Reviewing the Prevalence of (Cigarette) Smoking and its Related Factors in Students of Tehran University, Iran

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Abstract

Background: This study aimed to determine the prevalence of smoking behaviors among students in Tehran University, Iran.

Methods: This was a cross-sectional study on 400 participants of Tehran University. A self-administrated, anonymous questionnaire was used for data gathering.

Findings: The mean age of students was 21.70 ± 2.73 years, and 92% of them were single. The prevalence of smoking was 27.3% including 35.4% of men and 12.6% of women ($P < 0.001$). The mean duration of smoking was 4.22 ± 3.05 years. There was a significant association between smoking behaviors among students and their age, gender, type of accommodation, field of study, income status, duration of study, and existence of smoking habits among family members.

Conclusion: The prevalence of cigarette smoking among university students is high. The lack of adequate information about smoking related diseases indicates the incapability and inefficiency of educational programs on this issue.

Keywords: Smoking, University, Students, Iran.

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Introduction

Smoking is the risk factor of many diseases, and is also considered to be a major worldwide health issue. It is estimated that smoking and tobacco-related illnesses lead to death of approximately 5.4 million people around the world annually.[1] This figure will reach 8.3 million in 2030 which will be the cause of 10 percent of mortalities globally.[2]

Smoking still has a high prevalence among teenagers, and the age many begin to smoke is declining.[3] This behavior among university students is of high importance, since as an educated class of society they can impact all the population of society. Many studies have been implemented on the prevalence of smoking and its predisposing factors among university students. These studies indicate that the prevalence of smoking has a growing trend in universities.[4,5] Nazary et al. found that 43.5 percent of students started smoking after entering the university.[5]

Currently, contrary to many countries, smoking in Public Places is not prohibited in Iran. Hence, smokers are under no social pressure to withdraw from smoking. Many Iranian studies have shown that the number of smoking people among community members,[6-9] academic educated population,[4,5,10-12] and/or even school students[13-15] is growing. The above mentioned studies reported that between 11 to 15 percent of the population in Iran smoke.

Since university students, as an educated group of society, can have a more effective role in the prevention and reduction of smoking in society, determination of smoking prevalence is necessary among this group. The present study aimed to evaluate the prevalence of smoking and its related factors among students of Tehran University.

Methods

This was a cross-sectional descriptive-analytical study among the students of Tehran University. The data was collected between May and August 2010. The research protocol was approved in the Ethic Committee, and was done according to the ethical standards set by the Helsinki Convention. According to a preliminary study, and by using the sample size formula for descriptive studies with an estimated prevalence (P) of 20%, accuracy of estimation error (d) of 4% and a of 5%, the sample size was calculated to be 384 samples.

Therefore, a sample size with 400 participants was considered and they were selected using convenient random sampling (through table of random numbers by Microsoft Excel 2007).

An anonymous questionnaire including 46 questions was prepared by the researcher and validated during a preliminary study on a group of participants. The first and second parts of the questionnaire reviewed demographic characteristics (22 questions) and smoking status (23 questions), respectively. Finally, one question asked about the accuracy rate at the time of completing the questionnaire. The second part must only be completed by smokers. The students were informed about the confidentiality of their information, study objective and how to complete it orally and in writing. Thereafter, the questionnaires were completed by the students under supervision of the researcher and returned in the same session. All the participants of the study completed the questionnaire.

Descriptive statistics included the frequency distribution table and mean (SD), and were obtained through the Software SPSS version 17. In addition, chi-square and/or Fisher's exact test was used to compare the quantitative variables, independent t-test and/or Mann-Whitney U test to compare means, and also univariate and multivariable logistic regression analysis via Stata software. P-value of less than 0.05 was defined as a statistically significant level.

Results

In total out of 400 students, 257 students (64.3%) were male and 143 of them were female (35.8%). The mean age of students was 21.70 ± 2.73 years. 368 students (92%) were single. 23.3 percent of them used to study in art, 25.3 percent in human sciences, 26.8 percent in mathematics and engineering fields and 24.8 percent in sciences. 109 students (27.3%) stated that they smoke.

