

Selected Results from the 2021/22 HBSC Survey in Zone D Countries and Corresponding Health Promotion Interventions

Zone D Factsheet

Lukas Teufl (Austria)
Katia Castetbon, Maxim Dierckens, Emma Holmberg (Belgium)
Emmanuelle Godeau, Mariane Sentenac (France)
Anne Kaman, Ulrike Ravens-Sieberer, Franziska Reiss (Germany)
Carolina Catunda (Luxembourg)
Saskia van Dorsselaer, Margreet de Looze (The Netherlands)
Nora Balsiger, Marina Delgrande Jordan (Switzerland)

Introduction

Health Behaviour in School-aged Children (HBSC) [1] is a World Health Organization (WHO) collaborative cross-national study of adolescent health and well-being. Founded in 1982, the survey is undertaken every four years using a self-report questionnaire. HBSC yields findings at national, regional and international levels to gain new insights into young people's health and well-being, to understand the social determinants of health, and to inform policy and practitioners to improve young people's lives. Currently, 51 countries take part in the HBSC study. These countries are organized in six zones. Zone D includes the European countries Austria, Belgium, France, Germany, Luxembourg, The Netherlands, and Switzerland.



Fig. 1: Zone D countries in the HBSC network.

Note: This figure was created with PaintMyMap.com

This factsheet presents selected national results of zone D countries addressing different areas of health and health behaviour, ranging from physical activity, soft drink, vegetable and fruit consumption, mental health and well-being to e-cigarette consumption. These results reveal the need for health promotion interventions for young people. For this reason, each country shows a national health promotion intervention, that has been or will be implemented and represent learning opportunities for the other countries.

Austria: Physical Activity

The WHO recommends that children and adolescents aged 5-17 years should do at least an average of 60 minutes per day of moderate-to-vigorous intensity physical activity, across the week [2]. Additionally, these activities should include aerobic activities, as well as those that strengthen muscle and bone, at least 3 days a week. Figure 2 shows how many Austrian students of grades 5, 7, 9 and 11, being on the average 11, 13, 15 and 17 years old, have met the WHO recommendation for daily physical activity in 2021/22. In detail, only 14 to 36 % of boys and 7 to 27 % of girls meet these recommendations in Austria, with declining physical activities the older the adolescents are. These results places Austria in the average to upper placements when compared to the other countries of HBSC [3].

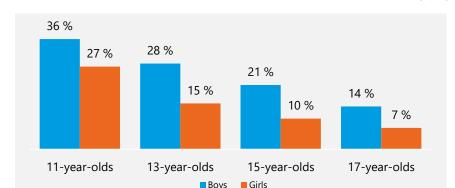


Figure 2. Percent of Austrian students who met the WHO recommendation for daily physical activity.

To foster physical activity in Austrian children and adolescents, the pilot project 'The Daily Physical Activity Unit' [Die Tägliche Bewegungseinheit] [4] launched by the Ministry of Sports and the Ministry of Education in cooperation with Austrian federal states and three sports umbrella associations, was started in the school year 2022/23. This pilot addressed children and adolescents in kindergartens, primary schools, and schools in secondary level I. The concept is based on three pillars that guide the implementation of the project:

- » Pillar 1: Strengthening the school climate towards physical activity and sports
- » Pillar 2: Additional physical activity and sports units in kindergartens and schools
- » Pillar 3: Individual promotion of physical activity and sports

Four physical activity units per week take place for all participating school classes. These are composed of regular physical education classes with teachers and independent additional units by physical activity coaches. In the participating kindergartens, the classes receive an additional weekly physical activity unit by physical activity coaches.

Evaluation results showed that 259 educational institutions actively participated during the first year of the pilot phase. The physical activity coaches carried out 35,000 additional physical activity units in these institutions. In total, 21,752 children and adolescents participated in these units, placing this project as one of the larger health promoting interventions for children and adolescents in Austria. Based on these and other evaluation results, the gradual roll-out of the project was decided by responsible political stakeholders.

