

Tobacco use among pharmacy students: An international survey

SIMON BELL¹, SATU SIISKONEN², & MARLOES TEN BRINK³

¹*International Pharmaceutical Students' Federation, The Hague 2517, JP, The Netherlands*, ²*International Pharmaceutical Federation, The Hague 2517, JP, The Netherlands*, and ³*University Centre for Pharmacy, University of Groningen 9713, AW, The Netherlands*

Abstract

The patterns of tobacco use among health professionals, and students studying to become health professionals, are an area of ongoing research interest. Pharmacy students who attended the 50th International Pharmaceutical Students' Federation World Congress were surveyed about their tobacco use, the policies of the students' associations they represented, and training they receive to provide advice about smoking cessation. One 147 out of 210 students from 30 countries completed the survey. About 16% reported past or present tobacco use, 10% that their local students' association had a policy that all social events are tobacco-free and 49% that their pharmacy course included material related to smoking cessation. Tobacco use among the pharmacy students was lower than literature reports of smoking rates among other groups of health professionals. However, pharmacy students' associations could be more proactive toward holding tobacco-free social events and in advocating for undergraduate education to include training to provide smoking cessation services.

Keywords: *Pharmacy students, IPSF, tobacco, smoking cessation*

Introduction

Half of all long-term smokers will die from tobacco related diseases, by 2030 tobacco is expected to be implicated in the deaths of more than 10 million people per year (World Bank 1999). In high income countries, eight out of ten smokers begin in their teens, with most smokers in low and middle income countries starting in their early twenties (World Bank 1999). Many new smokers underestimate the risk of becoming addicted, and smoking cessation in low and middle-income countries is rare (World Bank 1999).

The role of health professionals in promoting a tobacco-free future is the focus of the World No Tobacco Day in 2005 (WHO 2005a). The tobacco use habits of health professionals and students studying to become health professionals are an area of recent research interest (WHO 2005b). It has been suggested that high rates of smoking among health professional groups may undermine the success of population based anti-tobacco campaigns (Davis 1993). Smoking

rates among Albanian medical students are as high as 44%, compared with 39% in the general population, and it has been estimated that 20% of Saudi Arabian medical doctors smoke, compared with 13% of the general population (WHO 2004a). A study on tobacco use by pharmacists in 12 European Union countries, conducted by the EuroPharm Forum, indicated that smoking rates of pharmacists were less than the smoking rates of the corresponding general populations (EuroPharm Forum 2001). The overall prevalence of tobacco use among pharmacists was reported to be 12%, ranging from 7 (women in Finland) to 24% (men in Austria).

Providing smoking cessation services has become an integral part of community pharmacy practice in many countries. Community pharmacists are frequently consulted for advice about smoking cessation, particularly in relation to the optimum use nicotine replacement therapy (EuroPharm Forum 2001). In addition to the provision of verbal and written

Correspondence: Simon Bell, Faculty of Pharmacy, The University of Sydney, Pharmacy Building A15 2006, NSW, Australia. Tel: +61 2 9036-7081. Fax: +61 2 9351-4391. E-mail: Simon@pharm.usyd.edu.au

information, some pharmacists have organised group sessions for people aiming to quit using tobacco products (EuroPharm Forum 2001).

Both national and international pharmaceutical associations have an important role in encouraging their members to promote smoking cessation. The EuroPharm Forum established a Smoking Cessation Task Force in 1993 to promote the role of community pharmacists in providing advice about smoking cessation. Examples of national pharmacy smoking cessation initiatives have been recorded by the EuroPharm Forum, Western Pacific Pharmaceutical Forum and the International Pharmaceutical Federation (FIP) (Global Network of Pharmacists Against Tobacco 2004). Both FIP and the International Pharmaceutical Students' Federation (IPSF) have worked in collaboration with the World Health Organization (WHO) to promote the role of the pharmacist in providing advice about smoking cessation. The IPSF Tobacco Alert Campaign, which involves pharmacy students in providing education to high school students, has been successfully held each year since 1998 (International Pharmaceutical Students' Federation 1998). In 2001, IPSF launched the *Smoke Free Pharmacy Schools Initiative* in collaboration with WHO, and in the same year declared all IPSF events tobacco-free. At the World Conference on Tobacco and Health in Helsinki in 2003, FIP and the EuroPharm Forum launched the *Global Network of Pharmacists Against Tobacco*. The network is a forum where the exchange of research, sharing of ideas and international debate can take place freely. In 2004 both FIP and IPSF adopted the *WHO Code of Practice on Tobacco Control for Health Professional Organisations* (WHO 2004b), and began to encourage constituent member associations to do the same.

Despite international initiatives such as those described above, previous surveys to gauge the smoking habits of health professionals have generally been restricted to one or two health facilities or geographical locations. Little is known about tobacco use habits of pharmacy students, or the education they receive to provide counselling about smoking cessation. Likewise, it is not known how many faculties of pharmacy and pharmacy students' associations have tobacco-free policies at their premises and events. The objective of this study was to investigate international tobacco use patterns of pharmacy students and the training they receive during their undergraduate pharmacy course to provide consumer education about smoking cessation.

