

# Kadınlar Arasında Sigara İçimi, Sigara Dumanından Pasif Etkilenim Durumu ve Seçilmiş Bazı Faktörlerle İlişkiler: Tanımlayıcı Bir Araştırma

## Smoking and Passive Smoking Status Among Women and (Selected) Related Factors: A Descriptive Study

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### ÖZ

**Amaç:** Bu çalışmada kadınlar arasında sigara içimi ve sigara dumanından pasif etkilenim durumunun ortaya konulması ve her iki durumun seçilmiş bazı faktörlerle ilişkisinin incelenmesi amaçlanmıştır.

**Gereç ve Yöntem:** Araştırma tanımlayıcı tipte bir araştırmadır. Bu araştırma Türkiye'nin doğusunda yer alan bir ilde Ekim-Aralık 2016 tarihleri arasında 1856 kadının gönüllü katılımıyla yapıldı. Araştırmanın verileri, Tanıtıcı Bilgi Formu ve Fagerström Nikotin Bağımlılık Testi ile toplandı.

**Sonuç:** Araştırmaya katılan kadınların %15'inin sigara kullandığı, %63'ünün ailesinde sigara kullanan birinin olduğu ve bunların %89'unun evde sigara içtiği belirlendi. Pasif içicilik ile öğrenim durumu ve eşin öğrenim durumu arasında negatif yönde istatistiksel açıdan anlamlı bir ilişki bulunmuştur. Sigara içimiyle yaş arasında negatif yönde, öğrenim durumu ile pozitif yönde anlamlı ilişki olduğu ( $p<0.01$ ,  $p<0.001$ ).

**Sonuç ve öneriler:** Çalışma kapsamındaki kadınların yarısından fazlasının pasif içici oldukları belirlendi. Sigara kullanımını azaltmaya yönelik özellikle kamusal alanda ciddi girişimler olsa da, pasif içicilik sorunu özellikle ev ortamı için ciddiye ele alınmamaktadır. Pasif içiciliğin zararları konusunda aile temelli eğitim programlarının periyodik olarak yürütülmesi önerilmektedir.

**Anahtar Kelimeler:** Kadınlar, Sigara, Pasif ve aktif sigara içiciliği

### Introduction

Despite the many bans implemented in several countries, smoking has been the most important preventable public health problem which increases continuously (1). With the thousands of harmful substances it contains, cigarette causes serious problems for human health (e.g. ischemic heart diseases, cerebrovascular diseases, chronic

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### ABSTRACT

**Aim:** The aim of this study is to determine the status of smoking and passive smoking among women and to investigate the relationship between smoking/passive smoking considering (some) selected factors.

**Methods:** The present study adopted a descriptive model. It was conducted with the participation of 1856 volunteer women in a city located in the Eastern part of Turkey between October and December, 2016. Data were collected using the Socio-demographic Form and Fagerstrom Test for Nicotine Dependence.

**Results:** Of all the women participating in the study, 15% were found to smoke, 63% had someone who smoked in their family, and 89% of the smoking family members reportedly smoked at home. More than half of the women participating in this study were found to be passive smokers. A negative, statistically significant relationship was found between passive smoking and education status and husband's education status. There was a positive, significant relationship between smoking and education status but age had a negative significant relationship with smoking. ( $p<0.01$ ,  $p<0.001$ ).

**Conclusions:** More than half of the women participating in the study were found to be passive smokers. Despite the important effects of the interventions specifically in public spaces, the issue of passive smoking particularly in homes is not approached seriously. It is recommended that family based training programs that focus on the harmful effects of passive smoking should be conducted periodically.

**Keywords:** Cigarette, Passive and active smoking, Women

obstructive pulmonary disease, tuberculosis, cancer, etc.) (2,4).

In 2016 alone, tobacco use caused over 7.1 million deaths worldwide. Nearly 884 thousand of those who died because of this reason were people who did not smoke but were passive smokers. (5). Unless precautions are taken for decreasing the use of tobacco, this number will reach up to 8 million people in 2030 (4).

Smoking among women is reported to be at different rates in the world, and this difference is considered to be associated with tobacco market,

globalization, and women's status. Approximately 175 million adult women worldwide smoke every day (5,7).

