

The Effect of Smoking Prohibition on Smoking Behavior at Workplace

Sema Sarac*

Süreyyapaşa Chest Diseases and Thoracic Surgery Training and Research Hospital, Department of Pulmonology, Basıbüyükmah, Maltepe, Istanbul, Turkey

***Corresponding Author:** Sema Sarac, Süreyyapaşa Chest Diseases and Thoracic Surgery Training and Research Hospital, Department of Pulmonology, Basıbüyükmah, Maltepe, Istanbul, Turkey.

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Abstract

Introduction: One of the most important risk factors for the development of chronic diseases is tobacco use, whereas tobacco use is a risk factor that can be prevented. We planned to investigate the contribution of the working environment in the elimination of this habit

Methods: After obtaining approvals for 292 people working in a public workplace, a 29-question questionnaire was applied. Cigarette smoking as a criterion of smoking on a regular basis or smoke at least one day; as a criterion for being left for a year was considered to have never smoked.

Results: There was no significant relationship between smoking habits and income level. The use of tobacco was higher in people with low and educational level (p.0.01) and men gender (p.0.001). Decreased after 40 years (p:0.01) there was a significant difference between the office environment where smoking was prohibited and the outdoor environment (p: 0.001).

Conclusion: It was concluded that the workplace environment is a suitable target area, according to the application of tobacco bans in the fight against cigarette addiction,

Keywords: Smoking Addiction; Workplace Environment; Prohibitions

Abbreviations

WHO: World Health Organization; OECD: Organisation for Economic Co-operation and Development Countries; MPOWER: Protect Offer Warn Enforce Raise

Introduction

Smoking is the most important risk factor for the development of chronic diseases [1]. According to the determinations of the World Health Organization (WHO), the rate of smoking was 47.5% in males and 10.3% in females in 2005 [2]. The World Health Organization states that there are 7 million deaths per year in tobacco and tobacco products in the world, and that this number will reach 8 million by 2030 unless the measures to be implemented in the field of tobacco control are taken with decisiveness. It is estimated that the epidemic will lead to the death of 1 billion people throughout the 21st century if it continues to present today's features in the World.

Risk factors that cause health problems in the work environment have a significant impact on the economic potential of the enterprise. In the study conducted in Australia, from 2009 on, it was calculated for unhealthy individuals in the workplace, in terms of treatment costs, loss of labor, decrease in productivity; expenditures were found to be 60 million dollars [3]. In a recent study in the same country; In the study group, it was found that while smoking dependence was 12% in women and 30% in men, this rate increased to 57% in men and 66% in women among the low blue-collar workers [4].

In Organisation for Economic Co-operation and Development countries (OECD), an employee spends about 35 hours a week in the workplace [5]. This period can exceed 50 hours per week in our country. This suggests that workplaces can play an important role in the fight against cigarette addiction, which is an important risk factor for health [6].

In our study, we aimed to determine the smoking rates of the individuals who are still active in our country and the factors which are most affected by smoking cessation, whether they are related to the workplace environment with smoking ban, as well as factors such as income, gender, education and age.

Material and Method

The study included 292 people from the Istanbul Regional Directorate of a public institution, who were working in the central office and the field (external) and who were authorized to participate in the study. A cross-sectional study was planned. After the approval of the ethics committee, a 29-question questionnaire was applied by face to face method.

The first 12 questions were questions about age, gender, education, income level, whether there was a smoking habit, duration of smoking, number of times, and whether work environments were offices or sites. Nicotine dependence of drinkers; Determined by Fagerstrom Dependency Survey. 5 and under are less dependent; Those with a score of 5 - 8 and a score higher than 8 were determined as severely dependent.

The next questions are whether to comply with smoking prohibitions, the opinions of the employees on the prohibitions, whether or not they feel regret, whether they want to stop smoking, if they want to quit or if they have been drinking, and what they are most impressed about, if they want to leave were the questions.

The statistical evaluation of the research data was done with IBM SPSS for Windows version 22.0 software. Arithmetic mean (X) ± Standard Deviation (SD) was used for defining continuous variables, and number (n) and percentage (%) were used to define categorical variables. Pearson chi-square and continuity corrected chi-square analysis were used to compare data on categorical variables. P 0.05 was considered statistically significant in all tests.

Results

The survey was attended by 292 people aged 20 - 60, active in a public institution. 47 of them (16%) were women. Some of the employees were employees in a closed office environment (where smoking ban was fully implemented). The number of personnel working in the office environment was 178 (60.9%). Of the employees, 114 (39.1%) were working in the field in a non-smoking environment. 137 employees (46.9%) were smoking among all employees.

