



## Evaluation of the relation between reasons for initiating smoking and dependence level

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### ABSTRACT

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The aim was to evaluate the dependence level and relation condition by examining the reasons to start smoking. Scanning the people in Family Health Center, personal information, smoking conditions and reasons to start smoking were asked to 359 smokers over 18 years of age using a questionnaire prepared. Fagerström Test for Nicotine Dependence (FTND) was used to determine the dependence level in smoking individuals. Then statistical analysis was made using the acquired data. 269 people, 181 males (50.4%) and 178 females (49.6%), were included in our study. While the package/year average of smokers is 9.0±8.4 right now, FTND score average was found 6.9±1.7 points. According to FTND, the ratio of low level, medium level and high level of dependents were 6.7%, 40.4% and 52.9% in order. Reasons for starting to smoke were grouped under 11 different answers. The cases stated the most common reason for starting smoking as "imitating" (21.2%) and boredom/stress (13.6%) followed this. There was a significant relation between the ages and reasons for starting smoking among the participants in our study (F=4.067, p<0.001). A statistically significant difference was not found in smoking dependence levels among FTND scores and smoking package/year condition. No significant relation was found between nicotine dependence level and reason to start smoking. "Imitation" as the most common reason to start smoking. Thus applications increasing the information level of individuals may decrease the smoking starting frequency of individuals.

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### 1. Introduction

Tobacco which is the most important reason for preventable causes of death kills nearly half of its users. More than one billion of people on the world which constitutes 1/4 of adult population, use tobacco products and tobacco use causes the death of more than 5 million people every year (Mathers and Loncar, 2006). On the other hand, tobacco use in developing countries increases day by day due to the increase in population and aggressive marketing efforts of tobacco industry (Murray and Anthonisen, 1999; Atulgan et al.,

2008).

The increase in consumption and production of cigarettes and other tobacco products in the whole world causes a very severe burden on people and national health system. Smoking is a serious addiction and quitting smoking is an extremely difficult process. While struggling against smoking, three strategies gain importance. The first of these is the smoking cessation of smokers, the second and third are preserving the condition for those who quitted and never started smoking. Yearly smoking cessation ratios even in

the presence of pharmacological approach together with professional help in smoking individuals are rarely above 25% (Ozturk et al., 2015). The most promising fact for future when these three strategies are considered is unchanging of non-smokers' condition. Thus the precautions required for individuals not to start smoking can be taken only by understanding how smoking is started. So the reasons for starting smoking were examined in individuals registered to a family health center in our city were investigated in our study for this reason. Also whether there was a relation between the dependence degrees and smoking starting reason was investigated in our study.

## 2. Material and method

This observational, cross-sectional and analytic study was made on the population registered in Family Health Center (FHC) between 28.03.2016 and 15.04.2016. 369 current smokers who are over 18 years of age, registered in FHC, have no psychiatric or other chronic diseases known participated voluntarily in the study after taking informed consent. No one rejected to participate in the study. Some demographical characteristics (age, gender, marital status, socioeconomic and education level, etc), smoking information [Fagerstrom Test for Nicotine Dependence (FNNT) and package/year] of these people were questioned. After a questionnaire was given to every individual to question their reasons for starting to smoke. Then acquired information was statistically analyzed.

### 2.1. Fagerstrom Test for Nicotine Dependence

This test is a questionnaire used to determine the degree of smoking addiction commonly in the world. It was developed by Karl O. Fagerström in order to determine the level of physical smoking addiction and contains six questions (Fagerström et al., 1996). The patient can both be applied face to face and can be filled individually. A score between 1 and 10 can be

taken from the questionnaire and the dependence level is considered to increase as the amount of the score taken increases. Those who take a score below 5 points from the test are defined as low nicotine addicts, and those who take 7 points and above are defined as severe nicotine addicts. In the adaptation made for our country, test and retest correlations were found 0.85 and 0.88 in order (Fidancı et al., 2015). A standardization study is available for the Turkish sampling (Uysal et al., 2004) and this scale was applied only to smoking participants (Şenyüz and Coştur, 2010).