National PIAR results in Turkey (1988) showed that smoking rates were 62% in men, 24.3% in women, and 43.6% in general society (8). After this report, "Tobacco and Health Symposium" was held in 1992. To raise awareness about the harmful effects of smoking on health, "National Committee on Cigarette and Health", which was formed after the symposium, participated in several conferences, meetings, panels, and radio and television programs and tried to inform society about this issue (9, 10). A study conducted one year after the activities carried out by the "National Committee on Cigarette and Health" reported smoking rates 57.8% in men, 13.5% in women, and 33.6% in general society (11).

Then another important step was taken about fight against smoking, and the *Law on Prevention and Control of Hazards of Tobacco Products (Law No. 4207)* was launched in 1996 (12). With this law, smoking was forbidden in closed areas such as education and health institutions, sports halls, transportation vehicles, and waiting rooms; selling tobacco products to children was forbidden; and writing warning signs and broadcasting educational programs about the the harms of smoking was made compulsory. The law was applied best in public transportation vehicles, but no complete success was achieved (10, 12).

Following the law no 4207, a more active era was started with the "Framework Convention on Tobacco Control" (FCTC) which was launched in 2005 (13).

Two reports shed light to the outcomes of the activities conducted with the enactment of the law no 4207 "National Tobacco Control Program". Of these reports, the "Global Adult Tobacco Survey" which was published in 2008 indicated that smoking prevalence was 31.3%; 47.9% of men and 15.2% of women smoked (14). Results of the report published in 2010 showed that two-third of the smoking people worldwide lived in

ten countries including Turkey and that in terms of cigarette consumption Turkey was ranked third in Europe and seventh in the world (4, 15).

As a result of these data, the law no 4207 was revised in 2008, and the related article "smoking is prohibited in places that provide entertainment services such as restaurants, coffeehouses, cafeterias, and barrooms" was launched in 2009 (16). Besides, "National Tobacco Control Program and Action Plan 2008-2012" was published, and some strategies were put into practice in line with the goals identified here (15).

According to the results of the "Global Adult Tobacco Survey 2012", smoking prevalence was 27.1%; and 41.4% of men and 13.1% of women smoked (17). OECD 2014 report indicated that smoking prevalence in Turkey decreased to 23.8%, and 37.3% of men and 10.7% of women smoked (18). WHO 2017 report indicated that smoking prevalence was 28.8% in Turkey; 41.4% of men and 16,3% of women smoked every day (19). Studies on passive smoking report that this rate is very high (20,23).

Passive smoking, which is defined as the inhalation of environmental tobacco smoke which is formed with chemical substances and particles, is a more common problem for women in comparison to men specifically in developing countries. Passive smokers are reported to be exposed to smoke mostly at homes and workplaces (6, 24, 25).

With the enactment of FCTC, the "National Tobacco Control Program" prepared by the Ministry of Health in Turkey is being implemented with the "Tobacco Control Strategy Paper and Action Plan 2018-2023" title. This action plan includes a number of goals and strategies about informing people about the "identification of passive influence levels in society" and "harms of passive influence" (26).

International Agency for Research on Cancer (IARC) reports environmental tobacco smoke as carcinogen, and passive smoking as a cause for lung cancer (27).

Studies on passive smokers show that passive smoking is associated with type 2 diabetes and increases the risk of atherosclerosis, coronary artery disease, stroke, and breast cancer (28,30).

In a similar vein, studies on passive smoking found that like smokers, pregnant women and babies who were exposed to passive smoking were affected by cigarette smoke negatively (31).

In the study conducted in Turkey the secondhand smoke exposure among children; it is indicated that there is a direct proportion between the more people at home smoking and number of cigarettes smoked grow; also the frequency of acute respiratory tract infection increase (32).

Studies on pregnant women in our country reported that the rate of exposure to passive smoking throughout the pregnancy period reached up to 74% (21, 22).

Smoking prevalence is less among women than men in many countries; however, the potential increase in smoking rates specifically among young women and high exposure to passive smoking among women highlight the need for taking precautions for the future.

