



Smoking Characteristics among University Hospital Staff: A Cross-sectional Study

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Abstract

The aim of the current study was to identify smoking rates and smoking-related traits among university hospital workers. A cross-sectional, descriptive survey method was used on employees at the Ministry of Health Ordu University Education and Research Hospital from September to October 2012. The study was conducted with a questionnaire consisting of 16 items asking about socio-demographic information, the smoking status of the participants and their family members, and views on laws regarding smoking. A total of 306 individuals, 172 (56.2%) female and 134 (43.8%) male, took part in the study. The rate of smoking among physicians was 38.0%, while 40.6% of nurses smoked. Significantly more men than women were smokers ($p:0.002$, $d:0.45$). Additionally, individuals who had close friends or family members who smoked were significantly more likely to do so themselves (family: $p:0.041$, $d:0.138$; friends: $p<0.001$, $d:0.200$). Among the participants who did smoke, an average consumption of 11–20 cigarettes per day was most commonly reported ($n:45$, %36.3). The most popular reason given to start smoking was social factors ($n:72$, %44.2), and the vast majority of participants who were able to quit smoking did not receive help doing so ($n:32$, %82.1). The high smoking rates among health care workers reflect the popular status of cigarette smoking in Turkey.

Keywords: Consumption, health, hospital, law, smoking

INTRODUCTION

Tobacco use, particularly cigarette smoking, is a major public health problem that is widely recognized by the medical community to be a root cause for many preventable diseases (Kara et al., 2011). However, psychosocial factors often lie behind the motivation to smoke and, thus, despite the well-documented health detriments, cigarettes are still widely consumed around the world (Leone et al., 2015).

Currently, six million people die each year because of diseases caused by tobacco use. In the 1990s, 20% of disease-related deaths in developing countries – such as those caused by cancer, heart disease, or stroke were due to the use of cigarettes and other tobacco products (Tezcan et al., 2003). However, before these health consequences were confirmed, rates of cigarette smoking were steadily growing worldwide. For example, between 1970 and 1985, smoking increased globally by 7.1%. After the harmful effects of smoking came to light, tobacco use in Europe and America began to decline; however, in Asia, Latin America, and Africa rates continue to rise (Coşkun et al., 2010). In Turkey, approximately 100,000 people die every year due to diseases related to smoking and, if necessary precautions are not taken, within the next 20 years this number is expected to rise to 250,000. As such, the World Health Organization has

declared smoking to be the world's /country's biggest health problem (Kutlu et al., 2005).

Turkey is a developing nation with a predominantly young population of more than 70 million. In 1988, a large-scale study on tobacco use conducted in Turkey found that 44.5% of individuals over the age of 15 (62.8% of men, 24% of women) regularly used tobacco products (Yorgancıoğlu et al., 2000). Moreover, studies have shown that 23% of all deaths in Turkey are due to tobacco-related diseases (TCSB, 2015). However, as a result of public health campaigns waged to fight against tobacco use, smoking rates in those 15 years and older have dropped to 33.4% in 2006, and were down to 27.1% by 2012 (TCSB, 2015).

In recent years, smoking age of onset has also started to decrease in those under the age of 15. A relatively low prevalence of smoking in children and adolescents is essential, as these groups should be protected against the initiation of this habit, which can lead to serious health problems (Er, 2009). Tobacco use at a young age begins for a variety of reasons, including curiosity, experimentation, and a desire to impress or fit in.

Health care workers, particularly doctors, should serve as examples to the community in regard to smoking and health behaviours. Despite this, rates of smoking among physicians in Turkey are in line with the rest of society.

The current study aims to identify smoking rates among university hospital workers and assess relevant characteristics and attitudes regarding cigarette use.

Materials and Methods

A cross-sectional, descriptive survey design was used to examine smoking-related behaviours among university hospital workers in Turkey. The study was carried out at the Ministry of Health Ordu University Education and Research Hospital from September to October 2012 among staff members who currently worked at the hospital. Staff members were provided with verbal information about the study and informed voluntary consent was obtained for all participants. In order to take part, individuals had to volunteer to participate and be present at the hospital on the days when the study was being conducted.

Those who agreed to participate completed a survey consisting of 16 questions asking about socio-demographic information, the smoking status of themselves and their family, and views on legal arrangements. The survey was created by the researchers. Before the study; suitability of the survey was investigated. This assessment was planned as a pilot study with 83 people and α -cronbach coefficient of validity was detected. α -cronbach was found to be 0,823. This result showed that the survey was found to be highly reliable for the study population. The questionnaire that was detected as highly reliable, was investigated for applicability by factor analysis. Factor loadings were found to be collected on three factors. These factors were factor.1 (general condition), factor.2 (tobacco use) and factor.3 (legal process). After detecting the load distribution of the factors; chi-Square (χ^2/df) value was calculated. It was detected as $\chi^2/df:2,69$ and intended to be good for the study population.