Belgium: Soft drink consumption

Sugar-sweetened beverages (SSB), such as sodas, contain high amounts of sugar and are a leading source of added sugar in the diet. In Belgium, the Superior Health Counsil recommends limiting the consumption of drinks containing more than 5 % of sugar and to opt for water instead [5].

In adolescents, high intake of sugar, including soft drinks, is associated with tooth decay, overweight, obesity and cardiometabolic risk factors. Similarly to other high-income countries, the daily consumption of soft drinks has been declining since 2010 both in Flanders and in Wallonia and Brussels (Figure 3). However, Belgian adolescents remain among the highest SSB consumers in Europe as evidenced by the latest HBSC international report [3].

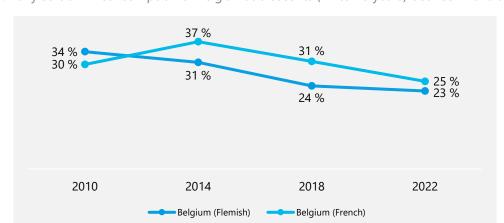


Figure 3: Daily soft drink consumption of Belgian adolescents (11 to 18 years) between 2010 and 2022.

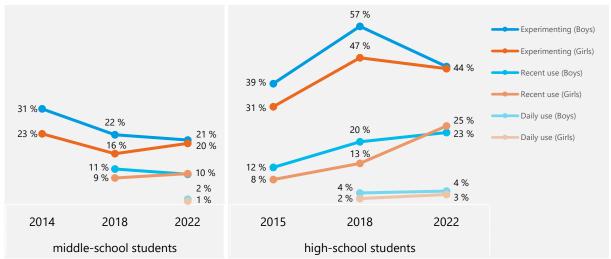
In 2015, Belgium introduced an excise tax on non-alcoholic drinks containing sugar or sweeteners. Initially at 0.03€ per litre, the excise increased to 0.07€ in 2016, 0.12€ in 2018 and 0.18€ per litre in 2019. A study using international HBSC data to compare SSB consumption trends in countries with a soda tax to those without concluded that the introduction of the tax did not yield additional benefits on the frequency of SSB consumption in Belgian adolescents [6]. In addition to an increase in the tax needed to expect additional benefits on behaviour, these findings support the importance of implementing multicomponent strategies to reduce SSB consumption in adolescents, as recommended by WHO. Indeed, SSB consumption is determined by multiple factors including individual factors like sex, family affluence and parental education, contextual factors such as access to SSB at home and in schools and peer influence and structural factors such as public policies.

France: E-cigarette use

In France, there has been a strong decrease in tobacco use in the last two decades like in many other countries in Europe. This may be interpreted as a denormalization of tobacco use by young people. In 2022, the use of e-cigarettes was higher than that of conventional cigarettes for the first time, with similar levels among boys and girls.

The use of e-cigarettes among girls significantly increased to levels like those of boys in 2022, whereas in 2018, girls consistently had lower usage levels than boys (Figure 4). For middle school students (11-14-year-olds) experimentation with e-cigarettes decreased until 2018, and then stabilized. In 2022, 10 % were recent users and 1-2 % were daily users. For high school students (15-18-year-olds) experimentation increased until 2018 and then decreased again whereas recent usage steadily increased until 2022. In 2022, 23-25 % were recent users and 3-4 % were daily users. Additionally, 30 % of high school students, have experimented with both, cigarettes and e-cigarettes, compared to 9 % of middle school students.

Figure 4. Trends in experimentation, recent use (in the past 30 days) and daily use of e-cigarettes in middle- and high-school students



Sources: HBSC 2014, ESPAD 2015, EnCLASS 2018 and 2022; OFDT (2024) Les usages de substances psychoactives chez les collégiens et lycéens. Note de résultats. Paris, OFDT, 17 p.