The purpose of this study, which has been conducted in a city located in the eastern part of Turkey, is to determine the status of smoking and passive smoking among women and to investigate the relationship between smoking/passive smoking considering (some) selected factors.

## **Methods**

### **Study Population**

This study utilised a descriptive model. It was conducted in Family Health Centers (FHC) in a city located in the Eastern part of Turkey between October and December, 2016. Target population of the study was 6956 women who applied to FHCs between the aforementioned dates. No sampling was performed, the study was conducted with 1856 women who were aged between 18 and 65, who could communicate sufficiently, and who accepted to participate in the study.

Those who stated that they smoke regularly were considered as smokers. Those who smoke one or less once in a month considered as non-smokers. Those who quit smoking long time (>6 months) or short time (>6 months) ago considered as quitter. (33)

Prior to the study, Ethical Committee approval was obtained with 13/05/2016-E.8791 document number 002 declared on 12.05.2016; permission was obtained from the Public Health Agency; and the participating women were informed about the study and their verbal consent was obtained.

### **Measurements**

Data were collected through the Socio-demographic Form and Fagerstrom Test for Nicotine Dependence (FTND).

### **Socio-demographic Form**

The form, which was developed by the researchers, consists of 12 questions that aim to collect data about the socio-demographic features of the women participating in the study.

### **Fagerstrom Test for Nicotine Dependence (FTND)**

Fagerstrom Test for Nicotine Dependence was developed by Karl O. Fagerstrom in 1989 with a view to identifying the level of physical dependence on cigarette. Cronbach's alpha reliability co-efficient was found 0.61 (34). Reliability and factor analysis of the Turkish version was performed by Uysal et al. in our country, and Cronbach's alpha reliability co-efficient was found 0.56 (35). The present study found Cronbach's alpha reliability co-efficient as 0.74. Each item of the scale was scored as "0", "1", "2", and "3". Total scores range between 0 and 10. The score obtained from the scale increases with the increase in dependence on

cigarette. Nicotine dependence is divided into five groups according to the total score obtained from the test: very low (0-2 points), low (3-4 points), moderate (5 points), high (6-7 points), and very high (8-10 points) dependence (34, 35).

## Results

**Table 1. Socio-demographic Features of the Women (n=1856), Ağrı 2016**

Variable		n (%)
Education Status	Illiterate	300 (16.2)
	Literate/Primary School	303 (16.3)
	Secondary School	127 (6.8)
	High School	432 (23.3)
	College	694 (37.4)
Marital Status	Married	975 (52.5)
	Single	850 (45.8)
	Widow/Divorced	31 (1.7)
Husband's Education Status	Illiterate	92 (9.1)
	Literate/Primary School	293 (29.1)
	Secondary school	151 (15.0)
	High School	245 (24.4)
	College	225 (22.4)
Social Security	Yes	1317 (71.0)
	No	539 (29.0)
Occupation	Civil Servant	169 (9.1)
	Housewife	810 (43.6)
	Other (student, etc.)	877 (47.3)
Monthly Income	Income less than expenses	771 (41.5)
	Income equal to expenses	911 (49.1)
	Income more than expenses	174 (9.4)
Smoking	Yes	281 (%15.1)
	No	1571 (%84.6)
	Quitted	4 (%0.2)
Presence of someone who smokes in the family	Yes	1168 (62.9)
	No	688 (37.1)
Smoking at home	Yes	1041 (89.1)
	No	127 (10.9)
	Mean±sd	
Age	28.42±10.83 (min. 18 max. 64)	
Age of starting to smoke	19.83±5.91 (min.10 max. 50)	
Duration of regular smoking (year)	10.19±8.56 (min. 1 max. 46)	
FTND	3.75±2.93 (min. 0 max. 10)	

### Data collection

Data were collected by the researchers through face to face interviews with the participants who applied to FHCs, who met the research criteria, and who accepted to participate in the study. Each interview took about 5 to 10 minutes.

### Statistical Analysis

Data analysis was performed in SPSS package programming, using descriptive statistics,

Kolmogorov Smirnov, Chi-square test, and Spearman correlation analyses. Statistical significance was taken  $p < 0.05$ .

