SMOKING PREVALENCE AMONG MEDICAL STUDENTS IN UKRAINE

Rozpowszechnienie palenia wśród studentów medycyny na Ukrainie

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ABSTRACT

Tobacco use is one of the leading preventable causes of premature death and disease in the world. Recently, literature has emerged suggesting that health professionals can play a critical role in reducing tobacco use. Importantly, the effectiveness of disease prevention activities and a healthy lifestyle promotion by medical personnel largely depends on their own attitude to smoking, their smoking status, understanding of the importance of this problem, and their responsibility for tobacco control activities among patients and the public. This article describes the methodology and results of the study on the prevalence of smoking among students of higher medical educational institutions in different regions of Ukraine, carried out within the framework of global survey under the egis of the World Health Organization’s European Region, and the United States Centers for Disease Control and Prevention (CDC). The data on the tobacco use prevalence, presence in tobacco smoke polluted environment, attitudes towards smoking, desire to quit smoking, and training received to provide patient counseling on cessation techniques have been collected and analyzed.

Keywords: smoking prevalence, air pollution, attitude towards smoking, smoking cessation, educational needs

Słowa kluczowe: rozpowszechnienie palenia, zanieczyszczenie powietrza, zaprzestanie palenia tytoniu, potrzeby edukacyjne

INTRODUCTION

In the XXI century, public health is influenced by the complex of factors, among which smoking has one of the leading roles. According to WHO data, tobacco is one of the most significant risk factors for chronic noncommunicable diseases, one of the causes of global burden of diseases, as well as preventable death. In 2008, tobacco caused more than 5 million deaths in the world. The number is expected to exceed 8 million deaths by 2030, with approximately 70% of these deaths occurring in developing countries. Furthermore, thousands of people die from the negative effects of passive smoking every year.

Medical consequences of smoking for the WHO European Region are enormous; 30% of the population are smokers, about 1.2 million people die from smoking, which constitutes 14% of the total number of deaths.

A significant increase in smoking prevalence among women and girls is of particular concern, which is largely attributable to creative marketing strategies. A total of 22% of women smoke in the region. This figure is much higher than in Africa, Asia and the Middle East, where the corresponding prevalences are 3-5%. Previously, smoking was mainly a male phenomenon.

However, today the difference in smoking prevalence among adult men and women in such countries as Austria, Denmark, Ireland, Norway, Netherlands, Sweden and the UK is very small, and in other countries it is also decreasing. Girls more often than boys use tobacco products in Bulgaria, Poland, Slovenia and Croatia.5

An increased prevalence of smoking among youth, including students, high levels of smoking among medical students - the future health care professionals - is of particular concern in Europe and in the world, as evidenced by numerous scientific publications, statistical data, discussion of smoking related issues at various international and national conferences.6 This issue is extremely important for Ukraine, where the negative tendency in the prevalence of smoking among young adults, including health care workers, has been observed for years.7 Health professions students have been found to play an important role in cessation and prevention of tobacco use among their patients.8 Counseling by health professions students has been shown to increase smoking cessation.9 Despite the involvement of health professions students, as the largest group of health-care professionals in tobacco control, only a few studies have collected information on tobacco use, exposure to secondhand smoke, and training to provide cessation counseling among health professions students. These studies used different sampling methods, questionnaires, and data collection procedures, and very few are from low or middle-income countries.10 The WHO and the U.S. Centers for Disease Control and Prevention have attempted to overcome these limitations by developing and implementing the Global Health Professions Student Survey (GHPPS).11

As the formation of attitude towards smoking in health professionals begins at school age and continues during university studies, it is crucial to enhance understanding of this problem by the medical students. Considering the key role that health workers play in the formation of healthy lifestyle, reduction in smoking prevalence among medical students is critical for its significant reduction in the whole population.

**PURPOSE AND RATIONALE**

Health professionals can play a crucial role in tobacco control. Even brief and simple advice from health professionals can substantially increase smoking-cessation rates. Therefore, one of the strategies to reduce the number of smoking-related deaths is to encourage the involvement

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5. Kills when used as prescribed – tobacco industry successfully targets girls with new marketing tactics /Information for the media, WHO ER. Copenhagen. Denmark 30 May 2012.
of health professionals in tobacco-use prevention and cessation counseling. The GHPSS was designed to collect data on tobacco use and cessation counseling among health professional students in all WHO member states. Questionnaires are translated into local languages as needed. GHPSS has a standardized methodology for selecting participating schools and classes and uniform data processing procedures.

