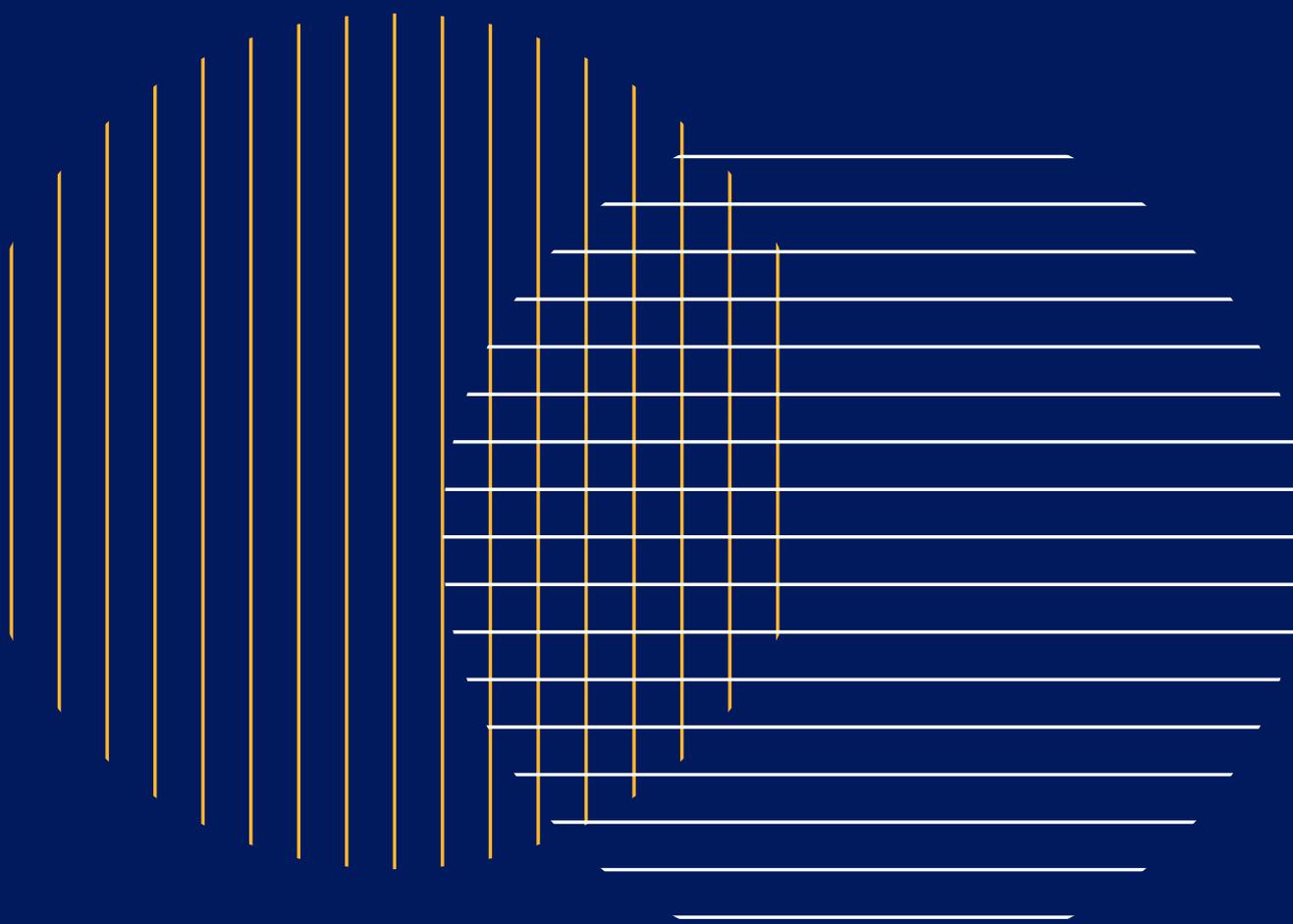


# A focus on adolescent social media use and gaming in Europe, central Asia and Canada

**Health Behaviour in School-aged Children international report from the 2021/2022 survey**

**Volume 6**



Meyran Boniel-Nissim, Claudia Marino, Tommaso Galeotti, Lukas Blinka, Kristīne Ozoliņa, Wendy Craig, Henri Lahti, Suzy L. Wong, Judith Brown, Mary Wilson, Jo Inchley and Regina van den Eijnden



World Health  
Organization

European Region



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## Abstract

The Health Behaviour in School-aged Children (HBSC) study is a large school-based survey carried out every four years in collaboration with the WHO Regional Office for Europe. HBSC data are used at national/regional and international levels to gain new insights into adolescent health and well-being, understand the social determinants of health and inform policy and practice to improve young people's lives. The 2021/2022 HBSC survey data are accompanied by a series of volumes that summarize the key findings around specific health topics. This report, Volume 6 in the series, focuses on adolescent social media use and gaming, using the unique HBSC evidence on adolescents aged 11, 13 and 15 years across 44 countries and regions in Europe, central Asia and Canada. It describes the status of adolescent social media use and gaming, the role of gender, age and social inequality, and changes in adolescent social media use and gaming since 2018. Findings from the 2021/2022 HBSC survey provide an important evidence benchmark for current research, intervention and policy-planning.

## Keywords

HEALTH BEHAVIOR  
SOCIOECONOMIC FACTORS  
ADOLESCENT HEALTH  
SOCIAL MEDIA  
INTERNET GAMING DISORDER

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## Foreword

Young people around the world face many challenges. Research shows that acceleration of climate change, migration, and economic and political instability – to name just three factors – are having profound effects on their health and well-being. The coronavirus disease (COVID-19) pandemic and, more specifically, the mitigation measures put in place by countries around the world to stop the spread of the virus, changed the way children and young people live their lives. And now, for the first time in decades, war is being waged in Europe.

Colossal global events like these inevitably have huge effects on young people. But it is the narratives of young people's everyday lives – their relationships with family, friends and teachers, self-image, levels of physical activity, what they eat and drink and their experiences at school, for instance – that determine to a large extent their overall sense of mental and physical health and well-being.

It is vital that we understand the impacts of all these issues on young people and identify what countries and regions can do to further promote adolescent health and positive health behaviours.

In this regard, we are so fortunate in the WHO European Region to have the Health Behaviour in School-aged Children (HBSC) study. HBSC is a school-based survey carried out every four years in collaboration with the WHO Regional Office for Europe. It tracks, monitors and reports on self-reported health behaviours, health outcomes and social environments of boys and girls aged 11, 13 and 15 years. The most recent survey (2021/2022) was conducted across 44 countries and regions of Europe, central Asia and Canada, and included an optional set of questions that measured the perceived impacts of the COVID-19 pandemic.

This report, Volume 6 in the series, focuses on findings from the HBSC survey on adolescent social media use (SMU) and gaming. While recognizing the undoubted benefits SMU brings to young people, especially in the social sphere, the report also highlights some of the risks, which include the growing number of adolescents who are developing addiction-like symptoms that promote SMU and gaming behaviours at the expense of other essential activities and life domains. Problematic SMU has grown from 7% at the time of the previous HBSC survey in 2018 to 11% in 2022, highlighting the urgent need for countries and regions to strengthen measures on young people's access to digital technologies and the regulation landscape.

I congratulate and thank those responsible for the HBSC/WHO Regional Office for Europe collaborative study for once again providing timely, reliable and clear evidence that countries and regions can use as a springboard to step-up existing initiatives and develop new policies to counter the ongoing challenges young people face.

**Hans Henri P. Kluge**  
**WHO Regional Director for Europe**

# Preface

The Health Behaviour in School-aged Children (HBSC) study provides unique insights into the health and well-being of adolescents across Europe, central Asia and Canada. In this, the study's 40th anniversary year, we are delighted to be launching the findings from the 11th consecutive international survey in a series of topic-based volumes.

Over the past four decades, the study has grown to include over 50 countries and regions. The scope of the study has broadened over this time to encompass emergent priorities for adolescent health, while also seeking to maintain the ability to monitor longer-term trends that provide invaluable insights into how the lives of adolescents have changed over recent decades. The 2021/2022 survey included a wide range of measures of adolescent health and health behaviours and the social context in which they grow up, including family and peer relationships, school experience and online communication. As the first HBSC survey since the coronavirus disease (COVID-19) pandemic, measures were included to understand the ongoing impact of the pandemic on adolescent health. A special focus was placed on mental health, with new measures of mental well-being, loneliness and self-efficacy.

For the first time, the HBSC international report is also presented online through a new data browser that allows users to view the data through a series of interactive charts and figures. The release of the new data is accompanied by a series of volumes that summarize the key findings around specific health topics. This report, Volume 6 in the series, focuses on adolescent social media use (SMU) and gaming. It presents some challenging findings, with high levels of SMU and increasing prevalence of problematic use, particularly among girls. SMU is higher among girls and gaming is higher among boys, but patterns vary by age and across countries and regions, suggesting wider sociocultural factors may influence adolescent online behaviours.

HBSC involves a wide network of researchers from all participating countries and regions. The data collection in each country or region is funded at national/regional level. We are grateful for the financial support and guidance offered by government ministries, research foundations and other funding bodies for the 2021/2022 survey round. We would also like to thank our valued partners, particularly the WHO Regional Office for Europe, for their continuing support, the young people who took part in the survey and shared their experiences with us, including those who provided the quotations that feature in the report, schools and education authorities for making the survey possible, and all members of the national HBSC teams involved in the research.

High-quality, internationally comparable data continue to be essential to support international policy development and monitor progress towards global targets such as the United Nations Sustainable Development Goals. At national/regional level, HBSC data provide key scientific evidence to underpin health improvement initiatives and can be used to track progress on health priorities. With its long-term trends, the HBSC study enables us to monitor the impact of wider societal change and individual lifestyles on health outcomes for the adolescent age group. Importantly, it lets us hear from young people themselves about the issues that matter to them and the factors that affect their health and well-being. While there are many challenges to address, the data also highlight the importance of providing caring and supportive environments in which adolescents can thrive.

**Jo Inchley**  
HBSC International Coordinator

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# Key findings and implications

## Key findings

- Gender differences were noted in the use of social media and digital gaming. Girls reported higher levels of continuous online contact and problematic social media use (SMU) than boys, while boys reported a higher prevalence of both non-problematic gaming and being at risk of problematic gaming than girls.
- Overall, 36% of adolescents reported continuous online contact with friends and others, with 15-year-old girls reporting the highest prevalence (44%).
- Adolescents reported continuous online contact with close friends most often (26%), and continuous online contact with friends met online least often (7%).
- Combining measures of continuous online contact with friends and others and problematic use in 2022, 11% of adolescents were classified as problematic social media users, 32% as intense users, 44% as active users and 12% as non-active social media users.
- Problematic SMU was most commonly observed among 13-year-olds. The prevalence of problematic SMU hardly varied across socioeconomic groups, but adolescents with lower socioeconomic status had the highest prevalence of non-active SMU.
- In comparison to the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey, the 2021/2022 findings show a higher prevalence of problematic SMU (7% in 2018 and 11% in 2022).
- Overall, 34% of adolescents reported playing digital games every day, and 22% reported playing for at least four hours on a gaming day. Boys tended to play more frequently and for longer sessions than girls.
- Daily digital gaming peaked at age 13 for boys and age 11 for girls. Engaging in long gaming sessions (at least four hours) was highest among 13- and 15-year-old boys and remained relatively stable across the age groups for girls.
- A fifth (20%) of adolescents were classified as non-gamers, 68% as non-problematic gamers and 12% as being at risk of problematic gaming.
- The prevalence of both non-problematic gaming and being at risk of problematic gaming was higher among boys (74% and 16% respectively) than girls (63% and 7% respectively) and problematic gaming was highest among 11-year-olds (14%).
- In comparison to the 2017/2018 HBSC survey, the 2022 findings show a slightly higher prevalence of non-problematic gamers (61% in 2018 versus 68% in 2022) and gamers being at risk of problematic gaming (10% in 2018 versus 12% in 2022).

