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Knowledge and Attitude of Dormitory Students of Shahid Beheshti University of Medical Sciences about Smoking in 2016

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Abstract

Aim: Smoking is one of the most important causes of respiratory, cardiovascular and cancers diseases. This study examined the smoking-related knowledge, attitudes and practices of dormitory students of Shahid Beheshti University of Medical Sciences in Tehran. The specific aim is to determine the correlation between the main variables' affect on smoking habits, knowledge and attitudes.

Methods: In this cross-sectional study conducted with descriptive and analytical approach, 340 students were selected through random cluster sampling. The participating students completed an interview measuring demographic characteristics and smoking-related knowledge, attitude and practice. Data were analyzed using Chi-square and Pearson's tests in SPSS (ver. 21).

Findings: The mean and SD of the participants was 22.93±4.05 years. Accordingly, 23% (n=78) of the subjects were current smokers and 17.1% (n=58) had experienced smoking. The knowledge of 1.8% (n=6) of the subjects was weak about smoking's health effects, 9.97% (n=332) had average and 0.3% (n=1) had good knowledge. Attitude of 8.6% (n=29) of the participants about smoking was poor, 29.5% (n=100) average and 61.9% (n=210) good. Relationship between knowledge and attitude about the harms of smoking ($r=0.35$, $p<0.001$), between knowledge and smoking ($r=0.2$, $p<0.001$), and between attitude and smoking ($r=0.45$, $p<0.001$) was significant.

Conclusion: There was a moderate level of knowledge and attitude about smoking hazards among the participants. Also the prevalence of smoking was relatively high. With regard to the statistically significant relationship between knowledge and attitude with smoking, declared health educational programs may enrich current knowledge, and promote the attitudes related to smoking risk and effects on the students' health.

Keywords: Knowledge, Attitude, Practice, Smoking, Student

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Introduction

Smoking is known as the main reason leading to preventable diseases and death globally [1]. Since the 1950s, scientific evidence has indicated this fact that smoking is the main cause of more than 25 types of diseases including cardiovascular diseases, lung cancer, and cerebrovascular diseases such that smoking directly or indirectly is involved in their incidence or aggravation [2]. Cigarette smoke contains four thousands of chemicals substances, and more than 40 of them have been identified as carcinogens in humans and animals. Accordingly, more than 80 percent of deaths from lung cancer and 30 percent of cancer deaths are caused by smoking [3]. On the other hand, cigarette compared to drug is the least valuable material that is more available and has very little social evil; this has caused a significant increase in the prevalence of smoking in most countries [4]. Various surveys in both the developed and developing countries have reported the high prevalence of smoking habits among youth [5, 6] annually [7]. 28.7% of smokers were aged at 18 - 24 years mainly college students [8]. It has been indicated that the prevalence of smoking among the students of medical universities is more than 20% [9, 10].

In a study conducted in India on the knowledge, attitude and performance of students about smoking, it was concluded that all students were aware of the harms of smoking, but did not have favorable attitude, and 29% of non-medical students and 18% of medical students had smoking habits [11]. Similarly, a study by Mohammad Zade and colleagues (2016) showed that medical students' knowledge of the harms of smoking was average but their attitude towards smoking was correct [12].

Given that students during education and employment are considered a good role model for people, especially youth, and smoking by students could possibly be effective in false teaching of other people [13], for different reasons such as emotional problems resulting from family separation, age condition, psychological pressures, absence of parental control, a sense of personal growth and independence, relative financial independence and presence of friends who smoke, they are at risk for smoking, This study examined the smoking-related knowledge, attitudes and practices of dormitory students of Shahid Beheshti University of Medical Sciences in Tehran. The specific aim is to determine the correlation between the main variables' affect on smoking habits, knowledge and attitudes. It is hoped that the results of this study can be used by the relevant authorities.

Materials and Methods

This cross-sectional study was conducted in

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2016 with descriptive-analytic approach. 340 subjects were selected using random clusters sampling. First, the list of all dormitories was provided where medical students in various fields lived. Then four dormitories were randomly selected, and all students living in them matching the inclusion criteria for the study were recruited.

Using Cochran's formula and taking into account p=0.24 for the prevalence of smoking [10], 95% statistical confidence and accuracy as d=0.05, the sample size was estimated 280 subjects. For greater accuracy and taking into account 20 percent loss of samples, maximum sample size of 340 was calculated.

The inclusion criteria included: the tendency of subjects to enter the study, being student, being studying in undergraduate level, being in the second or third year at university, having Iranian citizenship, and residency in dormitories under the supervision of Shahid Beheshti University of Medical Sciences. Also unwillingness to continue to participate in the study and failure to complete the questionnaire were considered as the exclusion criteria.

Data were collected by a questionnaire that was prepared and used after a review of internal and external resources available. This questionnaire has two-parts. The first part includes demographic data such as age, gender, year of education, marital status, employment status, probation history, amount of exercise per week, parents' education, family income, and having close friends who smoke. The second part consisted of evaluating knowledge (8 questions with a score of 8-24); for example, "Does smoking makes human life shorter?", assessment of attitudes about smoking (14 questions with a score of 14-70); for example, "Occasional smoking has no problems", and 5 questions about the practice in relation to smoking.

