

GYTS Country Report

Slovakia, 2007

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Introduction

Smoking is the most important cause of premature death and loss of health in developed countries. In countries, where smoking has been common, smoking is estimated to cause over 90% of lung cancer in men and about 70% of lung cancer among women. In addition, in these countries, the attributable fractions are 56-80% for chronic respiratory diseases and 22% for cardiovascular disease. Worldwide, it is estimated that tobacco causes almost 9% of all deaths (WHO Report on the Global Tobacco Epidemic, 2008). In European region one half of all people who regularly smoke die from tobacco-related diseases, half in middle age and half in old age. Situation in Central and Eastern Europe countries is particularly urgent. Middle-aged men here are in two times higher risk of death from tobacco-related disease than men in Western Europe. Currently more than 5 million of people die annually from tobacco induced diseases in the World and it is predicted that, unless effective measures are implemented, tobacco products will be responsible for 8 millions of deaths each year by 2030 globally (WHO Report on the Global Tobacco Epidemic, 2008, European Strategy for Tobacco Control, 2002).

Besides cigarette smoking, also other forms of tobacco significantly contribute on mortality and premature loss of health. According to available information, these forms become more and more familiar also in European region, representing potential public health problem (WHO Report on the Global Tobacco Epidemic, 2008).

However, negative impact of passive smoking should be kept into account, too. It is estimated, that in Europe annually die due to environmental tobacco smoke approximately 79,000 non smokers (Lifting the smokescreen, 2006). Moreover, beside direct biologic effect, smoking in the presence of youngsters significantly promotes social tolerance towards tobacco use in the community, and particularly strongly affects youngsters behaviour increasing risk of their smoking in future (Ellickson et al., 2001, Andersen et al., 2002)

In Slovakia, according to the latest estimation, 34.7 % of men and 14.3 % of women daily smoke cigarettes (WHO Report on the Global Tobacco Epidemic, 2008). Although no dramatic trend has been noticed within several couple of years, current situation cannot be considered as favourable. Smoking of men in Slovakia exceeds overall prevalence of European Union (30.3%). Smoking of women is not very high, but considering HBSC results in Europe indicating gradual increase of prevalence, higher values in women in Slovakia also should be expected in near future, unless effective measures would be implemented (Currie et al., 2000; Currie et al., 2004). Moreover, tobacco smoking represents in Slovakia the second most frequent cause of death and premature loss of health contributing in 19.2% of all deaths and 12.2% of DALYs (The European health report, 2005).

Tobacco control legislation in Slovakia

Tobacco use in Slovakia is regulated by several legal measures. The most important are: The Act No. 377/2004 Coll. On Protection of Non-smokers as amended¹ that lays down rules of sale and distribution of tobacco products as well as determines smoke free-areas.

*See end of the report for details of GYTS Slovakia, 2007, Collaborative Group

¹ Act No. 465/2005 Coll.

According to the said legal measure, tobacco products are forbidden to be sold in specialised groceries and shops with goods for children and youth; in any types of health services facilities, school facilities, schools and social care facilities for children and youth; in automatic machines and collected on delivery; and in a package of less than 10 pieces. Further it gives rulings on labelling of packs of tobacco products in accordance with directives of the European Communities. Under the terms of this Act it is prohibited to smoke in all health-care facilities, any type of schools including universities, governmental and public administration offices.

From the reason to ensure higher protection of non-smoking workers, in Slovakia has been passed new Act No. 124/2006 Coll. on Safety and Protection of Health at the Work as amended². The Act enacts a responsibility of any employer to ban tobacco smoking at workplaces, at which also non-smokers work.

However, legal measure, that influences pricing of tobacco products and thereby prevents the smoking initiative and tobacco use by minors, belongs to the most effective. Since the membership of the Slovak Republic in the European Union that became in 1st May 2004 it is obliged to observe directives and regulations according to the European Union Accession Treaty. According to these legal provisions, cigarettes shall tax by minimum excise-incidence of 57% of the retail-selling price of cigarettes of the price category most in demand; at the same time, the retail selling price of cigarettes of the price category most in demand shall not be less than EUR 64 per 1000 cigarettes. Slovakia will have fulfilled both said obligations by 31. December 2008 (transition period). Therefore, additional amending provisions³ will be inserted into the Act No. 106/2004 Coll. On Excise Duty of Tobacco Products as amended⁴, which harmonise enacted tax of cigarettes and other tobacco products with the European Communities directive. Subject to these provisions, Slovakia will take also possibility to ensure a high-level of health protection and exclude travellers under 17 years of age from the exemptions of excite duty for tobacco products. Currently, as per January 1, 2008, the retail-selling price of cigarettes of the price category most in demand is 52 EUR per 1000 cigarettes (1.764 Skk; app. 86 USD), price of cigarettes of a category most in demand is 50 Skk (app. 2.4 USD), an excise incidence is 68% of the retail-selling price of cigarettes of the price category most in demand. So, Slovakia has already fulfilled one of the laid down criteria's, the excise incidence of the retail-selling price of cigarettes of the price category most in demand.