Materials and methods

Design of the survey

The 15-item tobacco use survey was adapted from a survey developed in 1998 for use with the IPSF

Tobacco Alert Campaign. Survey items one to three dealt with demographic characteristics of the respondents. Items four to eight related to personal tobacco use, items nine to 12 concerned tobacco-free policies at the respondents' respective universities and events of local pharmacy students' associations, and items 13–15 covered the content of undergraduate pharmacy courses.

Recruitment

Delegates representing IPSF member pharmacy students' associations (both national and local associations from five of the six WHO regions of the world) arrived at the registration desk on the opening day of the 50th IPSF World Congress, and were asked to complete the tobacco use survey. The Congress was held in Halifax, Canada, from July 25 to August 2, 2004. The 15-item questionnaire was completed by students waiting in line to complete the congress registration process. All surveys were completed anonymously and participation in the research project was voluntary.

Data analysis

All responses were coded, entered into the Statistical Package for Social Sciences (SPSS) Version 11.5, and descriptive statistics were computed. Delegates were coded based on the WHO region, in which they studied. Chi squared tests were used to compare independent variables.

Results

Characteristics of respondents

The questionnaire was completed by 147 of 210 students on the opening day of the IPSF World Congress. The 147 respondents represented national and local pharmacy students' associations from 30 countries. About 57% ($n = 83$) of respondents came from countries classified by the World Bank as high income countries, 42% ($n = 61$) from middle-income countries and 1% ($n = 2$) were from low income countries. About 45% ($n = 66$) of respondents studied in the European WHO region, 32% ($n = 46$) in the Western Pacific region, 8% ($n = 12$) in the Pan American region and 8% each in the South-East Asian ($n = 11$) and Eastern Mediterranean ($n = 11$) regions. There were no respondents from the African region. About 64% ($n = 94$) of students were female. About 29% ($n = 43$) were aged less than 21 years, 52% ($n = 77$) were aged 21–23 and 14% ($n = 21$) were aged 24–26. The remainder of the students were aged 27 years or older.

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Personal tobacco use habits

A total of 123 students (84%) had never used tobacco products. Of the remaining 24 students who had used tobacco products, 11 students had quit their tobacco use, six used tobacco products occasionally and seven used tobacco products everyday. Overall, 9% of pharmacy student respondents were current users of tobacco products. There was a statistically significantly higher rate ($\chi^2 = 4.46$, $DF = 1$, $p = 0.035$) of past or present tobacco use among those students studying pharmacy in Europe compared to those studying in the Western Pacific region. Due to the small numbers of students who completed the survey from the other regions it was not possible to make meaningful comparisons between other WHO regions.

Of the 24 students who indicated that they use or had used tobacco products, the mean age that they commenced using tobacco products was 17 years. About 13 students indicated that they started 'because they just wanted to try it', eight students due to peer or social pressure and one student because they enjoyed the taste of tobacco products. About 14 of the students indicated that they smoke or smoked fewer than five cigarettes per day. No students indicated that they smoke or smoked more than 20 cigarettes per day. Out of the students who indicated that they currently use tobacco products, seven were ready to quit either immediately or within the next six months.

Tobacco use at pharmacy students' associations events

The majority of pharmacy students (87%, $n = 124$) were very or somewhat bothered by other people's cigarette smoke. About 51 out of 63 students from Europe (81%) were very or somewhat bothered by other people's cigarette smoke, compared with 42 out of 45 students (93%) from the Western Pacific region. This difference between the regions failed to reach statistical significance ($\chi^2 = 3.36$, $DF = 1$, $p = 0.067$). A total of 65% ($n = 91$) of respondents indicated that they believed tobacco control regulations at their university were not strict enough. Despite a higher rate of tobacco use in Europe compared with the Western Pacific Region, 38 of 63 students (60%) from Europe indicated that tobacco use regulations were not strict enough, compared with 32 out of 45 students (71%) from the Western Pacific region. This difference, however, was not statistically significant.

About 10% ($n = 15$) of respondents indicated that their local pharmacy students' association had a policy that all social events were smoke-free. A total of 38% ($n = 54$) of students reported having some smoking control policies at social events; with 35 (24%) indicating that they have smoke free areas at social events and 29 (20%) that some social events are smoke-free. About 52% ($n = 75$) of respondents

indicated that their local pharmacy students' association had no policy to limit smoking at social events. Of these 52% of students, 32 out of 75 (43%) responded that smoking in all public buildings was forbidden, 24 out of 75 (32%) students said that there are areas for smokers in public buildings, 28 out of 75 (37%) that there are smoke-free areas in public buildings and 16 out of 75 (31%) that there are no regulations to limit smoking in their environment (e.g. their university).

