

Tobacco Smoking Among School Personnel in Romania, Teaching Practices and Resources Regarding Tobacco Use Prevention

Sorina IRIMIE* and Ileana Maria MIRESTEAN

National Institute of Public Health – Regional Centre for public Health Cluj, Pasteur Street no. 6, 400349, Cluj-Napoca, Romania.

E-mail(s): sorina.irimie@gmail.com

*Tel.: 0040 744561842, Fax: 0040 264 599 891.

Received: 7 June 2010 / Accepted: 21 June 2010 / Published online: 30 June 2010

Abstract

The study was conducted to collect baseline information on tobacco use, knowledge and attitudes of school personnel toward tobacco, to evaluate the existence and effectiveness of tobacco control policies in schools, and to assess training and materials requirements for implementing tobacco prevention and control interventions. All schools from Romania containing 6th, 7th, and 8th grade that contained 40 or more students were included in the sampling frame. 50 schools were sampled to participate in the study. All school personnel in the selected schools were eligible to participate in the survey. The survey procedure was designed to ensure confidentiality and voluntary participation. We found that more than two thirds of school personnel had ever smoked tobacco, with men significantly outnumbering women, and more than one thirds of them are current smokers. Also, it appears that school policies regarding tobacco use are not being translated into effective measures for implementation. Despite school policies, tobacco products could still be purchased either within school premises or close by. An important aspect brought out is the need to train teachers on these issues, and the importance of providing specific teaching and learning material on related topics. Only a small proportion of teachers had ever received such training. This is an area where is a need to build infrastructure as well as put capacity building measures in place. The study conducted with the methodology provided by CDC offers comparable data at international level and, also a national start point in the process of monitoring tobacco use among school personnel.

Key words: Tobacco; School personnel; Policies.

Introduction

Tobacco use is one of the most preventable causes of death worldwide. Nowadays every tenth death among adults is attributable to tobacco use in the world [1]. The World Health Organization (WHO) appreciates that tobacco use is becoming the main preventable cause of morbidity and mortality in the world. There are 1.1 billion smokers in the world today, and if things continue as they are, that number is expected to increase to 1.6 billion by the year 2030 [2].

The European Region of WHO, with only 15% of world's population, faces nearly one third of the worldwide burden of tobacco-correlated diseases. While it has fallen from 45% to 30% over

past 30 years and has currently stabilized, smoking prevalence in the European Region still remains at a level that is devastating for public health and future generations [3].

Most people begin using tobacco in their adolescence, and a recent trend indicates an increase in smoking prevalence rates among adolescents and also earlier age of initiation. If this pattern continues, tobacco will be the cause of death for 250 million children and adolescents alive today, many of them in developing countries. Because of the increasing level of use and the dire public health implications, tobacco use among young people has been referred to as both a “pediatric disease” and a “pediatric epidemic” [4]. The harmful effect of environmental smoke, passive smoking, is also well-known [5, 6]. Tobacco contains about 4000 chemicals, and many more toxic chemicals are produced when it is burning, including at least 250 chemicals recognized as toxic or carcinogenic [7].

Tobacco not only impoverishes those who use it, it puts on enormous financial burden on countries. The costs of tobacco use at the national level encompass increased health-care costs, lost productivity due to illness and early death, foreign exchange losses, and environmental damage.

International efforts led by WHO resulted in rapid entry into force of the WHO Framework Convention on Tobacco Control (WHO FCTC) which has 168 signatories and more than 150 Parties [8]. Romania signed the Framework Convention on Tobacco Control in 2004.

Parties to the WHO FCTC have committed themselves to protecting the health of their populations by joining the fight against the tobacco epidemic.

The Global School Personnel Survey (GSPS) was initiated in 2000 by WHO and CDC to collect baseline information on tobacco use, knowledge and attitudes of school personnel toward tobacco, to evaluate the existence and effectiveness of tobacco control policies in schools, and to assess training and materials requirements for implementing tobacco prevention and control interventions.

Aim

The present study was conducted in the frame of Global School Personnel Survey (GSPS) to collect baseline information on tobacco use, knowledge and attitudes of school personnel toward tobacco, to evaluate the existence and effectiveness of tobacco control policies in schools, to assess training and materials requirements for implementing tobacco prevention and control interventions, and to obtain comparable data at international level, as well as a starting point in monitoring tobacco use among teachers.

