ORIGINAL RESEARCH

EVALUATION OF THE PREVALENCE AND BEHAVIOURS OF THE EX-SMOKER UNIVERSITY STUDENTS

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ABSTRACT

Objective: To evaluate the prevalence, knowledge, and attitudes of ex-smokers at the university in Konya.
Methods: This study consisted of 613 ex-smoker university students. The participants were selected by multiphase sampling from 17 different faculties. Data were obtained via questionnaire technique by interviewing. The Chi-square test was used for statistical analysis.
Result: In the majority of ex-smokers (98 %), the initiation age of smoking was under 21 years. 70.0 % of ex-smokers had had the knowledge of the harmful effects of smoking before. The most effective way of smoking-cessation was sudden quitting (55.7 %).
Conclusion: Cigarette smoking is an important public health problem in Turkey. An effective and comprehensive-national tobacco control program is urgently needed.

Keywords: Smoking-cessation, University students, Socio-demographic characteristics

SİGARA BIRAKAN ÜNİVERSİTE ÖĞRENCİLERİNDE SİGARA BIRAKMA SIKLIĞI VE DAVRANIŞ ÖZELLİKLERİNİN DEĞERLENDİRİLMESİ

ÖZET

Amaç: Bu çalışmada Konya'da üniversite öğrencilerinde sigara bırakma sıklığı ve davranışlarının değerlendirilmesi amaçlandı.
Yöntem: Bu çalışmada 613 sigarayı bırakan üniversite öğrencisi yer almıştır. Katılanlar 17 farklı fakülteden çok aşamalı örneklem yoluyla seçilmiştir. Veriler yüzyüze görüşülerek uygulanan anket yoluyla elde edilmiştir. İstatistiksel analiz için ki-kare testi kullanılmıştır.
Bulgular: Sigarayı bırakanların çoğunluğu (%98) sigaraya 21 yaş altında başlamıştı ve %70'i sigaranın zararlı etkileri hakkında bilgiye sahipti. Sigara bırakmada en etkin yol olarak aniden bırakma tespit edildi (%55.7).
Sonuç: Türkiye'de sigara içme alışkanlığı önemli bir halk sağlığı problemidir. Etkili ve kapsamlı bir ulusal sigara control programına acilen ihtiyaç vardır.

Anahtar Kelimeler: Sigara bırakma, Üniversite öğrencileri, Sosyodemografik veriler

INTRODUCTION

Cigarette smoking is the most important avoidable cause of morbidity and premature death in the developed world[1,2]. The harmful effects of smoking on health are now well known[3,4]. Such effects include the direct action of cigarettes on the respiratory tract, causing emphysema, bronchopneumonia, bronchitis and cancer of the lung, as well as more indirect action on other organs such as the heart, pancreas, bladder, stomach, uterus etc[5,6]. It is therefore important to determine why people begin smoking, because most smokers start smoking soon after starting secondary and high school. Adolescent smoking is thus a communicable disorder, and may be preventable by measures that reduce exposure to other smokers[1,7-9]. Having close friends who smoked and being encouraged by close friends to smoke were strong risk factors for smoking[7,10,11].

The most effective programs start from the principle that youth have to learn skills to resist pro-smoking pressure from peers, family, media, and advertising[12,13]. Anti-smoking school education can postpone smoking initiation for years. One possible measure to reduce the percentage of youth smokers is introducing an age limit for tobacco sales. This has been adopted by many countries, most setting the age limit at 18 years of age[12].

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Nicotine, a key ingredient in tobacco products, is an addictive drug. The difficulties in smoking cessation are suggested to be related to nicotine [14]. Addiction to nicotine involves the interaction of psychological, physical, behavioral, and social factors[3,4,15]. Current health education activities against smoking should be continued and extended to the young population to further reduce the prevalence of smoking and its health consequences[16-18]. If a smoker has been thinking about giving up, advice from health care professionals can encourage him to stop[4,19].

The WHO has estimated that the number of deaths each year from smoking-attributable disease will increase to 10 million within the next 30 years or so, of which 70 % will occur in developing countries [20-22]. Prevention and treatment of tobacco use have been targeted by the WHO as a priority in developing countries. However, such efforts are difficult because tobacco companies have applied active marketing and economic pressure to these countries, which are enticed by increased revenues provided by tobacco use [23]. Thus tobacco consumption is decreasing by 1 % per year in industrialized nations and increasing by about 2% per year in developing countries [24].

Cigarette smoking not only increases risk of death among older adults but also affects quality of life and physical functioning [25]. Smoking cessation at any age reduces the overall risk of death [26]. Smoking cessation also decreases the risk of developing lung and other cancers [27].