Income poverty level, which according to Turkey’s statistical office data were considered in determining the \$ 3,000 limit. Employees were divided into 4 categories according to income groups.

- 1- Monthly income less than 3000 TL,
- 2- Monthly income between 3000 - 5000 TL,
- 3- Monthly income between 5000 - 10000 TL,
- 4- Monthly income of more than 10000 TL.

There was no significant relationship between smoking and income level (p: 0.08) (Table 1).

Monthly Income Level	Smoker	Non-smoker	p
Less than 300 0TL	49 (50%)	49 (50%)	0.08
3000 - 5000 TL	83 (47.7%)	91 (52.3%)	0.06
5000 - 10000 TL	3 (17.6%)	14 (82.4%)	0.1
More than 10000	2 (66.7%)	1 (33.3%)	0.2

Table 1: Relationship between smoking and income level.

Employees were divided into 4 categories according to their level of education.

- 1- Primary school graduates,
- 2- Secondary school graduates,
- 3- Graduates of high schools and equivalent schools,
- 4- Those who have undergraduate and graduate education.

There was a significant relationship between smoking and education. Smoking increased significantly as education level increased (Table 2).

Education	Smoker	Non-Smoker	p
Primary School	32 (61.5%)	20 (38.5%)	0.05
Middle School	19 (46.3%)	22(53.7%)	0.03
High School	53 (55.2%)	43 (44,8%)	0,02
University	33 (28.5%)	70 (71.5%)	0.01

Table 2: Relationship between smoking and education.

When the relationship between smoking and age was found, the highest smoking age was found in 66 persons (62.5%) and 30 - 40 years old, and smoking decreased significantly after 40 years of age. In this age group, 98 (83%) patients were not smokers (p: 0.001).

When the relationship between smoking and gender was investigated, 125 (91%) of the smokers were male (p: 0.001). 113 (39%) of the employees were working in the field (external environment), while 179 (61%) were working in the office environment (indoor).

When the relationship between smoking and working environment was investigated, it was observed that the workers working in the field in the outdoor environment smoked significantly more than those working in the office (p: 0.0001) (Table 3).

Working-Environment	Smoker	Non-smoker	p
External environment (n:113)	68 (60.2%)	45 (39.8%)	0.0001
Office (n:179)	69 (38.5%)	110 (61.5%)	

Table 3: Relationship between working environment and smoking.

There was no significant difference in terms of age between the office environment and those working in the field (p: 0.47). In terms of gender, female gender was working significantly more in office environment (p: 0.001).

The level of education and income of the employees in the office environment was found to be significantly higher than the ones working in the field (p: 0.001). There were no differences in terms of age from the factors affecting smoking. The level of income was higher in the bureau environment, higher in the female gender bureau with low incidence of smoking, and the level of education among the factors influencing the smoking status was higher in the bureau staff.

Smoking year varies between 1 - 40. Most of them were clustered between 10 - 20 years.

The daily number of cigarettes was predominantly clustered (11 - 20) (Table 4).

Number of cigarettes per day	
10 and below	38
11 - 20	57
21 - 30	31
Over 30	11

Table 4: Number of cigarettes smoked daily.

The number of those who received 5 or less points (less dependent) than the Fagerstrom Cigarette Addiction Questionnaire was 46, whereas the score of 5-8 points was 34; there were 57 people who scored higher than 8.

Of the 155 non-smokers, 29 had smoked for a period. The reasons for release are summarized in table 5.

Reason	Number
Health	15
Warnings, prohibitions	8
Economic reasons	5
Health problem of one family	1

Table 5: Causes of smoking cessation.

Participants stated that smoking-related prohibitions were applied for 10 years in the institution. 224 (77.1%) of the participants stated that smoking ban was obeyed. 239 of the participants (82%) supported smoking bans in the work environment.

170 of the participants (58.2%) knew about the smoking cessation outpatient clinic. This number is; 36% (50 people) of smokers; 74% (120) of the nonsmokers.

136 (46.7%) of all participants were informed about smoking cessation line. Of these, 98 (72%) did not smoke, and 38 (28%) were smokers.

Table 6 summarizes the slogans that they know and are most influenced on cigarette packages.

Slogan	Number
Smoking causes fatal heart lung diseases	192
Smoking causes sexual impotence	100
Smokers die at a young age	76
Smoking skin age	54

Table 6: Which slogans are known and effective.

The slogan they knew most was a It causes fatal diseases on cigarettes, heart and lungs.

Discussion

The rate of smoking was 46.9% in Istanbul. The rate of smoking was 60% among those working in the open field and 38.5% in the office environment where the smoking ban was fully applied.