Mentioning of legal prevention the children and youth from smoking, we have to state the Act No. 147/2001 Coll. On Advertising as amended⁵, that in section 6 (1) prohibits the advertisement of tobacco products in any types of information carriers; through the free distribution of tobacco products samples to the public; and on advertising items, that are not relating to smoking and are distributed to the public, with the exception of advertising things distributing at the selling points.

The last, but not the least important legislation is the Act No. 308/2000 Coll. On Transmission and Retransmission as amended⁶, that does not permit the tobacco products advertisement in TV within the transmission. This is dealt with in section 33 (1) of the Act, which provides: "*The transmission of any forms of advertisement and teleshopping for tobacco products shall be forbidden*". Avoiding this ban by means of the use of brand names, trademarks, emblems

² Act No. 309/2007 Coll.

³ Drafted Bill amending the Act No. 106/2004 Coll. On Excise Duty of Tobacco Products as amended.

⁴ Act No 556/2004 Coll., act No. 631/2004 Coll., act No. 533/2005 Coll., act No. 610/2005 Coll. and act No.547/2007 Coll..

⁵ Act No. 23/2002 Coll., act No. 525/2005 Coll., act No. 282/2006 Coll., act. No.342/2006 Coll., act No. 102/2007 Coll. and act No. 648/2007 Coll.

⁶ Act No. 147/2001 Coll., act No. 206/2002 Coll., act No. 289/2005 Coll., act No. 95/2006 Coll., act No. 121/2006 Coll., act No. 13/2007 Coll., act No.220/2007 Coll., act No. 654/2007 Coll. and act No. 343/2007 Coll.

or other clear signs of such products in the broadcasting time appointed for the advertisement and teleshopping shall be forbidden.

As for sponsorship, except of the ban any advertisement through the sponsorship of tobacco products, the Slovak legislation *de lege lata* does not enact the issue of sponsorship.

Summarising, Slovak tobacco control legislation achieved rather high level of legal health protection of children and youth as well as of non-smokers in general and will have achieved even higher level after passing the drafted bill with expected force from December 1, 2008. Thereby, it will create fair legal framework to ensure a protection of population from spread diseases caused by the smoking.

Goals of the Global Youth Tobacco Survey (GYTS)

According to numerous studies, onset of a smoking habit and attitudes towards tobacco have roots in early childhood and preventive action should be implemented as soon as possible. To develop an effective strategy, epidemiological data on smoking habit and smoking-related factors among school children are essential. Keeping this in mind, the Tobacco Free Initiative (TFI), World Health Organization (WHO) and the Office on Smoking and Health (OSH), Centers for Disease Control and Prevention (CDC) have developed the Global Youth Tobacco Survey. The GYTS project was launched in 1999 and until now has been completed in 140 countries, 28 of them in Europe (Warren et al., 2008).

Via self-administered questionnaire GYTS monitors information on prevalence of tobacco use and its initiation, attitudes, knowledge and behaviours related to tobacco use, environmental tobacco smoke (ETS) exposure both in homes and outside homes, minors' access to tobacco products, role of advertisement and mass media as well as prevention curricula in schools. Target group of the survey is adolescents aged 13-15 years. The information obtained from the survey is of a great importance in planning of effective measures in tobacco control.

Standard methodology and uniform questionnaire used in GYTS enables valid cross-country comparisons and repeated surveys can reliably monitor a dynamics of tobacco epidemics as well as sensitively identify changes over time as results of implemented tobacco control measures.

In Slovakia, the first GYTS was carried out on the turn of 2002 and 2003 (GYTS: European Region: Slovakia Report, 2003).

The second GYTS in Slovakia was carried out in 2007 and was administrated by the National Coalition for Tobacco Control in Slovak Republic, together with Stop smoking NGO, Jessenius Faculty of Medicine, Comenius University in Martin and Public Health Authority of the Slovak Republic. Field work was supported by European Commission through the grant of the Governmental Office of the Slovak Republic, respecting standard conditions of projects co-funded by European Commission.

Material and methods

The GYTS uses a two-stage cluster survey design that produces representative samples of students in grades associated with the ages 13-15 years. In Slovakia, the 2007 sample frame included grades 7-9 in elementary schools and 3-5 in eight years study grammar schools. At the first stage, 60 schools were selected with probability proportional to enrollment size (a complete list of all schools with enrolment data were obtained from the Office of School Information and Prognosis, Ministry of Education of the Slovak Republic).

