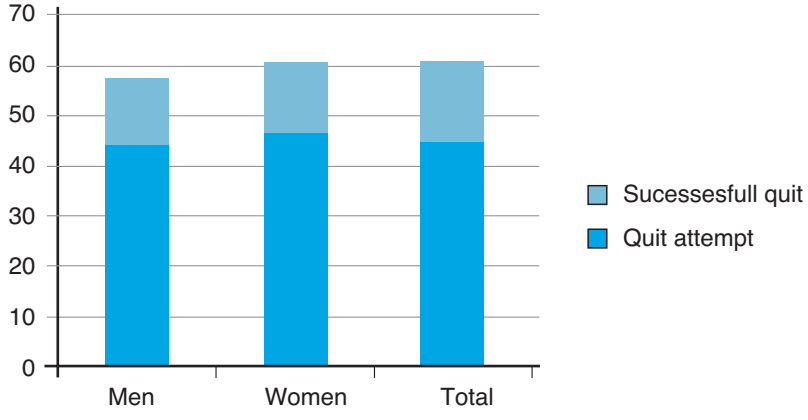
Characteristic	Smoking cessation - made quit attempt[1]			Smoking cessation - successfully quit[1]		
	Total	Men	Women	Total	Men	Women
	Percentage (95% CI)					
Overall	44.8 (42.5 - 47.0)	44.1 (41.5 - 46.6)	46.9 (42.6 - 51.1)	15.8 (13.5 - 18.0)	13.5 (11.1 - 16.0)	21.9 (16.5 - 27.4)
Age (years)						
15-24	52.3 (46.3 - 58.4)	48.3 (40.8 - 55.9)	64.1 (54.2 - 73.9)	17.5 (10.9 - 24.0)	13.8 (6.6 - 21.1)	25.6 (13.1 - 38.0)
25-44	42.7 (39.7 - 45.7)	41.5 (38.2 - 44.9)	45.6 (40.2 - 51.1)	13.8 (11.0 - 16.7)	10.9 (7.9 - 13.9)	20.8 (14.4 - 27.3)
45-64	44.2 (40.0 - 48.4)	46.2 (41.5 - 51.0)	37.2 (28.4 - 46.0)	17.1 (12.3 - 21.9)	16.5 (11.4 - 21.7)	19.5 (6.1 - 32.9)
65+	40.6 (30.4 - 50.7)	43.1 (32.4 - 53.9)	*	26.1 (12.3 - 39.8)	25.4 (11.4 - 39.4)	*
Residence						
Urban	44.7 (41.9 - 47.4)	44.2 (40.9 - 47.5)	45.8 (41.1 - 50.6)	15.6 (13.0 - 18.3)	12.7 (9.7 - 15.6)	22.4 (16.2 - 28.5)
Rural	45.1 (41.6 - 48.5)	43.8 (40.0 - 47.5)	53.1 (44.1 - 62.1)	16.1 (11.9 - 20.3)	15.4 (11.0 - 19.8)	19.6 (9.5 - 29.8)
Education Level[§]						
Not Graduated	35.0 (26.7 - 43.3)	33.4 (24.4 - 42.5)	37.7 (24.0 - 51.3)	16.8 (8.8 - 24.8)	12.4 (3.4 - 21.5)	23.3 (9.1 - 37.6)
Primary	44.6 (41.0 - 48.1)	43.9 (39.9 - 47.9)	46.7 (39.5 - 53.9)	13.3 (10.0 - 16.7)	12.4 (8.6 - 16.1)	16.2 (9.1 - 23.2)
Secondary	44.9 (39.0 - 50.8)	43.3 (36.8 - 49.8)	51.3 (39.9 - 62.8)	21.7 (15.2 - 28.2)	19.8 (12.2 - 27.3)	28.1 (12.5 - 43.8)
High School	48.0 (43.8 - 52.1)	48.0 (42.7 - 53.4)	47.8 (40.7 - 55.0)	15.5 (10.5 - 20.5)	10.0 (5.2 - 14.8)	29.4 (17.2 - 41.7)
University or Higher	45.8 (38.7 - 52.9)	44.3 (36.0 - 52.7)	50.2 (37.8 - 62.7)	15.9 (9.6 - 22.1)	16.6 (9.2 - 24.1)	13.9 (3.4 - 24.3)

1 Among current smokers and former smokers who have been abstinent for less than 12 months

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

Figure 3.7. Percentage of quit attempt and successful quit among current and former smokers Turkey Global Adult Tobacco Survey (GATS), 2008



Almost half (46.9%) of smokers had visited a health care provider in the past 12 months (Table 3.20). Having visited a health care provider was higher among women smokers (63.9%) than men (41.0%); and among those aged 45 and older (over 54%) compared to younger smokers (44%). There was no difference across education levels or place of residence. Half (49.0%) of the smokers who visited health care providers were asked by the provider if they smoked. Having been asked about smoking increased with age, from 42.0% (ages 15-24) to 61.0% (age 65 and older). There was no difference by gender or education. Over 80% (83.1%) of those asked about smoking by their health care provider were advised to quit. Having been advised to quit smoking increased with age (79.5% for age 15-24 and 99.0% for age 65 and over), but did not differ by gender, residence, or education level. Only 8.3% of those advised to quit were successful.

Table 3.20. Percentage of smokers[1] 15 years and older who made a quit attempt and received health care provider assistance in the past 12 months, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Smoking cessation and health care seeking behavior			
	Visited a HCP [1]	Asked by HCP if a smoker [2]	Advised to quit by HCP [3]	Advised to quit by HCP and successfully quit [3]
	Percentage (95% CI)			
Overall	46.9 (44.1 - 49.7)	49.0 (45.8 - 52.3)	83.1 (79.3 - 86.9)	8.3 (5.7 - 10.8)
Gender				
Men	41.0 (38.1 - 44.0)	49.1 (45.4 - 52.9)	85.9 (81.6 - 90.2)	8.7 (5.5 - 12.0)
Women	63.9 (59.5 - 68.4)	48.8 (43.3 - 54.4)	77.8 (71.9 - 83.8)	7.3(3.3 - 11.3)
Age (years)				
15-24	43.8 (37.8 - 49.8)	42.0 (33.6 - 50.3)	79.5 (67.1 - 91.8)	6.5 (0.0 - 14.0)
25-44	44.3 (40.9 - 47.6)	45.8 (41.5 - 50.1)	78.5 (73.6 - 83.5)	6.0 (3.2 - 8.8)
45-64	54.1 (49.6 - 58.6)	57.7 (51.9 - 63.5)	89.2 (84.8 - 93.6)	10.8 (5.8 - 15.9)
65+	54.7 (44.5 - 64.9)	61.0 (47.6 - 74.4)	99.0 (96.9 - 100.0)	18.7 (5.0 - 32.5)
Residence				
Urban	48.7 (45.2 - 52.1)	50.6 (46.6 - 54.5)	83.1 (78.6 - 87.7)	7.7 (4.8 - 10.5)
Rural	42.0 (38.0 - 46.0)	44.1 (38.7 - 49.4)	83.0 (77.1 - 88.8)	10.4 (5.3 - 15.5)
Education Level §				
Not Graduated	47.5 (40.2 - 54.7)	50.8 (39.4 - 62.1)	88.7 (80.3 - 97.1)	8.1 (1.6 - 14.7)
Primary	45.7 (41.8 - 49.7)	48.1 (42.9 - 53.3)	85.8 (81.1 - 90.5)	12.0 (7.5 - 16.5)
Secondary	43.7 (38.0 - 49.4)	53.0 (45.1 - 60.9)	80.0 (71.6 - 88.5)	6.5 (0.6 - 12.4)
High School	49.7 (44.3 - 55.1)	46.6 (40.0 - 53.1)	79.1 (70.9 - 87.3)	5.2 (0.3 - 10.1)
University or Higher	50.6 (43.1 - 58.1)	51.4 (42.8 - 60.0)	82.4 (73.7 - 91.0)	3.8 (0.0 - 7.8)

HCP = health care provider

1 Among current smokers and former smokers who have been abstinent for less than 12 months

2 Among current smokers and former smokers who have been abstinent for less than 12 months, and who visited a HCP during the past 12 months

3 Among current smokers and former smokers who have been abstinent for less than 12 months, who visited a HCP during the past 12 months and were asked by an HCP if they smoked.

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Among smokers who made an attempt to quit in the past 12 months, 9.3% used pharmacotherapy, 1.8% used counseling or advice, and 7.1% used other methods (Table 3.21). Use of pharmacotherapy was highest among smokers with high school or higher education (over 10%) and lowest for those who had not graduated (1.8%). Counseling did not differ by gender, age, residence, or education level.

Table 3.21. Percentage of smokers[1] 15 years and older who made a quit attempt in past 12 months and used various cessation methods, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Use of Cessation Method [2]		
	Pharmacotherapy [3]	Counseling/Advice [4]	Other [5]
	Percentage (95% CI)		
Overall	9.3 (7.5 - 11.2)	1.8 (0.9 - 2.8)	7.1 (5.0 - 9.2)
Gender			
Men	9.4 (7.2 - 11.7)	1.7 (0.5 - 2.9)	6.9 (4.9 - 8.9)
Women	9.1 (5.6 - 12.5)	2.2 (0.6 - 3.8)	7.6 (3.8 - 11.4)
Age (years)			
15-24	9.8 (4.9 - 14.7)	0.8 (0.0 - 1.9)	3.9 (0.7 - 7.0)
25-44	9.2 (6.8 - 11.6)	1.3 (0.5 - 2.1)	7.2 (4.8 - 9.6)
45-64	9.9 (6.1 - 13.7)	3.6 (0.7 - 6.5)	9.0 (4.7 - 13.4)
65+	4.1 (0.0 - 9.2)	4.8 (0.0 - 11.3)	13.7 (2.5 - 24.8)
Residence			
Urban	10.4 (8.1 - 12.7)	2.4 (1.1 - 3.6)	8.1 (5.3 - 10.9)
Rural	6.4 (3.5 - 9.3)	0.4 (0.0 - 1.2)	4.4 (2.3 - 6.4)
Education Level §			
Not Graduated	1.8 (0.0 - 4.2)	0.3 (0.0 - 0.9)	3.8 (0.3 - 7.3)
Primary	8.6 (5.9 - 11.4)	1.8 (0.2 - 3.3)	9.0 (5.8 - 12.3)
Secondary	8.6 (3.8 - 13.4)	0.9 (0.0 - 2.2)	9.0 (3.5 - 14.4)
High School	12.2 (7.7 - 16.8)	2.0 (0.6 - 3.5)	3.7 (1.3 - 6.1)
University or Higher	11.1 (5.2 - 16.9)	4.4 (0.1 - 8.7)	6.4 (2.0 - 10.8)

1 Among current smokers and former smokers who have been abstinent for less than 12 months
2 Among current smokers who made a quit attempt in the past 12 months and former smokers who have been abstinent for less than 12 months
3 Pharmacotherapy includes nicotine replacement therapy and prescription medications
4 Counseling/Advice includes counseling at a cessation clinic
5 Other includes traditional medicines and other products
§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Over half (53.0%) of current cigarette smokers stated they were interested in quitting; but only 10.0% said they planned to quit in the next month (Table 3.22). This indicated that around 8.4 million current cigarette smokers in Turkey were interested in quitting – 6.4 million men and 2 million women. There was no difference in interest to quit by gender, age, or residence; however, interest in quitting increased with education, from 41.7% among those who were not school graduates to 63.7% of those with university or higher education.

Table 3.22. Percentage distribution and number of current cigarette smokers 15 years and older by interest in quitting smoking and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Interest in Quitting Smoking [1]					
	Interested in Quitting	Planning to Quit Within Next Month	Thinking About Quitting Within Next 12 Months	Will Quit Someday, But Not in the Next 12 Months	Not Interested in Quitting	Don't Know
	Percentage (95% CI)					
Overall	53.0 (50.2 - 55.8)	10.0 (8.4 - 11.5)	17.8 (16.0 - 19.7)	25.2 (22.8 - 27.6)	42.4 (39.6 - 45.2)	4.6 (3.2 - 6.0)
Gender						
Men	53.6 (50.6 - 56.6)	10.0 (8.2 - 11.8)	17.7 (15.6 - 19.7)	25.9 (23.4 - 28.5)	41.8 (38.9 - 44.8)	4.6 (3.1 - 6.0)
Women	51.2 (46.5 - 55.9)	9.8 (7.2 - 12.4)	18.5 (14.9 - 22.0)	23.0 (19.3 - 26.7)	44.1 (39.3 - 48.8)	4.7 (2.5 - 7.0)
Age (years)						
15-24	54.5 (48.0 - 61.0)	11.0 (7.4 - 14.7)	18.9 (14.0 - 23.8)	24.6 (19.2 - 30.0)	41.4 (35.2 - 47.7)	4.0 (0.9 - 7.2)
25-44	52.4 (48.8 - 56.0)	8.8 (7.1 - 10.5)	17.6 (15.2 - 20.0)	26.0 (23.1 - 28.9)	43.0 (39.5 - 46.5)	4.6 (3.0 - 6.2)
45-64	54.2 (49.9 - 58.5)	11.7 (8.6 - 14.8)	18.1 (14.6 - 21.5)	24.4 (20.4 - 28.5)	41.4 (37.1 - 45.6)	4.4 (2.2 - 6.7)
65+	45.0 (34.2 - 55.8)	10.3 (4.7 - 15.9)	14.2 (5.7 - 22.6)	20.6 (11.8 - 29.3)	45.7 (34.7 - 56.7)	9.3 (1.3 - 17.4)
Residence						
Urban	51.5 (47.8 - 55.1)	9.2 (7.3 - 11.1)	17.4 (15.2 - 19.5)	24.9 (21.9 - 27.9)	43.4 (39.9 - 46.9)	5.1 (3.3 - 7.0)
Rural	57.3 (53.8 - 60.8)	12.1 (9.6 - 14.6)	19.2 (15.9 - 22.4)	26.0 (22.7 - 29.4)	39.6 (36.1 - 43.1)	3.1 (1.9 - 4.3)
Education Level§						
Not Graduated	41.7 (32.6 - 50.9)	11.5 (6.6 - 16.4)	11.4 (6.3 - 16.5)	18.8 (12.3 - 25.3)	53.3 (44.1 - 62.5)	5.0 (1.1 - 8.8)
Primary	51.5 (47.7 - 55.3)	9.9 (7.7 - 12.0)	17.1 (14.2 - 19.9)	24.6 (21.3 - 27.9)	43.4 (39.7 - 47.2)	5.1 (3.1 - 7.0)
Secondary	55.6 (49.6 - 61.5)	10.8 (7.0 - 14.6)	19.0 (14.5 - 23.6)	25.8 (20.3 - 31.2)	39.8 (34.1 - 45.5)	4.6 (1.9 - 7.3)
High School	53.7 (48.4 - 59.0)	8.4 (5.4 - 11.3)	19.9 (16.2 - 23.7)	25.4 (21.0 - 29.8)	42.0 (36.9 - 47.1)	4.3 (1.9 - 6.7)
University or Higher	63.7 (56.7 - 70.7)	11.6 (7.2 - 15.9)	19.8 (13.2 - 26.4)	32.3 (25.3 - 39.3)	33.5 (26.6 - 40.4)	2.8 (0.7 - 4.9)
	Number (in thousands)					
Overall	8,446	1,586	2,844	4,015	6,755	732
Gender						
Men	6,427	1,201	2,116	3,110	5,018	546
Women	2,019	386	728	906	1,737	186
Age (years)						
15-24	1,586	321	549	716	1,205	118
25-44	4,563	767	1,534	2,262	3,744	400
45-64	2,086	450	695	941	1,592	171
65+	211	48	66	96	214	44
Residence						
Urban	6,043	1,080	2,040	2,924	5,095	604
Rural	2,402	507	804	1,092	1,659	129
Education Level§						
Not Graduated	542	150	148	245	693	64
Primary	3,493	669	1,156	1,668	2,944	343
Secondary	1,471	286	504	682	1,054	122
High School	2,021	315	750	956	1,581	163
University or Higher	917	167	286	465	482	40

[1] Among current daily or less than daily smokers

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

3.3 Secondhand smoke (SHS) exposure

3.3.1 SHS exposure in public places

Secondhand smoke exposure was high, mostly in restaurants (55.9%) (Table 3.23 and Figure 3.8). More than half of men (57.7%) and women (52.3%) were exposed to tobacco smoke in restaurants. Exposure to SHS at restaurants was more common in urban areas, and smokers were more likely to have been exposed to SHS than non-smokers. One in six (16.5%) people were exposed to SHS on public transportation and one in ten (11.3%) in public buildings and state offices. In spite of the smoking ban at healthcare facilities, 6.0% of respondents stated that they had been exposed to SHS at healthcare establishments. Smokers were exposed to SHS more often than non-smokers, in all types of locations.