## Implications

- Both social media and digital gaming can be beneficial for young people, but a growing number of adolescents seem to use these technologies in a problematic way. The findings from the 2021/2022 HBSC survey provide an important evidence benchmark for interventions and policy planning.
- Evidence of increasing problematic SMU signals an urgent requirement for countries and regions to consider strengthening measures on access and regulation for young people.
- The development of specific policies and programmes promoting a healthy lifestyle in the digital age is crucially important. Adolescents need to understand how to balance their online activities with offline pursuits.
- These programmes should be specifically tailored and, where appropriate, gender-specific, as both social media and gaming show gendered patterns of use. The programmes should be

implemented throughout childhood to support the healthy development of online behaviours.

- Parents, policy-makers and teachers should be aware of the difference between intensive use and problematic use of social media and digital games to be able to identify at-risk adolescents.
- The industry should be held responsible for monitoring and enforcing the official age restrictions for social media platforms (age 13 or older) and games with certain age limits. The industry should be discouraged from using incentives such as intensive reward mechanisms.

# Introduction

In an era defined by the rapid integration of digital technologies into daily lives, adolescent use of digital technology has emerged as a pivotal area of research and concern (1,2).

Social media (including traditional social networking sites, instant messaging apps and other interactive social apps) facilitate both synchronous and asynchronous interactions, blurring the boundaries between the physical world and digital interactions and demanding the re-evaluation of traditional notions of socialization and communication. The unprecedented level of information-sharing and exposure to diverse viewpoints on social media introduces adolescents to a realm of opportunities and challenges. The construction of self-identity, formation of peer relationships, exploration of interests and exposure to societal norms are an integral part of online interactions. Alongside these opportunities, however, come concerns related to privacy, cyberbullying, addictive behaviours and potential negative impacts on mental and physical well-being (3–5).

Social media use (SMU) among adolescents has increased significantly in recent years (2). Beyond adolescents who use social media continuously, those with problematic SMU tend to have difficulty controlling their social media compulsions, feel distressed when their use is restricted and are preoccupied with thoughts of SMU when not online (6). The outcomes associated with continuous and problematic SMU are distinct, so the concepts need to be assessed and monitored separately.

Problematic SMU is linked with lower mental, social and school well-being, but the outcomes of continuous SMU are country/region-dependent and can be favourable in specific well-being domains, such as friendship support (7). Combining measures of continuous and problematic SMU allows for a better understanding of their relative effects on adolescent health and well-being. As such, four categories of SMU have been developed within the Health Behaviour in School-aged Children (HBSC) study, taking into account both continuous and problematic use simultaneously: non-active, active, intense and problematic use (7).

Similar to SMU, digital gaming has become a prevalent pastime for adolescents, serving as a digital nexus for engagement, creativity and interpersonal connectivity. In contemporary times, these virtual realms have evolved to encompass captivating and intellectually stimulating features, and the integration of a robust social dimension within gaming environments has solidified their significance. The inherent characteristics of digital gaming, including intensive reward systems, nevertheless have given rise to heightened concerns regarding the potential for problematic usage patterns (8,9).

The 2021/2022 HBSC survey provides new evidence on the frequency (intensity) of use and problematic, addictive-like use of social media and gaming among adolescents aged 11, 13 and 15 years across countries and regions in Europe, central Asia and Canada. More specifically, this report describes:

- continuous online contact with friends and others across 41 countries and regions (Table 1 and the Annex);
- problematic use of social media across 40 countries and regions (Table 1 and the Annex);
- intensity of digital gaming and problematic digital gaming across 12 countries and regions (Table 1);
- patterns of use by gender, age and socioeconomic status; and
- observable changes in SMU between the 2017/2018 and 2021/2022 HBSC surveys.

**Table 1. Digital technology measures included in the report**

Measures	Items
<b>Frequency of online contact with friends and others<sup>a</sup></b>	Adolescents were asked how often they had online contact through social media with four categories of people: close friends, friends from a larger friend group, friends they had met through the Internet, and other people (such as teachers, siblings, classmates and parents). The five response options ranged from never or almost never to almost all the time throughout the day. Findings presented in the Annex show the proportions reporting contact almost all of the time throughout the day (continuous online contact) with at least one of the four friendship categories and with each of the four friendship groups separately. Answers to these four items were combined with the problematic SMU measure to create four SMU categories (see below).
<b>Problematic SMU</b>	Adolescents were asked to report about symptoms of problematic (addictive-like) SMU using the Social Media Disorder Scale (6,10), a nine-item measure to which respondents answered with yes or no. Findings in the Annex represent adolescents who answered yes to six or more symptoms and were therefore categorized as problematic social media users.
<b>SMU categories<sup>a</sup></b>	<p>Four categories of social media users were computed by combining the frequency of online contact and problematic SMU measures. In line with previous HBSC studies, those answering yes to six or more of the problematic Social Media Disorder Scale items were classified as problematic users, irrespective of the frequency of online contact. Those who did not reach the threshold for problematic use were then categorized into three further groups based on their frequency of online contact with friends or others, giving four groups in total (7):</p> <ol style="list-style-type: none"> <li data-bbox="539 1438 1414 1507">1. <b>non-active users</b> (having weekly or less frequent online contact with others AND non-problematic SMU);</li> <li data-bbox="539 1527 1414 1597">2. <b>active users</b> (having online contact with others daily but not all the time AND non-problematic SMU);</li> <li data-bbox="539 1617 1414 1686">3. <b>intense users</b> (having online contact with others almost all the time throughout the day AND non-problematic SMU); and</li> <li data-bbox="539 1706 1414 1776">4. <b>problematic users</b> (having six or more symptoms of problematic use regardless of the online contacts with others).</li> </ol>

Table 1 contd

Measures	Items
<b>Frequency of digital gaming<sup>b</sup></b>	<p>Adolescents reported on their frequency of gaming by responding to two questions: how often do you play games?; and, on a day that you play games, about how much time do you spend gaming? Young people were asked to think about all the games they play on a smartphone, tablet, laptop, personal computer, Mac or console (such as PlayStation, Wii or Xbox).</p> <p>The first question was based on a six-point scale, which ranged from never or almost never to (almost) every day. The findings presented here show the prevalence of adolescents who answered (almost) every day.</p> <p>The second question was based on a five-point scale ranging from 1–2 hours to eight hours or more. The findings presented here show the prevalence of adolescents who answered at least 4–6 hours (11).</p>
<b>Problematic gaming<sup>c</sup></b>	<p>Adolescents reported on their symptoms of problematic (addictive-like) gaming by answering the dichotomous nine-item Internet Gaming Disorder Scale, based on the nine criteria for Internet gaming disorder described in section III of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5<sup>®</sup>) (12). In line with the DSM-5<sup>®</sup> definition, the present findings show adolescents who reported five or more symptoms and were therefore classified as being at risk of problematic gaming. Those with fewer than five symptoms were classified as non-problematic gamers (12,13).</p>
<b>Categories of gaming</b>	<p>Three categories of gaming were computed by combining the frequency of gaming and problematic gaming measures:</p> <ol style="list-style-type: none"> <li data-bbox="539 1357 1410 1429">1. <b>non-gamers</b> (responding that they never or almost never play digital games);</li> <li data-bbox="539 1447 1410 1554">2. <b>non-problematic gamers</b> (having fewer than five symptoms on the Internet Gaming Disorder Scale AND not responding that they never or almost never play digital games); and</li> <li data-bbox="539 1572 1410 1644">3. <b>at risk of problematic gaming</b> (having five or more symptoms on the Internet Gaming Disorder Scale).</li> </ol>

<sup>a</sup>Data were not available for Belgium (French), Denmark (11-year-olds), Denmark (Greenland), Slovakia and Switzerland.

<sup>b</sup>Data were not available for North Macedonia and United Kingdom (Scotland) (11-year-olds).

<sup>c</sup>Data were not available for Germany, Slovakia (11-year-olds) and United Kingdom (Scotland) (11-year-olds).

The report features three scientific case studies summarizing research projects in this area that have used HBS data.

# Insights into adolescent digital technology use

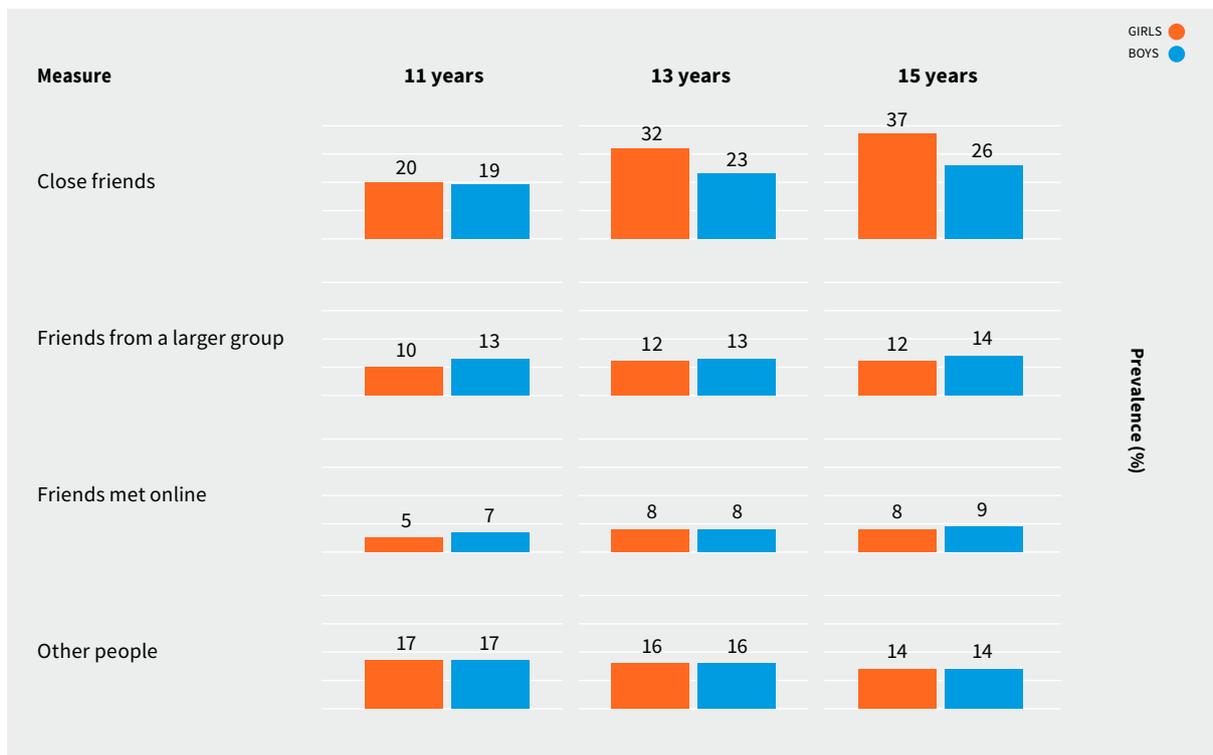
## Continuous online contact with friends and others

Overall, 36% of adolescents reported continuous online contact (almost all the time throughout the day) with friends and others. Girls reported a higher prevalence of continuous online contact; this gender difference increased with age. It was seen in five countries and regions at age 11, but in 37 at age 15. The exception was Tajikistan, where boys showed a higher prevalence at age 15. Between 2018 and 2022, changes in continuous online contact with friends and others were mixed, but there was a three percentage-point increase among 11-year-olds.