At the second sampling stage, classes within the selected schools were randomly selected. All students attending the school the day the survey was administered in selected classes were eligible to participate. A weighting factor was applied to each student record to adjust for non-responses and variation in the probability of selection at the school, class, and student levels.

SUDAAN, a software package for statistical analysis of correlated data (Shah et al., 1997), as well as EPI INFO were used to compute 95% confidence intervals.

The school response rate was 100.0% and the student response rate was 86.1%. A total of 4,696 students participated; thus yielding highly representative sample.

Survey procedures were designed to protect the students' privacy by allowing for anonymous and voluntary participation. Field administrators from Regional Public Health Authorities worked in 12 areas divided according to geographical closeness and transport possibilities. Standard GYTS questionnaire adopted for Slovakia, containing 90 questions, has been used. The survey was administered in the classrooms. Students were informed by field administrators about the purpose of the survey and about an appropriate way how to administrate the survey. Filled answer sheets were scanned by computer and analysed. The fieldwork was done from April to June 2007.

To compare GYTS results from 2007 and 2003, only students having 13-15 years were selected for the analysis.

Statistical tests for difference were determined by comparing the range of 95% confidence intervals for each estimate, at the $p=0.05$ level.

Results

GYTS 2007 (all students)

More than 6 in 10 students reported lifetime smoking and boys significantly prevail above girls. More than one quarter of respondents initiated smoking before age 10, while boys clearly dominated: there were more than one third of boys (34.9%) but only about one fifth of girls (21.8%) reporting this (Tab. 1).

Table 1: Percent of students who had ever smoked cigarettes, percent of students who ever smoked that first tried a cigarette before age 10, and percent of students who had never smoked that were susceptible to start smoking in the next year, SLOVAKIA GYTS, 2007 (percentage and confidence interval 95%)

	Ever smoked cigarettes, even one or two puffs	Ever smokers who initiated smoking before age 10	Never smokers likely to initiate smoking within a year
Total	64.9 (62.1 – 67.7)	29.1 (27.1- 31.2)	24.6 (21.9 – 27.6)
Boy	69.3 (66.1 – 72.3)	34.8 (31.6 – 38.2)	17.7 (15.4 – 20.4)
Girl	60.2 (56.5 - 63.8)	22.3 (20.0 – 24.8)	29.6 (25.1 – 34.5)

Approximately, 1 in 4 never smokers reported to be susceptible to smoking and girls significantly prevailed above boys (29.5% vs 17.7%) (Tab. 1).

One quarter of students reported current cigarette smoking, boys and girls almost equally. More than 1 in 10 students currently smoked tobacco products other than cigarettes and boys more frequently than girls. More than one tenth of current cigarette smokers reported signs of nicotine dependence with no significant gender differences (Tab. 2).

Less than half of students reported to be exposed to tobacco smoke in their homes within recent seven days. Approximately 7 in 10 students were exposed to tobacco smoke within recent seven days outside their homes. Overwhelming majority of them (80.7%) expressed their positive attitude towards ban of smoking in public places (Tab. 3).

Table 2: Percent of students who were current cigarette smokers, current users of tobacco products other than cigarettes, and percent of current smokers who were dependent on tobacco products, SLOVAKIA GYTS, 2007 (percentage and confidence interval 95%)

	Current cigarette smoker	Currently use other tobacco products	Current cigarette smokers who feel like having a cigarette first thing in the morning
Total	26.4 (24.1 – 28.8)	13.9 (12.6 – 15.4)	16.8 (14.1 – 19.9)
Boy	28.0 (24.9 – 31.3)	16.2 (14.6 – 17.9)	18.6 (14.9 – 23.0)
Girl	24.1 (21.4 – 27.0)	11.0 (9.6 – 12.6)	14.5 (10.5 – 19.5)

Table 3: Percent of students exposed to smoke at home within recent 7 days, exposed to smoke in public within recent 7 days, and supported banning smoking in public places, SLOVAKIA GYTS, 2007 (percentage and confidence interval 95%)

	Exposed to smoke from others at home within recent 7 days	Exposed to smoke from others in public places within recent 7 days	Think smoking should be banned in public places
Total	46.3 (43.6 – 49.0)	69.3 (67.6 – 71.0)	79.3 (78.2 – 81.4)
Boy	43.9 (40.9 – 47.0)	67.8 (65.2 – 70.3)	79.6 (77.5 – 81.5)
Girl	47.6 (44.2 – 51.0)	70.4 (68.5 – 72.3)	80.7 (78.5 – 82.8)

About 6 in 10 students reported to teach about dangers of smoking tobacco within recent school year. About one half of them discussed in schools about reasons why people their age smoke tobacco and taught about the effect of smoking tobacco (Tab. 4).