Material and Method

Sample description

All schools from Romania containing 6th, 7th, and 8th grade that contained 40 or more students (schools sampled for the Global Youths Tobacco Survey Study) were included in the sampling frame. The sampling was conducted by CDC, USA. Schools were selected with probability proportional to school enrollment size. 50 schools were sampled to participate in the study. All school personnel (including non-teaching staff) in the selected schools were eligible to participate in the survey. The survey procedure was designed to ensure confidentiality and voluntary participation. Confidential self-administered questionnaires were used. The answer sheet did not contain any information on the identity of respondent or school.

Questionnaire

The GSPS (Global School Personnel Survey) questionnaire included 45 core questions, covering five categories: prevalence, knowledge and attitudes regarding tobacco, school policy, school curriculum and, demographics. Each item was a multiple-choice question with a single possible answer. There was no skip or branching pattern for any question. It was a self-administered questionnaire and all questions were required to be answered.

Survey Administration

School personnel were explained the purpose of the study and received instructions on how to respond to the questionnaire. They completed the self-administered questionnaire during the break hours, recording their responses directly on a sheet, which could subsequently be optically scanned.

Overall Response Rate: 96% (48 of the 50) sampled schools participated.

Data analysis

Data were collected separately for each school, and all completed questionnaires were sent to CDC. SUDDAN, a software package for statistical analysis of correlated data, was used to compute standard errors for the point estimates and produce 95% confidence intervals (9). Differences in proportions were considered statistically significant at the $p < 0.05$ level assessed by non-overlapping confidence intervals.

Results

A total of 474 school personnel from 48 schools selected for the GYTS study participated in the survey. The majority of respondents was female, and aged 30-49 years (Table 1).

Table 1. Study sample

GROUP AGE (year old)	FEMALE (%)	MALE (%)
≤ 24	4.3 (2.1-8.5)	3.9 (1.4-10.4)
25-29	17.6 (11.4-26.3)	17.0 (7.9-32.8)
30-39	34.0 (28.8-39.6)	22.2 (14.0-33.5)
40-49	22.6 (18.0-28.0)	20.5 (12.4-31.9)
50-59	18.8 (12.5-27.4)	23.5 (13.7-37.1)
≥ 60	*	12.8 (5.9-25.5)

* indicates less than 10 respondents in cell, () 95% CI

93.9% of respondents were teachers in their respective schools, 6.1% were headmasters.

Among those surveyed, over two thirds admitted having ever used tobacco; the figures were significantly higher among men as compared to women (Table 2). In addition, around a quarter admitted having ever used tobacco on the school premises (Table 2). More than a third of respondents were current smokers at time of survey, with more men than women smoking cigarettes, but the differences were not statistically significant. A very small percentage of respondents, only men, reported using other tobacco products than cigarettes (Table 2).

Table 2. Tobacco smoking among school personnel

Category	Ever Smoked Cigarettes (ESMOKER)	Current Use (CSMOKER)	Using tobacco other than cigarettes (OTOB)	Ever used tobacco on school premises
TOTAL	68.0 (62.8-72.7)	35.0 (29.9-40.4)	2.2 (1.1-4.5)	25.3 (19.2-32.6)
FEMALE	61.9 (55.5-67.9)	31.3 (25.5-37.8)	0	23.0 (16.4-31.2)
MALE	84.9 (77.6-90.1)	45.0 (37.7-52.5)	8.4 (4.3-16.0)	31.7 (22.1-43.2)

Table 3. School policies and programs

School policies regarding tobacco use	% (CI 95%)
School had a policy specifically prohibiting tobacco use among students	96.6 (94.0-98.1)
School had a policy specifically prohibiting tobacco use among school personnel	70.4 (60.5-78.8)
School has non-classroom activities to teach tobacco use prevention	46.4 (36.1-57.0)

Table 4. Availability of tobacco products

Availability	% (CI 95%)
Cigarettes or tobacco products can be purchased inside school premises	9.0 (5.9-13.5)
Cigarettes or tobacco products can be purchased within 100 meters outside school premises	55.7 (46.5-64.5)

Although majority of school personnel surveyed (96.6%) reported that their school has a policy specifically prohibiting use of tobacco among students as well as school personnel, less than half (46.5%) confirmed that specific non-classroom activities were conducted to teach tobacco use prevention to students (Table 3).

