

KATARZYNA WÓJTOWICZ-CHOMICZ², ANNA CZECZUK²,
ELŻBIETA HUK-WIELICZUK², ANDRZEJ BORZĘCKI¹

The attitude of the students of the Academy of Physical Education to smoking habits

Abstract

Introduction. Poland is among the top ten countries of the European Union displaying the highest intensity of smoking.

Aim. To evaluate the frequency and intensity of smoking, the strength of nicotine addiction and the motivation to discontinue smoking, among students of the Academy of Physical Education.

Material and methods. First, a survey involving an anonymous questionnaire (which included both the Fageström and Schneider tests), was conducted within a population of 276 students. Next, this was analyzed statistically using the Statistica 7.1 program.

Results. The initial results of this research showed that 29,71% of all respondents smoke cigarettes. Moreover, the applied Fageström test revealed that the test population was either: slightly addicted (44,72% of all respondents), moderately addicted (34,84% of all respondents), or heavily addicted (17,44%).

Conclusions. The prevalence of smoking among students of the Academy of Physical Education remains alarming. Furthermore, the negative health behaviors contribute to an adverse overview of the health of the questioned students.

Keywords: nicotine smoking, students, Fageström test, Schneider test.

DOI: 10.1515/pjph-2015-0009

INTRODUCTION

Lifestyle is closely related to health and has significant positive or negative influences on it. Cigarette smoking is one of the many lifestyle elements which negatively influence health. With regard to this, Nicotine addiction affects all kinds of social groups – including students. Smoking is often considered by students as being a sign of maturity, hence, smoking improves their self-esteem, and a significant number of smokers begin smoking regularly in high-school. Nicotine addiction is brought about by both behavioral and pharmacological factors. Behavioral addiction depends on a combination of psychological, environmental and social factors. With regard to these elements, social acceptance promotes cigarette smoking. Pharmacological addiction is related to the necessity of maintaining an adequate level of cotinine in the blood serum, as well as to the avoidance of the symptoms of discontinuation. The mean concentration of cotinine in the blood serum of individuals addicted to smoking is 300 ng/ml, whereas among the non-addicted (including those who smoke not more than 5 cigarettes per day and who are able to give up smoking without noticing its abstinence symptoms), the mean concentration of cotinine is 50-70 ng/ml. Therefore, an average concentration of 50-70 ng/ml is considered as being the limiting level of cotinine which imposes physical addiction [1].

The number of elements which enter along with cigarette smoke into the human body depends on the quantity of cigarettes smoked. A commonly used quantification of cigarette smoking is a pack-year. This figure is calculated by multiplying the number of packs of cigarettes smoked per day by the number of years the person has smoked. Cigarette addiction is known as a chronic, recurrent disease and is listed in the International Classification of Diseases [2].

In the developed world, tobacco smoking is listed as being the major contributing factor in the deaths of 24% of all males and 7% of all females. Furthermore, actuary statistics have revealed that chain smokers (those severely or heavily addicted) live approximately 8 years less than do non-smokers. Indeed, smoking is presently recognized as the most serious public health problem in Europe. In Poland, 39% of all men and 23% of all women over the age of 18, smoke every day [3]. Moreover, 10 million Poles smoke regularly 15 to 20 cigarettes per day. Of this group, 5 million have been smoking for more than 20 years [4].

Inhalation of tobacco smoke significantly contributes to the growth of epidemic diseases related to nicotine, and it is the leading contributor to premature death inside the European population [5]. Addiction to nicotine commonly leads to cancer, to diseases of cardiovascular system and to chronic obstructive pulmonary diseases. Furthermore, numerous studies have indicated that smoking is one of key modifiable

¹ Chair and Department of Hygiene, Medical University in Lublin, Poland

² Department of Health Promotion, Faculty of Physical Education and Sport in Biała Podlaska, Józef Piłsudski University of Physical Education in Warsaw, 00-968 Warsaw, Poland

risk factors of cardiovascular diseases. Research strongly indicates that giving up cigarette inhalation positively influences smokers' health at every stage of their life, as doing so reduces the risk of being afflicted by tobacco-related diseases.

The assessment of degree of nicotine addiction is broken down into several categories. WHO classifies this as being of one of four levels. The first group is inclusive of smokers who smoke at least 1 cigarette a day, and have been doing so for at least 6 months. The second group includes those who smoke less than 1 cigarette per day or have been doing so for less than 6 months. The third group consists of those who used to be daily smokers in the past, but do not smoke anymore. The fourth group includes non-smokers (individuals who have never smoked), as well as those who has smoked less than 100 cigarettes throughout their lives, or have only smoked occasionally in the past [6]. Unfortunately, nowadays, more often, smoking has become part of a student's lifestyle, regardless of field of studies [7,8]. Therefore, this study was undertaken in an attempt to evaluate the prevalence of smoking habits among students of Physical Education, hence, among individuals who are primarily considered to be promoting healthy lifestyles.