Table 3.23. Percentage and number of adults 15 years and older who were exposed to tobacco smoke in public places in the past 30 days, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Among those who visited the following locations in the past 30 days, the percentage exposed to tobacco smoke			
	Public (State) Buildings/ Offices	Health Care Facilities	Restaurants	Mass Transportation
	Percentage (95% CI)			
Overall	11.3 (9.6 - 12.9)	6.0 (5.1 - 6.9)	55.9 (53.4 - 58.4)	16.5 (14.8 - 18.2)
Gender				
Men	13.0 (11.1 - 15.0)	6.6 (5.2 - 8.0)	57.7 (54.8 - 60.5)	18.7 (16.4 - 21.0)
Women	7.8 (5.3 - 10.3)	5.5 (4.4 - 6.6)	52.3 (48.1 - 56.6)	14.1 (12.2 - 15.9)
Age (years)				
15-24	13.2 (8.9 - 17.6)	7.8 (4.9 - 10.6)	57.4 (52.4 - 62.4)	21.2 (18.1 - 24.4)
25-44	11.3 (9.3 - 13.3)	6.6 (5.2 - 7.9)	59.0 (55.6 - 62.4)	16.0 (13.7 - 18.2)
45-64	9.6 (7.2 - 12.0)	4.4 (3.0 - 5.9)	50.3 (46.1 - 54.5)	14.1 (11.9 - 16.4)
65+	11.5 (6.1 - 16.8)	4.7 (2.8 - 6.7)	32.7 (23.5 - 41.9)	10.9 (7.8 - 14.0)
Residence				
Urban	11.8 (9.7 - 13.9)	6.2 (5.0 - 7.5)	58.4 (55.3 - 61.4)	16.2 (14.1 - 18.3)
Rural	9.7 (7.8 - 11.6)	5.4 (4.2 - 6.5)	48.2 (44.3 - 52.0)	17.3 (14.6 - 19.9)
Education Level [§]				
Not Graduated	9.8 (5.9 - 13.6)	4.7 (3.2 - 6.2)	39.6 (29.6 - 49.5)	15.9 (12.8 - 19.0)
Primary	9.8 (7.6 - 11.9)	4.7 (3.5 - 5.9)	48.7 (44.4 - 52.9)	13.7 (11.7 - 15.7)
Secondary	13.2 (8.6 - 17.7)	8.5 (5.2 - 11.7)	53.2 (47.8 - 58.7)	18.3 (14.8 - 21.8)
High School	11.4 (7.8 - 15.1)	6.7 (4.5 - 8.9)	61.7 (57.6 - 65.9)	18.5 (15.1 - 21.8)
University or Higher	12.9 (9.4 - 16.5)	9.1 (5.8 - 12.3)	66.2 (61.1 - 71.3)	20.2 (15.6 - 24.8)
Halen tütün kullanma				
Halen sigara kullanıcısı[1]	11.6 (9.2 - 13.9)	6.7 (4.9 - 8.5)	63.4 (60.1 - 66.7)	18.0 (15.3 - 20.6)
Tütün kullanmayan[2]	11.1 (9.0 - 13.2)	5.7 (4.7 - 6.8)	50.2 (47.0 - 53.5)	15.7 (13.9 - 17.5)
	Number (in thousands)			
Overall	2,103	1,619	10,947	5,866
Gender				
Men	1,612	782	7,541	3,440
Women	491	837	3,407	2,426
Age (years)				
15-24	521	388	3,091	1,900
25-44	1,010	770	5,608	2,424
45-64	458	338	2,042	1,265
65+	113	122	206	277

Table 3.23. continued...

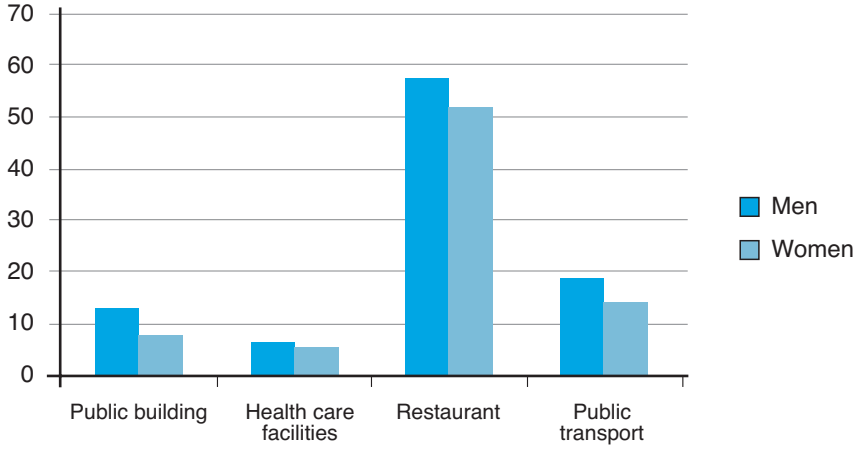
Residence				
Urban	1,652	1,227	8,669	4,303
Rural	451	392	2,278	1,563
Education Level §				
Not Graduated	117	207	386	764
Primary	644	519	2,844	1,872
Secondary	418	301	1,974	1,198
High School	522	346	3,482	1,313
University or Higher	403	246	2,262	690
Current Smoking Status				
Current Cigaratte Smokers[1]	842	506	5,299	2,141
Non - smokers[2]	1,261	1,113	5,626	3,725

1 Among daily or less than daily cigarette smokers

2 Among former smokers and never smokers

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Figure 3.8. Secondhand smoking exposure in public places
Turkey Global Adult Tobacco Survey (GATS), 2008



The data indicated that over 6 million adults (38.5%) who worked indoors were exposed to SHS at their indoor workplaces (Table 3.24). Exposure to SHS at work was higher among men (41.5%) than women (28.3%), and among workers in rural areas (45.6%) compared to urban areas (36.8%). Thus, an estimated 5 million men and 1 million women who work indoors were exposed to SHS at work. Over 2.6 million (31.6%) non-smokers were also exposed to SHS at their work. Non-smoking men (35.4%) were more likely than non-smoking women (23.0%) to be exposed to SHS.

Table 3.24. Percentage and number of adults 15 years and older who work indoors or outdoors with an enclosed area and are exposed to tobacco smoke at work, by smoking status and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Adults Exposed to Tobacco Smoke at Work [1]	
	Overall	Non-smokers
	Percentage (95% CI)	
Overall	38.5 (35.8 - 41.3)	31.6 (28.4 - 34.8)
Gender		
Men	41.5 (38.4 - 44.6)	35.4 (31.5 - 39.3)
Women	28.3 (23.4 - 33.2)	23.0 (17.9 - 28.1)
Age (years)		
15-24	40.9 (33.7 - 48.0)	31.6 (23.1 - 40.1)
25-44	37.6 (34.6 - 40.6)	31.5 (27.7 - 35.4)
45-64	39.6 (34.7 - 44.6)	31.7 (26.1 - 37.4)
65+	32.5 (16.3 - 48.6)	31.8 (14.0 - 49.6)
Residence		
Urban	36.8 (33.6 - 40.0)	30.0 (26.3 - 33.7)
Rural	45.6 (40.8 - 50.4)	37.6 (31.8 - 43.3)
Education Level [§]		
Not Graduated	38.2 (27.2 - 49.1)	24.1 (14.6 - 33.6)
Primary	44.5 (40.2 - 48.8)	37.5 (31.9 - 43.2)
Secondary	40.3 (33.9 - 46.8)	38.1 (29.0 - 47.2)
High School	39.0 (34.0 - 44.0)	29.7 (23.8 - 35.7)
University or Higher	26.4 (22.0 - 30.8)	23.6 (18.2 - 28.9)
	Number (in thousands)	
Overall	6,044	2,666
Gender		
Men	5,058	2,070
Women	986	596
Age (years)		
15-24	1,180	563
25-44	3,625	1,506
45-64	1,188	557
65+	50	41
Residence		
Urban	4,621	1,996
Rural	1,423	670
Education Level [§]		
Not Graduated	249	100
Primary	2,353	927
Secondary	1,044	530
High School	1,576	618
University or Higher	822	492

[1] In the past 30 days. Among those respondents who work outside of the home who usually work indoors and outdoors with an enclosed area

[§] Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

For adults who worked indoors, 60.9% worked in sites where smoking was banned in all closed areas; 15.0% worked in sites where smoking was allowed everywhere; 15.2% worked in sites where smoking was allowed in designated closed areas; and 9.0% worked in sites with no policy (Table 3.25). Urban workers were more likely to work in sites with policies that banned smoking in closed areas (63.9%) than those in rural (48.8%) areas. Also, workers with university or higher education (78.4%) were more likely than those who had not graduated (29.0%) to work in sites with policies that banned smoking in closed areas.

Table 3.25. Percentage distribution of adults 15 years and older who work indoors or outdoors with an enclosed area by the policy they have at work and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Disallowed in any closed area	Allowed Everywhere	Allowed in some closed areas only	No policy	Total
	Percentage (95% CI)				
Overall	60.9 (58.0 - 63.7)	15.0 (13.1 - 16.8)	15.2 (12.9 - 17.5)	9.0 (7.5 - 10.4)	100.0
Gender					
Men	59.4 (56.2 - 62.5)	16.9 (14.8 - 19.1)	15.3 (12.7 - 17.9)	8.4 (6.8 - 9.9)	100.0
Women	66.1 (60.5 - 71.7)	8.0 (5.5 - 10.6)	14.8 (10.8 - 18.8)	11.0 (7.5 - 14.6)	100.0
Age (years)					
15-24	59.3 (52.7 - 65.9)	15.8 (11.1 - 20.5)	15.9 (10.9 - 20.8)	9.0 (5.3 - 12.8)	100.0
25-44	62.9 (59.6 - 66.1)	13.7 (11.6 - 15.8)	15.9 (13.3 - 18.6)	7.5 (6.0 - 9.0)	100.0
45-64	56.9 (51.5 - 62.4)	18.4 (14.6 - 22.3)	12.6 (8.8 - 16.4)	12.0 (8.6 - 15.4)	100.0
65+	40.5 (23.6 - 57.3)	11.7 (0.9 - 22.5)	8.0 (0.0 - 16.0)	39.9 (23.8 - 55.9)	100.0
Residence					
Urban	63.9 (60.6 - 67.2)	13.3 (11.2 - 15.4)	16.6 (13.8 - 19.3)	6.3 (4.8 - 7.7)	100.0
Rural	48.8 (43.4 - 54.1)	21.6 (17.4 - 25.8)	9.8 (7.2 - 12.4)	19.8 (15.5 - 24.1)	100.0
Education Level§					
Not Graduated	29.0 (15.9 - 42.2)	28.3 (17.1 - 39.6)	10.7 (2.4 - 18.9)	32.0 (20.7 - 43.2)	100.0
Primary	53.1 (48.6 - 57.5)	21.1 (17.7 - 24.6)	15.1 (11.7 - 18.6)	10.7 (8.3 - 13.1)	100.0
Secondary	63.6 (57.8 - 69.4)	18.2 (13.5 - 22.9)	11.5 (7.2 - 15.9)	6.7 (3.6 - 9.8)	100.0
High School	60.8 (56.0 - 65.6)	11.4 (8.5 - 14.4)	18.5 (14.1 - 23.0)	9.2 (6.4 - 12.0)	100.0
University or Higher	78.4 (74.1 - 82.8)	3.7 (2.0 - 5.5)	15.0 (11.2 - 18.8)	2.9 (1.3 - 4.4)	100.0

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

For adults who worked indoors, exposure to SHS at work varied by the smoking policy at the worksite (Table 3.26). Over 90% of those working in sites where smoking was allowed were exposed to SHS, compared to 12.5% who were exposed in sites where smoking in closed work areas was not allowed. The rate of exposure to SHS at work was 74.8% for those who worked in places with no policy. Exposure in work sites with no policy was higher for men (82.7%) than women (53.5%), for those in urban areas (86.3%) than those in rural areas (60.0%); and for those with primary or higher education (over 70%) than those who had not graduated (41.1%).

Table 3.26. Percentage of adults 15 years and older who work indoors or outdoors with an enclosed area and are exposed to tobacco smoke at work, by the policy they have at work and selected demographic characteristics – Turkey Global Adult Tobacco Survey, (GATS), 2008.

Characteristic	Adults Exposed to Tobacco Smoke at Work [1]			
	Disallowed in any closed area	Allowed everywhere	Allowed in some areas	No Policy
	Percentage (95% CI)			
Overall	12.5 (10.5 - 14.6)	94.8 (92.3 - 97.3)	65.1 (57.9 - 72.3)	74.8 (68.3 - 81.2)
Gender				
Men	13.7 (11.3 - 16.2)	96.2 (94.1 - 98.3)	65.3 (56.7 - 73.8)	82.7 (76.8 - 88.7)
Women	8.8 (5.5 - 12.1)	84.3 (73.5 - 95.1)	64.5 (50.3 - 78.7)	53.5 (39.3 - 67.7)
Age (years)				
15-24	16.0 (9.5 - 22.5)	93.3 (86.0 - 100.0)	53.6 (36.5 - 70.8)	86.2 (73.6 - 98.7)
25-44	12.8 (10.3 - 15.3)	96.3 (93.6 - 98.9)	67.8 (60.7 - 74.9)	73.1 (65.2 - 81.1)
45-64	8.6 (5.2 - 12.0)	94.4 (89.2 - 99.5)	66.9 (53.5 - 80.4)	74.3 (65.0 - 83.6)
65+	*	*	*	*
Residence				
Urban	12.0 (9.8 - 14.3)	96.4 (93.9 - 98.9)	65.0 (57.0 - 73.0)	86.3 (79.9 - 92.7)
Rural	15.2 (10.5 - 19.9)	90.6 (84.7 - 96.5)	65.9 (51.0 - 80.8)	60.0 (49.4 - 70.6)
Education Level §				
Not Graduated	6.3 (0.0 - 13.9)	82.0 (67.5 - 96.5)	*	41.1 (25.0 - 57.2)
Primary	13.0 (9.0 - 17.0)	93.7 (89.8 - 97.6)	65.0 (54.3 - 75.7)	72.1 (62.7 - 81.4)
Secondary	14.5 (8.4 - 20.7)	95.9 (91.6 - 100.0)	63.7 (46.8 - 80.6)	93.9 (85.8 - 100.0)
High School	11.3 (7.6 - 15.0)	100.0	67.7 (55.5 - 79.9)	88.6 (80.4 - 96.8)
University or Higher	12.4 (8.8 - 16.0)	*	71.3 (58.8 - 83.7)	*

1 In the past 30 days. Among those respondents who work outside of the home who usually work indoors and outdoors with an enclosed area

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

* Cell size less than 25

3.3.2 SHS exposure on private premises and in homes

An estimated 30.5 million (59.7%) adults in Turkey lived in homes where smoking was allowed (Table 3.27). Almost two-thirds of those aged 15-24 lived in homes where smoking was allowed, compared to 46.5% of those aged 65 and over. Almost 20 million (19.5 million – 55.5%) non-smokers lived in homes where smoking was allowed inside the home. Over 20 million adults in Turkey (41.1%) lived in homes where someone smoked daily. Exposure to daily smoking was higher among those aged 15-24 (51.6%) than those aged 65 and over (22.5%). Exposure at home was lowest among those with university or higher education level (32.7%). Over 10 million non-smokers lived in homes where someone smoked at least daily inside the home.

Table 3.27. Percentage and number of adults 15 years and older who are exposed to tobacco smoke at home, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Smoking is allowed inside the home [1]	Someone smokes at least daily inside the home	Someone smokes at least monthly inside the home
	Percentage (95% CI)		
Overall	59.7 (57.7 - 61.6)	41.1(39.3 - 42.8)	56.3 (54.4 - 58.2)
Gender			
Men	58.7 (56.3 - 61.2)	41.5 (39.3 - 43.7)	56.1 (53.8 - 58.5)
Women	60.5 (58.4 - 62.7)	40.6 (38.6 - 42.7)	56.5 (54.3 - 58.7)
Age (years)			
15-24	65.8 (62.1 - 69.4)	51.6 (47.8 - 55.4)	66.9 (63.3 - 70.4)
25-44	60.6 (58.4 - 62.9)	42.3 (40.2 - 44.5)	57.6 (55.3 - 59.9)
45-64	57.3 (54.6 - 60.1)	36.2 (33.8 - 38.7)	51.6 (48.9 - 54.3)
65+	46.5 (42.2 - 50.8)	22.5 (19.0 - 26.0)	37.3 (33.6 - 41.0)
Residence			
Urban	61.3 (58.9 - 63.7)	41.1 (39.0 - 43.2)	55.0 (52.7 - 57.4)
Rural	55.8 (52.6 - 59.1)	40.9 (37.9 - 43.9)	59.2 (56.1 - 62.3)
Education Level §			
Not Graduated	58.0 (54.2 - 61.8)	39.7 (36.2 - 43.2)	56.4 (52.8 - 60.0)
Primary	59.4 (56.9 - 61.9)	41.3 (38.9 - 43.6)	55.5 (53.0 - 58.0)
Secondary	61.3 (57.4 - 65.2)	43.6 (39.8 - 47.4)	61.3 (57.4 - 65.1)
High School	62.5 (59.1 - 65.9)	43.8 (40.4 - 47.2)	57.7 (54.5 - 60.9)
University or Higher	55.1 (50.7 - 59.5)	32.7 (28.8 - 36.5)	47.6 (43.3 - 52.0)
Current Smoking Status			
Non - smokers[2]	55.5 (53.3 - 57.6)	29.2 (27.5 - 31.0)	47.5 (45.3 - 49.7)
	Number (in thousands)		
Overall	30,500	20,748	28,452
Gender			
Men	14,732	10,290	13,920
Women	15,768	10,458	14,533
Age (years)			
15-24	7,575	5,874	7,613
25-44	13,246	9,147	12,450
45-64	7,500	4,693	6,680
65+	2,179	1,033	1,709
Residence			
Urban	21,849	14,476	19,364
Rural	8,651	6,272	9,088
Education Level §			
Not Graduated	5,052	3,399	4,832
Primary	11,861	8,153	10,968
Secondary	5,226	3,669	5,154
High School	5,789	4,025	5,299
University or Higher	2,516	1,478	2,157
Current Smoking Status			
Non - smokers[2]	19,497	10,129	16,449

1 Smoking is allowed or allowed, with exceptions

2 Among former smokers and never smokers

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

3.4 Expenditures for purchasing tobacco

Those who purchased manufactured cigarettes were most likely to have made their last purchase in a shop (92.5%), followed by a kiosk (5.8%) (Table 3.28). There was no difference in where the last purchase was made by gender, age, residence, or education level. On average, current smokers of manufactured cigarettes spent 86.7 Turkish Lira (TRL) on cigarettes in the past month and they purchased 31.3 cigarettes, on average, at their last purchase (Table 3.29 and Figure 3.9). Men (94.1 Lira) spent more than women (58.5 Lira). There was no difference in the average number of cigarettes last purchased by gender, age, residence, or education level.