The mean smoking duration was 4.22 ± 3.05 years. 61.3 percent of students started smoking after entering the university. The smoking rate increased after entering the university in 69 students (63.3%), while it had no effect on 34 samples (31.2%), and it reduced in 6 samples (5.5%).

In 44.3 percent of samples (47 students) the parents were unaware of their children smoking,

and in 44.3 percent (47 students) the parents were opposed to smoking. Almost 15.7% of smoking students announced they never smoke in public places, and 46.3 percent of them smoke in public places if they need to, and 38 percent stated that they smoke in public places.

The most common occasions for smoking respectively were 79.8% when they are upset, 76.1% when they are with friends and 67% after a meal.

The results of a univariate analysis, which indicated the impact of different variables on smoking, are illustrated in table 1. There were some significant factors among smoking students. As indicated in Table 1, age, sex, residence status, education, duration of academic year, previous GPA (grade point average), income source and rate, and also presence of smoking family

members in the household were significantly related to being a smoker (P < 0.05). Thus, being male (35.4% male vs. 12.6% female), living in rented houses or with living relatives, education in the field of art or human sciences, having lower GPA, prolonged time of education, having personal income, and also presence of smoking family members in the household was related to being a smoking student.

The final regression model is illustrated in table 2 by conducting a multivariate logistic regression analysis, and deleting the variables of source of financing and also the number of academic years in university.

There was no significant difference between the smoking and non-smoking students in terms of marital status, the number of family members, father's job and lack of one of parent (P > 0.05).

Table 1. The results of univariate analysis and impact of different independent variables on prevalence of smoking

Variable	Odds ratio	Confidence Interval 95%	P-Value
The ratio of female to male	0.24	0.15-0.45	< 0.001
Previous GPA	3.26	2.58-5.1	< 0.001
Number of academic years	1.25	1.12-1.40	< 0.001
Living with			
parents	-	-	-
friends in dormitories	1.35	0.77-2.1	0.31
relatives	1.82	0.32-10.29	0.49
student's rented house	3.96	2.08-7.53	< 0.001
Major			
Department of Experimental Sciences	-	-	-
Department of mathematics and Engineering	1.42	0.70-2.87	0.33
Department of Art	2.58	1.82-7.04	< 0.001
Department of Human Sciences	2.40	1.21-4.74	0.01
Financing			
By family	-	-	-
Personal income	4.52	2.32-8.81	< 0.001
Both cases	2.55	1.51-4.31	< 0.001
A smoker inside family	2	1.28-3.13	0.002

Table 2. The results of multivariate analysis and impact of different variables on prevalence of smoking

Variable	Odds ratio	Confidence Interval 95%	P-Value
The ratio of female to male	0.24	012-0.45	< 0.001
Previous GPA	3.47	2.08-5.78	< 0.001
Living with			
Parents	-	-	-
friends in dormitories	0.77	0.41-1.43	0.41
relatives	0.86	0.11-6.66	0.89
student's rented house	2.51	1.21-5.19	0.01
Major			
Department of Experimental Sciences	-	-	-
Department of mathematics and Engineering	0.87	0.39-1.96	0.74
Department of Art	3.15	1.47-6.71	0.41
Department of Human Sciences	2.06	0.96-4.42	0.06
A smoker inside family	1.72	1.03-2.87	0.03

Only 62 students (56.9%) were familiar with smoking-related diseases and complications. 49 smoking students (45%) had attempted to stop smoking and 80 students (73.4%) said their desire to withdraw from smoking has been low and very low.

Discussion

The present study reviewed smoking in Tehran University. More than one forth of students announced they smoke; its prevalence in male and female students was 35.4 and 12.6 percent respectively. Although the mentioned rate is lower than some European and American countries, according to the results of some studies in Iran, its prevalence in Tehran is higher than other cities.

In 2002, in a comprehensive study in 23 countries of the world (Europe, the U.S., Asia, South Africa and Latin America), the prevalence of smoking was calculated in universities (except Medical Sciences students).[16] Comparing the results of this study to the present study, the prevalence of smoking among men in Tehran was similar to Western European countries, the U.S. (31%), Central Europe, Eastern Europe, Asian countries, and Latin America (35%). However, the prevalence rate in the present study was lower than in Southern European countries (44%) and higher than South Africa and Thailand (14%).