MATERIALS AND METHODS

The current study was conducted in 4 regions of Ukraine during 2010 in the framework of the Global Health Professional Student Survey (GHPSS) in 49 countries under the egis of WHO and the Center for Disease Control and Prevention, the USA (CDC). It is a school-based survey of 3rd year students pursuing advanced degrees in dentistry, medicine, pharmacy, and nursing. The GHPSS uses a core questionnaire on demographics, prevalence of cigarette smoking and use of other tobacco products, exposure to second-hand smoke (SHS), desire to quit smoking, and training received to provide patient counseling on cessation techniques. The GHPSS has a standardized methodology for selecting participating schools and uniform data processing procedures.\textsuperscript{12}

The Medical GHPSS in Ukraine included a sample of students and a sample of schools. The sample was selected with probability proportional to size from all medical schools in Ukraine and a census of students in the selected schools were surveyed. The Ukraine GHPSS was conducted in schools during regular lectures and class sessions. Anonymous, self-administered data collection procedures were used. The final questionnaire was translated into Ukrainian and back-translated into English to check for accuracy.

The medical school response rate for the Ukraine GHPSS was 80.0%. The medical students response rates for the Ukrainian GHPSS were 95%.

A software package for statistical analysis of complex survey data SUDAAN was used to calculate weighted prevalence estimates and standard errors (SE) of the estimates and 95% confidence intervals (CI).\textsuperscript{13}

RESULTS

The percentage of medical students who were females was 70.8% and 95.6% were less than age 25. Among medical students, 72.0% reported that they have ever smoked cigarettes (table 1). A total of 33.1% are currently smoked cigarettes. Over 20% of medical students currently use tobacco products other than cigarettes.

The proportion of medical students reporting their schools have an official policy banning smoking in school buildings and clinics was 80.0% (table 2). However, only 56.9% reported that their school enforced the ban on smoking in school buildings and clinics.

Among medical students, 47.8% reported that they had been exposed to SHS in their home in the past 7 days. Nearly 75% answered that they had been exposed to SHS in public places in the past week.

Almost seven in 10 of current smokers indicated that they want to quit. Similarly, among other tobacco products users 46.6% of medical students reported that they want to stop using tobacco. However, only 49.3% of current smokers ever received help/advice to stop smoking cigarettes. Over 67% of the medical students thought health professionals have a role in giving advice about smoking cessation to patients (table 3). Over four in five medical students think health professionals should get specific training on cessation techniques. The percentage of health professions students reporting that they had ever received some kind of formal training in their professional school on cessation approaches to use with their patients was 24.8%.


### Table 1. Lifetime and Current Prevalence of Tobacco Use among Third-Year Medical Students in Ukraine

<table>
<thead>
<tr>
<th>Discipline (Medicine)</th>
<th>All Respondents</th>
<th>Current Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td>Total</td>
<td>72.0 (53.2 - 85.4)</td>
<td>51.3 (47.7- 55.0)</td>
</tr>
<tr>
<td>Women</td>
<td>68.7 (47.2- 84.3)</td>
<td>48.0 (40.9-55.2)</td>
</tr>
<tr>
<td>Men</td>
<td>79.9 (70.5- 86.9)</td>
<td>58.2 (39.6-74.7)</td>
</tr>
</tbody>
</table>

### Table 2. Policy and Exposure to Secondhand Smoke among Third-Year Medical Students in Ukraine

<table>
<thead>
<tr>
<th>Discipline (Medicine)</th>
<th>All Respondents</th>
<th>Current Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td>Total</td>
<td>42.6 (27.1-59.8)</td>
<td>14.8 (2.5-4.1)</td>
</tr>
<tr>
<td>Women</td>
<td>80.0 (67.2-8.7)</td>
<td>56.9 (42.2-70.6)</td>
</tr>
<tr>
<td>Men</td>
<td>74.6 (64.8-82.4)</td>
<td>47.8 (27.2-69.1)</td>
</tr>
</tbody>
</table>

### Table 3. Cessation, Education and Perception of Responsibility to Counsel Patients among Ever Smokers, Third-Year Medical Students in Ukraine GHPSS, 2010

<table>
<thead>
<tr>
<th>Discipline (Medicine)</th>
<th>Percentage Answering “Yes”</th>
<th>Learned Cessation Approaches to Use with Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td>Total</td>
<td>68.3 (50.9-81.8)</td>
<td>46.6 (38.2-55.3)</td>
</tr>
<tr>
<td>Women</td>
<td>67.1 (57.8-75.3)</td>
<td>77.7 (61.9-88.2)</td>
</tr>
<tr>
<td>Men</td>
<td>24.8 (12.6-43.2)</td>
<td></td>
</tr>
</tbody>
</table>

Source: GHPSS. 2010
DISCUSSION

Findings from the Ukraine GHPSS show that the prevalence of current cigarette smoking among medical students was 33.1%. Prevalence of use of tobacco products other than cigarettes was 20.8%. Tobacco use endangers the health of health professions students and negatively influences the future health professions workforce to deliver effective anti-tobacco counseling when they start seeing patients. The tobacco control community should target tobacco users among health professions students to overcome this situation. Educational institutions training health professions students should help their students quit using tobacco by providing encouragement and information to students who are considering quitting and providing assistance to students who are motivated to quit.