Few respondents (9.0%) affirmed that despite school policies, tobacco products could be purchased inside school premises. It is worrying that more than a half (55.7%) reported that tobacco products can be purchased within 100 meters outside school premises.

Less than a half (45.6%) of those surveyed were highly concerned regarding tobacco use among youth. A large majority think that smoking in public places, as well as advertising of tobacco products, should be completely banned (Table 5). Over three quarters of respondents also think that tobacco use by students is highly influenced by their teachers' tobacco use (Table 5).

Almost all respondents (Table 6) understood that tobacco use is addictive and were aware of its harmful effects on people's health.

Table 5. Opinions of school personnel on tobacco related issues (%)

	Total	Female	Male
Highly concerned about tobacco use among students	45.6 (39.8-51.5)	46.4 (38.3-54.8)	43.3 (33.1-54.0)
Think that cigarette smoking should be banned in public places	84.6 (80.2-88.4)	84.1 (78.0-88.7)	86.7 (80.0-91.3)
Think tobacco companies deliberately advertise and promote smoking to youth	71.0 (63.4-77.6)	71.4 (62.4-79.0)	69.9 (58.8-79.0)
Think that advertising of tobacco products should be completely banned	82.8 (78.0-86.6)	82.0 (76.2-86.7)	84.9 (77.5-90.1)
Think teacher tobacco use influences youth tobacco use	75.1 (69.0-80.3)	73.2 (65.4-79.7)	80.5 (71.2-87.3)
Think the price of tobacco products should be increased	69.5 (60.9-76.9)	71.4 (61.3-79.7)	64.2 (53.0-74.0)

Table 6. Knowledge of school personnel regarding tobacco use effects (%)

Knowledge regarding tobacco use effects	% (CI 95%)
Think that smoke from other people's cigarettes is harmful	93.5 (90.4-95.7)
Think tobacco use is addictive	90.5 (86.2-93.5)
Think tobacco use can cause lung cancer	93.1 (88.0-96.1)
Think tobacco use can cause heart disease	94.2 (90.7-96.4)

Table 7. Teaching practices and resources regarding tobacco use prevention

Teaching practices	% (CI 95%)
Percent of school which include tobacco use prevention in school curricula	59.7 (53.8-65.4)
Ever advised their students to stop using tobacco	65.6 (58.2-72.3)
Have access to teaching materials about tobacco use and its prevention use among youth	76.6 (66.7-84.2)
Think school personnel need specific training to be able to teach students to avoid or stop using tobacco	42.2 (36.4-48.1)
Have ever received training to prevent tobacco use among youth	25.3 (19.5-32.2)

Almost two thirds (59.7%) of the school personnel surveyed reported that tobacco prevention was a component of their teaching curriculum at school, and 65.6% had advised their students to

stop using tobacco (Table 7). Less than a half of teachers (42.2%) think they need specific training to teach students how to avoid or stop using tobacco, and only a quarter (25.3%) has actually received such training (Table 7). Also, around a quarter of teachers reported that they had ever received training to prevent tobacco use among youth (Table 7).

Discussion

Smoking continues to remain a major cause of morbidity and mortality from respiratory disorders, as well as several other diseases including cancer. It also leads to considerable economic burdens resulting from expenditures on health care. The burden of tobacco associated diseases such as the chronic obstructive pulmonary diseases (COPD) in Romania is as serious as in several other countries. The concerns of physicians regarding tobacco smoking have greatly expanded in the last two decades. Similarly, exposure to smoking from others (i.e. passive smoking) has also been recognized as an important health hazard. The majority of tobacco users initiate consumption in their teens. The risks of tobacco use are also highest among those who start smoking early and continue for prolonged periods. It is therefore important that successful prevention efforts are implemented in order to reduce the long-term global burden of tobacco-related diseases.

Teachers represent an important target population for tobacco control efforts, because they are role models for students, conveyors of tobacco prevention curricula, and key opinion leaders in relation to school tobacco control policies. The Report *The Status of Population Health in Romania* (2000) from the National Institute of Statistics (10) shows that 47.5% of current smokers initiated smoking during school ages. Unfortunately we found that more than two thirds of school personnel have ever smoked tobacco, with men significantly outnumbering women, and more than one third of them are current smokers. More importantly, over a quarter of respondents reported they smoked on school premises in spite of school policies prohibiting it. This is likely to have an impact on school students, who are likely to initiate the habit of tobacco consumption after seeing their role models indulge in the habit at school. However, it appears that school policies regarding tobacco use are not being translated into effective measures for implementation. For instance, less than a half of all school personnel surveyed were really concerned about tobacco use among youth, and reported use of non-classroom activities to impart tobacco-related knowledge to students. Moreover, despite school policies, tobacco products could still be purchased either within school premises or close by. These findings suggest the need for additional administrative input into programs aiming to improve school curricula on tobacco-related issues, as well as active tobacco control measures in and around schools.