Table 4: Percent of students who were taught dangers of smoking, discussed reasons why people their age use tobacco, taught effects of using tobacco, GYTS Slovakia, 2007 (percentage and confidence interval 95%)

	Taught dangers of smoking tobacco	Discussed reasons why people their age smoke tobacco	Taught about the effects of smoking tobacco
Total	58.5 (54.8 – 62.1)	49.1 (45.6 – 52.7)	49.7 (46.0 – 53.4)
Boy	56.9 (52.8 – 60.9)	46.6 (43.0 – 50.3)	48.5 (45.1 – 51.9)
Girl	60.6 (56.2 – 64.7)	52.2 (47.6 – 56.8)	51.2 (46.6 – 55.8)

More than 6 in 10 students reported to see any cigarette brand names when watching TV and almost more than 10% of boys than girls. Almost 7 in 10 students reported to see pro-tobacco advertisements in newspapers or magazines in the past month. Less than one fifth of students had an object with a cigarette brand logo while significantly more boys than girls (21.1% vs. 13.6%) (Tab. 5).

Table 5: Percent of students who saw cigarette brands on TV, saw ads in newspapers, and had an object with a tobacco company logo on it, SLOVAKIA GYTS, 2007 (percentage and confidence interval 95%)

	Have seen any cigarette brand names when watching TV	Saw ads for cigarettes in newspapers or magazines in the past month	Have an object with a cigarette or tobacco logo on it
Total	66.6 (64.9 – 68.2)	67.4(65.4 – 69.4)	18.0 (16.6 – 19.5)
Boy	70.9 (68.4 – 73.3)	68.1 (65.5 – 70.7)	22.0 (19.9 – 24.3)
Girl	62.4 (60.2 – 64.6)	67.0 (64.1 – 69.8)	13.6 (11.8 – 15.6)

More than 6 in 10 current smokers expressed their desire to stop smoking. Almost 8 in 10 current smokers reported an attempt to stop smoking within the past year. Less than 7 in 10 current smokers received help to stop smoking (Tab. 6)

Table 6: Current smokers who want to quit, current smokers who tried to quit, and current smokers who received help to quit, SLOVAKIA GYTS, 2007 (percentage and confidence interval 95%)

	Current cigarette smokers who want to quit smoking	Current cigarette smokers who tried to stop smoking during the past year	Current smokers who received help to stop smoking
Total	65.1 (61.6 – 68.4)	78.0 (75.3 – 80.5)	66.4 (63.1 – 69.6)
Boy	64.3 (59.1 – 69.2)	76.5 (71.9 – 80.6)	68.1 (63.4 – 72.5)
Girl	66.3 (60.5 – 71.7)	80.5 (76.7 – 83.8)	64.2 (58.2 – 69.7)

More than half of current smokers reported to buy usually their tobacco in a store and boys clearly dominated against girls (59.7% vs. 43.3%). Overwhelming majority (85.0%) of current smokers was not refused cigarette purchase because of their age. More than 5% of current smokers reported to be addressed by a tobacco company representative and offered cigarettes for free. About two times more boys than girls answered this question positively (7.2% and 3.9%, respectively).

Table 7: Percent of current smokers who usually buy tobacco in a store, percent of current smokers who buy tobacco in a store and were not refused purchase because of their age, and percent of all students who have been offered free cigarettes by a tobacco company representative, SLOVAKIA GYTS, 2007 (percentage and confidence interval 95%)

	Current smokers who usually buy their tobacco in a store	Current smokers who buy their tobacco in a store and were not refused cigarette purchase because of their age	Have been offered "free" cigarettes by a tobacco company representative
Total	50.8 (46.4 – 55.3)	83.3 (79.9 – 86.2)	6.6 (5.6 – 7.6)
Boy	58.9 (53.2 – 64.5)	80.4 (75.1 – 84.8)	8.0 (6.6 – 9.6)
Girl	43.3 (38.5 – 48.5)	89.6 (85.2 – 92.8)	4.7 (4.0 – 5.6)

Comparison of GYTS 2003 and GYTS 2007 (13-15 years old students)

Prevalence of current and weekly cigarette smoking did not significantly change over the time, similarly as current use of other tobacco products. Among boys, proportion of daily smokers significantly increased. Considering gender differences, proportion of never smokers susceptible to initiate smoking slightly dropped in boys and increased in girls, so, despite of 2003, susceptible girls significantly dominate above boys (29.5% vs 17.7%) (Tab. 8) in 2007. Prevalence of respondents' parental smoking significantly decreased, as reported by boys. Similarly, boys less frequently reported passive smoking in their homes in 2007 than in 2003, while passive smoking outside homes did not significantly changed. Proportion of positive attitudes towards ban of smoking in public places increased in boys (Tab. 9A).