Table 3.28. Percentage distribution of the source of last purchase of cigarettes among current manufactured cigarette smokers 15 years and older, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Where bought last manufactured cigarettes				Total
	Shop	Kiosk	Street Vendor	Other	
	Percentage (95% CI)				
Overall	92.5 (91.0 - 93.9)	5.8 (4.4 - 7.2)	0.5 (0.2 - 0.9)	1.2 (0.6 - 1.8)	100.0
Gender					
Men	92.7 (91.0 - 94.4)	5.5 (4.0 - 7.0)	0.6 (0.2 - 1.1)	1.2 (0.5 - 1.8)	100.0
Women	91.6 (88.8 - 94.3)	6.9 (4.3 - 9.6)	0.2 (0.0 - 0.5)	1.3 (0.3 - 2.3)	100.0
Age (years)					
15-24	90.5 (86.1 - 94.9)	8.5 (4.3 - 12.6)	0.0	1.1 (0.0 - 2.8)	100.0
25-44	92.3 (90.6 - 94.0)	5.7 (4.2 - 7.2)	0.7 (0.2 - 1.3)	1.3 (0.5 - 2.1)	100.0
45-64	94.1 (92.1 - 96.1)	4.4 (2.6 - 6.2)	0.5 (0.0 - 1.2)	0.9 (0.3 - 1.6)	100.0
65+	95.0 (90.5 - 99.5)	3.4 (0.0 - 7.1)	0.4 (0.0 - 1.2)	1.2 (0.0 - 3.6)	100.0
Residence					
Urban	91.5 (89.6 - 93.4)	6.7 (4.9 - 8.5)	0.5 (0.1 - 1.0)	1.3 (0.6 - 2.0)	100.0
Rural	95.3 (93.6 - 97.1)	3.2 (1.6 - 4.9)	0.5 (0.1 - 0.9)	0.9 (0.2 - 1.6)	100.0
Education Level §					
Not Graduated	94.3 (90.0 - 98.5)	4.4 (0.2 - 8.5)	0.3 (0.0 - 0.8)	1.0 (0.0 - 2.2)	100.0
Primary	94.3 (92.6 - 96.0)	3.6 (2.2 - 4.9)	0.9 (0.2 - 1.7)	1.2 (0.5 - 1.9)	100.0
Secondary	91.1 (87.3 - 94.9)	7.2 (3.9 - 10.6)	0.6 (0.0 - 1.4)	1.0 (0.0 - 2.9)	100.0
High School	91.5 (88.4 - 94.6)	7.2 (4.3 - 10.1)	0.0	1.3 (0.0 - 2.7)	100.0
University or Higher	87.8 (83.3 - 92.3)	11.0 (6.6 - 15.4)	0.0	1.3 (0.0 - 2.7)	100.0

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

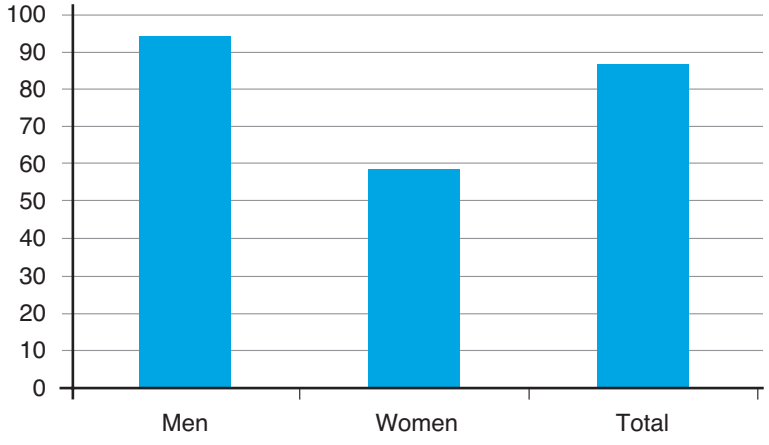
Table 3.29. Average number of cigarettes purchased last time among current manufactured cigarette smokers 15 years and older, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Cigarette expenditures per month (Liras) [1]	No. of cigarettes purchased last time
	Average (95% CI)	
Overall	86.7 (83.5 - 89.9)	31.3 (27.7 - 34.8)
Gender		
Men	94.1 (90.4 - 97.8)	31.5 (27.2 - 35.9)
Women	58.5 (53.7 - 63.3)	30.4 (25.1 - 35.7)
Age (years)		
15-24	83.5 (76.1 - 90.9)	28.6 (18.4 - 38.8)
25-44	86.5 (82.2 - 90.9)	31.0 (26.2 - 35.8)
45-64	91.0 (85.6 - 96.3)	33.5 (28.6 - 38.4)
65+	72.5 (59.9 - 85.1)	35.8 (25.6 - 46.0)
Residence		
Urban	85.9 (82.0 - 89.9)	31.1 (26.5 - 35.6)
Rural	88.9 (84.1 - 93.7)	31.8 (27.6 - 36.1)
Education Level §		
Not Graduated	81.8 (69.7 - 94.0)	26.9 (22.9 - 30.9)
Primary	86.3 (81.7 - 91.0)	29.7 (26.7 - 32.7)
Secondary	82.6 (76.2 - 89.0)	30.9 (19.7 - 42.2)
High School	90.7 (84.0 - 97.3)	34.6 (25.8 - 43.5)
University or Higher	88.5 (80.2 - 96.8)	33.4 (23.4 - 43.3)

1 Among daily manufactured cigarette smokers

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Figure 3.9. Montly expenditure for purshasing cigarettes (TRL) Turkey Global Adult Tobacco Survey (GATS), 2008



3.5 Media and advertising

Among adults age 15 and over in Turkey, 88.8% had noticed an anti-cigarette smoking message during the past 30 days; with the highest exposure on television (85.5%), followed by newspapers and magazines (46.3%), billboards (36.0%), and radio (23.0%) (Table 3.30). Men were more likely than women to have noticed anti-cigarette messages in newspapers and magazines or on billboards. Across all locations, having seen anti-cigarette messages was lowest among those aged 65 and over, compared to the younger ages, and for those who had not graduated from school compared to the higher education levels. Those living in urban areas were more likely than those in rural areas to have noticed anti-cigarette messages in newspapers and magazines, on radio, or on billboards.

Table 3.30. Percentage of adults 15 years and older who noticed anti-cigarette smoking information during the last 30 days in various places, by smoking status, and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Noticed anti-cigarette smoking information during the last 30 days in….					
	Any location	Newspapers and magazines	Television	Radio	Billboards	Other
	Percentage (95% CI)					
Overall	88.8 (87.6 - 90.0)	46.3 (44.2 - 48.5)	85.5 (84.1 - 86.8)	23.0 (21.2 - 24.8)	36.0 (33.7 - 38.3)	4.5 (3.7 - 5.3)
Gender						
Men	89.9 (88.5 - 91.3)	53.7 (51.2 - 56.2)	85.5 (83.9 - 87.2)	23.7 (21.4 - 25.9)	40.7 (37.8 - 43.6)	5.3 (4.2 - 6.3)
Women	87.8 (86.4 - 89.3)	39.2 (36.7 - 41.6)	85.4 (83.8 - 87.0)	22.3 (20.3 - 24.4)	31.4 (29.1 - 33.7)	3.8 (3.0 - 4.7)
Age (years)						
15-24	91.3 (89.4 - 93.3)	51.5 (47.8 - 55.3)	85.8 (83.0 - 88.6)	24.4 (21.2 - 27.6)	42.9 (38.9 - 46.8)	6.2 (4.3 - 8.0)
25-44	90.5 (89.1 - 91.9)	48.5 (45.9 - 51.2)	87.4 (85.8 - 89.0)	24.4 (22.3 - 26.5)	39.0 (36.1 - 41.8)	5.1 (4.1 - 6.0)
45-64	88.8 (87.1 - 90.5)	44.6 (41.9 - 47.2)	86.1 (84.3 - 87.9)	22.4 (19.8 - 25.1)	31.3 (28.6 - 34.1)	3.4 (2.5 - 4.3)
65+	75.0 (71.4 - 78.6)	28.1 (24.5 - 31.7)	74.0 (70.4 - 77.6)	14.6 (11.7 - 17.4)	17.9 (14.6 - 21.2)	1.2 (0.2 - 2.1)
Residence						
Urban	89.9 (88.3 - 91.5)	51.0 (48.1 - 53.8)	86.1 (84.2 - 87.9)	25.5 (23.0 - 28.0)	40.2 (37.2 - 43.3)	5.4 (4.3 - 6.5)
Rural	86.4 (84.8 - 88.0)	35.7 (33.2 - 38.2)	84.1 (82.5 - 85.7)	17.2 (15.2 - 19.3)	26.1 (23.2 - 29.0)	2.5 (1.8 - 3.2)
Education Level §						
Not Graduated	76.3 (73.2 - 79.5)	16.8 (14.3 - 19.2)	74.9 (71.7 - 78.1)	12.8 (10.4 - 15.1)	11.3 (9.0 - 13.7)	1.5 (0.7 - 2.3)
Primary	90.9 (89.5 - 92.3)	46.2 (43.6 - 48.8)	88.2 (86.7 - 89.7)	23.0 (20.7 - 25.3)	36.1 (33.4 - 38.9)	2.8 (2.1 - 3.6)
Secondary	92.3 (90.2 - 94.4)	55.0 (51.0 - 58.9)	88.1 (85.6 - 90.6)	23.6 (20.3 - 26.9)	41.0 (37.0 - 45.1)	5.9 (4.1 - 7.6)
High School	92.8 (90.9 - 94.7)	59.7 (56.3 - 63.1)	87.4 (84.7 - 90.0)	29.3 (25.9 - 32.7)	48.9 (45.0 - 52.7)	8.4 (6.2 - 10.6)
University or Higher	89.3 (86.5 - 92.0)	61.0 (56.3 - 65.6)	85.0 (81.8 - 88.2)	29.0 (24.7 - 33.3)	47.1 (42.2 - 51.9)	7.5 (5.1 - 9.9)
Current Smoking Status						
Current Cigarette Smokers [1]	91.6 (90.1 - 93.1)	53.7 (50.7 - 56.6)	87.8 (85.9 - 89.7)	24.9 (22.2 - 27.5)	43.9 (40.6 - 47.3)	6.0 (4.6 - 7.4)
Non - Smokers [2]	87.6 (86.2 - 89.0)	43.0 (40.8 - 45.3)	84.4 (82.9 - 86.0)	22.1 (20.2 - 24.1)	32.4 (30.1 - 34.6)	3.9 (3.1 - 4.7)

1 Among daily or less than daily cigarette smokers

2 Among former smokers and never smokers

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Among current smokers of manufactured cigarettes, 95.1% had noticed health warnings on cigarette packages during the past 30 days, and almost half (46.5%) thought about quitting because of the message (Table 3.31). There was no gender difference in this regard, and those who had not graduated (83.4%) were the least likely to have noticed health warnings. Smokers with university or higher education (36.3%) were the least likely to think about quitting because of the warning labels.

Table 3.31. Percentage of current manufactured cigarette smokers 15 years and older who noticed health warnings on cigarette packages and considered quitting because of the warning label on cigarette packages during the last 30 days, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Current manufactured cigarette smokers[1] who…	
	Noticed health warnings on cigarette package [2]	Thought about quitting because of warning label [2]
	Percentage (95% CI)	
Overall	95.1 (93.8 - 96.3)	46.5 (43.7 - 49.3)
Gender		
Men	95.3 (93.9 - 96.7)	46.5 (43.2 - 49.7)
Women	94.3 (91.7 - 96.9)	46.7 (42.1 - 51.3)
Age (years)		
15-24	94.4 (91.3 - 97.5)	42.3 (35.4 - 49.2)
25-44	95.3 (93.6 - 97.0)	47.7 (44.1 - 51.4)
45-64	95.6 (93.8 - 97.5)	47.2 (42.5 - 52.0)
65+	89.9 (83.1 - 96.7)	44.4 (32.7 - 56.0)
Residence		
Urban	95.0 (93.4 - 96.7)	44.8 (41.4 - 48.3)
Rural	95.1 (93.6 - 96.6)	51.6 (47.8 - 55.5)
Education Level §		
Not Graduated	83.4 (76.9 - 90.0)	40.9 (32.5 - 49.3)
Primary	95.9 (94.2 - 97.5)	52.3 (48.3 - 56.3)
Secondary	96.9 (95.1 - 98.8)	45.1 (39.1 - 51.0)
High School	96.1 (93.8 - 98.5)	43.0 (38.1 - 48.0)
University or Higher	94.5 (90.2 - 98.7)	36.3 (29.4 - 43.2)

1 Among daily or less than daily manufactured cigarette smokers
2 During the last 30 days
§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Although banned by law in 1996, 13.3% of adults in Turkey noticed pro-cigarette marketing (advertising, sponsorships or promotions) in the past 30 days (Table 3.32, Figures 3.10 and 3.11). Having seen pro-cigarette marketing was highest among males (17.1%), those aged 15-24 years (20.5%), those living in urban areas (14.5%), those with university or higher education (22.3%), and current cigarette smokers (16.8%). Advertising was the highest type of pro-cigarette marketing noticed (7.1%), compared to promotions (5.3%) and sports sponsorships (3.3%). Advertising was highest on television (3.4%) and in shops (2.7%) compared to all other media or locations.

The greatest number of cigarette promotions mentioned were clothing items with a brand name or logo (2.8%) and receiving free samples (2.5%). Current cigarette smokers (4.1%) were more likely than non-smokers (1.8%) to have received free samples; there was no difference between groups in terms of having an item with a brand name or logo on it. The 15-24 age group (5.3%) was more likely than the 25 and over group (2.1%) to have a clothing item with a brand name or logo on it.

Table 3.32. Percentage of adults 15 years and older who noticed cigarette marketing during the last 30 days in various places, by selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Noticed Advertisement, Sponsorship, or Promotion	Overall	Gender		Age (years)		Residence		Education Level §					Current Smoking Status	
		Men	Women	15 - 24	25 +	Urban	Rural	Not Grad	Primary	Secondary	High School	Univ/ Higher	Current cig. smk.	Non-Smoker[2]
	Percentage (95% CI)													
Noticed advertisements	7.1 (6.2 - 8.1)	8.2 (6.8 - 9.5)	6.1 (5.1 - 7.2)	10.2 (7.7 - 12.7)	6.2 (5.5 - 7.0)	7.9 (6.7 - 9.2)	5.3 (4.3 - 6.3)	4.2 (2.9 - 5.5)	5.4 (4.4 - 6.4)	10.0 (7.3 - 12.7)	9.0 (7.0 - 11.0)	11.2 (8.3 - 14.0)	7.9 (6.5 - 9.4)	6.8 (5.7 - 7.8)
In shops	2.7 (2.0 - 3.4)	3.6 (2.5 - 4.8)	1.8 (1.2 - 2.4)	4.3 (2.3 - 6.4)	2.2 (1.8 - 2.7)	3.3 (2.3 - 4.3)	1.4 (1.0 - 1.8)	0.7 (0.3 - 1.2)	2.1 (1.4 - 2.8)	3.8 (1.7 - 6.0)	3.9 (2.5 - 5.3)	4.6 (2.7 - 6.4)	3.5 (2.5 - 4.6)	2.3 (1.6 - 3.1)
On TV	3.4 (2.9 - 4.0)	3.1 (2.5 - 3.7)	3.7 (2.9 - 4.6)	3.8 (2.5 - 5.1)	3.3 (2.8 - 3.9)	3.4 (2.7 - 4.0)	3.6 (2.8 - 4.4)	3.3 (2.2 - 4.4)	3.1 (2.3 - 3.8)	3.3 (2.1 - 4.5)	3.7 (2.2 - 5.2)	5.0 (3.2 - 6.8)	3.2 (2.5 - 4.0)	3.5 (2.9 - 4.2)
On radio	0.2 (0.1 - 0.3)	0.3 (0.1 - 0.5)	0.1 (0.0 - 0.2)	0.1 (0.0 - 0.3)	0.2 (0.1 - 0.4)	0.2 (0.0 - 0.3)	0.3 (0.1 - 0.5)	0.3 (0.0 - 0.6)	0.3 (0.1 - 0.4)	0.2 (0.0 - 0.5)	0.1 (0.0 - 0.2)	0.1 (0.0 - 0.2)	0.3 (0.0 - 0.5)	0.2 (0.1 - 0.3)
On billboards	0.3 (0.1 - 0.5)	0.4 (0.1 - 0.7)	0.2 (0.1 - 0.4)	0.2 (0.0 - 0.4)	0.3 (0.1 - 0.5)	0.3 (0.1 - 0.5)	0.3 (0.0 - 0.7)	0.1 (0.0 - 0.3)	0.3 (0.1 - 0.5)	0.1 (0.0 - 0.3)	0.2 (0.0 - 0.5)	1.1 (0.0 - 2.5)	0.3 (0.0 - 0.7)	0.3 (0.1 - 0.4)
On posters	0.3 (0.1 - 0.4)	0.3 (0.1 - 0.5)	0.2 (0.0 - 0.4)	0.4 (0.0 - 0.8)	0.2 (0.1 - 0.3)	0.3 (0.1 - 0.4)	0.3 (0.0 - 0.5)	0.2 (0.0 - 0.4)	0.1 (0.0 - 0.2)	0.2 (0.0 - 0.4)	0.6 (0.1 - 1.1)	0.5 (0.0 - 1.0)	0.4 (0.1 - 0.6)	0.2 (0.1 - 0.4)
In newspapers or magazines	0.6 (0.4 - 0.8)	0.7 (0.4 - 0.9)	0.5 (0.3 - 0.8)	0.8 (0.3 - 1.3)	0.5 (0.4 - 0.7)	0.6 (0.4 - 0.9)	0.5 (0.2 - 0.8)	0.2 (0.0 - 0.5)	0.4 (0.2 - 0.7)	0.5 (0.1 - 0.8)	0.8 (0.2 - 1.3)	1.9 (0.9 - 3.0)	0.5 (0.2 - 0.8)	0.6 (0.4 - 0.9)
In cinemas	0.7 (0.5 - 1.0)	1.0 (0.6 - 1.4)	0.5 (0.2 - 0.8)	1.6 (0.7 - 2.5)	0.5 (0.3 - 0.7)	0.8 (0.5 - 1.2)	0.5 (0.2 - 0.8)	0.1 (0.0 - 0.2)	0.2 (0.0 - 0.4)	0.9 (0.3 - 1.5)	1.8 (0.9 - 2.7)	1.9 (0.9 - 3.0)	1.0 (0.5 - 1.5)	0.6 (0.3 - 0.9)
On internet	0.8 (0.5 - 1.1)	1.3 (0.8 - 1.7)	0.4 (0.1 - 0.6)	1.8 (0.9 - 2.7)	0.5 (0.3 - 0.8)	1.0 (0.6 - 1.4)	0.4 (0.1 - 0.6)	0.1 (0.0 - 0.2)	0.2 (0.0 - 0.4)	1.5 (0.7 - 2.4)	1.4 (0.5 - 2.4)	2.2 (1.0 - 3.4)	1.0 (0.5 - 1.5)	0.7 (0.4 - 1.0)
On mass transportation vehicles or bus stops	0.5 (0.3 - 0.7)	0.5 (0.2 - 0.8)	0.6 (0.3 - 0.9)	0.6 (0.1 - 1.1)	0.5 (0.3 - 0.7)	0.7 (0.4 - 1.0)	0.1 (0.0 - 0.3)	0.2 (0.0 - 0.5)	0.5 (0.2 - 0.7)	0.9 (0.2 - 1.5)	0.6 (0.1 - 1.0)	0.8 (0.1 - 1.5)	0.7 (0.3 - 1.1)	0.5 (0.3 - 0.7)
Anywhere else	0.5 (0.3 - 0.7)	0.7 (0.3 - 1.0)	0.3 (0.1 - 0.5)	0.9 (0.3 - 1.5)	0.4 (0.2 - 0.5)	0.6 (0.3 - 0.9)	0.2 (0.0 - 0.4)	0.2 (0.0 - 0.6)	0.2 (0.0 - 0.3)	1.5 (0.6 - 2.4)	0.5 (0.0 - 1.0)	0.4 (0.0 - 0.8)	0.6 (0.3 - 1.0)	0.4 (0.2 - 0.6)
Noticed sports sponsorship	3.3 (2.7 - 3.9)	5.3 (4.2 - 6.3)	1.4 (0.9 - 1.8)	6.6 (4.8 - 8.5)	2.3 (1.8 - 2.7)	3.9 (3.1 - 4.7)	1.9 (1.1 - 2.6)	0.6 (0.1 - 1.1)	1.5 (1.0 - 2.0)	4.6 (2.9 - 6.4)	6.7 (5.1 - 8.3)	6.5 (4.5 - 8.5)	4.7 (3.6 - 5.7)	2.7 (2.0 - 3.3)
Noticed cigarette promotions	5.3 (4.6 - 6.1)	7.8 (6.6 - 9.0)	3.0 (2.3 - 3.7)	8.7 (6.9 - 10.5)	4.4 (3.6 - 5.1)	5.5 (4.6 - 6.5)	4.9 (3.9 - 5.8)	2.2 (1.3 - 3.0)	4.5 (3.7 - 5.4)	6.8 (5.0 - 8.5)	6.5 (4.8 - 8.3)	9.9 (6.9 - 12.9)	7.8 (6.4 - 9.2)	4.2 (3.5 - 5.0)
Free samples	2.5 (2.0 - 3.0)	3.5 (2.8 - 4.3)	1.6 (1.1 - 2.0)	3.1 (2.0 - 4.2)	2.4 (1.8 - 2.9)	2.6 (1.9 - 3.2)	2.5 (1.8 - 3.2)	1.2 (0.6 - 1.9)	2.5 (1.9 - 3.2)	2.7 (1.6 - 3.8)	2.6 (1.5 - 3.7)	4.6 (2.8 - 6.4)	4.1 (3.1 - 5.1)	1.8 (1.3 - 2.3)
Bundled with gifts	0.3 (0.2 - 0.5)	0.5 (0.2 - 0.8)	0.1 (0.0 - 0.3)	0.6 (0.1 - 1.2)	0.2 (0.1 - 0.4)	0.3 (0.1 - 0.5)	0.3 (0.0 - 0.5)	0.2 (0.0 - 0.4)	0.3 (0.1 - 0.5)	0.3 (0.0 - 0.7)	0.2 (0.0 - 0.6)	0.9 (0.1 - 1.6)	0.7 (0.3 - 1.1)	0.2 (0.0 - 0.3)
Clothing/item with brand name or logo	2.8 (2.3 - 3.4)	4.4 (3.4 - 5.4)	1.3 (0.8 - 1.8)	5.3 (3.8 - 6.9)	2.1 (1.6 - 2.6)	3.0 (2.3 - 3.7)	2.4 (1.7 - 3.1)	1.0 (0.3 - 1.7)	2.1 (1.5 - 2.7)	3.9 (2.6 - 5.3)	3.8 (2.5 - 5.1)	5.4 (3.2 - 7.7)	3.8 (2.8 - 4.8)	2.4 (1.7 - 3.0)
Other	0.1 (0.0 - 0.2)	0.2 (0.0 - 0.3)	0.1 (0.0 - 0.2)	0.3 (0.0 - 0.6)	0.1 (0.0 - 0.2)	0.2 (0.0 - 0.3)	0.1 (0.0 - 0.1)	0.2 (0.0 - 0.5)	0.1 (0.0 - 0.2)	0.1 (0.0 - 0.4)	0.2 (0.0 - 0.4)	0.2 (0.0 - 0.5)	0.3 (0.0 - 0.5)	0.1 (0.0 - 0.2)
Noticed any advertisement, sponsorship, or promotion	13.3 (12.0 - 14.6)	17.1 (15.3 - 19.0)	9.6 (8.4 - 10.9)	20.5 (17.3 - 23.7)	11.2 (10.1 - 12.3)	14.5 (12.7 - 16.2)	10.7 (9.3 - 12.1)	6.6 (4.9 - 8.2)	10.1 (8.8 - 11.4)	17.6 (14.2 - 20.9)	18.3 (15.5 - 21.1)	22.3 (18.6 - 26.1)	16.8 (14.8 - 18.9)	11.7 (10.4 - 13.1)

