کارگاه‌های آموزشی مرکز اطلاعات علمی

مقاله نویسی علوم انسانی

اصول تنظیم قراردادها

آموزش مهارت های کاربردی در تدوین و جاب مقاله
The Prevalence and Motivation of Cigarette Smoking among Kerman high school students

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Objective: Nicotine dependence has been identified as a critical health problem. This study assesses the prevalence and motivation of smoking among Iranian junior and senior students.

Methods: A cross sectional study was performed using a questionnaire. In addition to data on frequency, motivation, initiation and cessation, this questionnaire included Fagerstrom items for nicotine dependency. The census method was used for sampling. Thus, the questionnaire was distributed to all high school junior and senior students of Kerman.

Results: 3072 students participated in the study. Among them, 4.9% were nicotine dependent, 6.4% had used it occasionally during the last six months and 11.5% had used it at least once in their life. Out of all the cigarette users, 80.6% had experienced smoking before the age of 15 with 9.09±8.52 cigarette per day. Boys smoked significantly more than girls. More than 38% of the students had a history of smoking cessation. The most common motivations for smoking among the students have been identified as smoking of the peer group and the belief that smoking is fashionable.

Conclusions: The motivation and gender difference in smoking were similar to the general population. The rate of nicotine dependency was less than other parts of the country. However, the age of smoking initiation was in a decreasing trend and similar to other parts of the country. High school stage is a very critical period for adolescents' smoking. Therefore, for the provision of more social skills trainings and behavioral therapies, providing information for decision makers is recommended.

Keywords:
Cigarette, Iran, Motivation, Prevalence, Students

Nicotine dependence is the most prevalent, most deadly, most costly, yet most treatable type of substance dependency. The popularity of cigarette grew dramatically in the first half of the twentieth century; as a result, dependency signs developed quickly. In terms of the diagnosis of nicotine dependency, about 20% of the population develops nicotine dependency at some point, making it the most prevalent psychiatric disorder (1). Three million people die annually from cigarette smoking and half of regular smokers are predicted to die (2). Up to 91% of adult smokers start smoking during adolescence (3). Although adolescence is a time of optimum health, adolescents are often inclined to assume behaviors which could damage their health and affect their lifestyle in the future (4).

Materials and Method
In this cross sectional study, the target population consisted of pupils going to the last year of high school (junior) or college (senior) in Kerman in 2004. The city of Kerman is located in the central part of Iran with the distance of 1000 kilometers from the capital (Tehran), and it holds a population of more than half a million. The census method was used for sampling. The questionnaire was distributed to 3500 junior and senior students of all the high schools of Kerman. A number of 3072 students completed the questionnaire appropriately. The response rate was 92.59%.
Instrument and Procedures

The questionnaire consisted of two parts: 1) demographic data (sex, educational grade; 2) questions about cigarette smoking frequency, motivation, availability, modality of initiation, and cessation. The choices included in the frequency question are categorized as follows: 1) never smoked; 2) once in life; 3) sometimes; 4) daily; 5) if ever smoked, the number of daily smoked cigarettes. The question about modality of initiation consisted of the age of initiation, who offered the first cigarette (in a multiple choice question) and the places mostly used for smoking. The availability was investigated through multiple choice questions about the price, where the cigarettes are available and how effortless it is to have them. The cigarette cessation was defined by answering the following questions: "Did you ever intend to quit smoking and if so, how many times did you attempt to stop smoking and who did you refer to?

The second part consisted of Fagerstrom questionnaire for nicotine dependency and its severity (10, 11). The translated valid copy of modified Fagerstrom questionnaire was accessible and used in the precedent epidemiologic studies of this regard (12). This test determines the nicotine dependency via the three following questions: 1) "How many cigarettes a day do you smoke?"; 2) "How soon after waking up do you smoke your first cigarette?"; 3) "Do you find it difficult to abstain from smoking in places where it is forbidden?". The content validity index for the first part was 90% and for each question alone was 80%. To confirm reliability, the test and retest method was used where the coefficient of correlation was 96.3% and cronbach's alpha index was 0.602.

The aim of this study was explained to participants in a general assembly by a trained staff prior to the distribution of the questionnaire. Then, the questionnaire was distributed during regular classroom sessions and collected in the same session after 30 minutes. Because only the volunteers completed the questionnaire, the passive (oral) consent was obtained. To further maintain confidentiality, school personnel did not participate in any parts of the data collection and all the questionnaires were nameless and contained no other indicators. The survey was approved by the Research Committee of Kerman University of Medical Sciences and Health services.

Analysis

Data analysis was carried out using SPSS 10 software. Chi square, t-student test and Odd ratio for trends were used for comparisons. A p-value less than 0.05 was retained statistically significant.

Results

Among the 3072 participants, 1891 were male and 1181 were female. Moreover, 68.5% of the students were in the last year of high school (juniors) and 31.5% were in college (seniors). The mean age of initiation of cigarette smoking was 12±3.02 among males and 13.43±3.31 among females and no gender difference was observed. The mean number of daily cigarettes smoked was 9.09±8.52 with a significant difference between males (9.95±8.42) and females (5.83±8.18), (p<.005). The availability was defined by multiple choice questions concerning the easiness of cigarette accessibility. Rate of cigarette availability was very high for 91.4% of male and 80.7% of female students as they declared that the price was too low and there was no restriction on sale of cigarettes; gender difference in this regard was significant (p<.05). In the majority of participants, cigarette smoking had been started independently and in the second rank, cigarettes had been offered by a friend. The number of smoked cigarettes was significantly more in senior (college) students comparing to juniors (last year of high school) (p<.0001).