### Limitations of research

The limitation of the research is that it is made of a single city. Besides this, research was built in a small group, therefore it cannot represent the female population in the province.

An analysis of the participants' socio-demographic features showed that their average age was  $28.42 \pm 10.83$ . Besides, 37.4% had college degree, 52.5% were married, and husbands of 29.1% were literate/had primary school education. Of all the women participating in the study, 71% had social security, 47.3% were students/worked in daily jobs, and 49.1% had monthly income equal to expenses. 15.1% of the women smoked, average age for starting smoking was  $19.83 \pm 5.91$ , average of the FTND point  $3.75 \pm 2.93$ ; and the duration of regular smoking was  $10.19 \pm 8.56$  years on the average. 62.9% of the women had someone who smoked in their family, and 89.1% of them smoked at home (Table 1).

Nicotine dependence was found to be very low for the 42% of the participants and high for the 22% (Table 2).

**Table 2. Nicotine Dependence Levels of the smokers (n=281), Ağrı 2016**

Level	n	%
Very low (0-2 points)	118	42.0
Low (3-4 points)	47	16.7
Moderate (5 points)	19	6.8
High (6-7 points)	62	22.1
Very high (8-10 points)	35	12.5

#### Limitations of research

No significant difference was found in terms of passive smoking between those who smoked and who did not smoke or who quit smoking (Table 3).

**Table 3. Passive smoking status by smoking status of the participants (n=1168), Ağrı 2016**

Smoking status	Passive smoker		Not passive smoker		x <sup>2</sup>	p
	n	%	n	%		
Smoker/quitted	227	90.1	25	9.9	.301	.583
Non smoker	814	88.9	102	11.1		

A negative, statistically significant relationship was found between passive smoking and education status and husband's education status. Age was found not to affect passive smoking, but it had a negative, significant relationship with smoking.

There was a positive, significant relationship between smoking and education status; husband's education status did not have effects on smoking (Table 4).

**Table 4. Relationship between passive smoking and age and education status, Ağrı 2016**

Smoking status		Age	Education Status	Husband's Education Status
Passive smoker	r	.053	-.134	-.137
	p	.071	.000	.001
Smoker	r	-.158	.107	-.024
	p	.000	.000	.454

#### Discussion

Tobacco Atlas reports that 175 million women ages 15 or older are current smokers and one-third of females globally were exposed to second hand smoke (5). Passive smoking rates are reported to be very high in many countries in the world. Therefore, passive smoking is acknowledged as a public health problem for every age group starting from childhood.

According to several studies in Turkey, it is determined that passive smoking is very high. Especially among school students, rate of the passive smoking frequency is founded by the Ersu et al. (36), with 81% and Guneser et al. (37) with 67%. Also, according to the research of the Karakoc et al. (38); it shows that 74% of the school students are exposed to passive smoking at home. In this study 63% of the women had someone who smoked in their family, and 89% of them smoked at home.

The present study found a negative, statistically significant relationship between passive smoking and education status and husband's education status. This result could be associated with the increased awareness of individuals with the increase in their education status.

An analysis of smoking according to age indicated a negative, significant relationship between smoking and age. A number of studies also report a decrease in smoking with the increase in age (3,

39,41). This result is considered to be associated with the increased health problems with age, which leads individuals to quit smoking.

A positive, significant relationship was found between smoking and education status. Turan et al. (3) found that majority of people who smoked had education status of university and above. Different studies in the literature also indicated similar results (39, 40). The Tobacco Atlas results show that half of female daily smokers live in very high- human development index countries (5).

The present study found that FTND mean score of women who smoked was  $3.75 \pm 2.93$ . nicotine dependence was found to be low-very low for the 58.7%. This finding of the study is similar to the literature.(42,44).

### **Conclusion**

More than half of the women participating in this study were found to be passive smokers. Despite the important effects of the interventions specifically in public spaces, the issue of passive smoking is not approached seriously particularly in homes. It is recommended that the issue of passive smoking should be examined with larger groups, and family based training programs that focus on the harmful effects of passive smoking should be conducted periodically.

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