1 Among daily or less than daily cigarette smokers

2 Among former smokers and never smokers

§ Education level: Not Graduated = Not graduated; Primary = Elementary school; Secondary = Primary education, secondary school or vocational secondary school; High School= High school and equivalents; University or Higher= College or faculty, or master's degree/doctorate degree

Figure 3.10. Percent of adults who noticed cigaratte marketing by gender during last 30 days. Turkey Global Adult Tobacco Survey (GATS), 2008

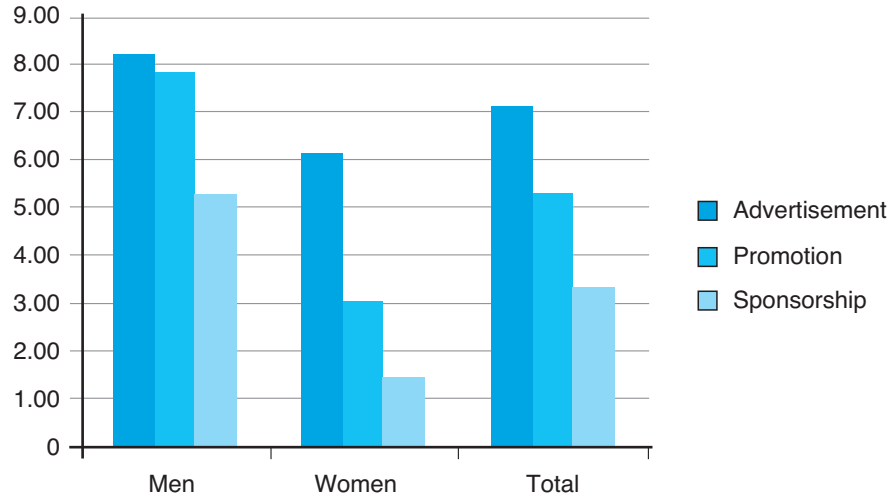
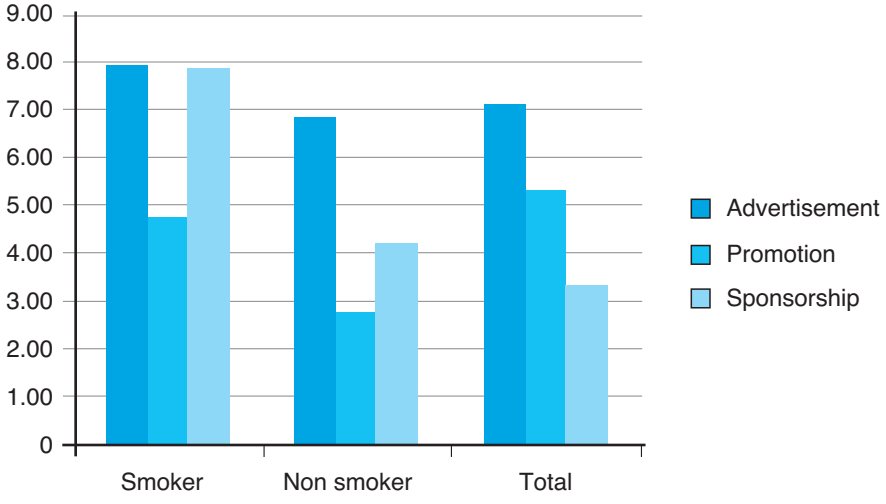


Figure 3.11. Percent of adults who noticed cigaratte marketing by smoking status during last 30 days. Turkey Global Adult Tobacco Survey (GATS), 2008



3.6 Knowledge, attitudes and perceptions

Over 90% of adults believed smoking caused serious illness (97.2%), including 98.0% for lung cancer, 95.5% for heart attack; and 83.7% who believed smoking caused stroke (Table 3.33). Overall, 95.5% of adults believed breathing other people's smoke caused serious illness. The lowest education level (non graduate) was less likely than the other education levels to believe smoking caused serious illness, stroke, heart attack, or lung cancer. The non-graduates were also less likely to believe breathing other people's smoke caused serious illness than the other education levels. There was no difference in level of knowledge of the effect of smoking between current cigarette smokers and non-smokers.

Table 3.33. Percentage and number of adults 15 years and older who believe that smoking causes serious illness, stroke, heart attack, lung cancer, or breathing other people's smoke causes serious illness by smoking status and selected demographic characteristics – Turkey Global Adult Tobacco Survey (GATS), 2008.

Characteristic	Adults who believe that…		Among those that believe smoking causes serious illness, adults who believe that…		
	breathing other people's smoke causes serious illness	smoking causes serious illness	smoking causes stroke	smoking causes heart attack	smoking causes lung cancer
	Percentage (95% CI)				
Overall	95.5 (94.9 - 96.1)	97.2 (96.7 - 97.7)	83.7 (82.2 - 85.1)	95.5 (94.8 - 96.1)	98.0 (97.6 - 98.4)
Gender					
Men	95.9 (95.1 - 96.7)	97.8 (97.2 - 98.3)	85.2 (83.6 - 86.9)	96.1 (95.4 - 96.9)	98.6 (98.1 - 99.0)
Women	95.1 (94.3 - 95.9)	96.7 (95.9 - 97.5)	82.2 (80.4 - 84.0)	94.8 (93.9 - 95.7)	97.5 (97.0 - 98.1)
Age (years)					
15-24	95.9 (94.7 - 97.1)	97.8 (96.9 - 98.7)	83.6 (80.9 - 86.3)	96.0 (94.8 - 97.3)	98.8 (98.1 - 99.5)
25-44	95.8 (95.0 - 96.7)	97.9 (97.2 - 98.5)	84.0 (82.1 - 85.9)	96.0 (95.1 - 96.8)	98.8 (98.3 - 99.2)
45-64	96.3 (95.6 - 97.1)	97.2 (96.4 - 98.0)	85.7 (83.7 - 87.7)	96.1 (95.3 - 97.0)	97.9 (97.2 - 98.5)
65+	90.5 (88.1 - 92.9)	92.8 (90.8 - 94.9)	76.6 (72.9 - 80.2)	89.7 (86.8 - 92.5)	93.1 (91.1 - 95.1)
Residence					
Urban	96.3 (95.6 - 97.1)	97.7 (97.1 - 98.4)	84.7 (82.8 - 86.6)	96.5 (95.8 - 97.3)	98.9 (98.5 - 99.3)
Rural	93.6 (92.6 - 94.6)	96.0 (95.1 - 96.9)	81.3 (79.5 - 83.2)	93.0 (91.9 - 94.1)	96.1 (95.2 - 96.9)
Education Level §					
Not Graduated	89.8 (88.0 - 91.6)	91.8 (89.9 - 93.8)	75.7 (72.7 - 78.8)	88.0 (85.7 - 90.3)	92.4 (90.7 - 94.1)
Primary	96.1 (95.3 - 96.9)	98.1 (97.5 - 98.6)	84.5 (82.7 - 86.3)	96.3 (95.6 - 97.1)	98.7 (98.3 - 99.1)
Secondary	97.0 (95.8 - 98.2)	98.3 (97.4 - 99.3)	85.6 (82.7 - 88.5)	97.0 (95.9 - 98.1)	99.7 (99.3 - 100.0)
High School	97.6 (96.5 - 98.6)	99.0 (98.5 - 99.5)	85.6 (83.1 - 88.1)	97.7 (96.7 - 98.8)	99.7 (99.4 - 100.0)
University or Higher	96.8 (95.3 - 98.3)	97.9 (96.6 - 99.2)	87.7 (84.6 - 90.9)	98.0 (96.6 - 99.4)	99.4 (98.5 - 100.0)
Current Smoking Status					
Current Cigarette Smokers [1]	95.4 (94.4 - 96.4)	97.4 (96.7 - 98.2)	84.2 (82.2 - 86.3)	96.0 (95.1 - 97.0)	98.8 (98.3 - 99.3)
Non-smokers [2]	95.6 (94.9 - 96.3)	97.2 (96.5 - 97.8)	83.4 (81.9 - 85.0)	95.2 (94.5 - 95.9)	97.7 (97.2 - 98.2)

Table 3.33. continued...

Characteristic	aAdults who believe that…		Among those that believe smoking causes serious illness, adults who believe that…		
	breathing other people's smoke causes serious illness	smoking causes serious illness	smoking causes stroke	smoking causes heart attack	smoking causes lung cancer
	Number (in thousands)				
Overall	48,851	49,724	41,970	47,876	49,168
Gender					
Men	24,075	24,532	21,010	23,698	24,293
Women	24,776	25,192	20,960	24,177	24,874
Age (years)					
15-24	11,056	11,271	9,490	10,899	11,214
25-44	20,935	21,375	18,072	20,638	21,240
45-64	12,618	12,727	10,978	12,321	12,540
65+	4,241	4,351	3,431	4,018	4,174
Residence					
Urban	34,338	34,827	29,604	33,742	34,563
Rural	14,513	14,897	12,367	14,133	14,605
Education Level §					
Not Graduated	7,830	8,008	6,325	7,346	7,716
Primary	19,202	19,595	16,610	18,942	19,397
Secondary	8,286	8,402	7,207	8,166	8,393
High School	9,037	9,174	7,853	8,965	9,145
University or Higher	4,420	4,469	3,926	4,387	4,447
Current Smoking Status					
Current Cigarette Smokers [1]	15,200	15,521	13,124	14,962	15,391
Non-smokers [2]	33,614	34,170	28,819	32,881	33,744

4. Discussion

Smoking is a major risk factor for cancer, cardiovascular and respiratory diseases and many other health problems. In Turkey, more than 100,000 people die every year as a consequence of smoking (a quarter of all deaths), a number that is predicted to rise to 240,000 by 2030. In addition to the health hazards, the economic burden of tobacco use is enormous. About 16 million smokers in Turkey spend nearly 25 billion TRL annually on tobacco products – four times the annual budget of the Ministry of Health. Based on the tobacco sales data, there was an almost 80% rise in smoking during the 1980's and 1990's, mainly because of the marketing of foreign cigarette brands. The immediate consequence observed has been a significant rise in the occurrence of lung cancer. The number of patients hospitalized with a diagnosis of lung cancer over a 40-year period, starting from the 1960's, showed a 45-fold increase, whereas the population increase was only 2.5 fold during the same period[6,15].

As indicated in the MPOWER package, monitoring is an essential element of an effective tobacco control program. A large number of studies are available on the prevalence of tobacco use in Turkey. However, most of these studies were carried out in specific populations, such as school or workplace populations, or certain occupational groups, and were not suitable for monitoring tobacco use and prevention policies. It is important to base policy decisions on valid and reliable evidence from population-based, representative studies that are periodically repeated to enable policy makers to monitor the results of their interventions and appropriately tailor anti-tobacco activities to future needs. The WHO FCTC calls on countries to use consistent methods and procedures in their surveillance efforts. The GATS was designed for exactly this purpose (that is, standardized sampling procedures, core questionnaire items, training in field procedures, and analysis of data, all of which are consistent across all survey sites). The GATS provides indicators for measuring achievement of five WHO FCTC articles (exposure to SHS, cessation, warning about the dangers of tobacco, media and advertising, and raising taxes) and results from the 2008 GATS can be used to set baseline measures that can be used to monitor the five WHO FCTC articles, as discussed below[1,2].

Article 20: Research, surveillance and exchange of information

Smoking prevalence

A total of 16 million adults (12 million men and 4 million women) currently smoked in Turkey - nearly half (47.9%) of men and one in every six (15.2%) women. Almost all the male smokers (11 million) and most of the female smokers (3 million) were daily smokers, and 96.5% of the smokers preferred manufactured cigarettes.

Current daily smoking was more common among young age men up until age 45, and then it decreased. Age 45 and over is when there is increasing incidence of chronic and degenerative diseases, some related to tobacco use, which could lead to giving up smoking. On the other hand, the age of smoking initiation showed a decreasing trend, even as smoking became more popular among women, particularly adolescents. Daily smokers started smoking at age 16.9 years on average, with women (17.8 years) starting one year later than men (16.6 years). The average age of starting smoking for both men and women was below the legal age for purchasing cigarettes. The legal age is 18, nevertheless nearly two-thirds (62.5%) of male daily smokers and half of female daily smokers (48.9%) started smoking before this age. In daily practice, cigarettes are not sold to minors at major markets, but they can easily buy them at small markets and from street vendors. Stricter inspection and enforcement of the law will be necessary to prevent children from buying cigarettes.

There was an inverse relation between smoking and education among males, with the lowest figures among university graduates, particularly those younger than 45. However, smoking frequency increased

with education among women. Only 4% of women with no formal education smoked tobacco, but almost one in five of high school and university graduates smoked. This is generally true for women living in the developing countries, and is explained by the lower economic power of the women.

Current smokers smoked a little less than a pack of cigarettes (17.7 cigarettes) a day on average, and more than half smoked more than 15 cigarettes daily. Overall 41.1% of daily smokers had their first cigarette within 30 minutes after waking. These two figures are important indicators of nicotine dependency. The EMASH (European Medical Association on Smoking and Health) criteria indicate that if a smoker has his/her first cigarette in the first half an hour time of awakening and consumes 15 or more cigarettes a day, s/he is considered as nicotine dependent. When these two criteria were combined, one in every four or five (21.5% to 27.2%, depending on age group) of daily smokers in Turkey seemed to be highly dependent.

Use of hand-rolled cigarettes and water pipes was low. However, water pipe (narghile) use, an age-old tradition among elderly men in Turkey, has recently been regenerated and marketed, particularly to young people. Mainly because of this marketing, water pipe use is increasing among adolescents and young people (4.3% in the 15-24 age group vs. 0.9% in the 45-64 years age groups), particularly those living in urban areas (2.9% urban vs. 1.0% rural). Another reason for this rising trend could be certain misconceptions that water pipe smoking is not hazardous to the health, since tobacco is filtered through water before inhalation. A study done in Ankara revealed that more than half of narghile users were young people (18 to 24 years old) and one in five believed that water pipe smoking was not hazardous to the health[16].