Psychological and behavioral factors affecting success in quitting smoking must be established. [23]. Health promotion at schools was considered very important because people usually start smoking before the age of 20. Therefore, focusing attention on smoking cessation among university students is an immediate and urgent priority for public health professionals [26,28].

METHODS

This study was performed with using multiphase sampling among 4504 university students who were selected from 17 faculties of Selçuk University in 2003-2004 academic year. In this period, 63000 students were having education in the university. In this study, we only selected faculties which had 45000 students. Vocational high schools were not included. We used multiphase sampling. Participants were first divided into faculties, after that classes and then gender. We randomly selected from every strata by using 10% sampling. Consequently we reached 4504 students. Data were obtained via the questionnaire form by interviewing. First, the student's smoking status was defined as never-smoker, ever-smoker, and ex-smoker. Secondly, ex-smoker students were selected. This study consisted of 613 ex-smoker university students.

Ever- smokers were defined as those who had smoked 100 cigarettes and now smoked either every day (i.e., daily smokers) or some days (i.e., some-day smokers). Ex- smokers had smoked at least 100 cigarettes in their lives but did not currently smoke. The minimum quitting period for the ex-smokers was accepted as 6 months. Never-smokers were defined as those who had never smoked.

This special questionnaire included 44 items and contained the students' socio-demographic characteristics, opinions related to smoking cessation, the status of smoking in family, and the effects of TV programmes on smoking cessation. Participants answered questions on the following factors.

Socio-demographic characteristics: gender, marital status, age, faculty, class, place of living, place of residence, participation in sport activities, the use of another addictive substance, Family characteristics: father's occupation, mother's occupation, father's and mother's educational level, the status of smoking in family.

Opinions related to smoking cessation: the reason for smoking cessation, the effect of TV programmes on smoking cessation, the method of smoking cessation, effectiveness of TV programmes related to the harmful effects of smoking, reactions to TV programmes related to smoking.

Smoking-related habits before quitting smoking: the initiation age of smoking, duration of smoking, the reason to start smoking, believing the hazards of smoking, being influenced by advertisements related with smoking.

Data Analysis

The data were entered into a personal computer using the SPSS statistical package. Chi-square and analysis of variance were used to test for baseline differences in demographic and smoking-history variables. Statistical significance was defined as $p< 0.05$.

RESULTS

This study was performed by using multiphase sampling according to faculties, classes and

gender by using 10% sampling among 4504 university students. The student's smoking status was defined as never-smoker, ever-smoker, and ex-smoker. Of the students in this study, 36 % (n=1621) were ever-smokers, 13.6 % (n=613) were ex-smokers, 50.4 % (n=2270) were never smokers. For this study, ex-smokers were separated.

Of the students in this study 33.1% (n=203) were female, 66.9% (n=410) were male, 92.3% (n=566) were single, and 7.7% (n=47) were married. The age interval of participants was 17-31 years. The majority of students (90.2%) were not using another addictive substance. The socio-demographic characteristics of the study subjects are shown in Table I. In this study, the mothers' educational levels were intermediate and low (92.3 %). Smoking prevalence of fathers was 38.3%. 72.9% of family members were smoking (only father, only mother, brothers, or both parents).

The most important reason for smoking-cessation was knowledge of the harmful effects of smoking (51.1%). In the majority of participants (40.6 %), there was a negative opinion that TV programs on smoking-cessation were ineffective. The best way of smoking-cessation was sudden quitting (55.7 %). The majority of participants (56.7 %) had believed that effective TV programmes related to the harmful effects of smoking were lacking. Approximately 88.8% of ex-smokers watched TV programmes related to smoking. Table II shows opinions related with smoking cessation.

We found that 3 % of the ex-smokers began smoking before 9 years of age, 17 % of this group began smoking at 10-13 years of age. In the majority of ex-smokers (78.1 %) the initiation age of smoking was between 14-21 years. The most important reason to start smoking was social factors (environment, friend groups, etc) (39.1 %). Later, distress and anxiety were found (30.5 %). More than 70.7 percent of ex-smokers were aware of the hazards of smoking. The majority of ex - smokers (65.4 %) did not want their children to smoke. Smoking-related habits before quitting smoking are shown in Table III. Differences of some parameters between smokers and ex-smokers are shown in Table IV.