According to reports of students, frequency of smoking prevention issues in school programs considerably dropped out. In more than 10% (from 70.0% to 58.1%) decreased positive answers if students were taught about the dangers of smoking and boys significantly more rarely reported discussions about reasons why people their age smoke (Tab. 9A).

Considering media anti-smoking messages, in 2007 significantly more students reported these to see on TV (64.3% vs 66.8%) compared to 2003. On the other hand, level of indirect advertisement decreased: seeing cigarette brands on TV, pro-tobacco messages in newspapers and magazines as well as having an object with a cigarette brand logo on it. These changes held for both boys and girls (Tab. 9B)

No significant changes were found in proportion of current smokers wanting to quit and current smokers showing signs of nicotine dependence (Tab. 9B). Similarly no significant changes were shown in proportion of current smokers not refused because of their age while buying their cigarettes and of those reporting to be offered free cigarettes by tobacco company representatives.

Table 8: Prevalence – SLOVAKIA 2003 and 2007 (13-15 Years ONLY) (percentage and confidence interval 95%)

	2003			2007		
	Total	Boy	Girl	Total	Boy	Girl
Ever smoked cigarettes	66.5 (64.1 - 68.8)	72.0 (69.3 - 74.5)	60.8 (57.6 - 64.0)	64.4 (61.5 - 67.2)	68.7 (65.4 - 71.9)	60.2 (56.4 - 63.8)
Ever Smokers, first smoked cigarettes before age 10	28.8 (25.9 - 31.8)	35.1 (31.5 - 38.8)	21.1 (17.8 - 24.9)	28.8 (26.4 - 31.2)	34.9 (31.5 - 38.5)	21.8 (19.1 - 24.8)
Current* cigarette smoker	26.4 (24.3 - 28.7)	28.1 (25.1 - 31.4)	24.3 (22.0 - 26.8)	25.0 (22.6 - 27.6)	26.5 (23.2 - 29.9)	23.4 (20.7 - 26.4)
Daily cigarette smoker**	4.5 (3.4 - 5.8)	5.3 (3.9 - 7.2)	3.5 (2.5 - 4.9)	7.6 (6.1 - 9.4)	9.3 (7.3 - 11.7)	5.8 (4.4 - 7.6)
Weekly cigarette smoker***	18.5 (16.8 - 20.4)	19.7 (17.4 - 22.3)	16.9 (14.9 - 19.1)	16.9 (15.0 - 19.0)	19.0 (16.4 - 21.9)	14.7 (12.7 - 17.0)
Current* user of other tobacco products	13.1 (11.6 - 14.7)	14.7 (12.4 - 17.5)	11.2 (9.6 - 13.0)	12.9 (11.6 - 14.4)	15.1 (13.5 - 16.9)	10.6 (9.1 - 12.3)
Never smokers likely to initiate smoking in the next year	24.7 (21.2 - 28.5)	21.5 (17.4 - 26.3)	26.4 (21.7 - 31.8)	24.5 (21.4 - 27.9)	17.7 (14.6 - 21.4)	29.5 (24.8 - 34.6)

*current smoking is defined as smoking one or more days during the past 30 days

**smoking all 30 days of the past 30 days

*** smoking at least once a week during the past 30 days

Table 9A: Factors influencing tobacco use – SLOVAKIA 2003 and 2007 (13-15 Years ONLY) (percentage and confidence interval 95%)

Factors	2003			2007		
	Total	Boy	Girl	Total	Boy	Girl
EXPOSURE TO TOBACCO SMOKE						
One or more parents smoke	55.1 (52.7 - 57.4)	53.7 (50.8 - 56.5)	56.2 (53.4 - 58.9)	49.9 (47.3 - 52.5)	46.6 (44.1 - 49.1)	52.6 (49.3 - 55.9)
All or most best friends smoke	24.1 (21.9 - 26.3)	23.5 (21.0 - 26.1)	24.6 (21.2 - 28.3)	23.5 (21.1 - 26.1)	22.7 (19.6 - 26.0)	23.7 (21.0 - 26.7)
Exposed to tobacco smoke in home	79.5 (77.1 - 81.7)	79.0 (76.6 - 81.2)	79.8 (76.8 - 82.4)	74.5 (72.2 - 76.7)	72.5 (69.9 - 75.0)	76.2 (73.4 - 78.8)
Exposed to tobacco smoke outside home	85.7 (84.5 - 86.9)	85.2 (83.3 - 87.0)	86.2 (83.7 - 88.3)	86.7 (85.2 - 88.0)	85.6 (83.9 - 87.2)	87.6 (85.3 - 89.6)
In favor of banning smoking in public places	75.6 (73.4 - 77.6)	75.5 (72.6 - 78.2)	76.1 (72.5 - 79.4)	80.7 (79.1 - 82.2)	80.5 (78.5 - 82.3)	81.1 (78.9 - 83.2)
SCHOOL						
During this school year, were taught in any classes about the dangers of smoking	70.0 (66.8 - 73.1)	67.8 (64.2 - 71.2)	72.9 (69.1 - 76.3)	58.1 (54.3 - 61.9)	56.4 (52.4 - 60.3)	60.2 (55.6 - 64.6)
During this school year had discussed in class, during year, reasons why people their age smoke	57.2 (54.5 - 59.8)	55.3 (52.1 - 58.4)	59.4 (56.5 - 62.3)	48.9 (45.0 - 52.9)	46.2 (42.5 - 50.0)	52.0 (47.0 - 56.9)