The prevalence of smoking among women of the present study was still relatively lower than many European and American studies (28-39%) but was similar to Asian and Latin American countries (15%). Khami et al.[4] in Iran in a study on dental students in Tehran showed that the smoking rate was 23 percent (32.7 and 14.6% in men and women, respectively) among students. However, among other studies in cities except Tehran, the prevalence of smoking has been reported in 11% of students in Kerman (22% men and 2.4% women)[12], in 14.4% of students in Semnan[5] , and in 18.48% of students in Shiraz[10] which had a lower prevalence than our study.

According to the study of Fotouhi et al.,[8] the overall prevalence of smoking in Tehran is 11.9% (20.6 and 2.9% for men and women, respectively). This rate was much lower than our results among the students of Tehran University. This point emphasized the necessity of conducting a more active approach in

evaluation of and prevention from smoking among students.

Many studies have reported a higher prevalence of smoking among men than women which were in accordance with the present study. However, unlike the present study and similar Asian researches, this difference was not significant in Western Countries.[16]

Moreover, some other factors were related to high prevalence of smoking among students including age, living in student homes instead of dormitories, education in fields of Art and Human Sciences, low GPA, prolonged education duration, having personal income and smoking members in their families. Living without parents (due to study in university) is associated with freedom of previous limitations which can lead to some considerable changes in an individual's life, particularly among students with lower awareness and knowledge. This situation can be more prominent due to economic independence and living alone. A similar result was obtained in Lebanon by Tamim et al.[17]

This study showed that smoking is an easy way to reduce tension in the critical period of separation from family and individual autonomy. More prevalence of smoking in some majors (Art and Human Sciences fields) showed the lower knowledge of these groups. On the contrary, the students of Experimental Sciences (such as courses related to Medical Sciences) showed significantly lower prevalence of smoking. Although this difference between the students from different majors was not seen in some studies,[18] the need for effective education against smoking students has been raised in all of the studies. Raising awareness about smoking complications and side-effects, and its related diseases can prevent such an unhealthy behavior or it can even encourage them to withdraw from smoking. This subject emphasizes on identifying factors which influence the effectiveness of training programs in this field.

Conclusion

It seems that there are very few studies (or there is not enough education) about the harmful effects of smoking on physical and mental health as well as about costs associated with addiction to various substances such as

cigarettes. Lack of knowledge and awareness of the educated class of society about risks of smoking exclusively indicated the necessity of serious attention of authorities to implement control and preventive programs with a nation-wide approach to solve this issue.

Conflict of Interest: The Authors have no conflict of interest.

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بررسی شیوع استعمال سیگار و عوامل مرتبط با آن در دانشجویان دانشگاه تهران

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چکیده

مقدمه: هدف از انجام این مطالعه، بررسی شیوع سیگار در میان دانشجویان دانشگاه تهران بود.

روش‌ها: این مطالعه توصیفی تحلیلی به صورت مقطعی در ۴۰۰ نفر از دانشجویان دانشگاه تهران و با استفاده از یک پرسش‌نامه بی‌نام انجام شد.

یافته‌ها: میانگین سن دانشجویان ۲/۷۳ ± ۲۱/۷۰ سال بود و ۹۲ درصد آن‌ها مجرد بودند. شیوع سیگار در جمعیت مورد مطالعه ۲۷/۳ درصد بود که ۳۵/۴ درصد آقایان و ۱۲/۶ درصد خانم‌ها را شامل می‌شد (۰/۰۰۱ > P). میانگین مدت زمان استعمال سیگار در افراد مورد بررسی ۳/۰۵ ± ۴/۲۲ سال بود. ارتباط معنی‌داری بین سیگار و عواملی همچون سن، جنس، وضعیت درامد، وضعیت سکونت، رشته تحصیلی، طول دوره تحصیل و وجود فرد سیگاری در خانواده مشاهده شد.

نتیجه‌گیری: شیوع بالای سیگار در بین دانشجویان نشان دهنده کمبود آگاهی در مورد زیان‌ها و بیماری‌های مرتبط با آن است که باید با استفاده از فعالیت‌های آموزشی مؤثر و کافی از شیوع آن کاسته شود.

واژگان کلیدی: سیگار، دانشگاه، دانشجویان، ایران.

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