In our study, the percentage of smoking was lower in previous years than in the workplace; For example, in a study conducted at the Sivas Cement Plant, cigarette dependency was found to be 67.8% and, in a study, conducted in Malatya Tekel factory, 68.9% (7.8) was found. This difference can be explained by the fact that previous studies were conducted before the entry into force of the Law no. 4207 on the Prevention of Damages of Tobacco and Tobacco Products in our country. In fact, in a study conducted by Hacettepe University in a closed workplace in 2007, the rate of smoking in the workplace was found to be 50% [9].

In our study, male sex was significantly more smoking than in other studies [7-11]. It is possible to explain this with the traditional structure of our country.

As the level of education increased in our study, the rate of smoking decreased in accordance with other studies [10,11]. In other studies, conducted in our country, while smoking dependency has decreased with education in male sex, it has been observed that smoking habits increase as female education level increases [10,11]. In our study, the smoking rate decreased as education level increased in both sexes. When other studies are conducted in the community, the fact that our study is related to the active employees may be effective.

As the income level increased in the world, it was observed that the smoking habit decreased and the smoking habits were the most low-income population [12]. In our study conducted in our country around Denizli, as the income level increased, the habit of smoking increased [10]. In our study, there was no difference between different income groups in terms of smoking habit. The smoking habits decreased after 40 years, similar to the literature [10]. This may be related to the onset of problems related to heart and lung health, or to concerns about this issue.

The most striking result was the fact that smoking was less than smoking in an office environment where smoking was strictly enforced.

Of the 155 non-smokers, 29 had previously smoked. The first one of the reasons to quit smoking was health, while the second was the prohibitions and warnings in the workplace. In a study conducted at Hacettepe University, 46.2% of the workers in the workplaces where smoking bans were fully implemented were considering quitting smoking; 25.2% of the employees in the workplaces where the prohibitions were not fully implemented were thinking about quitting smoking [9].

Among the reasons for smoking cessation, it can be thought that smoking bans will have a certain contribution. Steward and colleagues in order to increase information on the dangers associated with tobacco use of low-level blue-collar workers in their study by separating the two groups of cigarette smoking in the study of the group's information about the harmful effects of smoking increased [13].

Mishra, *et al.* (2010) reported that cessation of smoking was at least 20% in the group of low-income workers in a telephone switchboard in India, and continued for 16 - 24 months [14]. It is seen that workplaces are suitable environments to fight smoking cessation and to achieve success.

In our study, in terms of age, gender, education and income level, the individuals who work in the office environment and in the open field were compared. While there was no difference between the two groups in terms of age, female gender, education and income level were higher in the office environment. Among all participants, female gender was as low as 16%. Considering the fact that income level is not a difference in terms of smoking habits, it was thought that smoking bans applied in the office environment were effective in the difference between the two groups. At the workplace where the ban on smoking was applied for 10 years by the participants, all employees stated that 77% of the employees and 87% of the employees were obeyed. 240 out of 292 respondents (82%) stated that they supported smoking bans. The majority of the participants who were informed about smoking cessation policlinic and smoking cessation line were non-smokers.

When the most of the slogans on cigarette packages are known or affected; In the first place, Smoking causes fatal heart and lung diseases and secondly "Smoking causes sexual impotence.

The un Framework Convention on Tobacco Control raises the report of Monitor Protect Offer Warn Enforce Raise (MPOWER) to protect public health in countries and stimulate national and local governments to improve tobacco control in all member states. Turkey signed the Framework Convention on Tobacco Control of the WHO in 2004. In Turkey, Law No. 4207 on the Prevention of Harm of Tobacco Products entered into force in 1996 [15], the Law on the Prevention and Control of the Harms of Tobacco Products No. 5727 was adopted and entered into force in the TGNA on the date of 3.1.2008 as a result of the extensive regulations made later [16]. With this law, the consumption of tobacco products is prohibited in closed areas of public service buildings.

In addition to the prohibition of closed space, the Prime Ministry circular issued in January 2015, as well as the consumption of tobacco products in the open areas of public institutions and organizations, restricted the consumption of tobacco products in a designated area which will not exceed 30 percent of the total open-air rate.

Conclusion

Smoking addiction; chronic, deadly diseases leading to risk among the leading factors. Prohibition of the use of tobacco products in the work environment, the ability of employees to tackle this dependency create favorable conditions for non-smokers to be protected from passive smoking. It is thought that this ban should not be limited to only closed office areas in business environments and it would be beneficial to implement the workplace in all open and closed areas. It has been concluded that the awareness of the employees and supervisors should be increased and training should be given to employees in support of smoking cessation.

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Conflict of Interest

The author declare that they have conflict of interests.

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