Original article

Prevalence of Smoking among the Students resided at Dormitories in Golestan University of Medical Sciences, Iran

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Abstract:

Introduction: Cigarette smoking leads to harmful physical and emotional problems and also is a predisposed factor for the addiction. The aim of this study was an attempt to determine the rate of prevalence and causes of smoking among the students of Golestan University of Medical Sciences who resided in the dormitories. ***Material & Methods:*** A cross-sectional analytical study conducted among the resident students of dormitories in 2010. The sample size consisted of all the university dormitory students. The data gathered using a validated and reliable questionnaire. The data analyzed using SPSS software and statistical tests including Chi-square, Logistic regression and Independent t-test. ***Results:*** Of 669 students, 538 (80%) of them filled out the questionnaires completely. 67.3% (362 subjects) were female. 6.1% (33 students) were smoker and 83.5% of them had experiences of cigarette smoking. The most important reasons for the smoking tendency were "having a smoker friend in 33%, a personal interest 27% and as hobby in 24% of the cases". There were significant relation between "age, sex, region and year of education" with smoking ($P<0.05$). However, we couldn't find any significant relation between major and marital status with cigarette smoking ($P>0.05$). ***Conclusion:*** The results indicated low prevalence of cigarette smoking among the students. However, preventive measures should be taken to conduit youth toward healthier behaviors. It seems parental control and monitoring children's friend finding are crucial issue.

Keywords: cigarette smoking; prevalence; university student; dormitory; tendency; Iran

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Introduction:

Smoking is considered a major preventable cause of morbidity and mortality, causing over four million deaths a year[1]. This figure is forecast to increase to 10 million deaths per annum by 2030; 70 % of which will be in developing countries[2]. Cigarette smoking is well known as risk factor for many of health problems such as lung cancer, cardiovascular diseases, intrauterine growth retardation, spontaneous abortion, antepartum hemorrahage, female infertility, peptic ulcer disease, chronic obstructive lung disease, sexual dysfunction in men, and so on. Passive smokers can also acquire diseases associated with cigarette smoking[3-7]. Beside harmful physical and emotional problems, smoking is a predispose factor

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for the addiction. When people want to quit, they also have a psychological habit to break. That is why we must emphasis on prevention and preventive measure [8].

The World Health Organization estimates that 1.3 billion people smoke and more than 80 percent of these people live in countries with low or middle income levels[9]. Numerous studies indicated that both in developed and developing countries the prevalence of smoking is increasing in youths, while the age of smoking initiation is decreasing[10]. One of the main reasons that young people smoke is to be like their friends and gain excitement. This may become very soon a part of their behaviors[11]. Twenty eghit point seven percent of smokers are between the ages 18-24 years[12]. Studentship is a period that many of behavioral patterns are forming and establishing, so smoking among the students should be considered carefully[13].

The youth including medical students are the main part of Iran's population. Therefore we cannot ignore their influence on health system of the country. Medical students may be considered as a role model for other young people. The students studied in governmental university while pay no cost, then the society expects to have healthy educated doctors and nurses for a healthy community. The aim of this study was to estimate the prevalence and causes of smoking among Golestan University of Medical Sciences students.

Material & Methods:

A cross-sectional analytical study conducted among the students residing in dormitories of Golestan University of medical sciences, Gorgan, located in Northern Iran, in 2010. The sample size consisted all of the university dormitories' students. A 25-item self-administered questionnaire incuding demographic characteristics and needed factors was designed and validated in a pilot study. The content validity was verified by a panel of experts, and the reliability was confirmed with a Cronbach alpha reliability coefficient of 80 percent obtained in a pilot study on 15 cases. A team of expert students, especially trained for this study distributed the anonymous questionnaires among the participants, while giving adequate explanation and reassurance. Of 669 male and female residents in four dormitories, 538(80.4%) participants filled out the questionnaires confidentially. The obtained data were analyzed by SPSS software package version 16.0 using t-test for comparison of mean values and Chi square test for comparing the frequencies between smokers and non-smokers. Logistic regression analysis was fitted to the data to calculate odds ratio and 95% confidence interval (95% CI) were employed to evaluate the gender-specific associations of starting to smoke with possible associated factors such as socioeconomic factors, smoking of relatives and friends, parents' marital status. The P-Value less than 0.05 was considered as statically significant.

Results:

Of 538 students, 67.3% (362 subjects) were female and 92.4% (497) single. The mean age of smokers were 22.18 ±2.35 years (age range: 18 to 39) (Table 1). 17.3 % of them had smoker fathers, 1.3% smoker mothers and 9.5% had smoker siblings. The average starting age of smoking was 20.65± 1.98 years. 47.8% of the students stated at least once a day exposed to someone else's smoke. Prevalence of smoking was 6.1% while, 83.5% of student had experiences of cigarette smoking atleast for once.