### 2.2. Statistical analyses

The acquired data were examined and evaluated using SPSS 16.0 statistics program. Characteristics of the study group were presented with definitive type of analyses (number, percentage, average and standard deviation). Data were evaluated using mutual independent group comparisons Mann-Whitney-U groups test and Pearson chi-square and Kruskal Wallis test analysis methods. Statistical significance level 'p' value was accepted as those below 0.05.

### 2.3. Ethic board

Ethic board consent for this study was taken from Turkish Republic of Health Clinical Studies Ethic Board.

## 3. Results

### 3.1. Demographic features

The demographic and smoking features of the study group are given in Table 1. 269 people, 181 males (50.4%) and 178 females (49.6%), were included in our study. The average age of the participants was found  $52.6 \pm 12.2$  years. There was no significant difference between the average ages of both genders. In the classification according to the educational status of the participants, 21 people (5.8%) stated that they were literate, 32 (8.9%) were elementary school, 156

**Table 1.** The demographic and smoking features of the participants according to their gender

	Male	Female	
Age (years) (mean)	52.95±12.63	52.34±11.83	t=0.470, p=0.636
Occupation	Not occupied 14 (7.7%)	Not occupied 15 (8.4%)	$\chi^2=1.345$ p<0.05
	Farmer 33 (18.2%)	Farmer 16 (9.0%)	
	Worker 29 (16.0%)	Worker 23 (12.9%)	
	Retired 68 (37.6%)	Retired 49 (27.5%)	
	State worker 35 (19.3%)	State worker 25 (14.0%)	
Education level	Student 2 (1.1%)	Student 3 (1.7%)	$\chi^2=2.307$ p<0.001
	Unschooling 10 (5.5%)	Unschooling 11 (6.2%)	
	Elementary 15 (8.3%)	Elementary 17 (9.6%)	
	Secondary 49 (27.1%)	Secondary 83 (46.6%)	
	High school 94 (51.9%)	High school 62 (34.8%)	
University 13 (7.2%)	University 5 (2.8%)		
FNNT scores (mean)	7.07±1.7	6.74±1.7	t=1.804 p=0.072
Package/year (mean)	8.57±8.1	9.6±8.6	t=1.157, p=0.248
Years of smoking (Mean)	9.5±8.6	10.46±9.3	t=1.008, p=0.314

were (43.5%) high school and 18 (5.0%) were college graduates. Most of the participants in the study were married [64 (17.8%) were single and 295 (82.2%) were married]. When occupational groups are considered, 49 people (13.6%) were workers, 52 (14.5%) were government employees, 60 (16.7%) were freelancers, 5 (1.4%) were students, 47 (13.1%) were housewives and 117 (32.6%) were retired. 29 (8.1%) people stated that they were not working.

### 3.2. Smoking characteristics

Average FTND scores of the cases participating in the study were calculated as  $6.90 \pm 1.740$ . There was no difference between FTND test score averages of males and females ( $t=1.804$ ,  $p=0.072$ ). Package/year value of the participants was calculated as  $9.08 \pm 8.4$ . There was no difference between package/year averages of males and females ( $t=1.157$ ,  $p=0.248$ ). No correlation was detected between the ages and both total smoking duration ( $r=0.053$ ,  $p=0.314$ ), package/years ( $r=0.029$ ,  $p=0.581$ ) and FNTD scores of the cases participating in the study ( $r=0.082$ ,  $p=0.122$ ) A strong correlation was detected only between total smoking duration and package/year of the patients ( $r=0.850$ ,  $p<0.001$ )

