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Original Article

Smoking habits among medical students: a survey at the University of Prishtina Faculty of Medicine

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Abstract

Background: Smoking is a common habit among the population in Kosovo. In the country, smoking occurs in public places, health and educational institutions despite being prohibited by law. The objective of our paper is to describe smoking habits, knowledge and attitudes among medical students from all departments in the University of Prishtina, Faculty of Medicine. **Methods:** The present study followed the Global Health Professions Student Survey (GHPSS) standardized methodology including data processing procedures. A self-administered questionnaire was used adapted from the GHPSS. A total of 600 students were invited in the study while 470 (78.3%) responded to the questionnaire. Descriptive statistics were used to present the data. The Fisher's exact test was used to test the significance and a p-value<0.05 was considered significant. **Results:** We found out that the prevalence rate of smoking among students is 16.9% (95% Confidence Interval [CI] 13.2-20). 79 students are current smokers, 28.2% of all males and 7.7% of all females. The study showed that 55.5% of student smokers smoke less than a pack of cigarettes per day. Almost half (47.6%) of those who smoke reported to have a smoker inside the family. This study also revealed that 74.7% of respondents who smoke do so in the presence of non-smokers on daily basis. **Conclusion:** In addition to threatening their own health, smokers also present a societal public health risk and medical students should be role models for the others by not smoking. Even though the percentage does not show a high rate of smokers in the Medical University of Prishtina, we still need to pay attention to smoking habits and try to lower the percentage of smokers.

Key Words: Smoking; Medical Students; Kosovo; Tobacco; Public Health (Source: MeSH-NLM).

Introduction

Smoking at the early stage of life is a common habit among the population in Kosovo. Smoking persists to be a problem worldwide with a lot of health consequences. By 2030, approximately 70% of deaths attributable to smoking worldwide are expected to occur in low- and middle-income countries. [1] In a systematic review of the literature, conducted by Smith and Leggat, they concluded that smoking among male medical students is in a range between 3% in the USA and 58% in Japan. [2] In our country, which is a low-income country, smoking occurs in public places, health and educational institutions even though it is prohibited by law. The irony is that people also smoke in the Assembly's hall, which is the place where the law that bans smoking in certain areas was ratified. Another concerning fact that results in increasing the number of smokers is that cigarettes are sold to people of any age, without checking their IDs. Even more concerning is that children sell cigarettes in restaurants and streets. In addition to its many negative social and economic implications, tobacco is also a factor which leads smokers to many disorders, disabilities, or even death. [3] According to M. B. Allen, health problems and consequences related to tobacco will rise as new markets develop. [4] Each year 5.4 million deaths occur due to tobacco use. [5]

In order to reduce the rates of morbidity/mortality, medical professionals are expected to incorporate efforts to reduce smoking in their practice. As a privileged category in our University, medical students should be role models for their peers. Smoking among medical student has a negative impact and it can only be tackled through using appropriate educative methods. The most likely method which would further emancipate the future doctors regarding smoking habits and consequences is implementing a module in University's syllabus for Bachelor level of study.

Physicians can play a pivotal role in educating patients about the smoking risks and dangers. However, their own smoking habits might unintentionally affect the smoking behavior of others. [6] Of special interest is the decrease in the percentage of smokers among most health professionals, particularly physicians. [7] Since health care professionals can easily access the relevant data and research in the field of smoking effects on health, they are believed to be aware of the smoking consequences. [8] Among Russian students who study medicine were found high levels of smoking, hypodynamia, and motivation to intake unhealthy food compared to those students who aspire to be future teachers and wellness instructors. [9]

Experimental smoking is a new aspect of smoking. We believe that it is mainly caused in night clubs where it is most likely for students to try drinking and smoking. Such environment cues reduce their ability to resist. A study conducted in India shows an increased risk of smoking in medical students who have experienced experimental smoking in their past. Therefore, the study suggests that medical schools must include more tobacco education lessons and training in order to prepare their students in dealing with smoking problems, whether for themselves or for their patients. [10] Also, it should be noted that smoking associated environments might increase the urge of smoking and make it difficult for smokers to quit. [11] In many countries smoke-free laws, which ban smoking in public venues, have proven to be effective in protecting public health; however, this may be less applicable

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to low- and middle-income countries since there are difficulties in achieving compliance with these laws. [12]

The main goal of this study is to investigate the knowledge and attitudes of medical students toward cigarette consumption. The significance of the study is to emphasize the crucial role that medical students play by providing a good example to their peers.

Methods

A cross-sectional study was conducted from September to December 2015 using a self-administered questionnaire derived and adapted from the Global Health Professions Student Survey (GHPSS), developed by the World Health Organization (WHO), Centers for Disease Control and Prevention (CDC) and the Canadian Public Health Association (CPHA). GHPS has a standardized methodology for selecting participating schools and classes and uniform data processing procedures.