To assess reliability, the questionnaire was examined by a group of experts in the fields of health education and epidemiology, and their ideas were received via e-mail. Then some questions were removed and others were revised. The questionnaire was presented to 30 students, and Cronbach's alpha number was calculated as 0.75 for knowledge, and 0.85 for attitude. In this study *smoking-experienced* are the people who smoked a cigarette during their lives, and smokers are those who smoke daily or occasionally. The knowledge and the attitude were also classified in three levels of poor (scores less than 50% of the total score), moderate (50-75%) and good (scores over 75% of the total score) [14].

The questionnaires were completed self-reportedly; all the students were asked to respond honestly to the questions and were assured that all required information used in the questionnaire would be confidential.

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Accordingly, the questionnaires were completed by the students at the dormitories. After data collection, the data were entered into the SPSS software (ver. 16). Then this data were analyzed using Chi-square tests and Pearson correlation analysis. The significance level of 0.05 was considered in this study.

Results

The mean and standard deviation (SD) of the participants' age was 22.93±4.05 years. Accordingly, 60% (n=204) of them were female and 40% (n=136) were male. Among the participants, 87% (n=293) were single and 59% (n=199) were third-year student. In terms of employment, 73% (n=248) reported that they are not working. In terms of educational background, 96.5% (n=328) had no conditional history, and only 5.3% (n=18) exercised every day. Regarding the level of parents' education, 37.2% (n=126) of the students said their father got diploma and 35.6% (n=121) reported that their mother's level of education is high school. In terms of family income, 50.3% (n=171) announced their family monthly income as 300-600 dollars, and 58.4% (n=198) had close friends who smoke. Table 1 shows other demographic information of the students participating in the study. The results showed that 59.9% (n=203) were non-smokers, 23% (n=78) were smokers, and 17.1% (n=58) had smoking experience.

The mean and standard deviation (SD) of the knowledge score of all participants in this study was 16.65±1.62, and for attitude score, it was 53.03±10.33. Table 2 shows the knowledge and attitudes of students about the health effects of smoking. Regarding the level of knowledge and attitude towards the health effects of smoking, knowledge of 1.8% (n=6) of the subjects was poor, 97.9% (n=332) was moderate, and 0.3% (n=1) was good. Attitude of 8.6% (n=29) of the students towards smoking was poor, 29.5% (n=100) was moderate, and 61.9% (n=210) was at a good level.

Table 3 shows the relationship of the main variables with each other. There was a direct and significant relationship between knowledge and attitude towards smoking's health effects ($p<0.001$ and $r=0.35$). There was also a direct and significant relationship between knowledge and practice of smoking ($P<0.001$ and $r=0.20$), as well as between attitude and practice of smoking ($p<0.001$ and $r=0.45$) so that the mean scores of knowledge and attitude of smokers were less than those of non-smokers.

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Table 1: Demographic information of the participants

Variable		Number (Percent)
Gender	Female	204 (60)
	Male	134 (40)
Educational level	Sophomore	141 (41)
	third year student	199 (59)
Marital status	Single	295 (66.8)
	Married	41 (12.1)
	Divorced / Death of spouse	4(1.2)
Occupational status	Yes	90 (26.5)
	No	250 (73.5)
Probation history	Yes	12 (3.5)
	No	328 (73.5)
Physical activity and exercise	Everyday	18 (5.3)
	Most days	41 (12.1)
	Sometimes	140 (41.2)
	Rarely	111 (32.6)
	Never	30 (8.8)
Father's education	Illiterate	33 (9.7)
	High school	82 (24.2)
	Diploma	126 (37.2)
	Associate degree or Bachelor	75 (22.1)
	Master degree or higher	23 (6.8)
Mother's education	Illiterate	57 (16.8)
	High school	121 (35.6)
	Diploma	97 (28.5)
	Associate degree or Bachelor	58 (17.1)
	Master degree or higher	7 (2.1)
Family income	Less than 300 dollars	44 (12.9)
	Between 300-600 dollars	171 (50.3)
	Between 600-900 dollars	83 (24.4)
	More than 900 dollars	37 (10.9)
Having friends who smoke	Yes	198 (58.4)
	No	142 (41.6)

Table 2: Knowledge and attitude towards the health effects of smoking

Variable \ Smoking		No	Yes	Total
		Number (Percent)	Number (Percent)	Number (Percent)
Knowledge	Poor	2 (0.6)	4 (1.2)	6 (1.8)
	Moderate	200 (59)	132 (38.9)	332 (97.9)
	Good	1 (0.3)	0 (0)	1 (0.3)
Attitude	Poor	1 (0.3)	28 (8.3)	29 (8.6)
	Moderate	47 (13.9)	53 (15.6)	100 (29.5)
	Good	155 (45.7)	55 (16.2)	210 (61.9)