Prevalence of continuous online contact with friends and others increased with age in both genders, from 31% at age 11 to 39% at age 15. The largest difference was seen in Ireland (a 25 percentage-point increase). Age-related increases were not universal, however: Lithuania, for example, showed a nine percentage-point decrease between ages 11 and 15. Combining ages and genders, adolescents in Portugal and Serbia showed the highest prevalence of continuous online contact (52% and 50% respectively). The lowest prevalence was seen in Tajikistan (22%).

A quarter (26%) of adolescents reported having continuous online contact (almost all the time throughout the day) with close friends, 12% with friends from a larger friend group, 7% with friends they met online and 16% with people other than friends. Continuous online contact with close friends increased with age for both genders but remained stable across age groups for the other friendship categories (Fig. 1). A gender difference in continuous online contact with close friends emerged in

**Fig. 1. Continuous online contact with four friendship categories by age and gender, HBSC average**



Note: no data were received from Belgium (French), Slovakia and Switzerland.

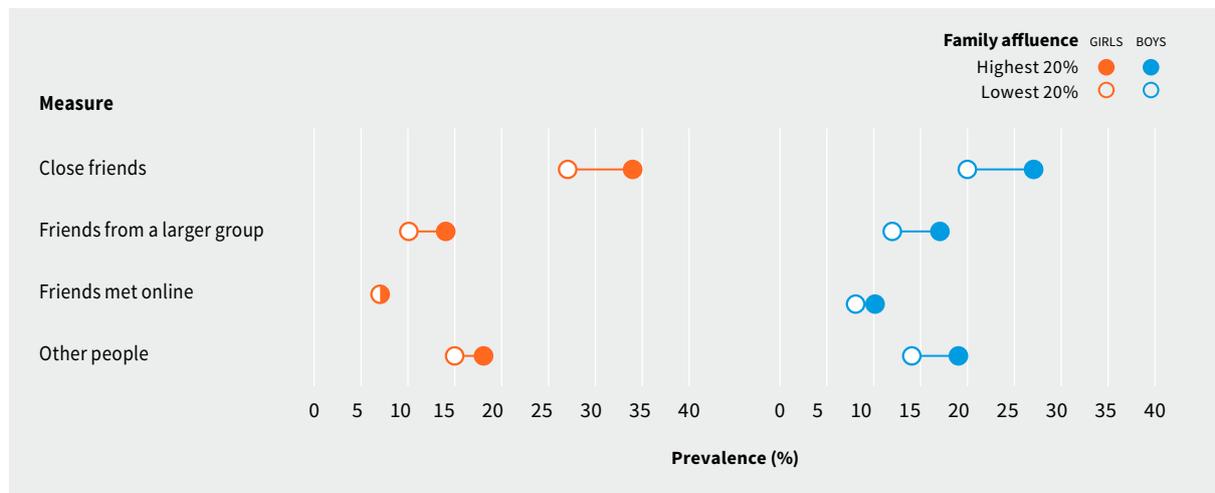
the older age groups, with higher prevalence among girls at ages 13 and 15 compared with boys. No gender differences were seen in the other friendship categories (Fig. 1).

Cross-country/regional variation in the prevalence of continuous online contact with different groups, such as close friends and others, was seen. Adolescents from Albania and Portugal had among the highest prevalence of continuous online contact with close friends, friends from a larger friend group and friends met online.

Generally, adolescents from high-affluence families reported continuous online contact with friends or others more often than those from low-affluence families (40% versus 34%). This socioeconomic difference was seen in 22 countries and regions among boys and 27 among girls.

Adolescents from higher affluence families reported the highest prevalence of continuous contact with close friends, friends from larger friend groups and other people (Fig. 2). There were no differences between adolescents from low- and high-affluence families in continuous contact with friends they had met online.

**Fig. 2. Continuous online contact with four friendship categories by family affluence and gender, HBSC average**



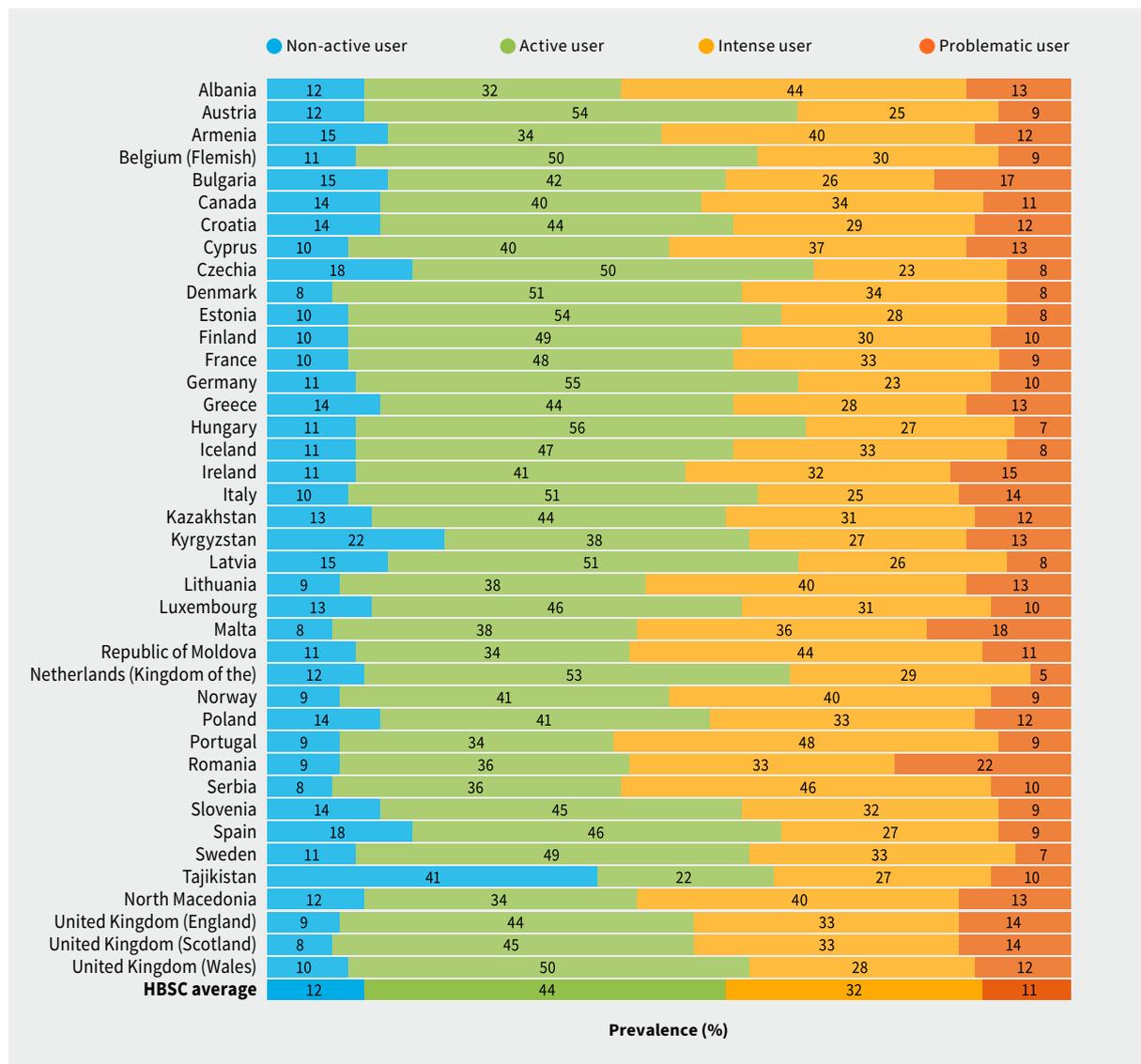
Note: no data were received from Belgium (French), Slovakia and Switzerland.

### Problematic SMU

Overall, 11% of adolescents reported problematic SMU. The prevalence of problematic use showed a slight increase since 2018 (from 7%). A larger increase was seen among girls than boys, with 13-year-old girls showing a six percentage-point increase in problematic SMU since 2018. Although 18 countries and regions showed a significant increase in problematic SMU across boys and girls, there was country/region-level variation. Romania showed the greatest increase in problematic SMU across age and gender groups. In contrast, boys in Spain showed a decrease in all age groups. Finland and Norway showed no change between 2018 and 2022 in all age and gender groups.

Romania had the highest prevalence of problematic SMU (22%), followed by Malta (18%) and Bulgaria (17%). The lowest prevalence was found in Netherlands (Kingdom of the) (5%) (Fig. 3).

**Fig. 3. SMU four categories by country/region**



Note: no data were received from Belgium (French), Denmark (11-year-olds), Denmark (Greenland), Slovakia and Switzerland.

Differences in problematic SMU were seen across age groups. Prevalence was highest among 13-year-olds (12%) and lowest in 11-year-olds (9%). Gender differences in problematic SMU also emerged with age. Overall, the prevalence was higher among girls (13%) than boys (9%). This gender difference was seen in six countries and regions at age 11 and 31 at age 13.

There were minimal differences in the prevalence of problematic SMU across socioeconomic groups. A difference between low- and high-affluence adolescents was seen in four countries for boys and six countries and regions for girls, but the direction of the socioeconomic gradient was mixed.

## SMU categories

When looking at the four categories of SMU, based on a combination of the frequency of online contact with friends and others and problematic SMU measures, most adolescents were classified either as active (44%) or intense (32%) users. Eleven per cent were classified as problematic users and 12% as non-active users.

The prevalence of problematic use showed a slight increase since 2018, but there was little change across other SMU categories, and variation across countries and regions was considerable. For example, the prevalence of intense use ranged from 23% in Czechia and Germany to 48% in Portugal, while the prevalence of active use ranged from 22% in Tajikistan to 56% in Hungary. The proportion of non-active users was lowest in Denmark, Malta and Serbia (all 8%) and highest in Tajikistan (41%) (Fig. 3).

Differences in intense and non-active SMU were seen across the age and gender groups (Fig. 4). Intense SMU was most often reported by 15-year-olds (35%) and least often by 11-year-olds (30%). Conversely, the prevalence of non-active use was highest among 11-year-olds (18% versus 9% at age 15). Active use remained relatively stable across age groups for girls, but prevalence for boys increased from 42% at age 11 to 48% at age 15.

Girls and boys reported very similar prevalence of intense SMU (34% and 31% respectively). Active SMU was slightly higher among boys (46%) than girls (42%). The same pattern was observed for non-active SMU (14% boys versus 11% girls). Both active and non-active SMU therefore showed an opposing gender pattern to problematic SMU, where prevalence generally was higher among girls.

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### Scientific case study 1

In a study using HBSC 2017/2018 data, Boniel-Nissim et al. (2) used the four SMU categories to understand the health implications of the interplay between different levels of SMU intensity and problematic SMU. Problematic users reported the least favourable mental and social well-being profile and the highest level of substance use. Non-active users had the lowest levels of substance use, but also reported lower mental and social well-being than active users. Social well-being, measured in terms of levels of peer and classmate support, was highest among the intense, non-problematic users.