Study settings: The study setting was Medical Faculty, at the University of Prishtina, which according to Wikipedia data is a public higher education institution, based in Kosovo, with approximately 40,000 students. About 5,000 students receive bachelor or master degrees every year at University of Prishtina. More than 70,000 have graduated from the university since its establishment in 1968. Medical faculty consists of six departments: Medicine, Dentistry, Pharmacy, Nursing, Midwifery and Physiotherapy.

Sampling and participants: With 95% CI and 3% possible non-responses bias the sample size was calculated to be 600. The response rate was 78.3% (470/600). This study included students from all years of study in all departments of the Medical Faculty.

Variables: The GHPSS used in our study is adapted and modified by Georgios-Marios et al to fulfill the goal of the study. [16] The questionnaire was translated from English to Albanian, back translation into English and the final version was done by a third person checking translation in case of possible errors. There were included demographic data, prevalence of smoking, the number of packs smoked per day, smoking in presence of non-smokers, other smokers in family, passive smoking, addiction and how students think they should be as role models to other peers. The demographic predictor variables were gender, age when they started smoking, and department of study.

Data Collection: The questionnaire was administrated online on Survey Monkey platform during a four-month period. The research was approved by the ethical committee of Medical Faculty, University of Prishtina. Also, the researchers had made it clear and emphasized to the students that the participation was voluntary, and the results would remain confidential. Since not all the students agreed on partaking in the study, the first 100 volunteers from all six departments of Medical Faculty were chosen to be part of the study sample.

Data Analysis: Collected data was cleaned and tested with Statistical Package for the Social Sciences (SPSS) 20.0. The confidence interval was performed by the same software (SPSS). The Fisher's exact test was used to test the significance. A p-value <0.05 was considered significant.

Results

A total of 600 students (100 from each department) from all departments were invited to participate in the study by filling in a questionnaire. Those who agreed to participate and completed the questionnaire (470) were included in the study. The response rate was 78.3% (470/600).

From the total number of respondents (470), 44.4% were male and 55.6% female. The prevalence rate of smoking was 16.9% (95% CI 13.2-20). Smoking habit is not present in the same rates between male and female. Male students tend to smoke much more compared to their female colleagues (p<0.005). Among the smoking group of students, 28.2% were male and 7.7% female (**Table 2**). More than four fifths (83%) of the smokers started smoking between the age of 16 to 24. Almost half of them (47.6%) who smoke reported to have a smoker inside the family. From the participants' perceptions, 38.4% consider that passive and active smoking equally dangerous, while 36.9% think that passive smoking is more dangerous than the active one. Three hundred and four students declared that smoking causes both physical and psychological addiction (**Table 1**). Fisher's exact test is used for p-value.

Table 1. Main Findings of Our Study.

Variable	Answer	No.	%
Gender	M	209	44.50
	F	261	55.50
Smoker	Yes	79	16.80
	No	391	83.20
The age of beginning	< 16 years	10	12.70
	> 16 years	69	87.30
Smoking in front of non-smokers	Yes	78	75.00
	No	26	25.00
	Not at all	10	2.10
How harmful can passive smoking be	A little	106	22.60
	Same as active	181	38.50
	More than active	173	38.80
Addiction	Physical	157	33.40
	Psychological	7	1.50
	Both	306	65.10
Medical students as role models	Yes	423	90.00
	No	47	10.00

Table 2. Correlation between Smokers and Gender.

	Smoker		
Gender	Yes	No	p-value
M	59 (28.2%)	150 (71.8%)	
F	20 (7.7%)	241 (92.3%)	< 0.05
Total	79 (16.8%)	391 (83.2%)	

Smoking consequences are correlated with the consumption in one day. When asked on how many packs they smoke per day, 58.2% of participants claimed that they smoke less than one pack of cigarettes per day. Only 3.8% of them smoke more than one pack/day.

One of the most interesting findings from this survey was the role model of medical students in their appearance and influence among peers and younger population. Both male and female agreed that medical students play a crucial role as a good model for the others. Male with 84.7% and female with 94.3% believe that they should set a good example to other mates regarding smoking habit (**Table 3**).

Table 3. Correlation between Gender and Model Role.