Table I: Socio-demographic characteristics

Characteristics	%
Gender	
Female	33.1
Male	66.9
Marital status	
Single	92.3
Married	7.7
Age (years)	
17-20	36.7
21-23	51.7
24 and over	11.6
Faculty	
Science	22.9
Social	69.4
Medical	7.7
Class	
First year	29.2
Second year	22.4
Third year	20.8
Final year	27.6
Place of living	
Rural	44.0
Urban	56.0
Place of residence	
Home with family	27.3
Home with friends	37.8
Dormitory	34.9
Participation in sportive activities	
One day in a week	29.1
Two-three days in a week	27.7
One day in two weeks	17.6
Never	25.6
The using of another addictive substance	
Alcohol	7.4
Illegal drug	0.3
Family characteristics	
Father's occupation	
Retired	25.3
White-collar	22.8
Blue-collar worker	22.6
Tradesman	29.3
Mother's occupation	
Housewife	85.2
Father's education	
Illiteracy	4.6
Primary school	39.2
Middle and high school	34.9
University	21.3
Mother's education	
Illiteracy	7.7
Primary school	55.3
Middle and high school	29.2
University	7.8
The status of smoking in family	
Only father	38.3
Only mother	10.4
Both parents	12.5
Brothers or sisters	11.7
None of parents smoke	27.1

Table II: Opinions related with smoking

Opinions	%
The reason of smoking cessation	
Health problems	13.9
Economic reasons	9.3
Social pressure (from family or companionship)	10.9
Knowledge of harmful effects of smoking	51.1
Others	14.8
Effect of TV programs on smoking-cessation	
Effective	36.2
No idea	23.2
Ineffective	40.6
The way of smoking-cessation	
By participation in a health program	9.5
Sudden quitting	55.7
Gradual decrease	20.9
Other	13.9
Effective TV programs related harmful effects of smoking are lacking	
Yes	56.7
No idea	11.3
No	32.0
Reactions to TV program related smoking	
Pay attention and completely watch	44.6
Mediocre watching	44.2
Never watch	11.2

Table III: Smoking-related habits before quitting smoking cessation

Habits	%
The initiation age of smoking	
0-9	3.0
10-13	17.0
14-17	45.6
18-21	32.4
22-25	2.0
Duration of smoking (years)	
0-2	32.1
3-5	43.5
6-8	14.7
9-11	7.1
12 and more	2.6
The reason to start smoking	
Social factors (environment, friend groups, etc.)	39.1
Emulation and enthusiasm	23.5
Distress and anxiety	30.5
Pleasure and fun	6.9
Believing the hazards of smoking	
Yes	70.7
No	18.7
No idea	10.6
Being under effect of the advertisements related with smoking	
Yes	29.0
No	53.6
No idea	17.4
I don't ever want my children smoke	
Yes	65.4
No	25.8
No idea	8.8

Table IV: Differences between ever-smokers and ex-smokers at different parameters

	Ever - smoker (%)	Ex- smoker (%)	p
Gender			
Female	32.6	33.1	
Male	67.4	66.9	(p=0.853)
Faculty			
Science	80.5	10.5	
Social	67.7	32.3	
Medical	77.1	22.8	(p=0.000)
Class			
First year	71.1	28.9	
Second year	75.7	24.3	
Third year	74.1	25.9	
Final year	69.3	30.7	(p=0.664)
The using of another addictive substance			
Alcohol	15.2	7.4	
Illegal drug	0.8	0.3	(p=0.001)
Place of residence			
Home with family	28.9	26.0	
Home with friends	44.9	35.8	
Dormitory	26.2	38.2	(p=0.000)

DISCUSSION

Adolescent smoking is a communicable disorder, and may be preventable by various measures[1,7]. Smoking prevalence among adolescents has increased recently[29]. Recent research has shown that children aged 12-17 years are susceptible to smoking[12]. Adolescents are most likely exposed to the effects of both pro- and anti-tobacco advertising simultaneously[30]. The results in table 1 show the influence of family on current smoking status. According to our data, the risk was highest when the father was a smoker.

Unfortunately, the mass media has not been used adequately in Turkey to combat smoking. In the last census, the total population was 67 million in Turkey. The Turkish population is predominantly young; with 40.6 million above 15 years of age. Turkish laws are inadequately enforced to combat smoking. There is a light legislation against tobacco, including a ban on many forms of advertising, restrictions on smoking in many public places, prohibition to buy cigarette for those aged under 18. Therefore, smoking rates in adolescents have continued to rise in recent years[31]. Alikasifoğlu et al. also reported that the prevalence of smoking among Turkish high school students gradually increased. A significant increase was observed in cigarette experimentation rate across grades for both female and male students. Twenty- three percent of the students reported that they were current users [32]. In this study, although the prevalence of ex-smokers was 13.6%, the prevalence of ever-smokers was 36 %.This high ratio was similar to other studies. Recent data from the 1997 Youth Risk Behavior Survey suggest that youth smoking rates are increasing. The prevalence of smoking among high school seniors increased from 27.5% in 1991 to 36.4% in 1997 in USA[33,34].