Table 9B: Factors influencing tobacco use – SLOVAKIA 2003 and 2007 (13-15 Years ONLY) (percentage and confidence interval 95%)

Factors	2003			2007		
	Total	Boy	Girl	Total	Boy	Girl
MEDIA/ADVERTISING						
During the past month saw any anti-smoking media messages	88.3 (86.8 - 89.6)	88.9 (87.5 - 90.2)	87.5 (85.1 - 89.6)	89.0 (87.9 - 90.1)	89.7 (87.9 - 91.4)	88.3 (86.8 - 89.6)
During the past month saw any anti-smoking messages on TV	64.3 (62.1 - 66.4)	66.8 (64.0 - 69.5)	61.7 (59.0 - 64.3)	71.9 (69.6 - 74.0)	73.2 (70.0 - 76.2)	70.6 (67.9 - 73.2)
During the past month saw any cigarette brand names on TV	78.0 (76.4 - 79.6)	80.2 (78.6 - 81.8)	75.8 (73.4 - 78.0)	66.4 (64.6 - 68.1)	71.2 (68.6 - 73.6)	62.0 (59.6 - 64.2)
During the past month saw any advertisements or promotions for cigarettes in newspapers or magazines	75.0 (73.1 - 76.8)	75.4 (73.5 - 77.2)	74.5 (71.5 - 77.3)	67.3 (65.1 - 69.4)	68.2 (65.4 - 71.0)	66.6 (63.6 - 69.5)
Have an object (t-shirt, pen, backpack, etc) with a cigarette brand logo on it	26.2 (23.9 - 28.5)	29.1 (26.7 - 31.6)	23.2 (19.8 - 26.8)	17.3 (16.0 - 18.7)	21.1 (18.8 - 23.6)	13.6 (11.9 - 15.4)
CESSATION						
Current smokers who want to stop smoking now	62.9 (57.9 - 67.7)	61.1 (55.7 - 66.3)	65.1 (54.4 - 74.5)	64.8 (61.0 - 68.4)	63.3 (58.0 - 68.4)	67.3 (61.4 - 72.6)
Current smokers who always feel like having a cigarette first thing in the morning	11.8 (8.7 - 15.9)	12.6 (8.2 - 18.9)	10.9 (7.5 - 15.7)	16.6 (13.7 - 20.0)	19.0 (15.1 - 23.5)	13.4 (9.4 - 18.7)
ACCESS						
Current smokers who usually buy their cigarettes in a store were not refused purchase because of their age	80.3 (73.8 - 85.6)	76.7 (68.5 - 83.3)	83.9 (71.5 - 91.5)	85.0 (81.3 - 88.1)	82.8 (77.0 - 87.4)	88.6 (83.8 - 92.1)
Ever offered a “free” cigarette by a tobacco company representative	7.5 (6.3 - 8.8)	9.1 (7.5 - 11.0)	5.6 (4.3 - 7.1)	5.5 (4.7 - 6.4)	7.2 (5.9 - 8.7)	3.9 (3.2 - 4.6)

Discussion

Prevalence of smoking and using of tobacco

Smoking of cigarettes is the most frequently used form of tobacco and is rather familiar among students in Slovakia. Although prevalence of current smoking is in both genders similar, in smoking initiations boys predominates and their first experiences with cigarettes gain still earlier than girls. It reflects traditional attitudes towards smoking considering smoking of women as inappropriate as shown in prevalence of smoking of adults, where males clearly predominates over women (34.7 % vs 14.3 %) (WHO Report on the Global Tobacco Epidemic, 2008). However, GYTS results suggest that such situation will change in the near future because, despite of earlier initiation in boys, in age 13-15 years girls smoke almost as frequently as boys, as seen in current cigarette smoking as well as daily and weekly smoking of cigarettes. Considering susceptibility to smoking in adolescents as a strong predictor of tobacco use in the future (Forrester et al., 2007) found data on never smokers likely to initiate (about one fourth) should be considered seriously as a potential public health problem indicating possible rising prevalence of smokers in the next years. Moreover, in 2007 never smoking girls susceptible to initiate smoking clearly predominated boys, while in 2003 this difference was not significant, yet.