More than 40% of male narghile users and over 20% of female users started narghile use before the age of 20. The average age of initiation of narghile use was relatively higher than that of cigarette use. More than three-quarters (77.7%) of water pipe users reported sessions of more than 20 minutes, and 42.6% reported sessions lasting more than 45 minutes. The users mostly used narghile at cafes (narghile café), but one in four women users (26.8%) smoked narghile at home.

Article 8: Protection from exposure to tobacco smoke

Law 4207 in 1996 called for a ban on smoking in public places, however, the ban was limited to healthcare facilities, schools, theatres and cinemas, and some public transport (buses, trains, and domestic and international air transport). In 2008, Law 4207 was “amended” to include smoke-free places, mainly through the inclusion of workplaces in the hospitality sector. In addition, the version of Law 4207 did not cover private cars and homes. The expanded Law 4207 was passed in Parliament in January 2008, but implementation in hospitality sector workplaces was postponed for 18 months (until July 2009) to allow them to adapt to the new rules, some 8 months after the data collection of the GATS[24].

Due to the high prevalence of smoking, exposure to SHS is very common in Turkey. More than half (55.9%) of the adults were exposed to SHS in restaurants and 59.7% at home, which were not covered by Law 4207 at the time of GATS data collection. Smoking was banned in the healthcare facilities more than 10 years ago, but still 6.0% of adults stated that they were exposed to SHS at healthcare facilities. Healthcare facilities have a unique responsibility regarding tobacco control and smoking cessation. A number of healthcare professionals smoke cigarettes (30.5% of general practitioners, and 22.1% of specialists) and probably many do so where they work[10].

Another place where SHS exposure frequently occurs is the workplace. More than one third (38.5%) of the adults stated they were exposed to SHS in their workplaces, with a marked predominance of men (41.5% men and 28.3% women), and rural workers (36.8% urban and 45.6% rural). Protection of non-smokers from SHS is particularly important. GATS results indicated that almost 2 million non-smokers in

urban areas and more than half million non-smokers in rural areas were exposed to SHS at their workplaces. Some of the workplaces were already covered by the 1996 anti-tobacco law, and the amendment made all workplaces smoke-free in 2008. Implementation of the amended articles at public workplaces started in May 2008, only 6 months prior to the GATS data collection. The anti-smoking policy was effective at 60.9% of the workplaces; indicating that in almost 40% of the workplaces smoking was allowed, either partly or totally, which is very important with regard to SHS exposure at the workplaces. Obviously, exposure to SHS was more common at workplaces where smoking was allowed.

Overall, one in every six adults stated they were exposed to SHS on public transportation. Smoking on public transport was banned in 1996, including municipal buses, intercity travel and all domestic and international flights, and the smoking ban on public transport was very strictly implemented. But that law did not include commercial taxis. The amended law in January 2008 included commercial taxis and this rule came into force in May 2008, six months prior to the data collection. Nevertheless, it is possible that some taxi drivers and passengers still maintain their old habit of smoking in taxis.

The anti-tobacco law does not cover private premises; therefore smoking was not banned in homes. Exposure to SHS at home is very common in Turkey. In 59.7% of homes smoking is allowed and more than 30 million adults live in these homes, including 20 million non-smokers. Various studies have indicated that in 55 to 90 percent of homes, at least one person smoked, usually the father[17-20,25,26]. Smoking in the home is dangerous for adults, and also for children. A child who grows up in a home where smoking is allowed experiences smoking as normal behavior. That child is more likely to smoke than one who grows up in a smoke-free home. In addition a number of serious health problems may occur due to SHS exposure, both among children and adults. Studies have revealed increased CO levels and some respiratory function abnormalities among those exposed to SHS in coffee houses[25].

Article 13: Tobacco advertising, promotion and sponsorship

Turkish Law 4207 has prohibited mass media advertising and promotion of cigarettes and other tobacco products since 1996, and in 2008 the law was amended to ban sponsorship of all sports and cultural events by tobacco companies. Data from the GATS showed 13.3% of adults noticed some pro-cigarette advertising, promotion or sponsorship, mostly advertising (7.1%). Although tobacco advertising has been banned for more than 10 years, some is still seen by people, especially on TV, films and in shops. Although in relatively small numbers, some cigarette logos were placed on clothing. More importantly, 2.5% of the survey participants had been offered free samples of cigarettes. All advertising, promotion and sponsorships were more commonly seen by the young (20.5% in the 15-24 years age group), an important target group for the tobacco industry.

The fact that one in eight of the adults, and one in every five young people noticed any advertising promotion and sponsorship, particularly free samples of cigarettes, indicates the tobacco industry is still putting great effort into promotion of their products, particularly towards youth.

Turkish Law 4207 requires all television channels to devote at least 90 minutes air time per month to communicating the harms of tobacco use. Most newspapers and magazines also have messages on the negative effects of tobacco use. GATS data showed that 9 out of 10 adults had seen anti-tobacco messages during the last month, mostly on television and in newspapers or magazines.

Article 14: Demand reduction measures concerning tobacco dependence and cessation

One smoker in four (26.5%) had quit smoking in the past. The proportion of quitters increased by age; only 8.9% of smokers ages 15-24 quit smoking, compared to 68.7% for the 65 and over age group.

Elderly people could have been motivated to quit by some kind of health problem, or a physician may have forced them to quit. Among the current smokers, a little more than half (53.0%) were interested in quitting, and 10% (one million urban, and half a million rural) planned to quit within one month's time. There are no organized smoking cessation services throughout the country, particularly in rural areas, and there is need to increase these essential services to help those who plan to quit.

Healthcare workers play an important role in helping smokers to quit. Half (46.9%) of the smokers had contacted a healthcare provider during the past 12 months; half (49.0%) of those were asked if they smoked and 83.1% of those who were asked were advised to quit, out of which 8.3% were successful. In other words, only 19.1% of smokers were advised to quit, and 1.9% successfully quit smoking. If all the physicians in Turkey were to ask their patients about their smoking behavior, and if they were supported by organized intervention and treatment services, hundreds of thousands of smokers could be helped to quit smoking. Physicians, particularly those working in primary healthcare services, should be trained about smoking behavior and ways to intervene. GATS results showed that fewer than one in ten (9.3%) of quitters had used drug treatment, and only 1.8% had counseling. Primary healthcare services should be supported by proper cessation services using scientifically proven treatment methods. Use of pharmacotherapy and counseling was less common in rural areas and among less educated groups, which indicates that smoking cessation and counseling services should focus on reaching these underserved groups. On the other hand, 42.4% of current smokers (almost 7 million people) were not interested in quitting. Primary healthcare services should also reach out and try to convince them to quit.

There were more successful quitters among middle-aged and elderly than younger age groups, and those having less education. Since education is inversely related to age, more middle-aged and elderly people with less education could also have more chronic diseases. Having a chronic disease may be an important reason for quitting. On the other hand, physicians may ask elderly people about their smoking behavior more frequently because of their health status.

Article 6: Price and tax measures to reduce the demand for tobacco

Almost all (92.5%) of the adult smokers bought cigarettes from shops, spending an average of 86.7 TRL monthly. Nearly two-thirds (58.9%) of the smokers started smoking before age 18 (the legal age for purchasing tobacco products), and one in five (19.7%) started before age 15. These findings indicate that enforcing the law to reduce minors' access to tobacco is a major issue in Turkey. Minors are more sensitive to price increases and increasing tobacco prices through tax increases is another way to reduce their access. The Special Consumption Tax on tobacco products increased by 20% in January 2010, raising the total tax on tobacco products to 78%, a little above the level recommended by WHO. The effect of this increase has been seen in reduced tobacco sales. The number of cigarettes sold during the first four months of 2010 was 25% lower than the number sold during the same period in 2009[27]. This large effect might change slightly, but the reduction in cigarette sales is expected to continue.

In order to sell tobacco products, a license provided by the Tobacco Regulatory Authority is required. However, cigarettes are available in every market, regardless of whether they are licensed. People can buy cigarettes in a variety of places, including markets, kiosks and even from street vendors. Cigarette prices in Turkey are relatively low in comparison to most European countries. The highest price of a 20-cigarette pack is 7 TRL and the most popular one costs 5 TRL. However, these prices are actually high when the average Turkish monthly income is taken into consideration. The lowest monthly salary is around 700 TRL and average monthly income of a lower grade civil servant is around 1200 TRL. Smokers spend 86.7 TRL on average monthly, i.e., 12.7% of the lowest monthly salary. Men spend more money on cigarettes than women.

Article 11: Packaging and labeling of tobacco products

Simple health warnings (Legal Warning: Smoking is dangerous to your health) have been put on cigarette packages for many years. But rotating messages (text messages) released by the European Union began in 2005, and the combined warning of text and pictures was started in May 2010. At the time of data collection, only rotating text messages appeared on packages. Nearly all the smokers (95.1%) had noticed text health warnings on the cigarette packages, and almost half of those thought about quitting because of these messages. Since all the packages had text messages, there were no major differences between urban-rural groups, age groups or educational status.

5. Conclusions

The passing of Law 4207 in 1996, ratification of the WHO FCTC in 2004, amendment of Law 4207 in 2008 to make all closed places smoke-free, including the hospitality sector, and the formation of a working group by the MOH to assist in developing a National Tobacco Control Program (NTCP) are important milestones for tobacco control in Turkey. The MOH now needs to move forward in implementing the provisions of Law 4207 and developing effective enforcement procedures. The working group and the MOH can use the findings of the GATS to help develop a NTCP, as recommended in the WHO European Strategy for Tobacco Control. Development of an effective comprehensive NTCP – including smoke-free environment policies, increases in the price of tobacco products, comprehensive laws to regulate and enforce bans on sales, purchases, and consumption of tobacco products by underage youth, regulations of content, labeling, promotion, and advertising of tobacco products, and targeted mass media campaigns – will require careful monitoring and evaluation of the existing programs and should be tailored to future needs. The synergy among Turkey's leadership in passing Law 4207, ratifying the WHO FCTC, and supporting the conduct of the GATS offers a unique opportunity to develop, implement and evaluate a comprehensive and effective tobacco control policy.

6. Policy Implications

Turkey has alarmingly high rates of cigarette smoking - 16 million adults smoke. Smoking is the leading cause of death among men in Turkey, and Turkey has one of the highest male smoking rates in the WHO European Region.

- Adult smokers in Turkey want to quit: Over half said they wanted to quit and 45% had made an attempt to quit.
- Tobacco control policies banning advertising, promotion and sponsorship have been successfully implemented in Turkey. Only 7% of adults are exposed to tobacco industry advertising (one of lowest in the world). (Turkey has strong penalties and they are enforced.)
- Policy measures must be enforced to protect people from the harms of tobacco and exposure to secondhand smoke. The Turkish government has done a great thing in passing the law. The law must be enforced at the local level.
- Smokers spend a large percentage of their income on cigarettes. Increased taxes are needed to help reduce the consumption of tobacco products in Turkey.

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Appendix A: Sample Design

Geographical Coverage

All settlements (small villages) in Turkey were covered in the sample selection. Settlements which had a population less than 200 were not covered in the survey as they do not allow reaching a sufficient cluster size.

Covered Population

All of the population aged 15 and older living in private households in Turkey were covered. Members of what was defined as the institutional population (residents of dormitories, hotels, schools, kindergartens, rest homes for elderly persons, special hospitals, military barracks and recreation quarters for officers) were not covered.

Estimation Level and Sample Size

The sample size of the survey was calculated to make estimations on the basis of the total population of Turkey, urban and rural. The sample size was calculated by taking into account the requirements of GATS Sample Design Manual (which required at least 8000 respondent questionnaires, allocated equally into urban and rural areas, with 2000 males and 2000 females in each area) and the results of the 2006 Turkey Time Use Survey. The initial total sample size of 10,827 was calculated by using the following response and eligibility rates (Appendix Table A1). The final sample size of 11,200 took into consideration non-response rates of other household surveys conducted in TURKSTAT. The detailed computations are shown below. Appendix Table A2 presents the number of sample households by urban/rural and by gender.

Since non-response was also taken into account when calculating the sample size, substitutions for households or individuals were not used in the survey.

Appendix Table A1. Response and Eligibility Rates for 2006 Turkey Time Use Survey

Response and Eligibility Rates	Percentage
Household Eligibility Rate (HER)	98.64
Household Response Rate (HRR)	85.67
Household Screening Rate (HSR)	98.00
Person Eligibility Rate (PER)	98.00
Person Response Rate for Males (PRRMales)	90.12
Person Response Rate for Feales (PRRFemales)	91.99

$$Male\,Sample = \frac{4{,}000}{PER * PRR_{Males}} = \frac{4{,}000}{(0.98 * 0.9012)} = 4{,}529$$

$$Female\,Sample = \frac{4{,}000}{PER * PRR_{Females}} = \frac{4{,}000}{(0.98 * 0.9199)} = 4{,}437$$

$$Initial\,Total\,Sample\,Size = \frac{4{,}529 + 4{,}437}{HER * HSR * HRR} = \frac{8{,}966}{0.9864 * 0.98 * 0.8567} = 10{,}827$$

Appendix Table A2. Overall Number of Sample Households by Urban/Rural and by Gender

Gender	Urban / Rural Status		Total
	Urban	Rural	
Female	2,800	2,800	5,600
Male	2,800	2,800	5,600
Total	5,600	5,600	11.200

Sampling Method

A 3-stage cluster sample strategy was used as the sampling method for Turkey GATS. At the first stage, clusters of households were combined to form the Primary Sampling Units (PSU). For urban and rural areas with organized municipalities PSUs were formed with approximately 300 addresses in each. In rural areas without organized municipalities, village populations of 501 or greater were identified as PSUs. Villages with populations between 200 and 500 were combined to form PSUs. PSU were selected with probability proportional to size (PPS).

First Stage

In the first stage, 200 PSU from urban areas and 200 PSU from rural areas were selected, for a total of 400 PSU. The PSUs were selected with equal probability using a systematic sampling method. Appendix Table A3 shows the distribution of the PSU by urban and rural area.

Appendix Table A3. Number and Percent Distribution of PSUs by Urban and Rural Status

Urban / Rural Status	Number	Percentage
Urban	200	50
Rural	200	50
Total	400	100

Second Stage

In the second stage, 28 households were selected systematically for each selected PSU and then households were divided randomly into 2 groups of equal size – 14 male households and 14 female households.

Third Stage

In the last stage, one eligible male (or female) age 15 or older was selected randomly via IPAQ within each selected male (or female) household. A roster of males (or females) of all eligible individuals in the household was used.

Address Frame

The frame used in sampling was the National Address Database (dated October 2008), which is the basis of the 2007 Address Based Population Registry System. Updating the Address Based Population Registry System also provided updates on the National Address Database, hence households were selected directly from National Address Database without having to use address-listing procedures.

Stratification Criterion

Settlements with populations 20,000 and below were defined as “rural”, while settlements with populations 20,001 and over were defined as “urban”.

Sampling Distribution

In the urban areas, 5600 households were selected within the 200 selected PSU, 28 households from each PSU. A total of 4,584 eligible individuals who lived in the 5,600 selected households were interviewed.

Similarly, 5,600 households were selected from within 200 selected rural PSU, 28 households from each selected PSU. A total of 4,446 eligible individuals who lived in the 5,600 selected households were interviewed.

Weighting

Weighting procedures were carried out to obtain parameters from the data set resulting from sampling so as to represent the universe. Weighting procedures were done in accordance with the GATS Sample Weights Manual.

First Stage of Weighting

First, base weights, which are inversely proportional to the overall selection probabilities, were calculated. In this stage, probabilities of selection of PSU, households and eligible individuals were calculated, and then base weights were calculated by using the probabilities based on households and individuals.

Second Stage of Weighting

In the second stage, base weights were adjusted to compensate for losses in the sample outcome due to non-response. In this stage, household-level non-response adjustment was made by using un-weighted data on the PSU base; individual-level non-response adjustment was done by using weighting data on 8 cells, which took into account rural/urban, gender and tobacco use from the roster information.

Household-Level Non-response Adjustment

Household-level non-response adjustment was made by using the following household-level response rate calculating formula based on PSU:

Household-Level Response Rate = (I+P) / [(I+P) + (R+NC+O) + (UH+UO)].

Where,

I is the number of fully completed households,

P is the number of partially completed households,

R is the number of refusals,

NC is the number of non contacts,

O is any other reason for not obtaining household data from eligible households,

UH is households with unknown eligibility, and

UO is any other reason for not obtaining household data from units with unknown eligibility.

Appendix Table A4 lists all household-level non-response adjustment factors by PSU.