Data were evaluated with chi-square tests and analysis of percentages using the Statistical Package for the Social Sciences (SPSS), version 16.0. The study was carried out in accordance with the principles outlined in the Declaration of Helsinki and was approved by the ethics committee at Ordu University.

RESULTS

Socio demographic features of the participants are summarized in table 1. Regarding tobacco use, 38.0% of physicians smoked cigarettes, while the rate of smoking among nurses was 40.6%. Men had significantly higher rates of smoking than women ($p = 0.002, d = 0.45$); the smoking status of the study population according to gender is described in table 2.

When asked whether there was a smoker within their close friend group, 253 people (82.7%) responded yes, while 53 people (17.3%) said no. Of the 124 participants who currently smoked, 120 (97.0%) reported having close friends who were smokers, while among 143 non-smokers, 98(68.0%) had close friends who were smokers. Overall, people who had smokers as their close friends were significantly more likely to be smokers themselves ($p < 0.001, d = 0.200$). Similarly, people who had smokers in their family had significantly higher rates of smoking ($p = 0.041, d = 0.138$). Smoking status according to family smoking habits is described in table 3.

In terms of the amount of cigarettes smoked per day, among current smokers, 26 (20.9%) smoked 1–5 cigarettes, 29 (23.4%) smoked 6–10 cigarettes, 45 (36.3%) smoked 11–20 cigarettes, and 21 (19.4%) smoked over 21 cigarettes per day.

Both current and former smokers ($n = 163$) were asked about the age that they started smoking. Over half ($n = 87, 53.4%$) began smoking between 10 and 20 years old, 70 (42.9%) between 21 and 30 years old, 3 (1.8%) between 31 and 40 years old, and 3 (1.8%) were over 41 years old. When asked about the reasons why they started smoking cigarettes, 72 (44.2%) listed social factors, 34(20.9%) said stress and anxiety, 25(15.3%) said affectation and

Table 1. Socio demographic features of the participants

	N	%
Gender		
Male	134	43,8
Female	172	56,2
Maritalstatus		
Married	242	79,1
Single	64	20,9
Occupation		
Doctor	29	9,5
Nurse	70	22,9
Healthofficer	16	5,2
Technician	34	11,1
Other allied health personnel	34	11,1
Medicalsecretaries, cleaners, security	116	37,9
Administrative squad officer	7	2,3

Table 2. Smoking status of the study population according to gender

Gender	Status of smoking						Total	
	Current smokers		Former smokers		Never smokers		n	%
	n	%	n	%	n	%		
Male	72	53.8	20	14.9	42	31.3	134	100
Female	52	30.2	19	11.1	101	58.7	172	100
Total	124	40.5	39	12.8	143	46.7	306	100

p = 0.002

Table 3. Smoking status of the study population according to family smoking status

Family smoking status	Status of smoking						Total	
	Current Smokers		Former Smokers		Never Smokers		n	%
	n	%	n	%	n	%		
Present	56	49.1	10	8.8	48	42.1	114	37.3
Absent	68	35.4	29	15.1	95	49.5	192	62.7
Total	124	40.5	39	12.8	143	46.7	306	100

p = 0.041

enthusiasm, 24 (14.7%) reported taking joy and pleasure from smoking, and 8(4.9%) cited other factors. In terms of how long they had smoked, 27 (16.6%) said for 1–5 years, 44 (27.0%) for 6–10 years, 36 (22.1%) for 11–15 years, 17 (10.4%) for 16–20years, and 39 (23.9%) for 20 years or more.

Of the 39 people who quit smoking, 12 individuals (30.8%) had stopped under 1 year ago, 6 (15.4%) had quit for 2–3 years, 3 (7.7%) for 4–5 years, 4(10.3%) for 6–10 years, and 14 participants (35.9%) had not smoked for 11 years or more. Twenty-three participants (59.0%) had quit smoking before the tobacco law in Turkey was implemented, while 16 people (41.0%) stopped after the tobacco law was declared. Among the 39 participants who quit smoking, 32 people (82.1%) did so without assistance, while 7 (17.9%) used some form of help to stop. Among the reasons people gave for

quitting smoking, 5 (12.8%) cited health problems, 26(66.7%) said because they knew smoking to be harmful, and 8 individuals (20.5%) stated other reasons.

DISCUSSION

Prevention of tobacco use is a major public health priority due to the many deadly diseases that have been empirically linked to smoking. In Turkey, with the enactment of the tobacco legislation, Law No.5727, on 19 July 2009, smoking is now prohibited indoors. This policy restricting tobacco use, as well as treatment studies aimed at helping habitual smokers to quit, are among the most important changes carried out by the Ministry of Health in recent years. However, prohibitional one cannot sufficiently prevent tobacco use. Professional groups in society, particularly those involved in health care, should also serve as an example, joining the efforts to reduce smoking rates across the country.