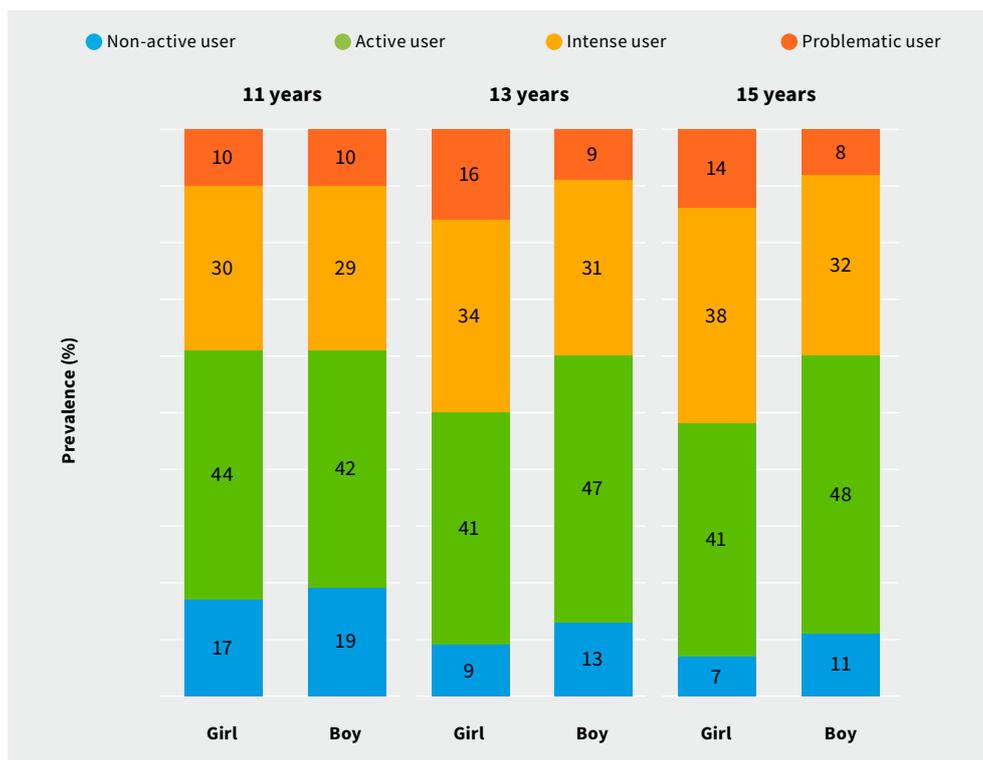
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Unlike problematic SMU, intense and non-active SMU showed a socioeconomic gradient. Adolescents from high-affluence families had the highest prevalence of intense SMU (37% against 31% among adolescents from low-affluence families). Adolescents from low-affluence families reported the highest prevalence of non-active SMU (15%) and those from high-affluence families the lowest (9%).

**Scientific case study 2**

A study by Boniel-Nissim et al. (5) using HBSC data tested the associations between adolescent SMU and sleep patterns across the four categories of SMU. It was found that non-active SMU was associated with longer sleep, earlier bedtimes and less social jetlag compared to active SMU, although the differences were minor. Both intense and problematic SMU were associated with less sleep, later bedtimes on both school and non-school days and more significant social jetlag than active SMU (5).

**Fig. 4. SMU four categories by age and gender, HBSC average**



Note: no data were received from Belgium (French), Slovakia and Switzerland.



*I think the benefits [of social media] is just making friends, being able to communicate very quickly. You can form connections and also find communities of people that enjoy the same things. You can learn more things and also find out more passions you may have. (Girl, Canada)*

## Frequency of digital gaming

Thirteen countries and regions included questions on online gaming in the 2021/2022 HBSC survey. Overall, a third (34%) of adolescents reported playing games every day and a fifth (22%) played for at least four hours on the days they played games.

Daily gaming peaked at age 13 for boys and 11 for girls. Among girls, 26% of 11-year-olds reported that they played online games daily. This decreased to 21% at age 13 and 16% at age 15. For boys, 46% of 11-year-olds, 48% of 13-year-olds and 42% of 15-year-olds reported daily gaming. There was a substantial increase in the proportion of boys who reported playing games for at least four hours a day between 11- and 13-year-olds (from 24% to 31%), but the proportion of girls gaming for at least four hours a day remained stable across the age groups.

The prevalence of daily gaming varied across countries and regions, with the lowest rates observed for boys in Serbia (11%) and girls in Iceland (11%). The highest prevalence of daily gaming was found among 13-year-old boys (60%) in United Kingdom (Scotland) and 15-year-old girls (51%) in Serbia. There was also cross-country/region variation in the prevalence of long gaming sessions (at least four hours). The lowest prevalence was found among 11-year-olds in Slovenia (15% boys and 7% girls) and the highest in 13-year-old boys in United Kingdom (England) (45%) and 11-year-old girls in Malta (19%).

## Categories of digital gaming

Most adolescents were classified as non-problematic gamers (68%). A fifth (20%) were classified as non-gamers and 12% as being at risk of problematic gaming. Problematic gaming was consistently higher among boys in every country and region (Fig. 5).

**Fig. 5. Proportion of adolescents classified as at risk of problematic gaming by age, gender and country/region**

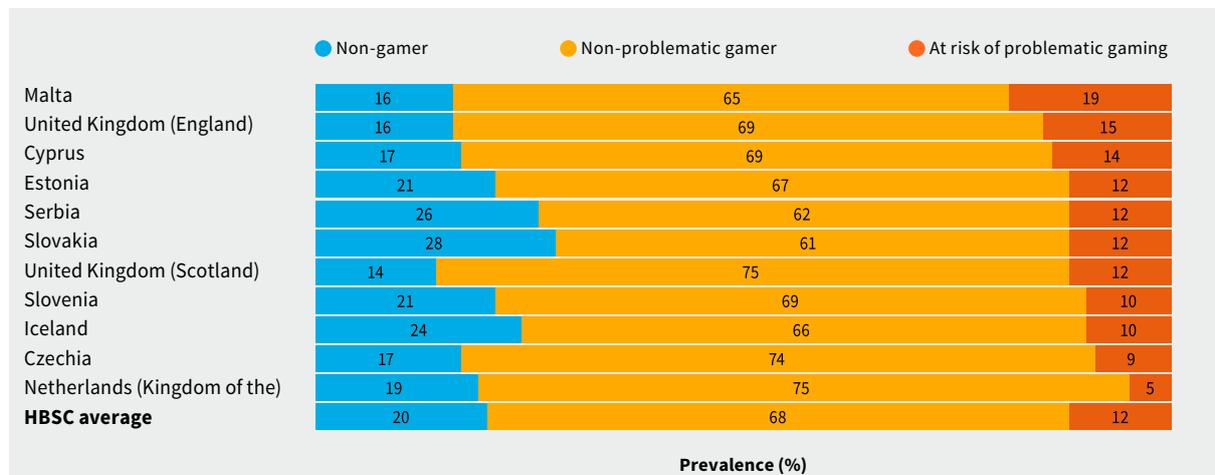
Country/region	GIRLS (%)			BOYS (%)		
	11 years	13 years	15 years	11 years	13 years	15 years
Malta	16	14	7	24	26	27
North Macedonia	16	13	12	28	22	21
United Kingdom (England)	15	9	7	26	20	16
Cyprus	12	11	7	21	21	15
Estonia	9	8	4	19	17	17
Serbia	8	9	9	17	16	13
Slovakia	–	7	5	–	20	17
United Kingdom (Scotland)	–	7	4	–	17	19
Slovenia	6	6	4	13	15	15
Iceland	6	5	3	16	16	14
Czechia	7	6	3	15	14	11
Netherlands (Kingdom of the)	2	3	2	7	11	7

Prevalence (%) 2 28

Note: gaming questions were optional. Data from at least one of the gaming questions were received from Cyprus, Czechia, Estonia, Germany, Iceland, Malta, Netherlands (Kingdom of the), North Macedonia, Serbia, Slovakia, Slovenia, United Kingdom (England) and United Kingdom (Scotland). Problematic gaming data were not received from Germany, Slovakia (11-year-olds) and United Kingdom (Scotland) (11-year-olds).

The prevalence of each gaming category varied significantly across countries and regions (Fig. 6). For example, the at-risk category for problematic gaming was highest in Malta (19%) and lowest in Netherlands (Kingdom of the) (5%). The proportion of non-gamers was highest in Slovakia (28%) and lowest in United Kingdom (Scotland) (14%).

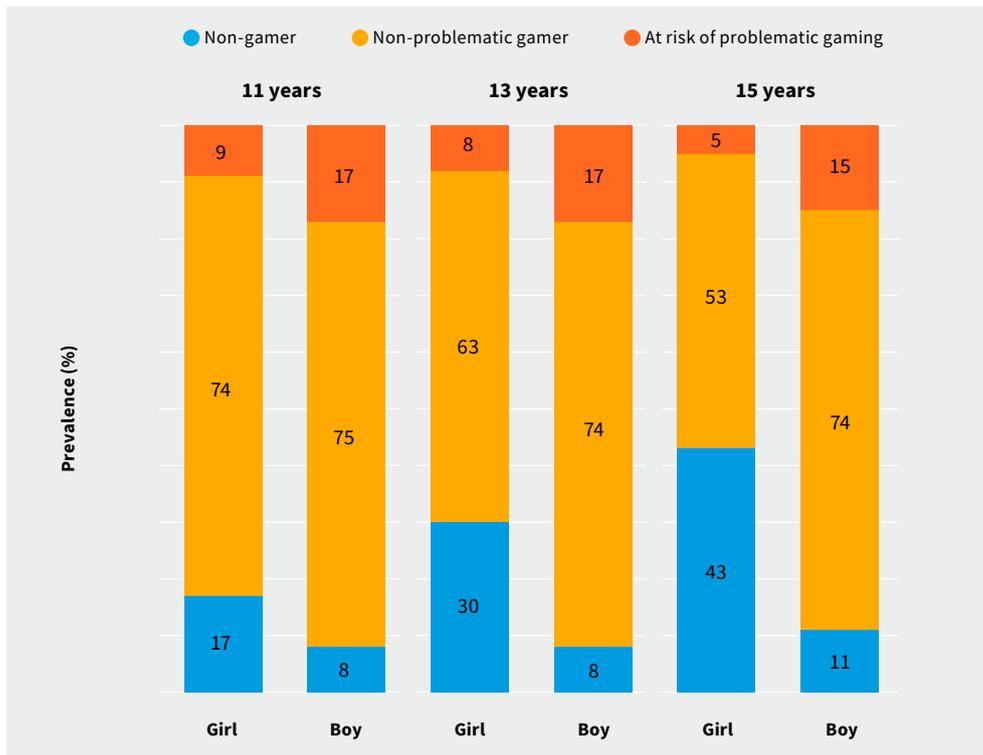
**Fig. 6. Gaming categories by country/region**



Note: gaming questions were optional. Data from at least one of the gaming questions were received from Cyprus, Czechia, Estonia, Germany, Iceland, Malta, Netherlands (Kingdom of the), North Macedonia, Serbia, Slovakia, Slovenia, United Kingdom (England) and United Kingdom (Scotland). Gaming categories could not be calculated if data were not received on either the gaming frequency question or the problematic gaming question, or both. Consequently, gaming categories could not be calculated for: Germany (no data received on problematic gaming); North Macedonia (no data received on frequency of gaming); Slovakia (11-year-olds) (no data received on problematic gaming); and United Kingdom (Scotland) (11-year-olds) (no data received on frequency of gaming and problematic gaming).