Appendix Table A4. Household-level Nonresponse Adjustment Factors

PSU	Household-level Nonresponse Adjustment Factor	PSU	Household-level Nonresponse Adjustment Factor	PSU	Household-level Nonresponse Adjustment Factor	PSU	Household-level Nonresponse Adjustment Factor
8001	1,304	8051	1,107	8101	1,155	8151	1,000
8002	1,080	8052	1,040	8102	1,000	8152	1,042
8003	1,091	8053	1,000	8103	1,143	8153	1,040
8004	1,000	8054	1,080	8104	1,080	8154	1,043
8005	1,167	8055	1,000	8105	1,083	8155	1,000
8006	1,192	8056	1,148	8106	1,000	8156	1,038
8007	1,000	8057	1,000	8107	1,125	8157	1,083
8008	1,000	8058	1,111	8108	1,042	8158	1,000
8009	1,000	8059	1,040	8109	1,037	8159	1,083
8010	1,214	8060	1,111	8110	1,038	8160	1,037
8011	1,107	8061	1,000	8111	1,155	8161	1,095
8012	1,111	8062	1,038	8112	1,043	8162	1,000
8013	1,000	8063	1,000	8113	1,000	8163	1,000
8014	1,120	8064	1,037	8114	1,077	8164	1,042
8015	1,037	8065	1,000	8115	1,037	8165	1,000
8016	1,107	8066	1,115	8116	1,000	8166	1,077
8017	1,038	8067	1,040	8117	1,000	8167	1,080
8018	1,077	8068	1,000	8118	1,107	8168	1,037
8019	1,148	8069	1,000	8119	1,111	8169	1,000
8020	1,080	8070	1,000	8120	1,107	8170	1,154
8021	1,038	8071	1,000	8121	1,077	8171	1,000
8022	1,077	8072	1,038	8122	1,000	8172	1,107
8023	1,107	8073	1,077	8123	1,000	8173	1,111
8024	1,286	8074	1,000	8124	1,136	8174	1,000
8025	1,175	8075	1,179	8125	1,077	8175	1,080
8026	1,087	8076	1,115	8126	1,120	8176	1,000
8027	1,037	8077	1,042	8127	1,000	8177	1,080
8028	1,077	8078	1,000	8128	1,038	8178	1,143
8029	1,000	8079	1,087	8129	1,080	8179	1,000
8030	1,040	8080	1,080	8130	1,038	8180	1,125
8031	1,087	8081	1,000	8131	1,038	8181	1,179
8032	1,083	8082	1,038	8132	1,038	8182	1,000
8033	1,080	8083	1,000	8133	1,000	8183	1,000
8034	1,000	8084	1,038	8134	1,037	8184	1,037
8035	1,000	8085	1,037	8135	1,000	8185	1,000
8036	1,000	8086	1,040	8136	1,040	8186	1,202
8037	1,038	8087	1,037	8137	1,000	8187	1,038
8038	1,038	8088	1,000	8138	1,000	8188	1,115
8039	1,111	8089	1,000	8139	1,077	8189	1,000
8040	1,038	8090	1,038	8140	1,040	8190	1,000
8041	1,077	8091	1,000	8141	1,091	8191	1,080
8042	1,115	8092	1,042	8142	1,000	8192	1,111
8043	1,053	8093	1,037	8143	1,000	8193	1,038
8044	1,042	8094	1,000	8144	1,037	8194	1,000
8045	1,038	8095	1,000	8145	1,000	8195	1,000
8046	1,087	8096	1,095	8146	1,042	8196	1,000
8047	1,080	8097	1,037	8147	1,000	8197	1,000
8048	1,000	8098	1,040	8148	1,043	8198	1,000
8049	1,143	8099	1,000	8149	1,100	8199	1,000
8050	1,000	8100	1,038	8150	1,175	8200	1,038

Appendix Table A4continued...

PSU	Household-level Nonresponse Adjustment Factor	PSU	Household-level Nonresponse Adjustment Factor	PSU	Household-level Nonresponse Adjustment Factor	PSU	Household-level Nonresponse Adjustment Factor
8201	1,000	8251	1,083	8301	1,000	8351	1,000
8202	1,000	8252	1,038	8302	1,042	8352	1,000
8203	1,037	8253	1,038	8303	1,115	8353	1,000
8204	1,107	8254	1,000	8304	1,154	8354	1,083
8205	1,111	8255	1,038	8305	1,040	8355	1,000
8206	1,040	8256	1,000	8306	1,077	8356	1,000
8207	1,077	8257	1,080	8307	1,042	8357	1,037
8208	1,000	8258	1,000	8308	1,077	8358	1,143
8209	1,000	8259	1,038	8309	1,214	8359	1,037
8210	1,000	8260	1,000	8310	1,120	8360	1,000
8211	1,040	8261	1,000	8311	1,000	8361	1,357
8212	1,107	8262	1,000	8312	1,185	8362	1,037
8213	1,107	8263	1,000	8313	1,040	8363	1,000
8214	1,214	8264	1,000	8314	1,125	8364	1,000
8215	1,000	8265	1,250	8315	1,038	8365	1,000
8216	1,080	8266	1,192	8316	1,083	8366	1,050
8217	1,000	8267	1,077	8317	1,040	8367	1,100
8218	1,000	8268	1,000	8318	1,000	8368	1,040
8219	1,037	8269	1,107	8319	1,038	8369	1,080
8220	1,000	8270	1,111	8320	1,143	8370	1,038
8221	1,000	8271	1,300	8321	1,148	8371	1,120
8222	1,077	8272	1,000	8322	1,000	8372	1,000
8223	1,000	8273	1,286	8323	1,000	8373	1,148
8224	1,042	8274	1,111	8324	1,038	8374	1,115
8225	1,000	8275	1,148	8325	1,148	8375	1,185
8226	1,111	8276	1,214	8326	1,185	8376	1,040
8227	1,077	8277	1,250	8327	1,045	8377	1,080
8228	1,000	8278	1,037	8328	1,000	8378	1,080
8229	1,000	8279	1,000	8329	1,000	8379	1,179
8230	1,037	8280	1,038	8330	1,111	8380	1,185
8231	1,179	8281	1,040	8331	1,077	8381	1,179
8232	1,000	8282	1,000	8332	1,083	8382	1,179
8233	1,040	8283	1,037	8333	1,214	8383	1,208
8234	1,000	8284	1,040	8334	1,000	8384	1,571
8235	1,000	8285	1,185	8335	1,087	8385	1,222
8236	1,000	8286	1,250	8336	1,429	8386	1,429
8237	1,224	8287	1,000	8337	1,370	8387	1,042
8238	1,000	8288	1,000	8338	1,000	8388	1,087
8239	1,080	8289	1,000	8339	1,154	8389	1,080
8240	1,000	8290	1,000	8340	1,083	8390	1,037
8241	1,000	8291	1,077	8341	1,440	8391	1,000
8242	1,000	8292	1,116	8342	1,095	8392	1,000
8243	1,000	8293	1,000	8343	1,107	8393	1,038
8244	1,043	8294	1,077	8344	1,048	8394	1,000
8245	1,077	8295	1,107	8345	1,000	8395	1,000
8246	1,037	8296	1,107	8346	1,179	8396	1,080
8247	1,000	8297	1,000	8347	1,080	8397	1,040
8248	1,000	8298	1,000	8348	1,000	8398	1,000
8249	1,000	8299	1,000	8349	1,105	8399	1,000
8250	1,038	8300	1,037	8350	1,111	8400	1,000

Individual-Level Non-response Adjustment

The individual-level non-response adjustment was made using the individual-level response rate calculating formula on 8 weighting classes, which took into account rural/urban, gender and tobacco use, as determined by the household roster:

Individual-Level Response Rate = (I+P) / [(I+P) + (R+NC+O) + (UH+UO)].

Then, individual-level adjustment values were calculated by using 1/(Individual-Level Response Rate) for each weighting class. Appendix Table A5 lists all household-level non-response adjustment factors by urbanization, gender and smoking status.

Appendix Table A5. Individual-level Nonresponse Adjustment Factors

Urban / Kır	Gender	Current Smoking Status	Individual - level Nonresponse Adjustment Factor
Urban	Male	Smoking	1,037
		Not Smoking	1,039
	Female	Smoking	1,013
		Not Smoking	1,008
Rural	Male	Smoking	1,065
		Not Smoking	1,049
	Female	Smoking	1,032
		Not Smoking	1,018

Final Stage of Weighting

In the final stage of the weighting, calibration adjustment was done on weighted data to adjust weights to known population totals using the "raking ratio method".

The variables used for calibration were groups aged 15 and over in the non-institutional population dated 15 November 2008, gender, rural/urban and ***Nomenclature of Units For Territorial Statistics*** (NUTS)-Level 1. Appendix Tables A6.1, A6.2, A6.3 and A6.4 show the calibration adjustment factors.

Appendix Table A6.1. The First Calibration Adjustment Factors (by NUTS1, Urban/Rural Status)

NUTS1 Level	Urban / Rural Status	Calibration Adjustment Factor
1	Urban	1,036
	Rural	1,556
2	Urban	0,926
	Rural	1,053
3	Urban	1,005
	Rural	0,857
4	Urban	0,960
	Rural	1,023
5	Urban	1,007
	Rural	0,661
6	Urban	1,028
	Rural	0,931
7	Urban	1,172
	Rural	1,203
8	Urban	0,904
	Rural	0,887
9	Urban	1,250
	Rural	1,444
10	Urban	1,062
	Rural	1,023
11	Urban	1,066
	Rural	0,944
12	Urban	0,972
	Rural	1,069

Appendix Table A6.2. The Second Calibration Adjustment Factors (by Urban/Rural Status, Gender, Age Group)

Urban / Rural Status	Gender	Age Grubu	Calibration Adjustment Factor
Urban	Male	15-24	1.051
		25-34	1.136
		35-44	1.105
		45-54	0.886
		55+	0.906
	Female	15-24	1.011
		25-34	1.034
		35-44	0.926
		45-54	0.869
		55+	1.027
Rural	Male	15-24	1.560
		25-34	1.349
		35-44	0.953
		45-54	0.812
		55+	0.837
	Female	15-24	1.155
		25-34	0.983
		35-44	0.852
		45-54	0.802
		55+	0.984

Appendix Table A6.3. The Third alibration Adjustment Factors (by NUTS1, Urban/Rural Status)

NUTS1 Level	Urban / Rural Status	Calibration Adjustment Factor
1	Urban	0.991
	Rural	0.962
2	Urban	1.004
	Rural	1.032
3	Urban	1.006
	Rural	1.005
4	Urban	1.001
	Rural	1.025
5	Urban	1.011
	Rural	1.024
6	Urban	1.003
	Rural	0.986
7	Urban	1.022
	Rural	1.008
8	Urban	1.009
	Rural	1.037
9	Urban	0.982
	Rural	1.022
10	Urban	0.988
	Rural	0.980
11	Urban	1.013
	Rural	0.949
12	Urban	0.982
	Rural	0.959

Appendix Table A6.4. The Fourth Calibration Adjustment Factors (by Gender)

Gender	Calibration Adjustment Factor
Male	0.99988
Female	1.00011

Assuring the Quality of the Weights

After the completion of weighting procedures, the multiplicative effect (Meff), which indicates whether there is a need to adjust the weights for minimum and maximum extreme values, was calculated. Appendix Table A7 shows the Meff values by urban/rural and gender status.

The multiplicative effect formula is defined in the GATS Sample Weights Manual as follows:

$$Meff_w = 1 + \frac{s_w^2}{\overline{w}^2}.$$

Where, s_w^2 is variance of the weight, $\overline{w}$ is mean of the weights. Meff was found to be 1.511 using this formula. This value is within the normal limits and less than the predicted maximum value of 2.0, so there was no need for any extreme value adjustment on calculated weights.

Appendix Table A7. Multiplicative Effect (Meff) by Urban/Rural Status and Gender

Urban / Rural Status	Gender	Meff
Urban	Male	1.268
	Female	1.267
	All	1.269
Rural	Male	1.640
	Female	1.531
	All	1.588
Overall	Male	1.519
	Female	1.498
	All	1.511

Other Computational Checks

To validate whether the calibration reflected the distribution of the known population by urban/rural status, sample weights were computed by strata. Appendix Table A8 reveals that the population counts were the same as the sum of the sample weights by urban/rural status.

Appendix Table A8. Sum of Final Weights by Urban/Rural Status

Urban / Rural Status	Sample Weights	Population Counts
Urban	35,640,186.22	35,640,184.64
Rural	15,510,902.94	15,510,904.63
Overall	51,151,089.16	51,151,089.27

Appendix B: Estimates of Sampling Errors

The estimates from a sample survey are affected by two types of errors: nonsampling errors and sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the GATS Turkey to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the GATS Turkey is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the GATS Turkey' sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the GATS Turkey is a Macro SAS procedure (SAS version 9.2). This procedure used the Taylor linearization method of variance estimation for survey estimates that are means or proportions.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1}{x^2}\sum_{h=1}^{H}\left[\frac{m_h(1-f_h)}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

where h in which

n

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

y_{hi} is the sum of weighted values of variable y in the ith PSUs in the hth stratum;

x_{hi} is the sum of weighted number of cases in the ith PSUs in the hth stratum; and

f_h is the sampling fraction in stratum h, which is so small that it is ignored.

In addition to the standard error, the procedure computes the *design effect (DEFT)* for each estimate, which is defined as the ratio between the standard error using the given sample design and the

standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error because of the use of a more complex and less statistically efficient design. The procedure also computes the relative error and confidence limits for the estimates.

Sampling errors for the GATS Turkey are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole and by gender. Appendix Table B1 shows the list of indicators, the type of estimate, and the base population of the indicator. Appendix Table B2 to Appendix Table B4 on the other hand present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (W) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±1.96SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1).

Appendix Table B1. List of indicators for sampling errors, GATS Turkey 2009

Indicator	Estimate	Base Population
Current Tobacco Smokers	Proportion	Adults ≥ 15 years old
Daily Tobacco Smokers	Proportion	Adults ≥ 15 years old
Current Cigarette Smokers	Proportion	Adults ≥ 15 years old
Current Manufactured Cigarette Smokers	Proportion	Adults ≥ 15 years old
Former daily tobacco smokers (among ever daily smokers)	Proportion	Ever daily smokers ≥ 15 years old
Smokers who made a quit attempt in the past 12 months among those who smoked in the past 12 months	Proportion	Current smokers and former smokers who have been abstinent for less than 12 months ≥ 15 years old
Smokers who quit in the past 12 months among those who smoked in the past 12 months	Proportion	Current smokers and former smokers who have been abstinent for less than 12 months ≥ 15 years old
Current smokers who are interested in quitting	Proportion	Current cigarette smokers ≥ 15 years old
Smokers advised to quit by a health care provider among those who smoked in the past 12 months	Proportion	Current smokers and former smokers who have been abstinent for less than 12 months, who visited a HCP during the past 12 months and were asked by an HCP if they smoked ≥ 15 years old
Adults exposed to tobacco smoke at the workplace in the past month	Proportion	Adults ≥ 15 years old who work outside of the home who usually work indoors and outdoors with an enclosed area
Adults exposed to tobacco smoke at the workplace where smoking is disallowed in any closed area	Proportion	Adults ≥ 15 years old who work outside of the home who usually work indoors and outdoors with an enclosed area
Exposed to SHS in Health Care Facilities	Proportion	Adults ≥ 15 years old who visited Health Care Facilities in the past 30 days
Exposed to SHS in Government buildings/offices	Proportion	Adults ≥ 15 years old who visited Government buildings/offices in the past 30 days
Exposed to SHS in Public Transportation	Proportion	Adults ≥ 15 years old who used Public Transportation in the past 30 days
Smoking is allowed inside the home	Proportion	Adults ≥ 15 years old
Someone smoked inside the home in the past month	Proportion	Adults ≥ 15 years old
Last purchased in a store	Proportion	Current manufactured cigarette smokers ≥ 15 years old
Adults who noticed any advertisements for cigarettes	Proportion	Adults ≥ 15 years old
Adults who noticed any advertisements or signs promoting cigarettes in stores	Proportion	Adults ≥ 15 years old
Adults who noticed any cigarette advertisements for sports sponsorships	Proportion	Adults ≥ 15 years old
Adults who noticed any type of cigarette promotions	Proportion	Adults ≥ 15 years old
Adults who noticed any cigarette promotions on clothing or other items	Proportion	Adults ≥ 15 years old
Current smokers who thought about quitting because of noticing warning labels on cigarette packages	Proportion	Current manufactured cigarette smokers ≥ 15 years old
Adults who noticed anti-cigarette smoking information on any media	Proportion	Adults ≥ 15 years old
Adults who noticed anti-smoking information on TV	Proportion	Adults ≥ 15 years old
Adults who noticed anti-smoking information on radio	Proportion	Adults ≥ 15 years old
Adults believe smoking causes serious illness	Proportion	Adults ≥ 15 years old
Adults who believe smoking causes lung cancer	Proportion	Adults ≥ 15 years old
Adults who believe smoking causes heart attack	Proportion	Adults ≥ 15 years old
Adults who believe smoking causes stroke	Proportion	Adults ≥ 15 years old
Adults who believe that breathing other people's smoke causes serious illness	Proportion	Adults ≥ 15 years old

Appendix Table B2. Sampling errors for national sample, GATS Turkey 2009

Indicator	Unweighted count Base	Weighted Counts Base	Estimate Percent	Standard Error of Percent	Design Effect	95% Lower Limit	95% Upper Limit	Relative Error
Current Tobacco Smokers	9030	51151090	31.2415529	0.658786662	1.82439416	29.9464164	32.5366895	0.02108687
Daily Tobacco Smokers	9030	51151090	27.4141806	0.628953115	1.79513552	26.1776951	28.6506662	0.02294262
Current Cigarette Smokers	9030	51151090	31.1489523	0.657798966	1.8218815	29.8557575	32.4421471	0.02111785
Current Manufactured Cigarette Smokers	9030	51151090	30.07532	0.653581465	1.83419903	28.7904166	31.3602235	0.02173149
Former daily tobacco smokers (among ever daily smokers)	3626	20307557	26.4701214	0.896285625	1.49658325	24.7080756	28.2321673	0.03386028
Smokers who made a quit attempt in the past 12 months among those who smoked in the past 12 months	2910	17194443	44.7721285	1.139089464	1.52701257	42.5327443	47.0115127	0.02544193
Smokers who quit in the past 12 months among those who smoked in the past 12 months	1319	7698318	15.7702989	1.140202681	1.29093307	13.5287262	18.0118716	0.07230064
Current smokers who are interested in quitting	2691	15933028	53.0072481	1.438220779	2.23459426	50.179789	55.8347072	0.02713253
Smokers advised to quit by a health care provider among those who smoked in the past 12 months	671	3954034	83.1079291	1.913954297	1.75089576	79.3452053	86.8706528	0.02302974
Adults exposed to tobacco smoke at the workplace in the past month	2461	15684077	38.5369376	1.388637253	2.00353919	35.8069568	41.2669183	0.03603393
Adults exposed to tobacco smoke at the workplace where smoking is disallowed in any closed area	1455	9517027	12.544204	1.032109197	1.41280617	10.5151368	14.5732712	0.08227778
Exposed to SHS in Health Care Facilities	4848	26944754	6.00831157	0.478851349	1.96843983	5.06691744	6.9497057	0.07969816
Exposed to SHS in Government buildings/offices	3172	18656743	11.2719797	0.831839819	2.19458092	9.63663062	12.9073288	0.07379714
Exposed to SHS in Public Transportation	5844	35632482	16.4621798	0.862585794	3.16187234	14.7663859	18.1579737	0.05239803
Smoking is allowed inside the home	9030	51151090	59.6582491	0.994627596	3.71179099	57.7028687	61.6136296	0.01667209
Someone smoked inside the home in the past month	9030	51151090	56.3051554	0.955721301	3.35252419	54.4262625	58.1840484	0.01697396
Last purchased in a store	2423	14578092	92.4545975	0.75697907	1.99026191	90.9664203	93.9427747	0.00818758
Adults who noticed any advertisements for cigarettes	9030	51151090	7.1274202	0.476731224	3.10038103	6.19019411	8.06464629	0.06688693
Adults who noticed any advertisements or signs promoting cigarettes in stores	9030	51151090	2.70842569	0.35632552	4.35100367	2.00791027	3.40894111	0.13156186