### 3.3. Reasons for starting to smoke

Reasons for starting to smoke grouped according to the answers given by the participants are given in Table 2. According to this, no statistical difference was found among the genders when reasons for starting to smoke were considered ( $\chi^2=9.903$ ,  $p=0.272$ ). When the reasons for smoking and smoking durations, FNTD scores ( $p=0.301$ ) and package/year values ( $p=0.245$ ) of the cases participating in the study are compared, no statistical relation was detected. But there was a significant relation between the ages and reasons for starting among the participants in our study ( $F=4.067$ ,  $p<0.001$ ). According to this, average ages of the people who stated that they were influenced by their friends ( $44.7 \pm 1.5$  years) and movies or television ( $48.3 \pm 1.6$  years) were 12 years less in average than those who were curious ( $56.9 \pm 1.2$ ) or influenced by their families ( $54.89 \pm 1.8$ ).

## 4. Discussion

The period when smoking trials are most common is between 16-19 years of age which is called adolescence. All factors affecting the life of the adolescent (physical, social and psycho-social factors) affect the individual. Especially with the effect of environmental circumstances, most adolescents are accepted as the group under risk when dangerous behaviors and habits are considered. It is quite common for the adolescents who cannot cope with the problems they face to use substances as a way to cope. Peer influence and impulse control problem are among the reasons for use and nearly 1/4 of smokers smoked their first cigarette before they reached 10 years of age. Especially in different studies abroad, the smoking trial frequency among high school students was reported as 70.4% and 78% (Warren et al., 2008). In studies made on participants less than 18 years of age in different cities of Turkey, the smoking frequency interval was found to be larger (9.5%-41.2%) (Dogan and Ulukol, 2010). Similar to other recent studies made in Turkey (Mayda et al., 2007), when smoking starting age is considered, it took place in late adolescence period (16-19 years of age) in our study, too.

Adolescence is accepted as a period in which people don't hesitate from taking risks. Adolescents think that risks which may take place in the future are too far away and would never affect them. When they don't care about health problems which may take place in their future lives, it is more common for them to start this risky behavior. Smoking starting age was found to be in adolescence in our study, too and the answer given for the reason was "imitation" which supports the studies available in literature (Akgül and Kutluk, 2015).

It is known that smoking behavior generally starts during the period up to the end of adolescence and although more rarely, older individuals may also start this behavior. Effective factors in starting to smoke are accepted as socio-demographical factors, socio-economical condition, personal characteristics, affect of family and friends and reachability of tobacco products (WHO, 2010; Aslan and Aşut, 2015).

**Table 2.** Comparison of most common reasons to start smoking according to gender

Reasons	Male		Female		Total	
	n	(%)	n	(%)	n	(%)
I imitated smoking individuals	39	(21.5)	37	(20.8)	76	(21.2)
I started in order to reduce my discomfort or stress	31	(17.1)	18	(10.1)	49	(13.6)
I was influenced by my family	26	(14.4)	19	(10.7)	45	(12.5)
I was influenced by my friends and social environment	21	(11.6)	21	(11.8)	33	(9.2)
I was influenced by the characters in movies or television	19	(10.5)	24	(13.5)	43	(12)
I started to prove that I grew up	17	(9.4)	20	(11.2)	37	(10.3)
I was curious	14	(7.7)	13	(7.3)	27	(7.5)
I started to influence opposite sex	12	(6.6)	25	(14.0)	37	(10.3)
Other	2	(1.1)	1	(6)	3	(0.8)

In a study made by Mayda and friends (Mayda et al., 2007) on the students of medical faculty, the reasons for starting to smoke were stated as friend effect (54.4%), imitation (28.0%), curiosity (28.8%) and loneliness (20.6%) (Aslan and Aşut, 2015). In our study, “friend effect” was lower among the reasons (9.2%), imitation was the first (21.2%) and the reason “I was influenced by my family” (12.5%) was the second.

As a result, in addition to the effect of many

reasons, it shouldn't be forgotten that personal and environmental characteristics are also important in addition to many reasons and its relation with nicotine dependence level is not clear. It should be remembered that the group which should be given highest importance is adolescent age group and education, seminary and similar activities should be increased to reach and inform young individuals.

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