Overall, digital gaming was more prevalent among younger adolescents (Fig. 7), with the highest risk of problematic gaming being found among 11-year-olds (13% compared with 10% at age 15). Boys and girls differed in their involvement in gaming, with the differences increasing with age. Specifically, gaming decreased among girls with age while levels of non-problematic gaming remained stable among boys.

**Fig. 7. Gaming categories by age and gender, HBSC average**



*Note:* gaming questions were optional. Data from at least one of the gaming questions were received from Cyprus, Czechia, Estonia, Germany, Iceland, Malta, Netherlands (Kingdom of the), North Macedonia, Serbia, Slovakia, Slovenia, United Kingdom (England) and United Kingdom (Scotland). Gaming categories could not be calculated if data were not received on either the gaming frequency question or the problematic gaming question, or both. Consequently, gaming categories could not be calculated for: Germany (no data received on problematic gaming); North Macedonia (no data received on frequency of gaming); Slovakia (11-year-olds) (no data received on problematic gaming); and United Kingdom (Scotland) (11-year-olds) (no data received on frequency of gaming and problematic gaming).

### Scientific case study 3

A study by van der Neut et al. (8) examined adolescents’ problematic online gaming behaviour in five countries and regions (Azerbaijan, Netherlands (Kingdom of the), Serbia, Slovenia and United Kingdom (England)) and found that overall, problematic gaming was associated with lower life satisfaction, more frequent psychological complaints and lower peer support.

## Cross-cutting themes

### The role of age in adolescent SMU and digital gaming

Intuitively, it might be assumed that digital technology use increases with age. Indeed, in relation to SMU, the intensity of online contact increased with age, with the highest prevalence of non-active use among 11-year-olds and the highest prevalence of intense use among 15-year-olds. This was mostly due to the frequency of online contact with friends increasing with age. In contrast, continuous online contact with friends from a larger group, friends met online and other people were relatively similar across the age groups. Prevalence of problematic SMU was highest at age 13.

The general trend with regard to online gaming was the reverse, with the prevalence of non-gamers tending to increase with age and the prevalence of daily gaming being lowest among 15-year-olds. In addition, the prevalence of problematic gaming for both boys and girls was lowest among 15-year-olds.

### Gender differences in adolescent SMU and digital gaming

Consistent with previous research, the results suggest that girls tend to use social media more often than boys to contact friends and others. In particular, the prevalence of continuous online contact with close friends was higher for girls than boys (except among 11-year-olds). The prevalence of problematic SMU was higher among girls than boys, and the gender difference widened with age. A larger increase in problematic SMU has been seen among girls than boys since 2018, with a six percentage-point rise among 13-year-old girls between 2018 and 2022.

Also consistent with previous research, boys tended to engage in digital gaming more frequently than girls, with girls being more likely to be non-gamers. The prevalence of both daily gaming and being at risk for problematic gaming is higher among boys than girls and a higher percentage of boys than girls reported long gaming sessions (playing for four hours or more on the days they played games).



*A lot of kids have a problem of being glued to their phone, and sometimes they are waking up in the night to look on their phone because they feel like, if they don't look at their phone, they'll miss out on something. (Girl, Slovakia)*

## Social inequalities in adolescent SMU

Adolescents from higher affluence families had a greater prevalence of continuous online contact with close friends, friends from larger friend groups and other people than those from lower affluence families.

With regards to the four SMU groups, a higher prevalence of non-active SMU was reported by adolescents from low-affluence families, but in general, there was no substantial difference in the prevalence of active use or problematic use across family affluence groups.

## Cross-national/regional variations in adolescent SMU and digital gaming

Large cross-national/regional variations were observed for continuous online contact with close friends and with other people. In contrast, more moderate variations were seen for continuous online contact with friends from a larger friend group and friends met online. Adolescents from Albania and Portugal had among the highest prevalence of continuous online contact with close friends, friends from a larger friend group and friends met online.

Large cross-national/regional variations were observed among categories of social media users. The prevalence of non-active SMU was lowest in Denmark, Malta, Serbia and United Kingdom (Scotland) and highest in Tajikistan, while active SMU was lowest in Tajikistan and highest in Hungary. Intense SMU was lowest in Czechia and Germany and highest in Portugal. Cross-national/regional variations in problematic SMU were smaller, with the lowest prevalence in Netherlands (Kingdom of the) and highest in Romania.

Large cross-national/regional variations were observed both in daily gaming and in long gaming sessions of at least four hours a day (both highest in United Kingdom (Scotland) and lowest in Slovenia, for all age groups combined). Cross-national/regional variations in the prevalence of non-gamers (lowest in United Kingdom (Scotland) and highest in Slovakia) and those at risk of problematic gaming (lowest in Netherlands (Kingdom of the) and highest in Malta and North Macedonia) were also observed.

## Policy implications

The findings of the 2021/2022 HBSC survey lead to proposals to support healthy SMU and digital gaming that target various stakeholders, including policy-makers, educators, parents and adolescents.

Both SMU and digital gaming can be beneficial for adolescents because they allow them to interact and stay involved with their peers. A growing number of adolescents, however, are developing addiction-like symptoms that lead to SMU or gaming behaviours being practised at the expense of essential activities and life domains (such as school functioning, physical activity and real-life interaction with parents and peers).

The increasing prevalence of problematic SMU (from 7% in 2017/2018 to 11% in 2021/2022, with significant gender disparities and socioeconomic differences in usage patterns) underscores the urgent need for countries and regions to critically consider their measures on regulation and access to digital technologies for young people. Regulatory frameworks that ensure age-appropriate content, robust parental and educational guidance, and equitable access are crucial.

Policies and programmes promoting a healthy, balanced lifestyle in the digital age are also important. Programmes for adolescents should address, but not solely focus on, online risks and specific behaviours in the virtual sphere and should demonstrate how adolescents can balance their online activities, whether on social media or in games. It is important that adolescents aim for a healthy balance between online activities and real-life pursuits, such as sleep, physical exercise, healthy eating, schoolwork and social connections with peers.

Policy-makers and school leaders should be advised to establish clear policies for using smartphones in the school environment. Media and emotional literacy programmes should accompany such school policies from the early years to encourage dialogue about healthy, balanced usage, with support made available for parents to help mitigate risky online behaviour. Parents and teachers should be aware of age limits and be advised to explore and discuss the world of social media and games with young people before they start to use online platforms so they are better informed and prepared for what to expect.

A comprehensive approach that addresses regulation, access, and policies and programmes to promote healthy use of digital technology is becoming increasingly important as countries and regions worldwide grapple with the implications of digital consumption on young people's well-being.

Policies and programmes should reflect the following considerations and processes.

### Developmental appropriateness

Programmes should be implemented throughout childhood, especially before children have their own smartphones and/or start playing games known for their addictive potential, to support the healthy development of online behaviours. Programmes are more effective when developmentally tailored and, in some cases, gendered. For instance, the newly emerged phenomenon that younger adolescents play games more and face higher levels of problematic gaming than previously deserves further attention. Digital games are usually designed using intensive reward mechanisms, and younger adolescents may face more difficulties regulating their gaming behaviour due to their developmental characteristics.

## Targeting

Additional support may be required for those adolescents who may be more vulnerable to negative outcomes from digital behaviours, such as those with pre-existing mental health issues or from lower socioeconomic backgrounds. Parents, policy-makers and teachers should be aware of the difference between intensive use and problematic use of social media and games to identify at-risk adolescents and refer them for professional assistance where appropriate.

## Inclusivity

Digital education programmes must be inclusive, catering to diverse learning needs and being accessible to all adolescents, including those with disabilities or from lower socioeconomic backgrounds.

## Cultural sensitivity

Digital education programmes need to be adapted to be effective across diverse settings. Understanding national/regional differences in digital access and usage can help tailor interventions more effectively.

## Intersectoral action

Digital policies should synergize with existing health, education and welfare policies, especially from a behavioural perspective. Effective integration across sectors will streamline implementation and enhance efficacy.

## Best practice

Policy-makers can learn from successful initiatives that support young people's well-being in today's highly digitalized society. For example, the Council of Europe has developed the Digital Citizenship Education concept (14), which aims to empower young people by providing the skills needed to actively learn and participate in the digital world while supporting healthy development. Educational resources for students, parents and educators are also available.

## Monitoring

The findings in this report provide clear direction for developing policies and programmes to support digital literacy and promote healthy online behaviours among adolescents, but ongoing monitoring is required to assess their effectiveness and impact over time. This could involve setting clear metrics for success and regularly reviewing and revising existing strategies based on new evidence. Importantly, mechanisms for young people themselves to provide feedback on digital behaviour policies and programmes should be integrated into monitoring and evaluation systems. This could include youth advisory panels or digital forums where young people can share their views and experiences.

## Conclusions

The digital transformation of the past decades and the coronavirus disease (COVID-19) pandemic have led to drastic changes in adolescent daily lives and a substantial increase in the use of digital technologies.

The relatively low percentages of non-active social media users and non-gamers indicate that SMU and digital gaming are very common and normative behaviours among adolescents. Although most users reported active/intense SMU and non-problematic gaming, it should be noted that a significant increase in problematic SMU has been observed between 2018 and 2022. Although previous studies have found that intense SMU is not necessarily associated with negative mental or physical health outcomes and can even be beneficial, there is a well established association between problematic SMU and problematic gaming in adolescence, with adverse mental, social and physical health outcomes. The increasing prevalence of problematic SMU and problematic gaming implies that a growing number of adolescents are at risk of experiencing social, school and emotional problems in their daily lives as a result of these phenomena, and policy-makers and practitioners should give careful consideration to the issues this raises.

Children and young people are an essential target group for health promotion because health behaviour learned early creates the basis for behaviour that supports well-being as an adult. The benefits of developing social media and digital gaming habits that are healthy, safe and responsible and that support one's own and others' well-being should therefore be emphasized to young people. By helping to understand the impact of social media and digital gaming on adolescents' lives, HBSC continues to inform actions that maximize opportunities and minimize harm and online risks. Understanding how SMU and digital gaming influence adolescents' lives is critical to developing optimal education, health and social infrastructure that can meet the needs of a new digital generation.