	Model role		
Gender	Yes	No	p-value
M	84.70%	15.30%	
F	94.30%	5.70%	> 0.005
Total	90.00%	10.00%	

Discussion

According to our findings, the smoking prevalence among medical students in Kosovo is 16.8%. The percentage of students who smoke is below the average compared to other studies conducted worldwide. The rationale behind this is perhaps their orientation toward becoming future health professionals. Moreover, smoking, despite the health side effects, can be a disadvantage in job seeking or sharing living and working place with others. Until now there is no data about the smoking rate in the general population in our country. Ashwin A. Patkar in his study found that among 397 students, medical students smoking prevalence was (3.3%) compared to nursing students (13.5%). [13] Based on the 2012 Euro barometer Report, the prevalence of smoking in the European population, where Kosovo belongs, aged . 15 years is 28%. [14]

In Jeddah, 24.8% male and 9.1% female medical students continue to smoke even though they are well-educated and have good knowledge regarding the hazards of tobacco consumption. [3] Meanwhile at the Berlin Medical School the smoking rate was 22.1% among women and 32.4% among men. [6] The prevalence rate of smoking in the University of Health Sciences in Vientiane was lower compared to our students. There was reported to be a low percentage of health professional students who claimed smoking, only 5.1 %. [2] Whereas in the city of Mosul, Iraq, the prevalence of cigarette smoking was 17.9%. [15] In the study among Japanese medical students the prevalence of smoking among men was significantly higher than among women (18.1% vs. 5.1%). [7] Smoking prevalence, among medical students of the Democritus University of Thrace was 24% (**Table 4**). [16]

Table 4. The Prevalence of Smoking among Medical Students in Different Studies.

Authors	The overall smoking prevalence
Fejza et al.	16.80%
A. Patkar et al.	13.50%
Siraj O. Wali	14.00%
B. Kysma et al.	25.20%
V. Singh et al	31.50%
R.M. Coe et al.	5.1-6.2%
T. Tomki et al.	13.70%
V. Sychareum	5.10%

Almost all our respondents agreed that medical students should be role models for other students and the public in general. In the study conducted by Sychareun, non-smokers were more likely than smokers to agree that health professionals should be role models; while both smokers and non-smokers strongly agreed that health professionals should give advice about quitting smoking. Ninety percent of respondents in Jeddah thought that doctors should set a good example by not smoking. [2] The Jordan authors in their study emphasis the importance of non-smoking policies within the university. [17]

The prevalence of smoking among adolescents increases with age. There is therefore a need for school-based tobacco prevention programs which also deal with family influences on smoking. [18] As most university students including those at medical school, would have limited financial means, it is reasonable to assume that any legislation increasing the price of tobacco would subsequently result in a drop in the overall number of student smokers. [19] This could be a good proposition for our country having in consideration the low family budget as well as the financial dependence of students on their families. Only a few of them can find a job to fund themselves while pursuing their studies.

Future studies should use longitudinal designs that can identify psychological and socio-environmental determinants of smoking among college students. Such information could inform the development of smoking prevention and cessation interventions targeted to the college student population. [20] The readiness and attitudes among our students to contribute in this study indicate that prospects are good for future investigation with the aim of finding a way to assist authorities in identifying a strategy for reduction and cessation of smoking among students. In our country smoking in closed areas is prohibited by Law, but despite that, lots of people still smoke due to the lack of consequences by authorities. The majority of respondents in a Lagos study supported a ban on smoking in homes (83.5%), in public places (79.2%), and in restaurants, nightclubs and bars (73.6%). [21] There are no ongoing initiatives within our school curricula in terms of promoting smoking cessation.

There are several trials that have proven the effectiveness of pharmacist-provided smoking cessation counseling in the inpatient, community, or clinic setting. [22] The cohort study conducted in US and Canada, which randomly selected over 13,000 smokers, showed that those subjects that had 2 or more quit attempts were more likely to stay smoking-free. [23] Medical professionals possess the greatest potential to promote a reduction in tobacco use. The role of pharmacists, in particular, is also important, because they have a wide client base that presents regularly, and, in many countries, smoking cessation aids are retailed in pharmacies. [24]

At nine German medical schools, students were involved in providing counseling teaching courses in novel smoking cessation for medical students. [25] Students, from a study done in Turkey, have shown willingness in taking new specific training that would advance their knowledge about tobacco; they also admitted that it would be beneficial to implement curricula's in tobacco cessation. [26] Hospital systems in the USA are adopting strict nicotine-free policies excluding hiring individuals who smoke, including residents for graduate medical training. [27] On the other hand, no cessation smoking program has been designed for students in our schools, including medical school. Some of the reasons for that are the low public interest, lack of funds, and the reluctance from professors to promote non-smoking habits.

The limitation of this study is that smoking status was self-reported by the respondents of the questionnaire, which might have led to possible biases; however, we included participant from all Departments in the Faculty of Medicine, therefore including a wide number of participants and perspectives.

Conclusion

We conclude that despite the low percentage of smokers among students, some of the habits, such as smoking in presence of non-smoking peers, should not be happening and there is a need for further activities and more educational promotion on this issue. In order to lower the current percentage and to discourage students from smoking, it is fundamental to increase students' awareness by including smoking prevention in each Departments' curricula.

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Author Contributions

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