INSIGHTS INTO SMOKING INITIATION AMONG YOUTH IN SERBIA

BACKGROUND

In Serbia, as in many other countries with high smoking prevalence, understanding the factors that contribute to the onset of smoking among youth is crucial for the development of effective prevention and cessation strategies and interventions. According to the Health Behavior in School-Aged Children (HBSC) conducted in Serbia in 2022, **15.1 percent of students in the fifth and seventh grades of elementary school and the first year of high school have smoked cigarettes at least once in their lives,** with the frequency of smoking increasing with age. Besides cigarettes, students have also used heated tobacco products, electronic cigarettes, or nicotine pouches. 19.9 percent of students have used electronic cigarettes in the past 30 days, 12.8 percent tried hookah, 6.4. percent tried heated tobacco products, and 4.9 percent snus or nicotine pouches at least once.

Investigating the effects of price and non-price tobacco control measures on smoking initiation among young people in Serbia is crucial due to the high prevalence of smoking initiation at a young age and the associated long-term health consequences.

Our previous research has empirically shown that raising tobacco prices through specific tax increases is an effective strategy to reduce the overall smoking prevalence in Serbia (Zubović et al., 2019). This policy brief is based on our study, which analyzes the impact of tobacco prices on youth smoking initiation among other factors.

DATA AND METHODOLOGY

The study is based on the **Global Youth Tobacco Survey (GYTS)** conducted in 2008, 2013, and 2017 in Serbia. The sample includes 11,105 eligible students in grades 7 and 8 of primary and the first year of secondary school. The largest share of the sample is students aged 14 and 15. A split-population duration model was applied to determine the impact of price and non-price measure increases on youth smoking initiation in Serbia. By considering both those who begin smoking and those who do not, this model helps to uncover the underlying causes and barriers that shape youth smoking behaviors, offering a more detailed and reliable analysis than traditional approaches.

RESULTS

The average age of the respondents is 14.5 years. In Serbia, young people typically start smoking at the age of 12, with a slight gender difference (11.7 for boys and 12.2 for girls). Over 40% of students have tried smoking, but most of them have not smoked in the past 30 days. However, 3.8% smoke daily, and 3.6% smoke occasionally. It is encouraging that 43.7% of those who tried smoking have attempted to quit. More than 15% received advice from friends to quit, and 13% from family. It is concerning that more than 10% received no advice at all. Nearly 60% of students have been educated about the harmful effects of smoking. Given that smoking is not prohibited in TV shows, over 80% of respondents have seen people smoking on TV.

The study highlights several key factors that contribute to the initiation of smoking among youth:

Price Elasticity of Smoking Initiation: The estimated elasticity ranges from -0.089 to -0.107. This means that a 10 percent increase in cigarette prices would lead to a reduction in the number of young people who start smoking by 0.89 to 1.07 percent.

Parental Influence: Parental smoking has a strong influence on increasing the risk of starting smoking among adolescents. Adolescents whose mothers are smokers and use tobacco at home have a 24.6 percent higher risk of initiating smoking compared with those who do not. A similar is for fathers smoking at home. These findings underline the importance of the family's role in young people's smoking behavior and provide further evidence of the need for interventions aimed at reducing adolescents' exposure to smoking in the family environment.

Siblings influence: Young individuals living with a brother or sister who smoke at home are more likely to initiate smoking compared to those who do not. Adolescents who have a brother or sister who uses tobacco at home have a 25.5 percent higher risk of initiating smoking compared with those who do not. This highlights the significant role of the presence of smoking siblings in the family environment in influencing youth smoking initiation.

Peer Influence: The risk of initiation is higher for girls than for boys when it comes to susceptibility to pressure from their best friends. In other words, girls may be more sensitive to the influence of friends in the context of smoking initiation as younger teenagers.

Tobacco Control Policies: Non-price tobacco control policies have a positive impact on reducing the risk of smoking initiation among young people.

Teacher influence: The teacher is a person who is with adolescents almost every day and plays an important role in their education. The analysis showed that respondents are more likely to start smoking if they see their teachers smoke on school premises.

Education on harmful effects of tobacco: Education about the dangerous effects of cigarette smoking is also an important factor in reducing the risk of starting to smoke. The results show that the risk of starting to smoke is lower when young people are educated about the dangerous effects of smoking in classes during the school year.

KEY FINDINGS

The most important research finding is that the price has an impact on smoking initiation among youth in Serbia in addition to non-price control policies.

Increase the tobacco excise tax

Research supports the effectiveness of price increases as a tobacco control measure. By making cigarettes more expensive, the barrier for young smokers to smoke more frequently and intensively is increased, making them less likely to start smoking. This is important in Serbian society, where economic factors influence youth behavior**.**

Tailor-made non-price tobacco control measures for youth

The analysis showed the strong influence of non-price tobacco control policies on youth smoking initiation. Measures such as banning advertising, protecting the population from secondhand smoke, and banning sales to minors significantly reduce the likelihood of young people starting to smoke.

Implement smoke-free laws in all public places, especially in schools

The government should adopt the Law to provide smoke-free environments in public places like restaurants and bars, as well as raise the minimum age for tobacco sales, which can further reduce smoking initiation among youth in Serbia.

All these findings underscore the urgent need for additional and continuous **education of young people** about the harmful effects of all forms of tobacco products.

In addition to educating children, it is also essential to raise awareness among parents about the harmful effects of tobacco product use in the presence of children and secondhand smoke exposure**.**

Only through a comprehensive approach that includes both education and prevention measures, we can address the challenges associated with tobacco use among youth and create a healthier (and wealthier) environment.

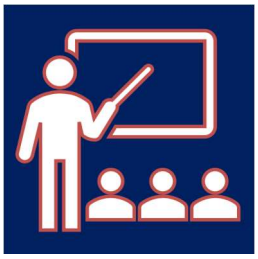

Table 1: Youth in Serbia, by age and gender

Age	Gender	Republic of Serbia
10–14	Total	323,322
	Boys	166,740
	Girls	156,582
15–19	Total	337,351
	Boys	172,986
	Girls	164,365
20–24	Total	337,105
	Boys	172,013
	Girls	165,092
25–29	Total	373,087
	Boys	190,414
	Girls	182,673

Source: SORS database, available at: https://data.stat.gov.rs/?caller=SDDB

Table 2. The structure of the respondents by age

Age	Number of students	%
13	**1,994**	**17.96**
14	**3,325**	**29.94**
15	**3,973**	**35.78**
16	**1,813**	**16.32**

Source: Authors' own calculations based on GYTS data

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Institute of Economic Sciences, Belgrade, Serbia is a part of the regional network of researchers in Southern Europe.

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