*I don't think it should be about using social media less as it can be a good thing. I think it is more important to make social media better and safer and teach people how to use it safely and to look after themselves.*  
*(Boy, United Kingdom (England))*

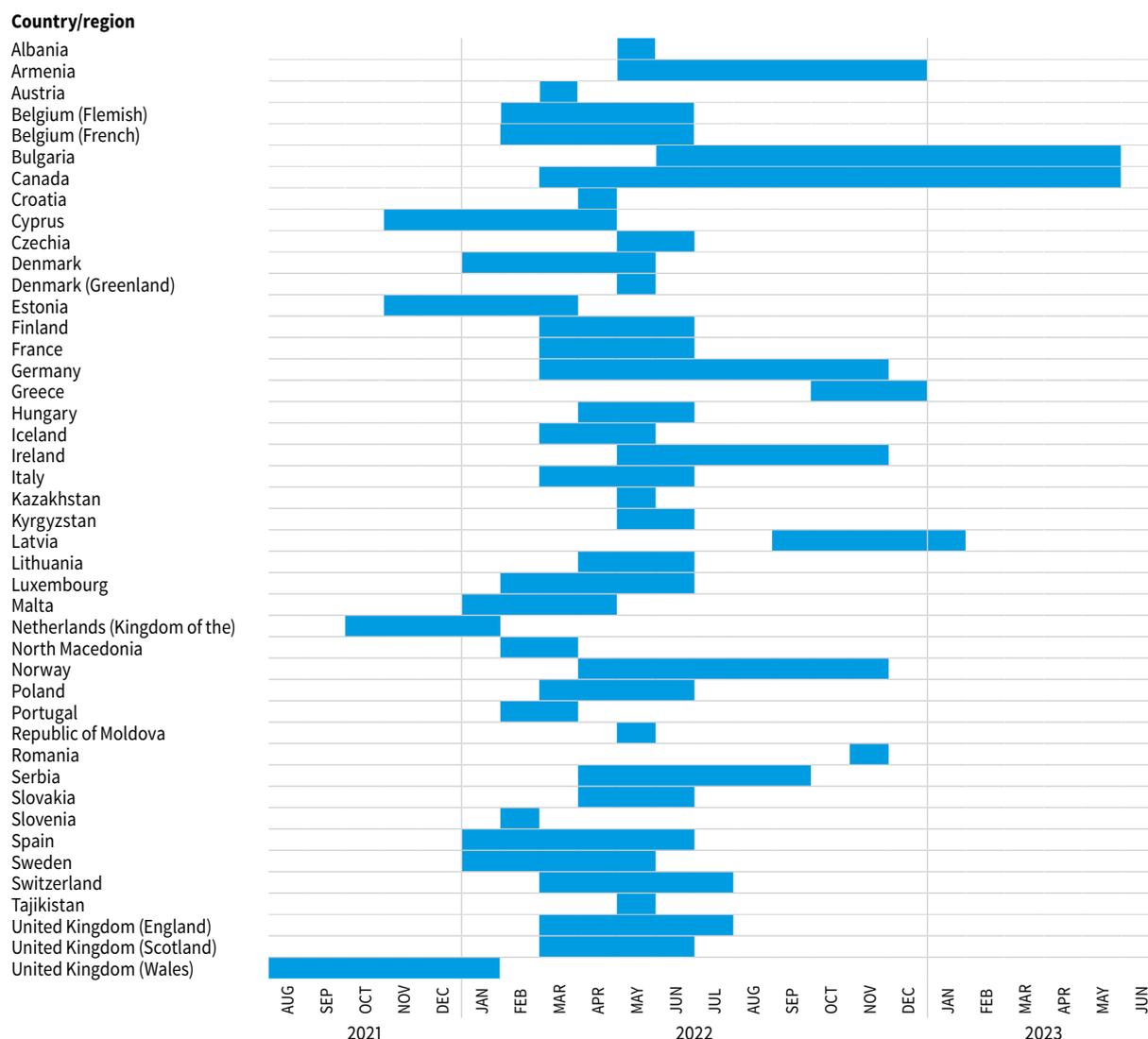
# HBSC study

The HBSC study is a large school-based survey carried out every four years in collaboration with the WHO Regional Office for Europe. The study collects data on the health behaviours, health outcomes and the social environments of adolescents aged 11, 13 and 15. Since the mid-1980s, HBSC data have been used to gain new insights into young people’s health and well-being, better understand the social determinants of adolescent health, and inform policy and practice to improve young people’s lives.

The most recent HBSC survey (2021/2022) was conducted across 44 countries and regions in Europe, central Asia and Canada and included an optional set of questions that measured perceived impacts of the COVID-19 pandemic.

This report presents key findings on adolescent SMU and gaming. It is the sixth volume in a series of reports that present findings from the latest international HBSC survey and discuss what they mean for young people’s health and well-being. Fig. 8 shows the dates on which the 44 countries and regions conducted the survey.

**Fig. 8. Dates on which the 44 countries and regions conducted the 2021/2022 HBSC survey**



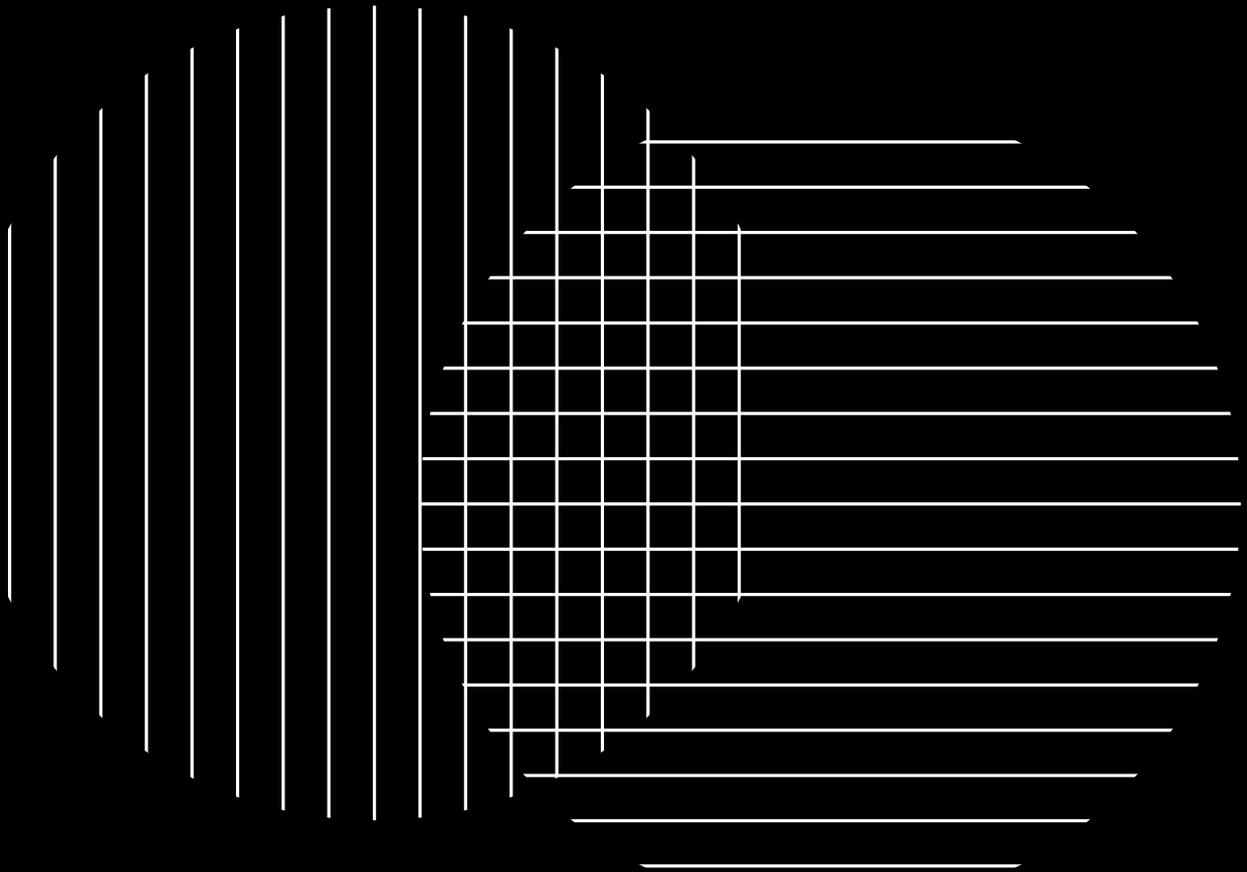
Note: data from Israel were collected too late for inclusion in the report. No HBSC survey was undertaken in 2021/2022 in Azerbaijan, Georgia, Türkiye and Ukraine. HBSC membership of the Russian Federation was suspended in April 2022.

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<sup>1</sup> All references accessed 19 April 2024.

# Annex



# Key data

## Introduction

This Annex presents the key data from the 2021/2022 Health Behaviour in School-aged Children (HBSC) study that underpin the summary of scientific findings presented in the main report – in this volume, related to adolescent social media use (SMU) and gaming.

A standard methodology for the study is used in each participating country and region. This is detailed in the HBSC 2021/2022 international study protocol (1).

Fieldwork took place mainly between October 2021 and June 2022. An extended fieldwork period was necessary in two countries to enable them to reach the required sample size.

Further information about the HBSC study is available online (2). Aggregate data from the 2021/2022 survey can be accessed as charts and tables via the HBSC data browser (3), alongside comparable data from the 2017/2018 and 2013/2014 surveys where available.

## Data presented

Key data on adolescent SMU and gaming are presented disaggregated by country and region, age group, gender and family affluence for the 279 117 young people aged 11, 13 and 15 years from 44 countries and regions who participated in the 2021/2022 HBSC survey. Data are presented for six of the 11 indicators presented in this volume.

## Data availability

Data are drawn from the mandatory component of the HBSC survey questionnaire, which was used in all countries and regions. Data for some indicators were not available from specific countries and regions; this is indicated in the footnotes to relevant charts.

## Family affluence

Family affluence is a robust determinant of adolescent health, but children are not able to give the sort of information traditionally collected about job roles and salary that would give an indication of how rich or poor families may be.

HBSC uses the Family Affluence Scale (FAS) (4–6), which asks young people about material assets in the household. The HBSC 2021/2022 survey used a six-item assessment of common material assets or activities, covering family vehicle ownership, house bedroom and bathroom/shower room capacity, holidaying abroad, and family computer and dishwasher ownership.

Responses are scored and summed to form an HBSC FAS summary score, which has been shown to provide a valid indicator of relative affluence (4). This summary score is used in the FAS charts to estimate relative socioeconomic position by comparing the individual's score for FAS with those of all other scores for the same gender and age group within their country or region. A relative affluence score (6) is then used to identify groups of young people in the lowest 20% (low affluence), middle 60% (medium affluence) (not shown in the charts in this Annex) and highest 20% (high affluence) in each country and region. This approach assesses relative, not absolute, health inequality.

### Interpreting differences in prevalence

Each chart indicates where differences are statistically significant. Statistical analyses are included to help readers avoid overinterpretation of small differences. Statistical significance does not always indicate a difference that is considered important in terms of public health.

Prevalence in the charts is presented as a percentage, rounded to the nearest whole number. Average scores are presented to one decimal place.

### Understanding the age-gender charts

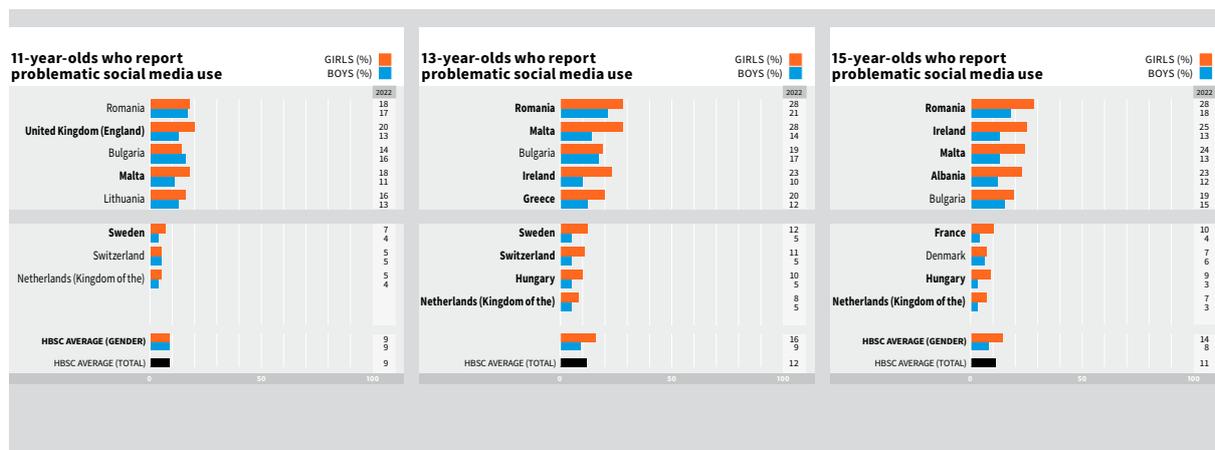
Bar charts present data for 2021/2022 for girls (orange bars) and boys (blue bars) in each age group separately for each country and region in descending order of prevalence (or average score) (for girls and boys combined). The percentage prevalence (or average score) in 2021/2022 (boys and girls separately) is also presented as a number down the right-hand edge of the charts. HBSC averages for each gender and combined are shown at the bottom of each chart.