Appendix Table B2. Continued…

Indicator	Unweighted count Base	Weighted Counts Base	Estimate Percent	Standard Error of Percent	Design Effect	95% Lower Limit	95% Upper Limit	Relative Error
Adults who noticed any cigarette advertisements for sports sponsorships	9030	51151090	3.27498543	0.316060853	2.84761315	2.65362802	3.89634284	0.09650756
Adults who noticed any type of cigarette promotions	9030	51151090	5.33416772	0.368953636	2.43428496	4.60882615	6.05950928	0.06916799
Adults who noticed any cigarette promotions on clothing or other items	9030	51151090	2.81275885	0.283686108	2.65841105	2.25504833	3.37046938	0.10085689
Current smokers who thought about quitting because of noticing warning labels on cigarete packages	2565	15383853	46.5352725	1.418546094	2.07455357	43.7464927	49.3240523	0.03048324
Adults who noticed anti-cigarette smoking information on any media	9030	51151090	88.833309	0.605330369	3.33558749	87.6432644	90.0233536	0.00681423
Adults who noticed anti-smoking information on TV	9030	51151090	85.4731602	0.692829176	3.49091422	84.111098	86.8352224	0.00810581
Adults who noticed anti-smoking information on radio	9030	51151090	23.003121	0.936185834	4.4683995	21.1626336	24.8436083	0.04069821
Adults believe smoking causes serious illness	9030	51151090	97.2101807	0.263997356	2.32059356	96.6911771	97.7291843	0.00271574
Adults who believe smoking causes lung cancer	9030	51151090	98.0351545	0.199289475	1.86185665	97.6433629	98.4269462	0.00203284
Adults who believe smoking causes heart attack	9030	51151090	95.4592249	0.32663803	2.22266162	94.8170734	96.1013764	0.00342175
Adults who believe smoking causes stroke	9030	51151090	83.6839945	0.741376543	3.63503993	82.2264909	85.141498	0.00885924
Adults who believe that breathing other people's smoke causes serious illness	9030	51151090	95.5030691	0.29632986	1.84631177	94.9205017	96.0856365	0.00310283

Appendix Table B3. Sampling errors for male sample, GATS Turkey 2008

Indicator	Unweighted Count	Weighted Count in Thousands	Estimate Percent	Standard Error of Percent	Design Effect	95% Lower Limit	95% Upper Limit	Relative Error
Current Tobacco Smokers	4,269	25,096	47.9216776	1.054463409	1.90195476	45.8486634	49.9946919	0.02200389
Daily Tobacco Smokers	4,269	25,096	43.8446784	1.036436841	1.86253324	41.8071034	45.8822535	0.02363883
Current Cigarette Smokers	4,269	25,096	47.7805808	1.055096786	1.90470312	45.7063214	49.8548402	0.02208213
Current Manufactured Cigarette Smokers	4,269	25,096	45.7932057	1.044685581	1.87690627	43.7394141	47.8469973	0.02281311
Former daily tobacco smokers (among ever daily smokers)	2,854	15,845	27.2071279	1.015003501	1.48462748	25.2116896	29.2025663	0.03730653
Smokers who made a quit attempt in the past 12 months among those who smoked in the past 12 months	2,173	12,788	44.0503677	1.301868456	1.49433222	41.4909694	46.609766	0.02955409
Smokers who quit in the past 12 months among those who smoked in the past 12 months	964	5,633	13.5156101	1.252000945	1.2927453	11.0542484	15.9769717	0.0926337
Current smokers who are interested in quitting	2,029	11,991	53.5964973	1.517937013	1.87975988	50.6123207	56.5806739	0.02832157
Smokers advised to quit by a health care provider among those who smoked in the past 12 months	447	2,578	85.9141557	2.181345413	1.75755447	81.6257564	90.2025549	0.02538983
Adults exposed to tobacco smoke at the workplace in the past month	1,904	12,196	41.4714475	1.58262644	1.96474775	38.3600952	44.5827998	0.03816183
Adults exposed to tobacco smoke at the workplace where smoking is disallowed in any closed area	1,101	7,223	13.725987	1.23768165	1.42423496	11.2927762	16.1591977	0.09017069
Exposed to SHS in Health Care Facilities	2,107	11,845	6.6037405	0.714343014	1.74324592	5.19938333	8.00809766	0.10817248
Exposed to SHS in Government buildings/offices	2,156	12,366	13.0348097	0.987241372	1.85372499	11.0939501	14.9756693	0.07573884
Exposed to SHS in Public Transportation	2,943	18,426	18.6706565	1.162312522	2.61835929	16.3856171	20.9556959	0.06225344
Smoking is allowed inside the home	4,269	25,096	58.7358525	1.236152132	2.69149666	56.3056487	61.1660563	0.02104596
Someone smoked inside the home in the past month	4,269	25,096	56.1279957	1.181624214	2.42057146	53.8049907	58.4510008	0.02105231
Last purchased in a store	1,890	11,347	92.709488	0.846088877	2.00175795	91.046126	94.3728499	0.00912624
Adults who noticed any advertisements for cigarettes	4,269	25,096	8.15195653	0.708888389	2.86516816	6.75832284	9.54559022	0.08695929
Adults who noticed any advertisements or signs promoting cigarettes in stores	4,269	25,096	3.61962088	0.589150652	4.24743914	2.46138468	4.77785708	0.16276585

Appendix Table B3. Continued…

Indicator	Unweighted Count	Weighted Count in Thousands	Estimate Percent	Standard Error of Percent	Design Effect	95% Lower Limit	95% Upper Limit	Relative Error
Adults who noticed any cigarette advertisements for sports sponsorships	4,269	25,096	5.2560448	0.512030447	2.24753859	4.24942247	6.26266713	0.09741744
Adults who noticed any type of cigarette promotions	4,269	25,096	7.7613752	0.614788638	2.25385681	6.55273619	8.9700142	0.0792113
Adults who noticed any cigarette promotions on clothing or other items	4,269	25,096	4.37255218	0.5003495	2.55596868	3.38889392	5.35621044	0.11442962
Current smokers who thought about quitting because of noticing warning labels on cigarete packages	1,916	11,492	46.4805898	1.656879424	2.11443513	43.2232604	49.7379192	0.0356467
Adults who noticed anti-cigarette smoking information on any media	4,269	25,096	89.8800898	0.701228558	2.30783729	88.5015149	91.2586647	0.00780182
Adults who noticed anti-smoking information on TV	4,269	25,096	85.5488106	0.816156937	2.30014883	83.9442931	87.1533281	0.00954025
Adults who noticed anti-smoking information on radio	4,269	25,096	23.6876849	1.139584556	3.06691696	21.4473274	25.9280424	0.04810873
Adults believe smoking causes serious illness	4,269	25,096	97.7551913	0.261252668	1.32778712	97.2415836	98.268799	0.00267252
Adults who believe smoking causes lung cancer	4,269	25,096	98.5529766	0.238257996	1.6993226	98.0845751	99.0213781	0.00241756
Adults who believe smoking causes heart attack	4,269	25,096	96.1395429	0.396969076	1.81258643	95.3591246	96.9199612	0.00412909
Adults who believe smoking causes stroke	4,269	25,096	85.2354851	0.836834384	2.37555762	83.590317	86.8806533	0.00981791
Adults who believe that breathing other people's smoke causes serious illness	4,269	25,096	95.9312235	0.398578106	1.73751759	95.1476419	96.714805	0.00415483

Appendix Table B4. Sampling errors for female sample, GATS Turkey 2009

Indicator	Unweighted count Base	Weighted Counts Base	Estimate Percent	Standard Error of Percent	Design Effect	95% Lower Limit	95% Upper Limit	Relative Error
Current Tobacco Smokers	4761	26055291	15.1756781	0.627712774	1.45730889	13.941631	16.4097252	0.04136308
Daily Tobacco Smokers	4761	26055291	11.58874	0.590150377	1.61837723	10.4285384	12.7489416	0.05092446
Current Cigarette Smokers	4761	26055291	15.1297877	0.626839935	1.45687863	13.8974565	16.3621189	0.04143085
Current Manufactured Cigarette Smokers	4761	26055291	14.9362495	0.616905693	1.42609892	13.7234485	16.1490505	0.04130258
Former daily tobacco smokers (among ever daily smokers)	772	4462985	23.8535873	1.703751571	1.23374865	20.50411	27.2030646	0.07142538
Smokers who made a quit attempt in the past 12 months among those who smoked in the past 12 months	737	4406779	46.8665457	2.172457776	1.39681593	42.595619	51.1374724	0.04635413
Smokers who quit in the past 12 months among those who smoked in the past 12 months	355	2065305	21.9198465	2.762451609	1.58284921	16.4890259	27.350667	0.12602514
Current smokers who are interested in quitting	662	3942110	51.2148987	2.384576715	1.50659686	46.5269584	55.902839	0.04656022
Smokers advised to quit by a health care provider among those who smoked in the past 12 months	224	1375922	77.8498061	3.037461781	1.1984905	71.8783314	83.8212807	0.03901695
Adults exposed to tobacco smoke at the workplace in the past month	557	3487775	28.2753319	2.479772284	1.68889457	23.4002426	33.1504212	0.08770091
Adults exposed to tobacco smoke at the workplace where smoking is disallowed in any closed area	354	2294390	8.82400507	1.689657332	1.25618695	5.50223621	12.1457739	0.19148418
Exposed to SHS in Health Care Facilities	2741	15099770	5.54122852	0.559305705	1.6381708	4.44166576	6.64079128	0.10093533
Exposed to SHS in Government buildings/offices	1016	6290720	7.80668522	1.275475826	2.29652974	5.29917331	10.3141971	0.16338251
Exposed to SHS in Public Transportation	2901	17206728	14.0972416	0.940164216	2.11745364	12.248933	15.9455502	0.06669136
Smoking is allowed inside the home	4761	26055291	60.5465746	1.100665731	2.41454208	58.3827293	62.71042	0.01817883
Someone smoked inside the home in the past month	4761	26055291	56.4758978	1.1255052	2.45358003	54.2632194	58.6885761	0.01992895
Last purchased in a store	533	3231261	91.5595288	1.3872972	1.32738219	88.8321825	94.2868751	0.01515186
Adults who noticed any advertisements for cigarettes	4761	26055291	6.14061268	0.523376363	2.26275207	5.11168494	7.16954043	0.08523195
Adults who noticed any advertisements or signs promoting cigarettes in stores	4761	26055291	1.83078549	0.304222244	2.45170005	1.2327021	2.42886887	0.16617034

Appendix Table B4. Continued…

Indicator	Unweighted count Base	Weighted Counts Base	Estimate Percent	Standard Error of Percent	Design Effect	95% Lower Limit	95% Upper Limit	Relative Error
Adults who noticed any cigarette advertisements for sports sponsorships	4761	26055291	1.36687908	0.240878207	2.04899232	0.89332641	1.84043174	0.17622496
Adults who noticed any type of cigarette promotions	4761	26055291	2.99634276	0.337368293	1.86434855	2.33309615	3.65958937	0.11259336
Adults who noticed any cigarette promotions on clothing or other items	4761	26055291	1.31040531	0.248289697	2.2695438	0.82228208	1.79852853	0.1894755
Current smokers who thought about quitting because of noticing warning labels on cigarete packages	649	3891684	46.6967509	2.320966463	1.40456577	42.1338647	51.2596371	0.04970295
Adults who noticed anti-cigarette smoking information on any media	4761	26055291	87.8250761	0.734760258	2.4038353	86.3805798	89.2695724	0.00836618
Adults who noticed anti-smoking information on TV	4761	26055291	85.4002956	0.829192241	2.62545878	83.7701515	87.0304397	0.00970948
Adults who noticed anti-smoking information on radio	4761	26055291	22.3437663	1.058102921	3.07200066	20.263597	24.4239356	0.04735562
Adults believe smoking causes serious illness	4761	26055291	96.6852403	0.42116637	2.63507707	95.8572515	97.5132291	0.00435606
Adults who believe smoking causes lung cancer	4761	26055291	97.5346581	0.282778825	1.58327306	96.9787312	98.0905849	0.00289927
Adults who believe smoking causes heart attack	4761	26055291	94.8016694	0.447813001	1.93736609	93.9212949	95.6820439	0.00472368
Adults who believe smoking causes stroke	4761	26055291	82.1844145	0.921024284	2.75835893	80.3737338	83.9950951	0.0112068
Adults who believe that breathing other people's smoke causes serious illness	4761	26055291	95.0906816	0.416142775	1.76613436	94.2725689	95.9087943	0.00437627

Appendix C: Questionnaire

TURKISH STATISTICAL INSTITUTE
PRIME MINISTRY
REPUBLIC OF TURKEY

ADDRESS INFORMATION **CODE**

PROVINCE:

DISTRICT:

SUB-DISTRICT:

VILLAGE:

QUARTER:

Please state whether the given information is for a square, boulevard, avenue, street or site, and check its type.

Name:

Type: **SQUARE** **BOULEVARD** **AVENUE** **STREET** **SITE**

If the location is not identified independently, please fill in the name of square, boulevard, avenue, street or site it belongs and identify its type.

Name:

Type: **SQUARE** **BOULEVARD** **AVENUE** **STREET** **SITE**

Neighborhood/Locality:

Site, if any:

Exterior door no:

Interior door no:

Postal code:

Telephone no (home):

Telephone no (office):

Telephone no (mobile):

POLLSTER'S	SUPERVISOR'S
Name & Surname:	**Name & Surname:**
Turkish ID No:	**Turkish ID No:**
	Date of Review:
I conducted the questionnaire at the given address on	**I reviewed the questionnaire delivered by the pollster on .....**

[in English: Annex 5: Draft Questionnaire in Turkish]

Household Questionnaire

INT: THE HOUSEHOLD SCREENING RESPONDENT MUST BE 18 YEARS OF AGE OR OLDER AND YOU MUST BE CONFIDENT THAT THIS PERSON CAN PROVIDE ACCURATE INFORMATION ABOUT ALL MEMBERS OF THE HOUSEHOLD.

IF NEEDED, VERIFY THE AGE OF THE HOUSEHOLD SCREENING RESPONDENT TO MAKE SURE HE/SHE IS 18 YEARS OF AGE OR OLDER.

INTRO: An important survey of adult tobacco use behavior is being conducted by the Turkish Statistical Institute throughout Turkey and your household has been selected to participate. All houses selected were chosen from a scientific sample and it is very important to the bsuccess of this project that each participates in the survey. All information gathered will be kept strictly confidential. I have a few questions to find out who in your household is eligible to participate.

HH1. First, I'd like to ask you a few questions about your household. In total, how many persons live in this household?

INCLUDE ANYONE WHO CONSIDERS THIS HOUSEHOLD THEIR PRIMARY PLACE OF RESIDENCE LAST NIGHT

☐☐ PERSONS

HH2. How many of these household members are 15 years of age or older?

☐☐ PERSONS

HH3. How many (male/female) household members are 15 years of age or older?

☐☐ PERSONS

IF HH3 = 00 (NO ELIGIBLE MALES/FEMALES IN HOUSEHOLD), END INTERVIEW AND GO TO PAGE 6 TO RECORD THE TIME THE INTERVIEW ENDED. ENTER RESULT CODE 2.

HH4. I now would like to collect information about the (males/females) that live in this household who are 15 years of age or older. Let's start listing the (males/females) from oldest to youngest.

ASK THE FOLLOWING QUESTIONS AND RECORD ANSWERS IN TABLE BELOW

a. What is this person's first name?

b. What is this person's age? IF RESPONDENT DOESN'T KNOW, PROBE FOR AN ESTIMATE

c. IF REPORTED AGE IS 15 THROUGH 17, ASK FOR BIRTH DATE: What is the month and year of this person's date of birth?

CHECK TO VERIFY IF DATE OF BIRTH FALLS BEFORE THE DATE OF [FILL MONTH/YEAR] TO MAKE SURE PERSON IS 15 OR OLDER. IF NOT 15 OR OLDER, DELETE LINE.

IF RESPONDENT DOESN'T KNOW DATE OF BIRTH, CONTINUE TO d

d. RECORD GENDER (FOR VERIFICATION IF NECESSARY)

e. Does this person currently smoke tobacco, including cigarettes, hand-rolled cigarettes, pipes, cigars and water pipes?

NOTE: SELECTION OF INDIVIDUAL RESPONDENT WILL BE PERFORMED BY THE SURVEY PROGRAM.

Individual Questionnaire

CONSENT1. CHECK AGE OF SELECTED RESPONDENT FROM THE HOUSEHOLD QUESTIONNAIRE CASE DETAILS, AND SELECT THE APPROPRIATE CATEGORY BELOW:

15-17 ..... ☐1 [GO TO CONSENT2]
18 OR OLDER ..... ☐2 [GO TO CONSENT5]
EMANCIPATED MINOR (15-17) ..... ☐3 [GO TO CONSENT5]

CONSENT2. Before starting the interview, I need to obtain consent from a parent or guardian of [NAME OF RESPONDENT] and from [NAME OF RESPONDENT].

IF BOTH SELECTED RESPONDENT AND PARENT/GUARDIAN ARE AVAILABLE, CONTINUE WITH INTERVIEW.

IF PARENT/GUARDIAN IS NOT AVAILABLE, BREAK-OFF INTERVIEW AND SCHEDULE AN APPOINTMENT TO RETURN.

IF MINOR RESPONDENT IS NOT AVAILABLE, CONTINUE WITH OBTAINING PARENTAL CONSENT.

CONSENT3. READ THE FOLLOWING TO THE PARENT/GUARDIAN AND SELECTED RESPONDENT (IF AVAILABLE):

I am working with the Turkish Statistical Institute. This institution is collecting information about tobacco use in Turkey. This information will be used for public health purposes by the Ministry of Health.

Your household and [NAME OF RESPONDENT] have been selected at random. [NAME OF RESPONDENT] responses are very important to us and the community, as these answers will represent many other persons.

The interview will last around 30 minutes. [NAME OF RESPONDENT] participation in this survey is entirely voluntary. The information that [NAME OF RESPONDENT] will provide will be kept strictly confidential and [NAME OF RESPONDENT] will not be identified by his/her responses. Personal information will not be shared with anyone else, not even other family members including you. [NAME OF RESPONDENT] can withdraw from the study at any time, and may refuse to answer any question.

If you have questions about this survey you can contact our institution at the following telephone number: [Name of Organization], [Name of Contact Person], [Telephone Number].