Beside other health risks, the expected increase of smoking prevalence among girls assumes particular significance considering elevated widespread use of hormonal contraceptives even among teenagers.

But also the situation in boys is not favorable, since prevalence of daily smokers almost doubled, indicating acceleration of development of tobacco use from experimenting to regular smoking. This finding corresponds with situation, that almost one fifth of currently smoking boys show signs of nicotine dependence.

Prevalence of using of tobacco products other than cigarettes is relatively high. Among them, cigars are used the most frequently. It can reflect youngsters' affords to be cool, since cigars have been traditionally symbol of upper economic classes and high social self-esteem (Frazier et al., 2000). However, because of relatively high prices of cigars, we cannot expect cigar smoking as a potential serious public-health problem and these tobacco products are used only occasionally. On the other hand, they can play a role during smoking initiation as a gate to more available products i.e. cigarettes (Everett et al., 2000; Frazier et al., 2000).

Exposure to tobacco smoke

Within 2003 and 2007 parental smoking, as reported by respondents, slightly decreased. This should be considered positively as possible impact of implemented changes in legislation as well as media campaigns organized within recent years.

Considering second hand smoking within recent seven days, prevalence is smaller than found in Global Health Professional Survey (Baška et al., 2006), i.e. in adult age group. The difference is apparent particularly regarding exposure at home. It can suggest change in attitudes towards smoking in general public, when some smokers get to show more consideration for their children regarding tobacco smoke exposure. Another positive finding is a slight decrease of passive smoking exposure in home, possibly caused, beside other reasons, by overall decrease of smoking prevalence in adult population in Slovakia.

Also high proportion of students reporting their support of restrictive legislative measures says for the public attitudes positively inclined towards smoke-free environment. Moreover, findings indicate positive trend in this field, because since 2003, percentage of boys supporting such measures has slightly, but significantly, increased.

School programs

GYTS findings showed deep reserves in the field of school-based programs. Only about one half of students reported having school-based activities regarding smoking. Moreover, frequency of these reports from 2003 even lowered. This represents rather unfavorable situation and a challenge for relevant decision makers. Results suggest that there is lack of permanence and continuation of such programs. Currently, most of activities in this field are limited to one-shot and separated campaigns, often not properly coordinated and built on individual activities of teachers.

Another problem in this issue is represented by a content of school based activities. It is well known that mere education on health effects of tobacco in this age group has only very weak, if any at all, effect (Baška et al., 2004). Tobacco control interventions in school age children should be focused particularly on change of attitudes towards smoking, social resistance as well as assertiveness, to be effective. GYTS Slovakia showed that positive answers to question on discussions why people in their age smoke (i.e. regarding attitudes towards smoking) were less frequent than reports on teaching about the dangers of smoking or effects of tobacco. It indicates that in Slovakia, beside insufficient quantity of school-based intervention, also existing activities do not reach their potential effect because its content is not always put together respecting evidence-based methods.

Although benefit of school-based programs alone is rather limited to short-term effects, they have significant contribution as a complement of other intervention such as extracurricular activities or community based campaign (Thomas & Perera, 2006; Dobbins et al., 2008).

One of important steps to improve the current situation would be besides emphasizing of importance of school-based intervention in relevant decision makers also appropriate education of teachers and other workers involved in pedagogic process in school how to prepare and implement evidence-based effective tobacco control programs for school children.

Mass-media

GYTS results demonstrated huge amount of indirect tobacco advertisement in Slovakia. Despite of valid legislation banning tobacco advertisement in all forms of mass-media, most of respondents report pro-tobacco messages or seeing of cigarette brands in journals and newspapers as well as on TV. Despite certain improvement of the situation after 2003, most probably due to enforcement of effective legislation⁷, GYTS results indicate that indirect advertisement is very difficult to control and new, more effective measures are needed.

Another aspect of indirect advertisement is distribution of attractive objects (t-shirts, baseball caps, backpacks, pens etc.) with cigarette brand logo. Although it still represents a certain problem, situation clearly improved within 2003 and 2007.

Another positive result is an increase of reported anti-tobacco messages in mass-media after 2003. This can be at least partially a result of progressive changes of public opinion and increased interest in preventive issues. Significant contribution was played by several activities such as the project HELP-For a Life Without Tobacco supported by European Commission⁸, other mass-media campaigns⁹ well as activities of NGOs¹⁰. Launching of QUITLINE in Slovakia in January 2006 (telephone based interactive smoking cessation support) represented another activity reflected also in mass-media¹¹.