AIM

To evaluate the smoking prevalence among students of Physical Education, and to assess their degree of addiction, as well as their degree of motivation to stop smoking.

MATERIAL AND METHODS

The study was conducted among 276 first year students (including 206 men and 70 women). Respondents filled-in an anonymous questionnaire regarding their degree of nicotine addiction as measured by the Fageström test. A 10-point questionnaire was employed. This included the following scale: low addiction to nicotine was determined when scoring <5 points, average addiction was assessed as being between 5-6 points (inclusive) and a high level of addiction was determined if the point assessment was >7. The second part of the survey included a test of the motivation towards ceasing a smoking addiction (the Schneider test). In this, the test population is classified as falling within two groups. The first group, recognized as those who are motivated towards ending their smoking addiction, included participants who scored 8 points and more, whereas the second group, seen as those without motivation to cease their addiction, included participants with less than 8 points, respectively. The questionnaire was completed in the presence of one of the authors of the study. The final statistical analysis was made by way of the STATISTICA 7.1 program, and by assuming a level of significance of $p < 0.05$.

RESULTS

The study was conducted among 276 first-year students of the Faculty of Physical Education in Biała Podlaska. Of the study population, 25.36% were women and 74.63% were men. The conducted analysis revealed that 29.71% of all

respondents are currently regular smokers, whereas 18.11% smoke occasionally, 30.79% of all respondents had never smoked, while 21.39% used to smoke in the past, but had not been actively smoking for at least one year. What is more, a significant minority of smokers or ex-smokers (48.78% of those within this category) began smoking at the age of 16, while the other group began smoking earlier. In addition, this study shows that students who smoke, usually went through one package of cigarettes within 1-3 days (such a population made up 54.8% of the nicotine addicted group). Other smokers went through one package of cigarettes per week. The calculation of points gained in the Fageström test demonstrate that 47.72% of all students of the sample population (60.31% of all women and 39.62% of all men) belong to the group consisting of those with a low level of addiction ($p = 0.0001$). The group with a medium level of addiction included 34.84% of all the students of the sample population (56.52% of all women and 43.48% of all men) ($p = 0.00001$), while 17.44%, of the entire sample population (and which mostly consisted of men), was found to be in the group assessed as having a high level of nicotine addiction. The calculation of points gained in the Schneider test placed the sample population into one of two groups. The first group (those with the motivation to cease smoking) accounted for 79.54% of the total population (30.0% of all women and 61.91% of all men) ($p = 0.0001$), while the other group was not motivated enough to cease smoking. Here, gender did not have a statistically significant impact on motivation attitude. It should be noted that all students, including both smokers and non-smokers, believe that the smoking habit has a negative influence on health.

DISCUSSION

Nicotine addiction is nowadays ascertained to be the major risk factor for a significant number of diseases. Indeed, it is estimated that smoking soon will be a considered a contributing factor to 1/3 of all deaths world-wide [9]. WHO reports that nearly a billion men and 250 million women in the world are regular smokers. Moreover, available scientific literature emphasizes that, despite a relatively high awareness of the harmful effects of smoking on health, the percentage of smokers still remains high [10]. Studies highlight that it is not easy to quit smoking, and show that of the 25% of smokers aged between 17-18 years who wanted to cease their smoking habit, only 5% succeed [11]. Having a strong degree of motivation has been ascertained to be the most important factor in ending a smoking habit, and numerous scientific studies reported that people without this strong motivation usually return to their smoking activity, whereas those with this strong motivation to cease their habit, are able to stop smoking without additional assistance and without return to the practice. The motivation towards ceasing a tobacco addiction might origin from various factors, but, usually those coming from negative self-assessments of the effect of smoking on health and financial situation are the strongest. Presently, the motivation to end a smoking habit is influenced by changeable lifestyle and by official regulations, yet, the result of our study is alarming, as 29.71% of all respondents were found to be regular smokers, while 18.11% smoked

occasionally. The given numbers account for 47.82% of the test population. Similar results were obtained by Kowalska et al., who conducted a comparable survey among students of the Faculty of Health Science in Medical University of Lodz. This aforementioned study was conducted among all first-year students, and 62.4% of the sample population declared a regular or occasional smoking habit [12]. Our study also reveals that a large percentage of students (48.78 %) began their smoking habit in high school. Similar results were obtained by Siemińska, who conducted a survey in 2002-2003, among students of the Medical University of Gdansk. In this study, 98% of the smoking respondents stated that their addiction began before they reached their 18th birthday [13]. What is more, studies carried out by Wojtal confirm the early initiation of smoking [14]. It can be said, then, that the period of late formal education is the time of social life development in which health misbehaviors begin or are maintained, and in Poland, sadly, the number of young smokers is gradually increasing. In our analysis of nicotine addiction level, we placed respondents into three groups. The largest group was slightly addicted, and the group with the highest level of addiction was made up of mostly males. It is interesting to notice that motivation to stop smoking was similar among both women and men.