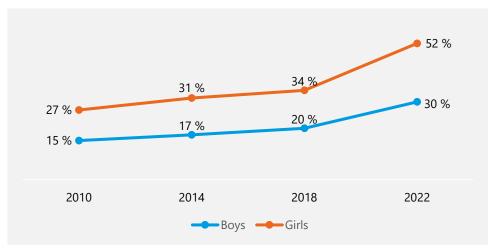
The emergence of new formats of vaping devices since 2021, particularly disposable electronic cigarettes and puffs (which can be considered as primarily targeting young people), has very likely contributed to the increased popularity of vaping among the youth. Therefore, at the end of 2023, France voted to ban these types of 'disposable' e-cigarettes starting in 2024. On September 25, 2024, the European Commission announced the validation of this ban in France. On December 4, 2024, the French parliament unanimously voted for the final version of this ban. The manufacture, sale, or free distribution of puffs and any disposable electronic cigarette products should from now on be forbidden. This text is expected to be enacted very soon. It should be noted that this ban is not focused on young people, and does not encompass non-disposable e-cigarettes.

Germany: Psychosomatic complaints

In line with the WHO definition of health, great importance is attributed to social and psychological well-being in addition to physical health. Therefore, self-rated health and psychosomatic complaints are commonly used as indicators of mental health and well-being. High well-being is not only important for daily functioning, but also for different life aspects throughout the entire life course, whereby impairments in health and well-being at an early age can have negative effects that persist into adulthood. In HBSC, psychosomatic health includes several physical and psychological symptoms (e.g. headache, abdominal pain, feeling low, irritability or bad mood, feeling nervous, and difficulties sleeping).

In 2022, a total of 42 % of German adolescents reported multiple psychosomatic complaints (at least two complaints in the last week) with significant gender differences (Figure 5). About half of the girls and one third of the boys suffered from multiple health complaints. The occurrence of multiple psychosomatic complaints increased over time, with a significant rise between 2018 and 2022 (+15 percent points).





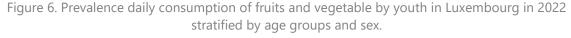
In response to the deterioration in the mental health and well-being of children and young people during the COVID-19 pandemic, the German Federal Ministry for Family Affairs launched the "Mental Health Coaches" [7] program to encourage young people with mental health problems to seek help. Thereby, children and young people at more than 100 schools across Germany were offered specific help by mental health professionals. The program aims to

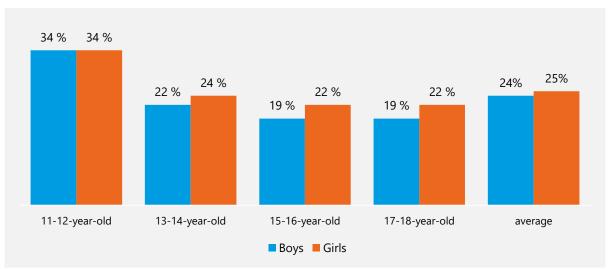
- » engage young people to actively deal with the topic of mental health,
- » teach strategies for dealing with stressful feelings and experiences,
- » contribute to an open approach to the topic of mental health and reduce stigmatization,
- » encourage networking and cooperation between providers of prevention work and welfare organizations in the field of youth's mental health,
- » help students to find out what help and advice services are available and how to use it, and to identify mental health needs of young people by multi-professional teams.

Luxembourg: Fruit and Vegetable consumption

A healthy diet helps to protect against malnutrition in all its forms and to reduce the risk of noncommunicable diseases (NCDs) such as diabetes, heart disease, stroke, and cancer. In this regard, the WHO recommends consuming at least 400g, or five portions, of fruits and vegetables per day to reduce the risk of NCDs and ensure an adequate daily intake of dietary fibre.

Figure 6 presents the prevalence of daily fruit and vegetable consumption among youth in Luxembourg in 2022, stratified by age groups and sex. The results indicate that 25 % of girls and 24 % of boys reported consuming fruits and vegetables daily. Regardless of gender, there is a decreasing prevalence of adolescents consuming fruits and vegetables daily as age increases.