⁷ Act No. 377/2004 on Protection of Non-smokers as amended by Act. No. 465/2005 Coll.

⁸ <http://www.help-eu.com/>

⁹ Usually organised on the World No Tobacco Day (31 May) or on other occasions

¹⁰ Besides others, Stop Smoking NGO provides several outstanding activities, mostly in the field of tobacco control advocacy (www.stopfajcenui.sk).

¹¹ <http://www.jfmed.uniba.sk/index.php?id=quitline>

Cessation

Most of current smokers among schoolchildren in Slovakia expressed their intention to quit and this proportion is comparable with data found in adult population (Extent of use of addictive drugs in Slovakia..., 2006). Taking into consideration that only small fraction (less than one fifth) of current smokers showed signs of nicotine dependency, the main problem does not lie in tobacco addiction (as in adult smokers) but should include other factors of psychological and social origin such as lack of assertiveness, peer-pressure, positive attitudes towards smoking etc. Latter mentioned facts indicate, that measures focused on this age group should also include appropriate smoking cessation programs, however, different from those for adults (Milton et al., 2004). High proportion of current smokers helped and/or advised to stop smoking may also indicate that such advice or help, anyway quite frequent, is not necessarily effective and students continue their smoking.

Access

GYTS results in Slovakia point out a dramatic violation of law regarding restricting of minors sale, since overwhelming majority of current smokers buy cigarettes in stores. This finding indicates a deep gap between legislation and its enforcement in Slovakia. It also evidences for public attitudes still accepting selling of tobacco products for minors as normal and ethical. Although percentage of students offered by free cigarette samples seems relatively low, taking into consideration total ban of such form of sale promotion, it again clearly evidences for violation of legislation by tobacco companies representatives.

Fact that results have not changed significantly from 2003 to 2007 indicates that adopted measures are not satisfactory effective and quite different approach is needed in this field.

Conclusions

GYTS carried out in Slovakia in 2003 and 2007 brought several important findings regarding epidemiological features of tobacco use, effect of implemented preventive measures as well as priorities of further tobacco control activities.

The most important findings can be summarized as follows:

Negative findings:

- Results do not indicate decreasing trend in any aspect of tobacco use in schoolchildren. On the contrary, relative increase of proportion of girls susceptible to smoking as well as boys reporting daily smoking suggests possible worsening of the current situation. This finding regarding girls deserves attention also considering increasing use of hormonal contraceptives among teenage girls and thus considering possible health risk.
- In Slovakia, employment of school-based tobacco control programs is insufficient and even decreased after 2003. Results also suggest not appropriate content of used school activities, thus even decreasing their effect.
- Overwhelming majority of current smokers buy their cigarettes in stores without any problem. Taking into consideration unequivocal legislation banning sales of tobacco products for minors, GYTS findings point out very low level of respect for this regulation by people as well as ineffective enforcements of it.

Positive findings:

- Among students, positive attitudes towards measures banning smoking in public places clearly outweigh. This, together with slight decrease of parental smoking and tobacco smoke exposure in homes, gives potential for public acceptance of future legislative regulations and their positive effect.
- After 2003, reports of anti-tobacco media messages have been increased, suggesting positive effect of several campaigns recently released in Slovakia.

- Indirect pro-tobacco advertisement and tobacco industry sales promotion activities clearly decreased in certain level, indicating that recently implemented measures in this field are at least partially effective. On the other hand, current extend of indirect pro-tobacco mass-media advertisement is still very high saying for urgent adoption of much more effective legislative measures appropriately enforced.

Implications for practice

As a contribution to deal with the most important problems found, several implications can be formulated:

- Much more attention should be paid on school-based tobacco control programs. One of the possibilities is to develop special manuals and textbooks to be distributed for teachers and other school-workers involved in pedagogic process providing them evidence-based information how to prepare effective programs and strategies tailored for their schools. Also pedagogical periodicals issued in Slovakia would be an appropriate way to disseminate findings of GYTS among teachers, together with recommendations and links to relevant resources.
- A special attention should be paid to smoking of girls. In campaigns, specific strategies should be employed, such as pointing out cosmetic effects of smoking and relation between smoking and body weight. Also increased cardiovascular risk of a combination between smoking and hormone contraceptive use should not be neglected.
- Although the situation regarding indirect tobacco advertisement has been improved, its extent is still very high. Legislation together with relevant complementary regulations should flexibly react to efforts of tobacco industry to penetrate media and thus eliminate its influence of minors.
- GYTS results indicate an urgent need for effective complementary regulations to keep the legislation banning tobacco products for minors in Slovakia.

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