Country/region names highlighted in bold in the age-gender charts are those in which there was a statistically significant gender difference in prevalence or average score in 2021/2022.

As an example, Fig. A1 shows that in an average HBSC country or region, 14% of 15-year-old girls and 8% of 15-year-old boys report problematic SMU. Prevalence of problematic SMU is significantly higher among girls at age 11 in only six countries and regions (including Malta, Sweden and United Kingdom (England)), but this increases to 35 countries and regions at age 13 and 31 at age 15. Thirteen-year-old boys and girls in Romania have the highest prevalence of problematic SMU (21% and 28% respectively).

For design reasons, the measures used to elicit the data from participants are described on the second (right-hand) page of each indicator spread.

**Fig. A1. Example of age-gender bar chart**



## Understanding the family affluence charts

Charts of prevalence by FAS group illustrate the relationship between family affluence and each SMU indicator. The FAS charts show the prevalence (or average score) of the indicators in the most affluent 20% of adolescents in each country or region (a solid circle) and the least affluent 20% (an open circle). The data are presented for each country and region for boys (blue circle) and girls (orange circle) separately, combined across the three age groups.

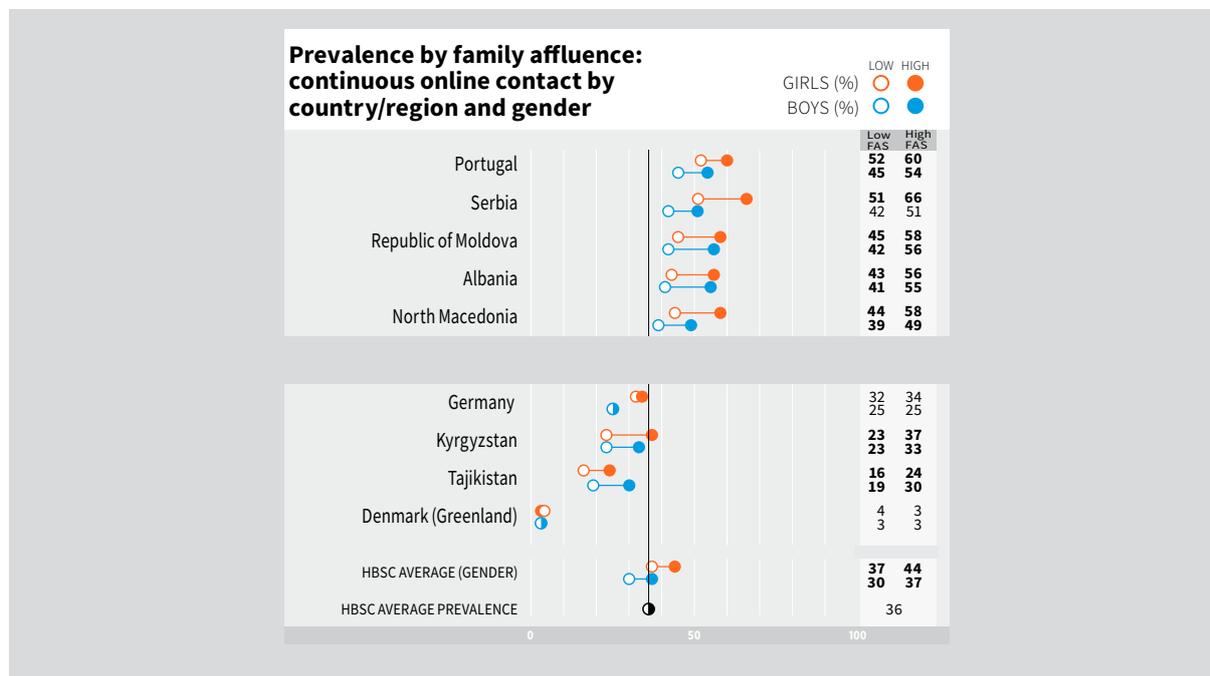
Prevalence (or average score) in the least and most affluent groups is linked by a line, the length of which indicates the difference in prevalence (or average score) between the two groups. HBSC averages for each affluence group are presented by gender at the bottom of the charts. The overall prevalence (or average score) for the indicator, combined over age groups and gender, is given as the final point at the bottom of the charts (black and white circle) and is shown as a line along the length of the charts.

Countries and regions are ordered on the FAS charts by prevalence (or average score) averaged across genders.

Significance of differences in prevalence (or average score) by family affluence are indicated by the figures for prevalence (or average score) being bolded. Prevalence of the medium-affluence group is not presented in the charts, but the data from all three FAS groups are used when carrying out statistical analysis.

Significance is only marked where there is a linear trend in prevalence across the three groups. This may mean that some differences in prevalence that look large between the low- and high-affluence groups may not be marked as significant if, for example, the prevalence in the medium-affluence 60% is lower or higher than both presented numbers.

**Fig. A2** presents an example family affluence chart. It shows that in more than half of the countries and regions, high-affluence boys and/or girls reported continuous online contact with friends and others significantly more than boys and/or girls from low-affluence families. In Portugal, for example, 54% of boys in the 20% most affluent households reported continuous online contact with friends and others, while 45% of boys in the 20% least affluent households did so. However, 12 countries and regions showed no difference between high- and low-affluence adolescents. For example, in Belgium (Flemish) and Denmark (Greenland) there was only 1% difference between high- and low-affluence adolescents.

**Fig. A2. Example of family affluence chart**

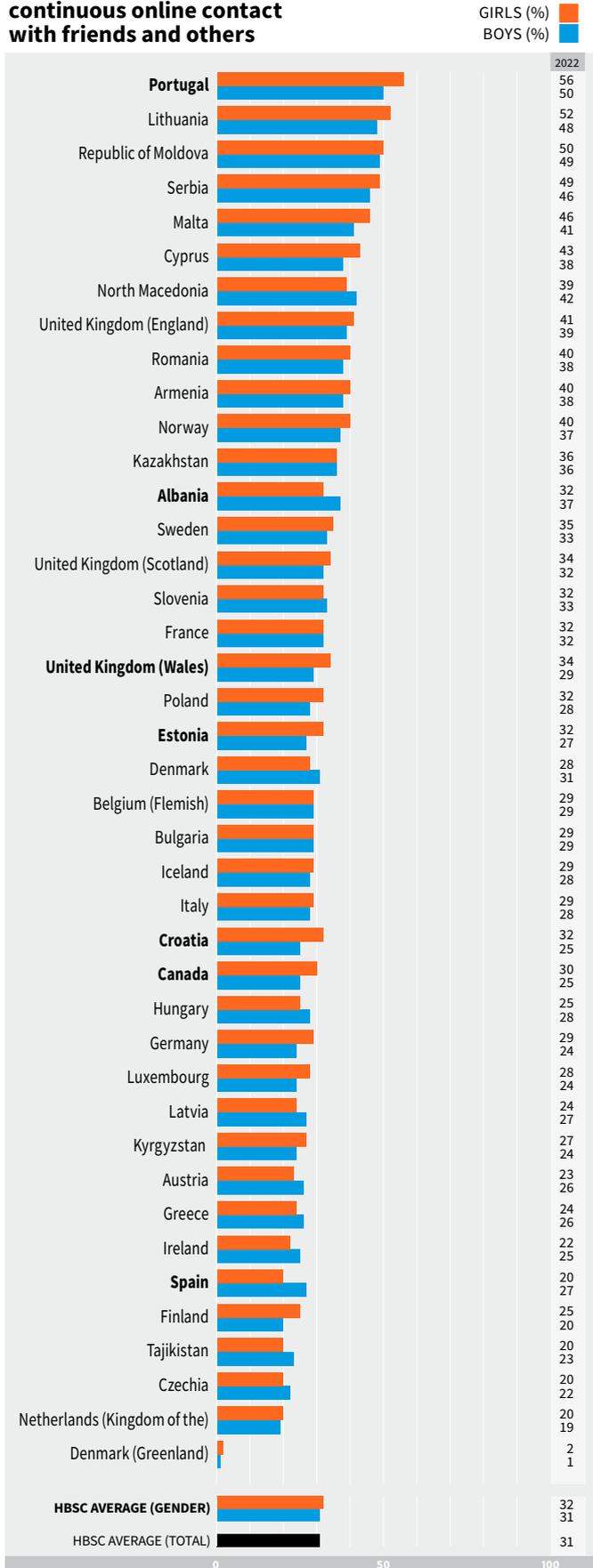
## References<sup>2</sup>

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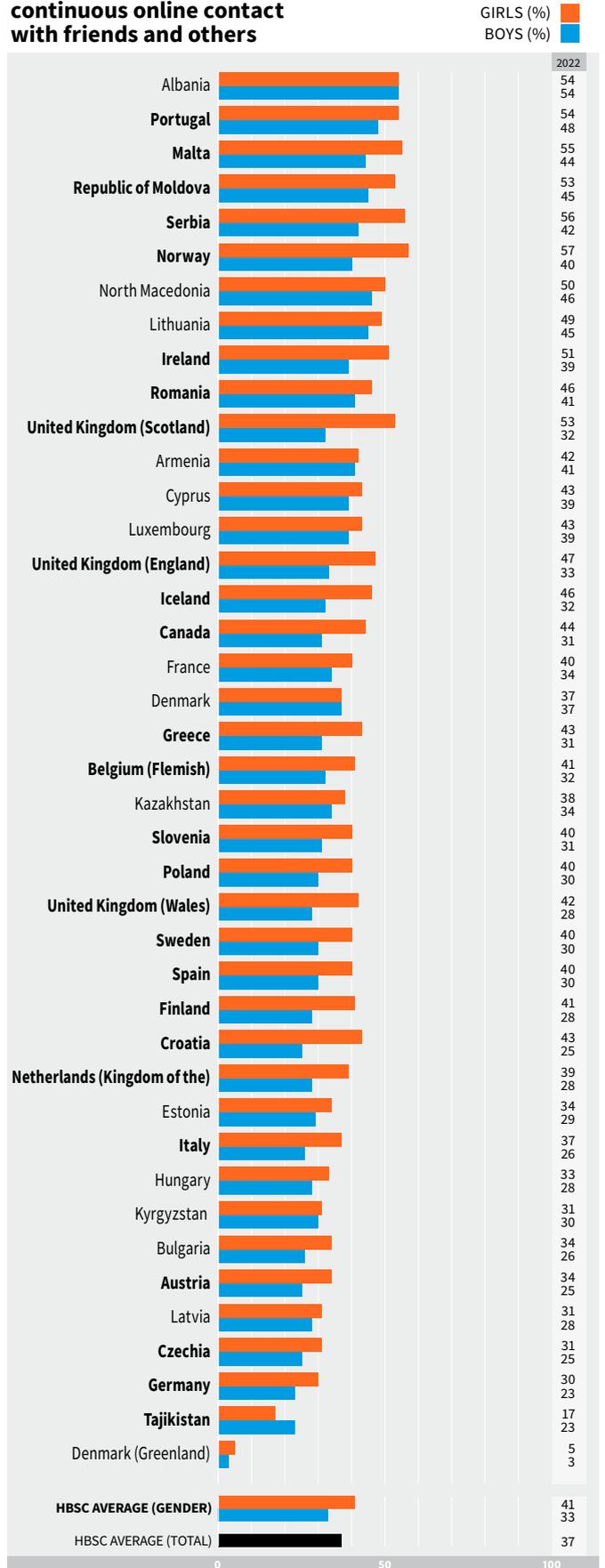
<sup>2</sup> All references accessed 19 April 2024.