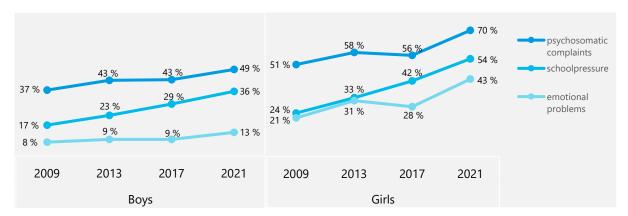


To promote a balanced diet and regular physical activity for children and adolescents in Luxembourg, the Luxembourg government initiated the "Eat healthy, move more" (Gesond iessen, Méi beweegen – GIMB) [8] program in 2006. This program emphasizes collaboration and networking among partners and stakeholders on the ground and adopts an interdisciplinary approach. In 2018, the project was renewed by the Ministry of Health, the Ministry of Sport, the Ministry of Education, Children and Youth, and the Ministry of Family Affairs, Integration, and the Greater Region until 2025.

The Netherlands: Mental health and Well-being

Mental health is an integral and essential component of health. It is more than just an absence of mental disorders or disabilities; it is fundamental to our ability as humans to think, interact with each other and enjoy life [9]. Recent trends show an increase in mental health problems among adolescents in the Netherlands as well as in other European countries. Specifically, an increase in psychosomatic complaints and emotional problems was observed between 2009 and 2013 and between 2017 and 2021 (Figure 7). These trends are especially strong among girls. In 2021, 70 % of the girls regularly experienced psychosomatic complaints and 43 % experienced emotional problems. It is likely that the increase in mental health problems relates to an increase in experienced schoolwork pressure. While 24 % of the Dutch girls experienced (quite) a lot of schoolwork pressure in 2009, more than half of the girls experienced (quite) a lot of schoolwork pressure in 2021 (Figure 7). Although schoolwork pressure also increased among boys (from 17 to 36 %), the rates and increases are most concerning among girls.

Figure 7. Trends in mental health and school pressure in the Netherlands in secondary education (12- to 16-year olds)



To improve the mental health and emotional well-being of children and students, the Trimbos Institute and expertise center Pharos created the program 'Well-Being at School' [10], which is part of the government-wide approach for mental health improvement. 'Well-being at School' uses a broad school approach [11] and is part of the 'Healthy School' program, which is currently implemented in 1,268 elementary schools and 318 secondary schools. This program aims to improve the emotional well-being of students through three principles:

- » Stimulating socio-emotional and cognitive competencies (e.g. teaching students how to solve arguments in class)
- » Decreasing sources of stress (e.g. teaching students how to relax, mindfulness trainings)
- » Improving supportive relationships (e.g. by maintaining good relationships with parents)

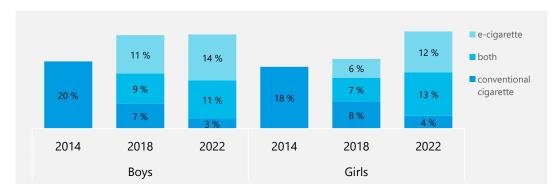
The 'Well-being at School' program focuses on facilitating professionals in and around schools (such as Healthy School advisors from community health services and policy officers from municipalities) to strengthen the mental health of students. This is done by collecting and sharing the latest insights and practical tools and by encouraging professionals to work on this theme in a sustainable and school-wide approach. In the coming years, the focus within the program will shift from gathering and developing knowledge to (further) expanding its reach.

Switzerland: E-cigarette use

While exploratory behaviour in adolescence – for instance substance use initiation – can be seen as a normal aspect of the developmental process, it can have a negative short-term impact on health and, in the case of substance consumption, lead to frequent use. In 2022, 25 % of 15-year-olds in Switzerland reported e-cigarette use in the past 30 days and 7 % reported using it frequently (i.e. on at least 10 days in the past 30 days). Among 13-year-olds, 10 % reported using e-cigarette in the past 30 days, while 3 % reported using them frequently. Hardly any 11-year-olds (<2%) reported e-cigarette use in the past 30 days.

While the 30-day prevalence of conventional cigarette use has remained rather stable among 15-year-olds since 2018 (Figure 8), the 30-day prevalence of e-cigarette use has increased significantly between 2018 and 2022, especially among girls. Likewise, the use of both conventional cigarette and e-cigarette at least once in the past 30 days has risen between 2018 and 2022, but only girls showed a statistically significant increase. The use of e-cigarette has fostered the emergence of a new group of young people who consume nicotine, while the use of conventional cigarettes has not decreased. This contradicts the hypothesis that conventional cigarettes are gradually being replaced by e-cigarette.