Pharmacy curricula

A total of 49% ($n = 71$) of students reported that their pharmacy curriculum included training to provide advice about smoking cessation. Only 20 out of 65 students (31%) from Europe indicated that their curriculum included material related to providing advice about smoking cessation compared to 31 out of 46 students (67%) from the Western Pacific region. This difference was statistically significant ($\chi^2 = 14.54$, $DF = 1$, $p < 0.001$). About 40% ($n = 57$) of students indicated that studying pharmacy had changed their opinions about tobacco use. Four students reported that studying pharmacy had caused them to quit using tobacco products, and seven students that studying pharmacy had caused them to reduce their tobacco use and/or provided the motivation to quit using tobacco products.

Discussion

Students participating in the congress came from a wide variety of countries and geographic locations. Students who completed the questionnaire came from five of the six WHO regions of the world. There was a similar rate of smoking among European pharmacy students and European pharmacists surveyed by the EuroPharm Forum (EuroPharm Forum 2001). It is unclear whether pharmacy students who smoke would be less likely to offer smoking cessation advice to fellow smokers than their non-smoking colleagues. Encouragingly, the overall rate of smoking among pharmacy students was less than in other samples of students and health professionals reported in the literature (WHO 2004a). Despite widespread promotion of the associated health risks by European governments, the higher rate of tobacco use among European pharmacy students than their colleagues from the Western Pacific region suggests that pharmacy students' associations may need to develop new and innovative ways to undertake anti-tobacco campaigns. Such initiatives may include generating greater public awareness about the role of community pharmacists in providing advice about smoking cessation.

The high rate of students who were very or somewhat bothered by cigarette smoke suggests that

moves by pharmacy students' associations to declare all their social events tobacco-free would be supported by the majority of students in those associations. Although IPSF took this important step in 2001 and FIP in 2004, only 10% of respondents indicated that their pharmacy students' association had a similar policy in place. Many pharmacy students' events are held indoors in public buildings, and 43% of respondents who reported their students' association had no policy to limit smoking also indicated that smoking was prohibited in all public buildings. Nevertheless, given that peer and social pressure is often cited as an important factor in students commencing smoking, pharmacy students' associations have an important leadership role to play in encouraging their members not to use tobacco products. This is particularly important considering that the majority of smokers begin as teenagers or in their early twenties (World Bank 1999). Declaring premises and events tobacco-free is an important aspect of the *WHO Code of Practice on Tobacco Control for Health Professional Organisations* (WHO 2004b).

The code also calls on associations to prohibit members from selling tobacco products on their premises, to refrain from accepting any form of financial support from the sale of tobacco products, and to actively participate in World No Tobacco Day on May 31 each year. Pharmacy students in those countries where tobacco products are still available in community pharmacies also have an important advocacy role in ending this unacceptable practice.

Pharmacists are frequently called upon to provide advice about smoking cessation, but only 49% of students (and just 31% of students from Europe) reported receiving training to provide smoking cessation advice as part of their undergraduate pharmacy course. Although the survey did not examine whether pharmacists in each country receive postgraduate or continuing professional education to provide such advice, the results do suggest that the content of undergraduate pharmacy curricula may need to be revised to reflect this important role. In many countries pharmacy students' associations have been strong advocates for good pharmacy education. Pharmacy students' associations are strategically placed to campaign for more material related to providing smoking cessation services to be included in undergraduate pharmacy courses.

Limitations

The student respondents were not evenly distributed across the world. Participants representing pharmacy students' associations in the European and Western Pacific WHO regions were over-represented in the sample when compared to their colleagues from the Pan American, Eastern Mediterranean and South East Asian WHO regions. Each WHO region consists

of a diverse range of countries, and pharmacists from each country perform a wide spectrum of professional activities. Representatives of the national pharmacy students' associations surveyed may not have been representative of all pharmacy students in their respective countries. As representatives of pharmacy students' associations, respondents were likely to be in the later stages of their undergraduate course, but this information was not collected as part of the tobacco survey. In several cases there were multiple respondents from the same local pharmacy students' association. It is possible that surveying students who voluntarily attended an international conference biased the sample in favour of students with a strong interest in professional issues. It is unknown whether this dimension would impact tobacco use.

It is also possible that even though the surveys were completed anonymously, smokers may have been uncomfortable and therefore less likely to complete the survey than non-smokers. In addition, IPSF operated a development fund scheme to assist people from developing countries in attending the congress, but the high cost of international travel and the difficulty of obtaining travel visas to enter North America meant that the study sample contained predominately students from high and middle-income countries. The above limitations restrict the generalisability of the survey results to other groups of pharmacy students and pharmacy students' associations worldwide.

Conclusions

Results of the international pharmacy students' tobacco survey are the first of their kind published. Notwithstanding the limitations described above, the survey provided a valuable insight into the tobacco use habits of students studying pharmacy in the European and Western Pacific WHO regions. Smoking rates among European pharmacy students and European pharmacists were similar. Results of the survey suggested that pharmacy students' associations could be more proactive in declaring social events tobacco-free. The content of many undergraduate pharmacy courses may need to be revised to reflect the important role of community pharmacists in providing smoking cessation advice.

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