Over 74.6% of health professions students in Ukraine reported they were exposed to SHS in public places. In addition, about 80% of the students reported their schools have an official policy banning smoking in school buildings and clinics. Educational institutions training health professions students should be encouraged to provide smoke free work and study areas by banning smoking in their buildings and clinics. A smoke free work environment has been shown to improve air quality, reduce health problems associated with exposure to tobacco smoke, support and encourage cessation attempts among smokers trying to quit, and receive high levels of public support from people who spend time in the area. Furthermore, the creation of smoke free areas by health education institutions sends a clear message to educators, students, patients, and clinicians about negative impact of tobacco.

Health professions students should be trained to provide effective, accurate, and accessible advice to patients on all aspects of health. The Ukraine GHPSS data show that over 67% of students recognize that they are role models in society. Over 77% of medical students think they should receive training on counseling and treating patients to quit using tobacco. However, only 24.8% of medical students have received formal training.

The Ukraine GHPSS surveyed 3rd year students, so it is possible that students receive training on patient cessation techniques during the latter years of their programs. To address this possibility, the GHPSS research coordinators raised this question to the school administrators and found that, in the majority of the countries, there is no formal training at any time. Of the countries with some training, the type of training included: problem-based learning, included in generic counseling curricula; or included in curricula as part of community medicine or public health courses.

This study did not make an effort to evaluate the adequacy of cessation training in the countries reporting this type of instruction. However, professional training for health professions students should include courses detailing the harmful health effects of tobacco use and exposure to secondhand smoke, and training in counseling on tobacco cessation techniques. Curricula should include a course or supplements to existing courses specifically relevant to tobacco issues. The results of this GHPSS are critical for gauging progress toward WHO FCTC and MPOWER implementation and uptake.

16 U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. Implementing a Tobacco-Free Campus Initiative in Your Workplace. Available at www.cdc.gov/nccdphp/dnpa/hwi/toolkits/tobacco/index.htm
Ukraine’s participation in GHPSS addresses the first element of MPOWER (Monitor tobacco use and prevention policies). And GHPSS asks students a range of questions that spans many of the remaining elements of MPOWER. The resulting data are critical for gauging Ukraine’s progress toward fully implementing the elements of MPOWER among its youth. The information provided by GHPSS can address several provisions of the FCTC that relate to the role of school personnel and the comprehensive school tobacco control policy.

Some of the key MPOWER elements include:

A) Protect people from tobacco smoke

The GHPSS data show that 47.8% of medical students were exposed to second-hand smoke at home in the past week and 74.6% were exposed to second-hand smoke in public places in the past week.

B) Offer help to quit tobacco use

Results from GHPSS show that health professions students who currently smoke are interested in quitting. Of students who currently smoke:
- 33.1% are current cigarette smokers who want to quit smoking cigarettes now
- 68.3% are current Users of Other Tobacco Products who want to quit using other tobacco products now

C) Warn about the dangers of tobacco

The GHPSS showed that 67.1% of medical students believed that health professionals serve as role models for their patients and the public and 77.7% believed that health professionals should get specific training on cessation techniques. Despite this fact, only 24.8% learned cessation approaches to use with patients.

GHPSS methodology provides an excellent framework for monitoring and guiding the implementation of school tobacco control programs while making it compliant with the requirements of FCTC.

The results of this survey will be disseminated broadly and, ideally, used to adopt and implement effective legislative measures for preventing and reducing tobacco consumption, nicotine addiction, and exposure to tobacco smoke.

**Proposed Interventions/Further Studies**

1) The health professions GHPSS is helpful in evaluating the behavior and attitudes regarding tobacco among health professions students, but additional research is necessary to improve the evidence base for effective tobacco-related curricula, especially materials that are appropriate for a range of cultural and economic settings.

2) Assess and share the content of tobacco control components within the formal training curricula and continuing education courses for health professions students

3) Further research should be carried out to assess the impact of existing tobacco control-related materials and training provided in health professions schools in a variety of cultural and economic environments.

4) Utilize research above to form a compendium of “best practices” of patient counseling for training health professions students relevant to countries with a broad spectrum of health resources and infrastructures.

**Recommendations**

1) Educational institutions, public health organizations, and education officials should discourage tobacco use among health professions students and work together to design and implement programs that train health professions students in effective cessation-counseling techniques.

2) To substantially reduce the use of tobacco products, resources should be invested in improving the quality of education of health professions students with respect to tobacco control.

3) Training materials, curriculum, and evidence-based programs need to be developed, implemented, and evaluated in all schools for health professionals.

4) Smoking bans should be instituted on all health professions schools campuses

**Acknowledgement**

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REFERENCES

5. Kills when used as prescribed – tobacco industry successfully targets girls with new marketing tactics / Information for the media, WHO ER. Copenhagen. Denmark 30 May 2012.