Table 3: The relationship of the main variables with each other

Variable		Knowledge	Attitude	Behavior
Knowledge	r*	-	0.35	0.20
	P-value	-	0.000	0.000
Attitude	r*	0.35	-	0.45
	P-value	.000	-	0.000
Practice	r*	0.20	0.45	-
	P-value	0.000	0.000	-

***:** Pearson correlation test

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Discussion and Conclusion

This study examined the smoking-related knowledge, attitudes and practices of dormitory students of Shahid Beheshti University of Medical Sciences in Tehran. The specific aim was to determine correlation between the main variable's affect on smoking habits, knowledge and attitudes. In this study, about 23% of the students were smokers. The results of this study are consistent with the results of Qodsi and colleagues [9], Shojaezade and colleagues [15], Bahrami and Bahrami [16] and Khami and colleagues [17], where smoking prevalence rates were reported as 23%, 22.3%, 23% and 23%, respectively, but not with the results of Shojaa and colleagues [18], Divsalar and colleagues [19] and Abedini and colleagues [20], where smoking prevalence rates were reported as 6.2%, 11% and 9%, respectively. Although this is lower than the prevalence of smoking in some European and American countries, but based on the results of studies in other cities of Iran, prevalence of smoking in Tehran is higher than in other cities [18-20]. A large increase can be seen in smoking in this study in compare to the above studies. Possible reason for this increase can be feeling less evil in smoking; therefore, it is easier now than in the past. Also there is more tendency to smoking in large cities. Another possible reason for this increase can be increase in the speed of changing lifestyle of students to the western lifestyle in large cities. Also in the results of different countries, different levels of prevalence of smoking among students were reported. This amount in the study by Oksuz et al. has been reported as 49.4%, in the study by Erdal and colleagues, as 40%, in the study by Tong et al. as 34.2%, and in study of Steptoe and colleagues, as 28.5%. The results of the present study are less compared to the results of above studies [21-24]. Also Metintas and colleagues reported the prevalence of smoking among medical students in European and Asian countries as 21.9% and 11%, respectively[17, 25].

In this study, the mean scores of the students' knowledge of the health effects of smoking were moderate. These results are consistent with the study by Mohammadzade and colleagues [12], Xu XH et al. [26] and Shokuhi and colleagues [27] but not with the results of Hessami and colleagues [28] and Namakin and colleagues [14], in which the knowledge of athletes and students was reportedly poor. Possible reasons for this inconsistency are the population examined in this study that includes the students of medical sciences, and that there are high chances that their knowledge of the health effects and consequences of smoking and the diseases caused by smoking is higher in compare to other groups of populations such as athletes and students. Also in the studies by Al- Haqvi and colleagues [29] and Han MY

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and colleagues [30], the knowledge of students was reportedly good may be due to a difference between the measuring tools used in these two studies and those in the present study.

Similarly, the mean scores of the attitude of students about the health effects of smoking were moderate. These results are consistent with the study by Shokuhi and colleagues [27] and Hessami and colleagues [28] but not with the results of Mohammadzade and colleagues [12] and Han MY and colleagues [30] where the level of students' attitude was good. The possible reasons for this inconsistency can be lower prevalence of smoking and smoking experience, as well as the difference between the samples, and also between the measuring tools of attitude in previous studies comparing to the present study.

In this study, the relationship between knowledge and attitude towards the health effects of smoking was significant so that the students with higher knowledge had more favorable attitudes towards the results of this study; this is consistent with the study by Heydari et al. [31], Xianglong et al. [32], and Bahrami and Bahrami [16] but not with the results of Hessami and colleagues [28] and Chiristian [33] where there was no significant relationship between knowledge and attitude toward smoking. The reasons for this inconsistency can be the difference between the samples from different perspectives, and different tools used in these two studies to assess knowledge and attitudes.

Accordingly, knowledge and attitudes were significantly associated with smoking practice so that the mean scores of knowledge and attitude in smokers were less than in non-smokers. These results are consistent with the study by Bahrami and Bahrami [16], Xianglong and colleagues [32], Heydari and colleagues [31], Joseph Guydish and colleagues [34], and Yao T and colleagues [35].

In total, the results of this study indicated a moderate level of knowledge and attitude of the students towards the harms of smoking, and the smoking prevalence was 23 percent. There was a statistically significant relationship between the variables of knowledge, attitudes and practice among the participating students. Accordingly, increasing the students' knowledge can be effective to improve their attitude towards the harms of smoking and reduce smoking. Thus, the inclusion of specific department seems necessary to educate the risks and harms of tobacco consumption as well as how to prevent smoking in all universities of the country. Further research is needed to describe the health providers' attitude to new health community-based program, as it has the potential to inform the way of training and providing smoke combatting program.

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One of the limitations of this study was questioning the dormitory students, but indigenous students and students living in places other than the dormitories were not involved in the study. So the findings of this study cannot be generalized to all students. Some of the information recorded partially due to a lack of cooperation or fear of a number of students in completing the questionnaire; this is another limitation of this study.

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