Since school personnel need to actively interact with students while teaching them the adverse consequences of tobacco use, lack of adequate knowledge could prove to be an important impediment in the process, even if only a few among all teachers were poorly informed. An important aspect brought out by these figures is the need to train teachers on these issues, and the importance of providing specific teaching and learning material on related topics. Unfortunately, only a small proportion of teachers had ever received such training. This is another area where there is a need to build infrastructure as well as put capacity building measures in place.

Conclusions

The study provides baseline information on tobacco use, knowledge and attitudes of school personnel toward tobacco, and also data about the school policies regarding tobacco use in the surveyed school, that are considered representative at national level. The study conducted with the methodology provided by CDC and WHO offers comparable data at international level and, also a national point of reference in the process of monitoring tobacco use among school personnel.

Conflict of Interest

The authors declare that they have no conflict of interest.

Acknowledgements

This survey was supported technically by the World Health Organization-Tobacco Free Initiative and the Centre for Disease Control. The Romanian Ministry of Health and Ministry of Education and Research offered their support to carry out this study. We would like to thank Dr. Charles W. Warren (Distinguished Fellow Statistician, CDC – Office on Smoking and Health) for his professional hard work during the study and analysis and for the great help he provided as for the completion of this final report. We also thank Ms Yulia Kadirova (Technical Officer, tobacco Free Initiative – WHO regional Office for Europe) and Dr. Haik Nikogosian (Regional Adviser, WHO regional Office for Europe) for their help in the organization and implementation of this survey and the completion of the present report. We thank also to Mr. Brandon O'Hara, Ms. Juliette Lee, Ms. Lea Veronica (epidemiologists US Centre for Diseases Control and Prevention) and all the colleagues in the CDC and WHO for their help. Last but not least we thank to the Romanian Ministry of Education and Research and to all the principals from the schools involved in this survey for their support.

References

1. Curbing the Epidemic. Governments and the Economics of Tobacco Control. World Bank Publication, Washington DC, 1999.
2. Mathers CD, Loncar D. Projection of global Mortality and burden of disease from 2002 to 2030. *PLoS Medicine* 2006;3(11):e442.
3. European Strategy for Tobacco Control. [online] 2002 [Accessed May, 2010]. WHO, regional Office for Europe: Copenhagen. Available from: URL: http://www.euro.who.int/__data/assets/pdf_file/0016/68101/E77976.pdf.
4. The Health Consequences of Smoking. A Report of the Surgeon General. [online] 2004 [Accessed May, 2010] Atlanta, GA, United States Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Disease Prevention and Promotion, Office of Smoking and Health, 2004. Available from: URL: <http://www.surgeongeneral.gov/library/smokingconsequences/>.
5. United States Environmental protection Agency, Office of Research and Development, Office of Air and Radiation. [online] 1992 [Accessed May, 2010]. Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders. Available from: URL: <http://www.exposurescience.org/respiratory-health-effects-of-passive-smoking-lung-cancer-and-other-disorders>.
6. Gonzales AC. Passive smoking. *BMJ* 2003;326:1094.
7. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Tobacco smoke and involuntary smoking. *IARC Monogr Eval Carcinog Risks Hum.* 2004;83:1-1438.
8. WHO Framework Convention on Tobacco Control. [online] WHO 2003, updated reprint 2004, 2005 [Accessed May, 2010], Geneva, Switzerland. Available from: URL: http://whqlibdoc.who.int/hq/2003/WHO_NCD_TFI_99.8_Rev.7.pdf.
9. Shah BV, Barnwell BG, Bieler GS. Software for the Statistical Analysis of Correlated Data (SUDDAN): User's Manual, Release 7.5 Research Triangle Institute, Research triangle Park, NC.
10. National Institute of Statistics. [online][Accessed September, 2009]. Available from: URL: www.insse.ro.