Table I demonstrates some important items in cigarette smoking frequency. All items were significantly different between males and females (p<.0001). According to Fagerstrom questionnaire, the prevalence of cigarette dependency was 4.9%. Nevertheless, 17.9% (11.5±6.4) of the cigarette users were not dependent; therefore, on the whole, 28.8% of the subjects could be considered as cigarette users. In male subjects, the most important motivations of tobacco use were identified as smoking of the peer group, the belief that smoking is fashionable and improves their self-esteem; and the incentives in females were; creating enjoyment and to be a girl of fashion.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
<td>%</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>No smoking</td>
<td>2370</td>
<td>77.1</td>
<td>1350</td>
<td>70.1</td>
<td>1020</td>
<td>88.5</td>
</tr>
<tr>
<td>At least once in life</td>
<td>354</td>
<td>11.5</td>
<td>285</td>
<td>15.1</td>
<td>69</td>
<td>5.8</td>
</tr>
<tr>
<td>Sometime in last six month</td>
<td>198</td>
<td>6.4</td>
<td>156</td>
<td>8.1</td>
<td>42</td>
<td>3.2</td>
</tr>
<tr>
<td>Dependence</td>
<td>15</td>
<td>4.9</td>
<td>128</td>
<td>6.6</td>
<td>25</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>3072</td>
<td>100</td>
<td>1891</td>
<td>100</td>
<td>1181</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1. The frequency of cigarette usage according to sex

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Several researches have concluded that self reports of smoking prevalence has shown a decreasing trend in Iran from 1991 to 1999 (7, 8). In the United States of America, current smoking rate has increased by 26.5% from 1991 to 1995 (21) while from 1993 to 2004 this trend decreased to 22.3% among high school students (22). In Europe, daily smoking prevalence rose from 9 to 18 percent across a -year follow up in Australia (23) while in Hungary, it rose from 36% to 46% across a – four- year follow up (24).

The mean age of the first smoking experience was about 16 to 25 in the general population (12,14, 25); but as demonstrated in the studies conducted in high school students, it decreased to 14 to15 years (17, 26).

Moreover, in a recent study performed in 2004 among high school students, the mean age of the first attempt to smoke was 13.2 years (6). These studies are in agreement with our results that the age of the first smoking experience was (12± 3.02) in males and (13.4±3.31) in females. In general, the age of smoking initiation in the world and in Iran is in a decreasing trend (6, 26, 27).

The mean number of daily smoked cigarette in the general population of Iran was 13.6 10.3 (7). In rural samples, the average daily smoked cigarette varied from 11 to 16.8 (12, 25), however, it was 8.75 in our subjects.

The items of “Smoker friends”, “To impress others”, and “Smoking is in fashion” showed a significant gender difference (table II).

44.7% of the male and 26.3% of female participants had a motivation to quit smoking; significant difference between males and females was observed (p<.05). The total number of cessation attempts was (4.83±3.72) with (5.32±3.62) in boys, and (3±3.64) in girls (p<.05).

### Discussion

Several researches have concluded that self reports of cigarette smoking by adolescents are generally valid; and in different ethnic groups the difference in false negative and false positive rates does not seriously affect the quality of results (13).

Cigarette smoking rate reports vary from 11% to 30% in the population of older than 15 years of age in different parts of the country (7, 14, 15). The studies conducted on the youth showed that in (Tehran) the capital (14) 7.2% of male and 1% of female students used to smoke regularly whereas in Rasht, a city in the north, 9% of male high school students were cigarette smokers (16, 17). However, the most recent study showed that the prevalence of self reported cigarette smoking in middle and high school students (11-18 years old) across the country was 14.3% (6).

In India, the other Asian country, nearly 40% of students identified themselves as current smokers (18), while the prevalence of cigarette smoking among male secondary school children in Singapore was 33.2% (19). As a school based survey in 132 different countries, The Global Youth Tobacco Survey reported that the world wide cigarette smoking rate in the youth is 8.9% (20).

According to this study, 4.9% of high school students were nicotine dependent in Kerman. This rate is less than all the above findings; this controversy may be due to the applied method. In our opinion, the lower rate of smoking dependency in this study in compare to other mentioned studies may be due to the fact that those researches evaluated all the users, not only the tobacco dependents. If we consider all the users as an item, our finding would then be 22.8%.

<table>
<thead>
<tr>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>My friends smoke</td>
<td>72</td>
<td>22.1</td>
</tr>
<tr>
<td>To impress others</td>
<td>36</td>
<td>10.6</td>
</tr>
<tr>
<td>It can’t stop</td>
<td>30</td>
<td>8.8</td>
</tr>
<tr>
<td>It is a fashion</td>
<td>96</td>
<td>28.3</td>
</tr>
<tr>
<td>It gives me confidence</td>
<td>39</td>
<td>11.5</td>
</tr>
<tr>
<td>It controls my weight</td>
<td>12</td>
<td>3.5</td>
</tr>
<tr>
<td>To appear older</td>
<td>15</td>
<td>4.4</td>
</tr>
<tr>
<td>I enjoy it</td>
<td>36</td>
<td>10.6</td>
</tr>
<tr>
<td>Total</td>
<td>339</td>
<td>100</td>
</tr>
</tbody>
</table>
model of risk and protective factors. Addict Behav 1999; 24: 371-381.

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