This questionnaire has been reviewed and approved by the World Health Organization and [name of the local IRB] review committee, which is a committee whose task is to ensure that research participants are protected from harm. If you wish to find more about this review committee, contact [name], [address], and [telephone number].

If you agree with [NAME OF RESPONDENT]'s participation in this survey, we will conduct a private interview with him/her.

ASK PARENT/GUARDIAN: Do you agree with [NAME OF RESPONDENT]'s participation?

YES..... ☐1 [GO TO CONSENT4]
NO ..... ☐2 [END INTERVIEW]

CONSENT4. WAS THE SELECTED MINOR RESPONDENT PRESENT?

PRESENT..... ☐1 [GO TO CONSENT6]
NOT PRESENT..... ☐2 [GO TO CONSENT5]

CONSENT5. READ TO THE SELECTED RESPONDENT:

I am working with the Turkish Statistical Institute. This institution is collecting information about tobacco use in Turkey. This information will be used for public health purposes by the Ministry of Health.

Your household and you have been selected at random. Your responses are very important to us and the community, as these answers will represent many other persons. The interview will last around 30 minutes. Your participation in this survey is entirely voluntary. The information that you will provide us will be kept strictly confidential, and you will not be identified by your responses. Personal information will not be shared with anyone else, not even other family members. You can withdraw from the study at any time, and may refuse to answer any question.

If you have questions about this survey you can contact our institution at the following telephone number: [Name of Organization] [Name of Contact Person] [Telephone Number].

This questionnaire has been reviewed and approved by the World Health Organization and [Name of the local IRB] review committee, which is a committee whose task whose is to make sure that research participants are protected from harm. If you wish to find more about this review committee, contact [name], [address], and [telephone number].

{FILL IF CONSENT4=2: Your parent/guardian has given his/her permission for you to participate in this study}

If you agree to participate, we will conduct a private interview with you.

CONSENT6. ASK SELECTED RESPONDENT: Do you agree to participate?

YES..... ☐1 [PROCEED WITH INTERVIEW]
NO ..... ☐2 [END INTERVIEW]

FILL IN THE FOLLOWING INFORMATION:

INTERVIEW LANGUAGE	☐1 TURKISH

SECTION A PERSONAL DETAILS

A1. Record gender from observation.

Male 1
Female 2

A2. What is your date of birth?

Month (If not known, insert "77")
Year (If not known, insert "777")

Note: Ask if the month is "77" or year is "7777". If not, skip to question A4.
TO BE INCLUDED IN MECHANIC EDITING FOR THE PROGRAM

A3. How old are you?

IF RESPONDENT IS UNSURE, PROBE FOR AN ESTIMATE AND RECORD AN ANSWER

.....years old

A3a. Is the response in question 3 an estimated age?

Yes 1
No 2

A4. Which school did you graduate the last?

Not graduated	1
Elementary school	2 (Skip to question A5)
Primary education	3 (Skip to question A5)
Secondary school or vocational secondary school	4 (Skip to question A5)
High school and equivalents	5 (Skip to question A5)
College or faculty	6 (Skip to question A5)
Master's degree, doctorate degree	7 (Skip to question A5)
DON'T KNOW	77

A12. Are you literate?

Yes	1
No	2

A5. Which of the following best describes your professional status within the last 12 months?

Public and private employees	1
Self-employed/non-paid family worker	2
Student	3
Housewife	4
Retired	5
Looking for a job (employable)	6
Looking for a job (unemployable)	7
Other (please specify)	8
Don't know	77

A6. Does this household or any member of this household have access to following items?

	Yes	No
a. Electricity	1	2
b. Toilets with water installation and sewage connection	1	2
c. Fixed phone	1	2
d. Mobile phone	1	2
e. Television	1	2
f. Radio	1	2
g. Refrigerator	1	2
h. Car	1	2
i. Motorcycle	1	2
j. Wash machine	1	2

SECTION B – TOBACCO USE

Now I will ask you a few questions about tobacco use. Please answer by considering that tobacco covers cigarette, hand-rolled cigarette, pipe, cigar and water pipe.

B1. What is your tobacco usage status at present? Every day, less than every day or none.

Every day	1 (Skip to question B4)
Less than every day	2
None	3 (Skip to question B3)

B2. Have you used tobacco every day in the past?

Yes	1 (Skip to question B8)
No	1 (Skip to question B10)

B3. What was your tobacco usage status in the past? Every day, less than every day or none.

Note: If the responder selects the options "every day" and "less than every day" at the same time, "every day" shall be considered as the valid answer and following questions shall be asked accordingly.

Every day	1 (Skip to question B11)
Less than every day	2 (Skip to question B13)
None	3 (Skip to next section WP)

Current everyday users

B4. At what age did you first start to use tobacco every day?

Age

Insert "99" if not known.

IF B4 = 99, ASK B5. OTHERWISE SKIP TO B6.

B5. How many years ago did you first start to use tobacco every day?

..... years

B6. How many kinds of tobacco products are you using every day at present?

Note: 1. If the responder uses tobacco products but less than one per day, leave the field blank and check the box on the right hand side.

2. If the responder gives the number as a pack or carton, calculate the total number by estimating the number [of units] per pack or carton.

Please read each line		Less than 1 but More than 0 per day	Refused
a. Cigarette	.....per day	888	999
b. Hand-rolled cigarette	.....per day	888	999
c. Full pipe	.....per day	888	999
d. Cigar	.....per day	888	999
e. Number of waterpipe sessions per day	.....per day	888	999
f. Other, specify	.....per day	888	999

B7. When do you usually first use tobacco after you wake up?

In 5 minutes	1
In 5 – 30 minutes	2
In 31 – 60 minutes	3
In more than 60 minutes	4

SKIP TO NEXT SECTION WP

Current less than everyday users

B8. At what age did you first start to use tobacco every day?

Age

Insert "99" if not known.

IF B8 = 99, ASK B9. OTHERWISE SKIP TO B10.

B9. How many years ago did you first start to use tobacco every day?

..... years

B10. How many tobaccos are you using per week at present?

Note: 1. If the responder uses tobacco products but less than one per week, leave the field blank and check the box on the right hand side.

2. If the responder gives the number as a box or carton, calculate the total number by estimating number [of units] per box or carton.

Please read each line		Less than 1 but more than 0 per week	Refused
a. Cigarette	.....per week	888	999
b. Hand-rolled cigarette	.....per week	888	999
c. Full pipe	.....per week	888	999
d. Cigar	.....per week	888	999
e. Number of waterpipe sessions per week	.....per week	888	999
f. Other, specify	.....per week	888	999

SKIP TO NEXT SECTION WP

Past users

B11. At what age did you first start to use tobacco every day?

Age

Insert "99" if not known.

IF B11 = 99, ASK B12. OTHERWISE SKIP TO B13.

B12. How many years ago did you first start to use tobacco every day?

..... years

B13. How long ago did you quit using tobacco?

Note: Ask only to responders who quit using tobacco permanently. Do not include rare use of tobacco.

Check the unit and enter the time.

Year Month Week Day

IF B13 < 1 YEAR (< 12 MONTHS), THEN CONTINUE WITH B14. OTHERWISE SKIP TO NEXT SECTION WP.

B14. Have you visited a doctor or other healthcare professional within the last 12 months?

Yes	1
No	2 (Skip to question B18)

B15. How many times have you visited a doctor or other healthcare professional within the last 12 months? Is it 1 or 2 times, 3 or 5 times, 6 or more?

1 or 2	1
Between 3 and 5	2
6 or more	3

B16. Have you been asked a question about your tobacco use during your visit to a doctor or other healthcare professional within the last 12 months?

Yes	1
No	2 (Skip to question B18)

B17. Has it been advised that you quit using tobacco during your visit to a doctor or other healthcare professional within the last 12 months?

Yes	1
No	2

B18. Have you used/tried any of the following to quit using tobacco within the last 12 months?

Read each line

	Yes	No
a. Counseling including clinical aid	1	2
b. Nicotine supporting therapy such as patch or gum	1	2
c. Other prescription drugs; e.g. zyban, campix	1	2
d. Traditional methods	1	2
g. Other, please specify	1	2

SECTION WP – WATER PIPE MODULE

The following routing will be programmed:

B6e/B10e ask for the number of water pipe smoking sessions per day/week

-IF B1=3 AND B3=3 (NEVER SMOKERS), SKIP TO NEXT SECTION D1
-IF B1=3 AND B3=1 OR 2 (FORMER SMOKERS), GO TO WP2

-IF B1=1 AND B6e>=1 (CURRENT DAILY WATER PIPE SMOKERS), GO TO WP3
-IF B1=1 AND B6e=888 (CURRENT LESS THAN DAILY WATER PIPE SMOKERS), GO TO WP1
-IF B1=2 AND B10e>=1 OR =888 (CURRENT LESS THAN DAILY WATER PIPE SMOKERS), GO TO WP1

-ELSE, GO TO NEXT SECTION D1

INTRO: I would now like to ask you some questions about smoking the water pipe.

WP1. Have you smoked the water pipe daily in the past?

YES..... ☐ 1 → SKIP TO WP3
NO..... ☐ 2 → SKIP TO WP3

WP2. **In the <u>past</u>, have you smoked the water pipe on a daily basis, less than daily, or not at all?**

IF RESPONDENT HAS DONE BOTH "DAILY" AND "LESS THAN DAILY" IN THE PAST, CHECK "DAILY"

DAILY ..... ☐ 1
LESS THAN DAILY ..... ☐ 2
NOT AT ALL ..... ☐ 3 → SKIP TO NEXT SECTION D1

WP3. **How old were you when you first started smoking the water pipe?**

☐☐ YEARS OLD IF DON'T KNOW, ENTER "99"

INT: IF WP3 = 99, ASK WP4. OTHERWISE SKIP TO ROUTING INSTRUCTION.

WP4. **How many years ago did you first start smoking the water pipe?**

☐☐ YEARS

ROUTING:
-CURRENT SHISHA SMOKERS: IF (B1=1 OR 2) AND [(B6x>=1 OR =888) OR (B10x>=1 OR =888)], GO TO WP5
-OTHERWISE, GO TO NEXT SECTION D1

WP5. **The last time you smoked the water pipe, how long did you participate in the water pipe smoking session?**

CHECK UNIT AND RECORD NUMBER

HOURS..... ☐ 1
MINUTES.... ☐ 2
☐☐

WP6. **The last time you smoked the water pipe, how many other people did you share the same pipe with during the session?**

☐☐ PEOPLE

WP8. **The last time you smoked the water pipe, where did you smoke it?**

HOME..... ☐ 1
WATER PIPE CAFE ☐ 2
OTHER CAFE..... ☐ 3
OTHER..... ☐ 4 → Specify: _____

SECTION D1 – QUITTING TOBACCO USE

IF B1 = 1 or 2 (RESPONDENT CURRENTLY SMOKES TOBACCO), THEN CONTINUE WITH THIS SECTION

IF B1 = 3 (RESPONDENT DOES NOT CURRENTLY SMOKE TOBACCO), THEN SKIP TO NEXT SECTION E

NOTE: The following questions are related with your attempts to quit using tobacco made within the last 12 months.

D1. Have you tried to quit using tobacco within the last 12 months?

Yes	1
No	2 (Skip to question D4)

D2. Considering your last attempt to quit using tobacco, for how long did you not use tobacco?

Check the unit and enter the time.

Month	Week	Day
Less than one day (24 hours)		

D3. Have you used/tried any of the following to quit using tobacco within the last 12 months?

Read each line

	Yes	No
a. Counseling including clinical aid	1	2
b. Nicotine supporting therapy such as patch or gum	1	2
c. Other prescription drugs; e.g. zyban, campix	1	2
d. Traditional methods	1	2
g. Other, please specify	1	2

D4. Have you visited a doctor or other healthcare professional within the last 12 months?

Yes	1
No	2 (Skip to question D8)

D5. How many times have you visited a doctor or other healthcare professional within the last 12 months? Is it 1 or 2 times, 3 or 5 times, 6 or more?

1 or 2	1
Between 3 and 5	2
6 or more	3

D6. Have you been asked a question about your tobacco use during your visit to a doctor or other healthcare professional within the last 12 months?

Yes	1
No	2 (Skip to question D8)

D7. Has it been advised that you quit using tobacco during your visit to a doctor or other healthcare professional within the last 12 months?

Yes	1
No	2

D8. Which of the following best describes your thinking on quitting tobacco use?

I plan to quit within the next month	1
I plan to quit within the next 12 months	2
I plan to quit, but not within the next 12 months	3
I don't plan to quit at all	4

SECTION E - PASSIVE TOBACCO USE

NOTE: I would now like to ask you a few questions about smoking in various places.

E1. Which of the following best describes the rules on tobacco use inside your home?

Permitted	1
Not permitted, but there are exceptions	2
Not permitted at all	3 (Skip to question E4)

E2. Is tobacco use permitted in every room of your home?

Yes	1
No	2

E3. How often does <u>anyone</u> use tobacco in your home? Daily, weekly, monthly or less than once a month?

Daily	1
Weekly	2
Monthly	3
Less than once a month	4

E4. Do you have a job out of home at present?

Yes	1
No/Not working	2 (Skip to question E9)

E5. Do you usually work in a closed or open space?

Closed space	1 (Skip to question E7)
Open space	2
Both	3 (Skip to question E7)

E6. Are there closed spaces at your workplace?

Yes	1
No	2 (Skip to question E9)

E7. Which of the following best describes the policy concerning tobacco use in closed spaces at your workplace? Is smoking permitted everywhere, is it permitted only in certain closed spaces or is it not permitted at all in any closed space?

Permitted everywhere	1
Permitted only in certain closed spaces	2
Not permitted in closed spaces	3
Don't know	7

E8. Has anyone used tobacco in closed spaces at your workplace within the last 30 days?

Yes	1
No	2

E9. Have you visited any public (state) building or office within the last 30 days?

Yes	1
No	2 (Skip to question E11)
Don't know	7 (Skip to question E11)

E10. Did anyone smoke tobacco in public (government) buildings or offices during your visits within the last 30 days?

Yes	1
No	2
Don't know	7

E11. Have you visited any healthcare organization within the last 30 days?

Yes	1
No	2 (Skip to question E13)
Don't know	7 (Skip to question E13)

E12. Did anyone smoke tobacco in the healthcare organizations you visited within the last 30 days?

Yes	1
No	2
Don't know	7

E13. Have you gone to a restaurant within the last 30 days?

Yes	1
No	2 (Skip to question E15)
Don't know	7 (Skip to question E15)

E14. Did anyone smoke tobacco in the restaurants you visited within the last 30 days?

Yes	1
No	2
Don't know	7

E15. Have you been in a mass transportation vehicle within the last 30 days?

Yes	1
No	2 (Skip to question E17)
Don't know	7 (Skip to question E17)

E16. Did anyone smoke tobacco in the mass transportation vehicles you used within the last 30 days?

Yes	1
No	2
Don't know	7

E17. To your knowledge and opinion, does inhaling the smoke of other tobacco users cause serious diseases for those not using tobacco?

Yes	1
No	2
Don't know	7

SECTION F – ECONOMY – PRODUCTION OF PACKED CIGARETTES

IF B1 = 1 OR 2 (RESPONDENT CURRENTLY SMOKES DAILY OR LESS THAN DAILY)

AND

[B6a OR B10a] > 0 OR = 888 (RESPONDENT SMOKES MANUFACTURED CIGARETTES)

THEN CONTINUE WITH THIS SECTION

OTHERWISE, SKIP TO NEXT SECTION G

The next few questions are about the last time you purchased cigarettes for yourself.

F1. How many cigarettes have you bought for yourself most recently?

Enter number by checking the unit.

Please fill in all boxes below.

Cigarettes	1	
Pack	2	How many cigarettes are there in a pack?
Carton	3	How many cigarettes are there in a carton?
Other, specify	4	How many cigarettes are there in each (specify)?
Not bought at all	5	Skip to next section G

F2. Overall, how much have you spent for such purchase?

YTL .....

[F3. DELETED]

F4. Where have you bought cigarettes for yourself most recently?

Cigarettes vending machine	1
Shop	2
Street vendor	3
Duty-free shop	5
Abroad	6
Kiosks	7
Another person	9
Other	10 (Please specify .....)
Don't remember	77

FF5. How much do you usually pay per pack of cigarettes you buy?

SECTION G – MEDIA

Note: The next few questions are related to your encounters with media and advertisements within the last 30 days.

G1. Have you noticed any information describing dangers of smoking or encouraging giving up smoking in any of the following within the last 30 days?

Please read each line	Yes	No	N/A
a. Newspapers or magazines	1	2	6
b. Television	1	2	6
c. Radio	1	2	6
d. Notice boards	1	2	6
e. Elsewhere (Please specify .....)	1	2	

G2. Have you noticed health warnings on the cigarette packs within the last 30 days?

Yes	1
No	2 (Skip to question G4)
Not seen any cigarette pack	(Skip to question G4)

G3. Have you carefully read the health warnings on cigarette packs within the last 30 days?

Yes	1
No	2

G4. Have you noticed any images, announcements, signboards or adverts encouraging smoking in any of the following within the last 30 days?

Please read each line	Yes	No	Don't know
a. Shops selling cigarettes	1	2	7
b. Television	1	2	7
c. Radio	1	2	7
d. Billboards	1	2	7
e. Posters	1	2	7
f. Newspapers and magazines	1	2	7
g. Cinemas	1	2	7
h. Internet	1	2	7
i. Mass transportation vehicles or bus stops	1	2	7
k. Elsewhere	1	2	7

Please specify .....

G5. Have you noticed any sports or sports event that are associated with cigarette brands or firms within the last 30 days?

Yes	1
No	2
Don't know	7

G6. Have you encountered any of the following situations encouraging smoking within the last 30 days?

Please read each line	Yes	No	Don't know
a. Complementary cigarettes	1	2	7
d. Cigarettes bundled with gifts	1	2	7
e. Clothing or other materials having cigarette brand or logo on it	1	2	7
f. Other, please specify.....			

SECTION H - KNOWLEDGE, CONDUCT AND PERCEPTIONS

H1. To your knowledge and in your opinion, does tobacco use cause serious diseases?

Yes	1
No	2 (Skip to END)
Don't know	7

H2. To your knowledge and in your opinion, which of the following is caused by tobacco use?

Please read each line	Yes	No	Don't know
a. Stroke (cerebral bleeding potentially leading to paralysis)	1	2	7
b. Heart attack	1	2	7
c. Lung cancer	1	2	7