Our results indicate that it is possible that the groups consisting of slightly and moderately addicted students may break their habit. In this regard, an evaluation of motivation towards ceasing a smoking addiction is of great importance when considering prognosis. After analyzing the results from the Schneider test, we tentatively conclude that $\frac{3}{4}$ of all students who smoke, are motivated towards ending their habit. Hence, a realization of the difficulty in ending a smoking habit, the promotion of anti-smoking activities among students, as well as general positive healthy life-style promotion, should be particularly emphasized in learning institutions.

WHO has introduced the World No Tobacco Day (celebrated each May 31st) in order to promote a healthier life-style. This event, and the promotion surrounding it, is thought to create appropriate patterns of social behavior. Such anti-nicotine actions, even if difficult to stage, should be undertaken, as such events improve communal and social health. Our study, as well as studies conducted by other authors, such as Skop-Lewandowska et al. [15], reveal that nicotine addiction is, unfortunately, a serious habit among students of Poland's medical universities and faculties of physical education. A cessation of this poor health-style choice should enhance the students' health and happiness. Of note, is that the described phenomenon is very worrying, as it shows that the knowledge gained during the period of formal education is not efficient in preventing addiction to tobacco.

CONCLUSIONS

1. The prevalence of smoking habits among students of the Academy of Physical Education is a worrying phenomenon.
2. The ascertained health misbehaviors indicate an unfavorable estimation of the health-styles practiced by the sampled population.
3. The Academy of Physical Education, being responsible for the educational background of prospective teachers, should put effort into promoting nicotine abstinence among its students.

REFERENCES

1. Zatoński W. Rzuć palenie razem z nami. Warszawa: Centrum Onkologii, Instytut im. M. Skłodowskiej-Curie;1999.
2. Światowa Organizacja Zdrowia: Międzynarodowa statystyczna klasyfikacja chorób i problemów zdrowotnych: rewizja dziesiąta ICD-10. Tom I. Kraków: Uniwersyteckie Wydawnictwo Medyczne „Vesalius”; 1999.
3. Zygulska AL, Kowalczyk A. Palenie tytoniu jako problem medyczny i prawny. Wybrane zagadnienia. Zdr Publ.2008;118(3):341-7.
4. Klimberg A, Żarnowska I. Możliwości wyjścia z uzależnienia od nikotyny na przykładzie chorych z nowotworem płuc. Probl Hig Epidemiol. 2006;87:270.
5. Tonstad S, Johnston JA. Cardiovascular risks associated with smoking: a review for clinicians. Eur J Cardiovasc Prev Rehabil. 2006;13:507-14.
6. Zatoński W, Jankowski P, Banasiak W, et al. Wspólne stanowisko dotyczące rozpoznawania i leczenia zespołu uzależnienia od tytoniu u pacjentów z chorobami układu sercowo-naczyniowego. Uzupełnienie „Konsensusu dotyczącego rozpoznawania i leczenia zespołu uzależnienia od tytoniu”. Kardiologia Pol. 2011;69(1):96-100.
7. Kołłątaj W, Kołłątaj B, Karwat ID, Pieciewicz-Szczęśna H. Postawy studentów Uniwersytetu Medycznego w Lublinie wobec palenia tytoniu. Probl Hig Epidemiol. 2010;91:495-500.
8. Hędzielek M, Wnuk M, Marcinkowski JT. Jakość życia studentów eksperymentujących z narkotykami. Probl Hig Epidemiol 2009;90:415-23.
9. Gostin LO. Global regulatory strategies for tobacco control. JAMA. 2007;298:2057-9.
10. Kanicka M, Krupicka A, Krysińska M, et al. Wiedza i postawy studentów kierunku Zdrowie Publiczne Uniwersytetu Medycznego w Białymstoku dotycząca nikotynizmu. Probl Hig Epidemiol. 2010;91:164-8.
11. Boudreaux ED, Francis JL, Carmack Taylor CL, et al. Changing multiple health behaviors: Smoking and exercise. Prev Med. 2003;36:471-8.
12. Kowalska A, Rzeźnicki A, Stelmach W. Rozpowszechnienie palenia tytoniu wśród młodzieży akademickiej pierwszych lat studiów. Przegl Lek. 2009;66(10):694.
13. Siemińska A, Jansen JM, Uherek M, et al. Postawy wobec palenia tytoniu studentów pierwszego roku medycyny. Pneumonol Alergol Pol. 2006;74(4):377-82.
14. Wojtal M, Kurpas D, Sochocka L, et al. Analiza problemu palenia tytoniu wśród studentów Wydziału Lekarskiego Akademii Medycznej we Wrocławiu. Przegl Lek. 2007;64(10):795.
15. Skop-Lewandowska A, Szot W, Kolarzyk E. Ocena uzależnienia od nikotyny wśród studentów kierunków medycznych. Probl Hig Epidemiol. 2007;88:437-40.

Corresponding author

Prof. dr hab. n med. Andrzej Borzęcki
11 Radziwiłłowska Str., 20-080 Lublin
tel.: 81 528-84-02