

## **SUMMARY**

The aftermath of the tobacco consumption is currently one of the greatest challenges for the Public Health in the whole world. According to the WHO the tobacco burns or uses otherwise 1,2 - 1,3 billion people. It is one of the main risk factors for cardiovascular diseases including ischemic heart diseases, stroke, cancers and respiratory system diseases. As an individual factor, it is the cause of 7 million deaths a year.

From the viewpoint of health, it is crucial at what age it came to the tobacco initiation, what was the process of experimentation with smoking or using the tobacco products, whether it lead to addiction and whether the experimenting person became a chain smoker. A significant risk group of smoking cigarettes and of using other nicotine products are children and young people. They are particularly put at long-term, tobacco-related health risk due to their susceptibility to stimuli luring to smoke and faster development of the nicotine addiction than in the case of the adults. The aims of undertaken studies were to assess the prevalence of smoking, exposure to environmental and behavioral risk factors of smoking, motivation to take up smoking and the risk of regular smoking in the future within the population of children and young people in the Lower Silesia. Two questioners published by the American Academy of Paediatrics (AAP) have been used in this study. The first one called 'The Youth Research on Tobacco' was designated for children and youth, and the second one called 'The Study of Passive Exposure of Children to the Tobacco Smoke' was designated for adults. Both tools were subjected to cultural adaptation after the approval of AAP.

The surveys were conducted between February and December of the 2016 in the group of children and youth aged 12 – 19 years old and adults – parents and carers. All of those taking part in the study were residents of counties of the Lower Silesian Voivodship. The study was conducted in middle and high schools with the collaboration of the Silesian Voivodship Sanitary-Epidemiological Station in Wrocław, with the approval of National Lower Silesian Sanitary Inspector from the 20<sup>th</sup> of October 2015 and a positive opinion of the Bioethical Committee of the University of Rzeszów No 21/12/2015 from the 2<sup>nd</sup> of December 2015.

The primary research group consisted of 1315 children and young people, of which 643 (48,9%) were girls and 672 (51.1%) were boys. The average age of the examined group equalled 15,8 years old, of which the average girls' age equalled 15,7

years old and the average boys' age equalled 15,9 years old. 690 people (52%) in the examined group were middle' school students and 625 people (48%) were high school students. 39% of the respondents were residents of villages and small towns up to 10 thousand inhabitants, 34% lived in towns of between 10 thousand to 100 thousand inhabitants and 27% were from towns and cities of over 100 thousand inhabitants. In order for the study to be a complete one, the survey was also conducted in a group of adults of parenting and caring roles.

In this study, the advancement of smoking cigarettes and other nicotine products was examined in the research group along with the frequency of smoking, the amount of smoked cigarettes and the age of nicotine initiation. Additionally, the motives of reaching to nicotine products, the assumptions regarding harmfulness of smoking in the group of respondents and the frequency of environmental risk factors as passive smoking or smoking of friends, they were all analysed. The study also demonstrates the evaluation of advancement of nicotine addiction symptoms and the manifestations of intentions of smoking in the years following.

It has been stated that 54% of the youth has tried smoking cigarettes, of which 55% were girls and 53% were boys. The differences regarding gender were not statistically relevant ( $p=0,303$ ). More older students than students of the middle school were smoking (71,5% and 38,3% ) and the difference was statistically relevant ( $p<0,0001$ ). The disparities regarding the place of residence were not statistically relevant. Comparable number of students from small villages and moderate towns were smoking (46.1% and 48%), a little less students from big cities were smoking (43%). Respondents declared, that except regular cigarettes, they were mostly using electronic cigarettes (38%), hand-rolled cigarettes (26,5%) and cigars (23%). More girls than boys were using e-cigarettes and flavoured cigarettes (43,3% and 22,8%), and more boys were using cigars and snuff (27% and 24,3%). A statistically significant difference regarding gender ( $p<0,0001$ ) was observed. Older students were experimenting with those and other nicotine products considerably more often ( $p<0,0001$ ). The place of residence did not differ significantly their usage, except of smoking the water pipe that was used more often in big cities ( $p<0,0001$ ).

31,9% of the examined youth that was experimenting with nicotine products declared having smoked over 100 cigarettes altogether, of which 33,8% were boys and 30% were girls. This difference was not statistically significant. More older student declared having smoked this amount of cigarettes – 44,7% over 19,2% of middle school

students and this difference was statistically significant ( $p < 0,0001$ ). Similarly, more residents of big cities (42%) than moderate (37%) and small (29%) towns declared having smoked 100 and more cigarettes. A statistical significance of those varieties was proved ( $p = 0,0018$ ). Two most repeatedly declared smoking frequencies were: everyday smoking (32,1%) and smoking once or twice a month (27,3%). The girls were smoking more frequently than the boys (28,6% vs 16,8%), however, more boys declared everyday smoking (47% vs 20,3%). These differences were statistically significant ( $p = 0,015$ ). Older students were smoking monthly more often than the younger students (37,4% vs 21,7%) and the difference was statistically significant ( $p < 0,0001$ ). The place of residence did not influence significantly the disparities in the frequency of smoking. The respondents declared most often that they have smoked their first cigarette at the age of 14 years old (17,6%). Significantly more boys than girls were attempting smoking cigarettes early on. There was a statistical significance  $p = 0,002$ . Half of the respondents (50,1%) declared exposure to passive smoking at home, however, the parents and the carers confirmed it only in 35,5%, of which only 17% declared that they have smoked next to the children. Young respondents often stated that all the students in their classes smoked (17,9%). An encouragement from a friend was most often stated as a reason to start smoking (30,2%). The analysis demonstrates that the girls are more often prone to such encouragements as opposed to the boys (57,8% vs 48%) ( $p = 0,007$ ). However, more boys (52,2%) than girls (47,3%) declared that smoking people have more friends than the people who do not smoke ( $p = 0,02$ ). 82% of all smoking in the last 30 days declared feeling the symptoms of nicotine addiction in the last 30 days before filling in the questionnaire. Most frequently, smoking respondents reported feeling one of the symptoms of nicotine addiction (35%), two symptoms (32%), three symptoms (21%) and four symptoms (12%). The girls reported more often than the boys that they were feeling one (36% vs 34%), two (33% vs 31%) and three of those symptoms (23% vs 19%). However, the boys reported twice as often as the girls that they could feel all four of the symptoms (16% vs 8%). The differences were not statistically significant ( $p = 0,277$ ). The risk of smoking in the future was 10 times higher in the group that admitted smoking in the last 30 days preceding the survey (OR=9,71; 95% CI 6,48 – 14,56;  $p < 0,0001$ ). According to the respondents, the group declaring having smoked 100 and more cigarettes altogether was observed to be under 4 times bigger risk of smoking in the future (OR=3,73; 95% CI 2,29 – 6,07;  $p = 0,002$ ). This risk also increased significantly by 15%

(OR=1,15; 95% CI 0,8 – 1,65; p=0,003) in the group that declared smoking the first cigarette under the age of 13 years old.