In the current study, 40.5% of all participants smoked, while among physicians the rate was 38.0%. This is substantially higher than the 2012 average smoking rate in Turkey for individuals over the age of 15 (27.1%) (TCSB, 2015). However, in a study conducted by Kutlu and colleagues in 2004 among nurses at Selcuk University, the rate of smoking was as high as 56.5% (Kutlu, 2005). A 2007 study by Atilgan and colleagues found similar high rates of smoking among the staff of the German Hospital in Istanbul (39.8%) (Atilgan, 2008). Finally, a review article by Tezcan and colleagues across several studies in Turkey found that smoking rates among physicians ranged from 35% to 66% (Tezcan, 2003). Internationally, smoking rates in similar studies ranged from 11 to 61% (Laws et al., 2007; Kanicka et al., 2007; Thompson et al., 2007; Mandil et al., 2007; Tamim et al., 2001). Physicians, nurses, and other health professionals should serve as examples to the community. As such, these professional groups should be required to show efforts to quit smoking in order to model this behaviour to the community at large.

Of those participants who smoked in the current study, the most common number of cigarettes consumed per day was 11–20 (36.3%). This is in line with a study conducted by Arıkan and colleagues in 2008 and 2009 that found 47.2% of individuals smoked 1–10 cigarettes, while 52.8% smoked 11–20 cigarettes (Arıkan et al., 2011). Similarly, in a study by Güneş and colleagues in 1997, the average number of cigarettes consumed per day was 10.33 ± 0.33 (Leone et al., 2015).

The age at which participants first started smoking was divided into two main groups: those who began before the age of 20 (53.4%) and those who started between the ages of 21 and 30 (42.9%). In a study by Erbaycu and colleagues in 2001 and 2002 in İzmir, the average age of smoking onset was 18.7 ± 4.2 (Erbaycu et al., 2004), while in the study by Kutlu and colleagues, 50.7% of individuals started smoking between 15 and 19 years of age (Kutlu et al., 2005). These findings suggest that adolescence is the primary age at which individuals begin smoking, perhaps due to factors like peer pressure or a desire to fit in. Thus, in addition to efforts made towards prevention, it is essential to support legal arrangements to ensure the implementation of methods that promote smoking cessation, such as smoking clinics, education, and media campaigns.

The most common reason given for starting to smoke were social factors, such as environment and friends (44.2%); the second leading cause was stress and anxiety (20.9%). In the study by Kutlu and colleagues, which asked the same questions in regards to motivation to start smoking, a similar proportion of answers were given for these items (Coskun et al., 2010). When asked how long they had been smoking, 27% of participants responded 6–10 years; this is again similar to the Kutlu et al. study, in which 55.7% of individuals gave this response (Kutlu et al., 2005).

After the tobacco legislation was implemented, 16 individuals said they had quit smoking. An additional 20% of current smokers said they had decreased the number of cigarettes they smoked per day, and 11.4% of smokers said their reputations has been impacted; 60.7% stated that the law had not affected them. Encouragingly, in the fight against tobacco use in Turkey, smoking rates were 33.4% in 2006, which decreased to 27.1% by 2012 (TCSB, 2015). In the current study, there appears to be a similar positive influence with the tobacco restriction law discouraging some individuals from smoking. However, the rate of smoking among employees, particularly at a hospital, is still higher than it should be. Additionally, smoking cessation training programs should be especially initiated among health professionals and educators given their roles in society.

A smoking cessation clinic is available at the institution where the study was carried out; however, 82.0% of the participants who had quit smoking stated that they had done so without the help of any programs. Specifically, such an institution who quit smoking often expected to receive assistance. In the study by Kutlu and colleagues, only 7.1% of participants who quit smoking said that they had help in stopping; thus, most smokers who try to quit do so on their own (Kutlu et al., 2005). As expected, the primary reason for quitting smoking, given by 66.7% of participants, was that they knew it 'to be harmful'.

In the current study, rates of smoking were higher in those whose families also smoked. One interpretation of this finding is that being allowed to smoke in the family encourages children and young people to do so as well. One may also be more likely to smoke if their spouse does so, and friends can also play a role in cigarette smoking. This finding

highlights the importance of smoking cessation in the family, as well as peer education.

Conclusion

Physicians and other medical staff play several critical roles, including serving as role models for the community. Yet a high smoking rate among health workers reflects a more nonchalant attitude towards cigarette smoking in Turkey, despite the known dangers associated with this behaviour. The application of a recent law restricting tobacco use can have an important impact on this matter, and it should be supported by company employees, executives of the institution and non-smokers alike. In addition, sanctions, awards, or modifications are needed to reduce smoking rates among health care workers. We believe that a reduction in smoking among health care members will have a positive effect on the society, decreasing the cigarette epidemic that currently exists in Turkey.

Competing interests

All authors declare that they have no financial or non-financial competing interests.

Authors' contributions

ÖE and EÖ carried out the smoking studies, participated in these quence alignment and drafted themanuscript. EÖ carried out the surveys. ÖT participated in these quence alignment. ÖE and KÖ participated in the design of thes study and performed the statistical analysis. UGB conceived of the study, and participated in its design and coordination and helped to draft the manuscript. All authors read and approved the final manuscript.

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