Table 1 : Demographic characteristics of the subjects studied

Variable		Number	Percent
Ethnicity	Fars	342	63.6
	Turkmen	110	20.4
	Azeri	33	6.1
	Others	53	9.9
	Total	538	100
sex	Male	90.9%	28.5%
	Female	9.1	71.5
Marital status	Single	497	92.4
	Married	41	7.6
Major	Medicine	190	35.3
	Nursing	123	23.8
	Health	67	12.5
	Midwifery	62	11.5
	Anesthesiology	40	7.4
	Others	56	9.5
Gender	Female	362	67.3
	Male	176	32.7

Table 2 : Characteristics of the subjects studied in the smoking and nonsmoking students

Variable		Smoker (%)	Non smoker (%)	X^2	P-value
ethnicity		n= 33	n= 505		
	Fars	60.6	63.7	12.941	0.005
	Turkmen	6.1	21.5		
	Azeri	18.2	5.4		
	Others ethnicity	15.2	9.4		
sex	Male	90.9%	28.5%	55.14	<0.01
	Female	9.1	71.5		

The reasons for starting smoking show that the three most common causes were “having a smoker friend, personal interest and hobby”. The average number cigarette smoked per day was 5.2. The average time to become addicted to smoking was two years. The average cigarettes costing was 3480 Rials (Amlost 1$) per week.

Table 3 : Univariate analysis of factors predicting smoking among the smokers

Variable		OR	CI (95%)	P-Value
ethnicity	Fars	1	.....	.....
	Turkmen	0.297	0.068-1.289	0.105
	Azeri	3.556	1.317-9.60	0.012
	Others ethnicity	1.702	0.61-4.752	0.31
Age (year)		1.292	1.116-1.495	0.001
Sex (male/female)		25.08	7.54-83.468	<0.01
Years education		1.435	1.168-1.764	<0.01

For 48.5% of the students, dormitory was the place that smoked their first trial (48.5). 30% of the smokers at least for once time tried to quit smoking.

Table 4 : Multivariate analysis of factors predicting smoking among smokers

Variable	OR	CI (95%)	P-value
Sex	23.52	7.54-83.468	<0.01
Age	1.23	1.04-1.44	0.012
Friends (yes/no)	3.22	1.24-8.38	0.016

Tables 2 and 3 show relation between cigarette smoking, ethnicity, sex, age and years of education. We couldn’t find any significant relationships among major and marital status with cigarette smoking (P>0.05). Table 4 shows the relationship among smoking with age, gender and friends using multivariate logistic regression analysis.

Discussion:

The results indicated low prevalence of cigarette smoking among the students. The prevalence of cigarette smoking among the students of medical universities from different parts of Iran (From North to South and from East to West) reported from 5.9 to 33%[14-21]. It was 20% among New Zealand University students[22] and 33.4% among Turkish University students[23].

Although the prevalence of smoking in our study was lower than the above mentioned studies, however 83.5% of the participants had an experience of smoking. In two similar studies only 13.9 and 31% of the students had smoking experience[16,24].

In Iran smoking is strongly disapprove by the families. It is not only bane in high schools but also culturally unacceptable among teenagers. Some of the authors believe the cultural issues possibly explain the lower rate of adolescence smoking in our study population[25].

However, in our country the price of cigarette is not high and everyone can buy it. Then, one of the strategies that may be effective particularly for young people is increasing the price of cigarette. Limit distribution, ban advertising and not easy access to the smokes may be helpful too[26]. In a national study the onset age for smoking was 9 years old[27] that are lower than our study[27,28]. If we believe addiction as a social not just personal behavior, and also influence of peer groups on forming behaviors[29,30]

then the policy makers should establish strategies such as appropriate education via public media, publication, and improving parent-child relationships[31]. Getting young people to avoid smoking is an important element of preventive health care[32].

According a study in Iran the most important resean for smoking tendency was "being similar as the others"[33]. Having fun and joy was the important factor for smoking among the students of two medical universities[19,34]. Molavi reported depression as an important factor for smoking tendency[35] however; we couldn’t find depression as reported factor for

smoking tendency by our participants.

In current study, the relationship between cigarette smoking and years of education was significant. As some of the studies showed tendency and daily cigarette smoking among the medical students increase from first year till last year[16,24,36]. It might be due to lower interest to the major in last terms[37]. Gender, male, also increase 2.8 fold cigarette smoking[14-15] that is less than current study. It is a hypothes that shame[23] and stigma of being a women smoker in a cultural and family centered country may play as preventive agent. Although, it can be due to fear of expression, underestimating and lack of report[38]. Some of the studies showed significant relationship between cigarette smoking and field of study[36] but we didn't find it. Also, we didn't find significant relation between cigarette smoking and marital status[17]. In current study the average number of cigarette smoked daily was 5 that is reported different number in different studies[27,39].

Finally, it should be emphasizes that the university students are vulnerable and at high risk for smoking since they are away of their parents, residents in dormitories feel more, home sickness[38].

Limitations

There are two aspects of the study design to be taken into account. First, the conclusions of this study are based on a cross-sectional sample. This design only allows for measures of association. Second, the self-reported nature of the data also needs to be taken into account. The validity of the responses will therefore depend on the responder's perception of the social disapproval of smoking. As the questionnaire was presented as confidential and anonymous, and since smoking is not illegal at the ages considered in this study, the probability of a response bias is minimized.

Conclusion:

Smoking behaviors of medical and nursing students may have a profound effect on the implementation of smoking-prevention activities in the future, as they are the role models. In this study **c**igarette smoking prevalence rate was relatively low in comparison with similar studies. However, psychosocial issues should be addressed to prevent future epidemics. According to the participants views friends' approval and friends' smoking prevalence were associated with their tendency to smoking. Appropriate interventions such as parental control and monitoring from early childhood may be useful as preventive measure. We can't underestimate a holistic approach to the students' education about smoking prevention as well.

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