Figure 8. Proportions of 15-year-olds who reported using conventional cigarette only, e-cigarette only or both at least once in the past 30 days



In Switzerland, in 2022, tobacco and nicotine products were regulated at regional level with the sale of conventional cigarettes to under 16-year-olds being banned in 24 of 26 cantons and the sale of e-cigarettes in nine cantons only. With no federal law prohibiting the sale to minors, this represented a major gap in youth protection. Especially since structural measures, such as the WHO's so-called "best buys" [12] have the proven greatest effect on reducing substances use among youth. Consequently, Switzerland ranks second-to-last in Europe when it comes to tobacco policy [13] and is lagging behind in areas such as tobacco advertising bans and protection against passive smoking [14].

The new Swiss Tobacco Law adopted by the federal parliament, which came into force in October 2024, introduces few improvements, such as a national ban on the sale of all tobacco and nicotine products to minors. However, it still allows advertising and sale promotions that can reach minors, as well as sponsoring on a national level. Additionally, blank packaging is not yet required.

References

- 1. HBSC (2024). HBSC Health Behaviour in School-aged Children [website]. Bergen: University of Bergen (https://hbsc.org/)
- 2. WHO (2024). Physical activity [website]. Geneva: World Health Organization (https://www.who.int/news-room/fact-sheets/detail/physical-activity)
- 3. Rakic, J.G., Hamrik, Z., Dzielksa, A., Felder-Puig, R., Oja, L. et al. (2024). A focus on adolescent physical activity, eating behaviours, weight status and body image in Europe, central Asia and Canada: Health Behaviour in School-aged Children international report from the 2021/2022 survey. Geneva: WHO.
- 4. FSA (2024). Die Tägliche Bewegungseinheit. [Daily Physical Activity Unit] [website]. Wien: Fit Sport Austria (https://www.bewegungseinheit.gv.at/)
- 5. SHC (2019). Dietary guidelines for the Belgian adult population. Brussels: Superior Health Council.
- 6. Chatelan, A., Rouche, M., Dzielksa, A., Fismen, A., Kelly, C., Pedroni, C. et al. (2023). Sixteen-year trends in adolescent consumption of sugar-sweetened soda in six European countries with a soda tax and comparison countries: a repeated cross-sectional survey analysis. Public Health Nutr 26, 519-530. doi: 10.1017/S1368980022002361
- 7. JMD (2014). Mental Health Coaches [website]. Bonn: Jugendmigrationsdienste (<u>www.mental-health-coaches.de</u>)
- 8. GIMB (2024). Gesond iessen. Méi beweegen. [Eat well and move more; website]. Luxembourg: Ministry of Health (https://gimb.public.lu/de.html)
- 9. WHO (2024). Health and Well-Being [website]. Geneva: World Health Organization (https://www.who.int/data/gho/data/major-themes/health-and-well-being)
- 10. Trimbos (2024). Well-being at school [website]. Utrecht: Trimbos Institute (https://www.trimbos.nl/aanbod/programmas/welbevinden-op-school)
- 11. Goldberg, J.M., Sklad, M., Elfrink, T.R. et al. Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: a meta-analysis. *Eur J Psychol Educ 34*, 755–782 (2019). doi: 10.1007/s10212-018-0406-9
- 12. WHO (2023). More ways, to save more lives, for less money: World Health Assembly adopts more Best Buys to tackle noncommunicable diseases [website]. Geneva: World Health Organisation (https://www.who.int/news/item/26-05-2023-more-ways--to-save-more-lives--for-less-money----world-health-assembly-adopts-more-best-buys--to-tackle-noncommunicable-diseases)
- 13. Joossens, L., Olefir, L., Feliu, A., Fernandez, E. (2022). The Tobacco Control Scale 2021 in Europe. Brussels: Smoke Free Partnership, Catalan Institute of Oncology.
- 14. WHO (2023). WHO report on the global tobacco epidemic, 2023. Geneva: World Health Organization.

Note, websites assessed 31.10.2025