Scientific data demonstrate that tobacco use is the leading preventable cause of death and illness. Smoking is a known cause of cancer, heart disease, stroke, and chronic obstructive pulmonary disease. The prevalence of ever-smokers among Turkish adolescents was higher than in the USA, European and other developed countries. Despite the tobacco companies' aggressive expansion of its markets in Asia, Turkey, Middle East, and other developing countries, a small group of students had succeeded in stopping smoking. In this paper, we found that the prevalence of ex-smokers was 13.6%. The Saudi Smoking Control Charitable Society reported that the smoking cessation rate was 13%[20]. This rate was 24.8% in USA[35]. There was a significant difference. This may be attributed to the more effective smoking cessation protocols, educational programmes at schools, anti-tobacco advertising, and strict laws banning tobacco use. Presently, tobacco use is the single, most important health disorder in Turkey. Thus, urgent effective cessation programmes must be established.

Having close friends and family members who smoked were strong factors for smoking[7,32]. We found that the risk was highest when the father was a smoker. Parental smoking may cause children to view smoking as an acceptable adult behavior engaged in by those they most admire[33]. In this paper, the smoking prevalence of fathers was 38.3 %. Unfortunately, 72.9 % of family members were smokers (only father, only mother, brothers, or both parents). Because of this high smoking ratio of family members, a wide health educational programme for everybody must be arranged.

Adolescents often follow the health advice of their doctors rather than of their parents or other adults[33]. Both doctors and teachers can play an important role in preventing tobacco use among children by adopting and modelling effective prevention strategies.

Young smokers listed 3 factors that would motivate them to try to stop smoking:
1-the tobacco-related death or illness of a close relative,
2-a request from their boyfriend or girlfriend,
3-advice from their doctor[36]

We found that the most important reason for smoking cessation was knowledge of the harmful effects of smoking (51.1 %). The second reason was the health problems (13.9%). These findings showed that health education, positive motivation, and effective cessation programmes offered by health services could play an important role in quitting smoking.

The majority of participants (40.6%) thoughtthat TV programmes on smoking-cessation were ineffective and insufficient. As much as possible, a measure's effectiveness is quantified in terms of declines in tobacco consumption and smoking prevalence among youth (12). Unfortunately, everybody is free to buy cigarettes in our country.

When we retrospectively examined the former lifestyle of ex-smokers, the initiation age of

smoking was under 21 years (98%). The most important reason for starting smoking was social factors (environment, friend groups, etc.) This rate was 39.1%. The second major reason was distress and anxiety (30.5%). The majority of ex-smokers (70.7%) have believed in the hazards of smoking. This belief positively influenced them to stop smoking. Research and theory must be directed towards understanding why some individuals smoke and others do not[37,38]. Further research on the etiology of smoking in young people must be performed.

Approximately 53.6% of the ex-smokers were influenced by commercials related with smoking. Fortunately, 65.4% of the ex-smokers do not want their children to smoke. Thus, the concept of a tobacco-free society must be promoted through involvement in anti-tobacco activities and educational projects in local communities, organizations and educational institutions.

We found that men were more susceptible than women to both smoking and quitting smoking. This finding was in accordance with other studies[20,39]. Although the causes are multifactorial, age, gender, having classmates, parents and teachers who smoked were very important[19]. The decision to stop smoking can be a long process which is established on behavioral change model. Smoking cessation is a dynamic process that occurs before; during and after the person quit[9].

There was a meaningful relation between smoking and alcohol use in our study. Among the ex-smokers, the rate of alcohol use was significantly lower than among the ever-smokers (p=0.001). In the faculties of social sciences, the rate of quitting smoking was significantly higher than in the others (p=0.000). Tot et al., also reported that cigarette smoking was associated with alcohol use [10]. Because of the rules in dormitories, residence at a dormitory was significantly more effective for quitting smoking (p=0.000).

CONCLUSION

The results of this study should help the development of anti-smoking policies in Turkey. A comprehensive strategy for smoking control must be established and adopted from other developing countries. Research teams should include representatives from a broad spectrum of disciplines, particularly educators and programme providers. The results of this multidisciplinary study, and the information gathered will be useful in the identification of high risk groups and the design of interventions. Norms for not smoking, a comprehensive strategy and environmental incentives must be supported through multiple channels in the community. Finally, an effective national comprehensive anti- smoking policy and a wide-ranging legislation against tobacco must be urgently established.

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