## Frequency of online contact with friends and others

### 11-year-olds who report continuous online contact with friends and others



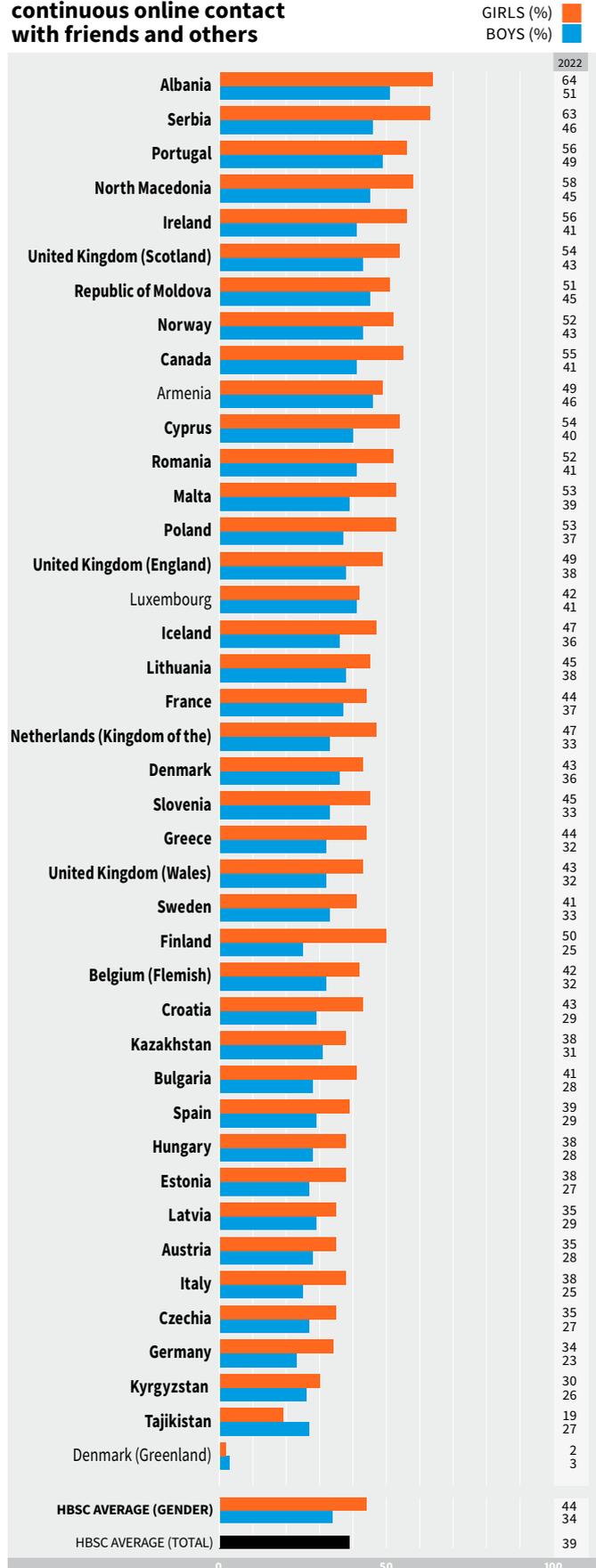
### 13-year-olds who report continuous online contact with friends and others



Note: country/region name in bold indicates a significant gender difference (at P<0.05). No data were received from Belgium (French), Slovakia and Switzerland.

MEASURE: young people were asked how often they had online contact through social media with four categories of people: close friends, friends from a larger friend group, friends they had met through the Internet and other people (such as teachers, siblings, classmates and parents). The five response options ranged from never or almost never to almost all the time throughout the day. Findings presented here show the proportions reporting contact almost all of the time throughout the day (continuous online contact) with at least one of the four friendship categories.

### 15-year-olds who report continuous online contact with friends and others



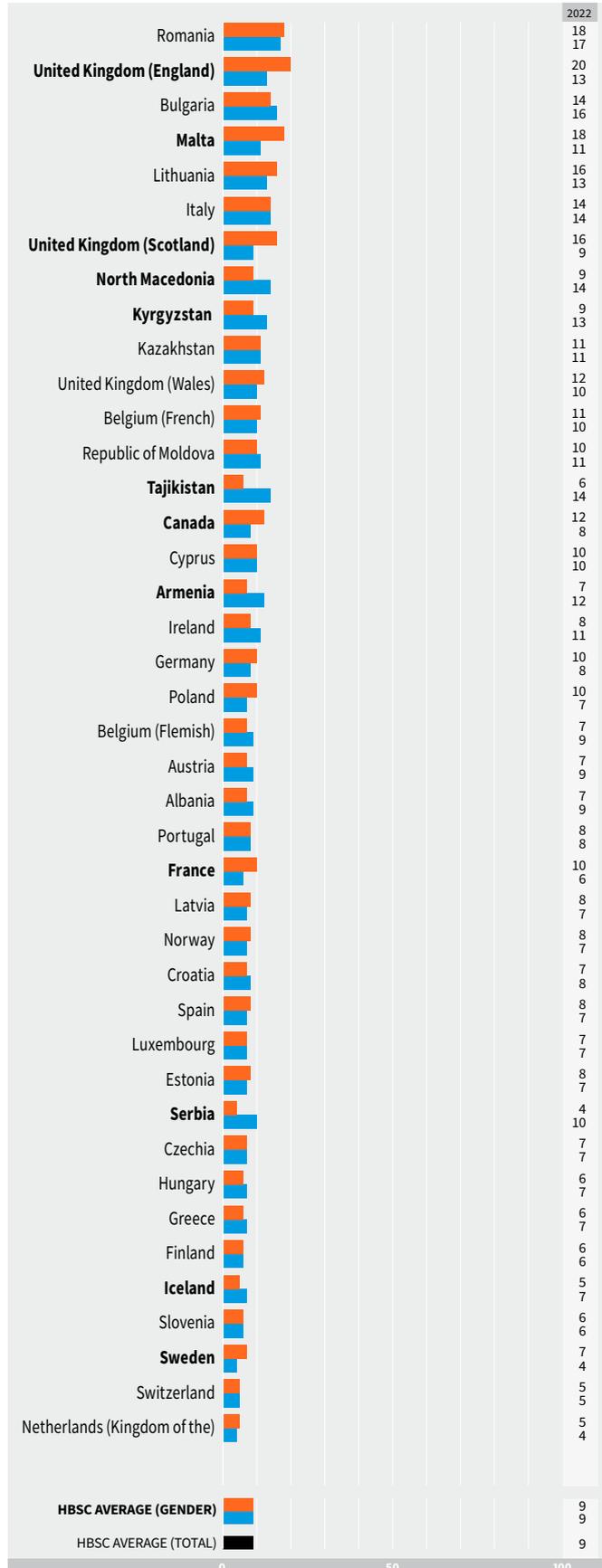
### Prevalence by family affluence: continuous online contact by country/region and gender



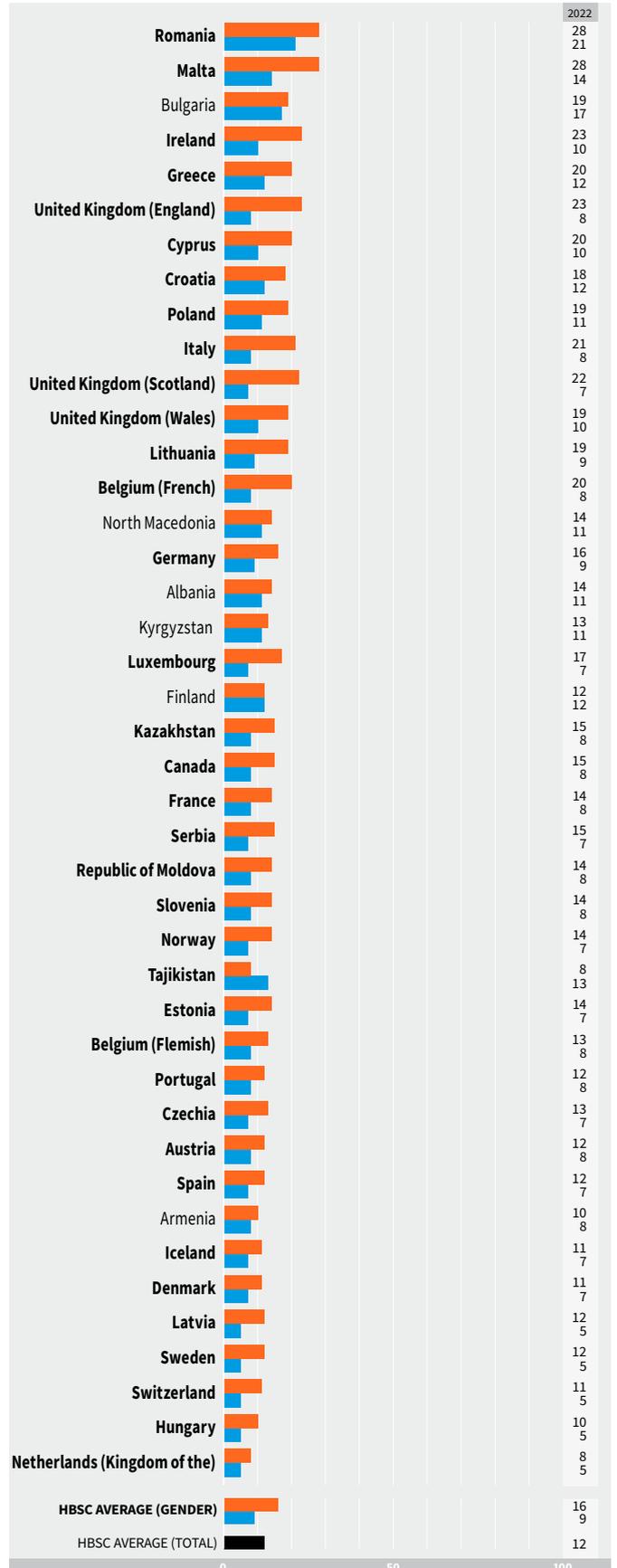
FAS: Family Affluence Scale. Note: **bold** indicates a significant difference in prevalence by family affluence group (at P < 0.05). Low- and high-affluence groups represent the lowest 20% and highest 20% in each country/region. No data were received from Belgium (French), Slovakia and Switzerland.

## Problematic social media use

### 11-year-olds who report problematic social media use



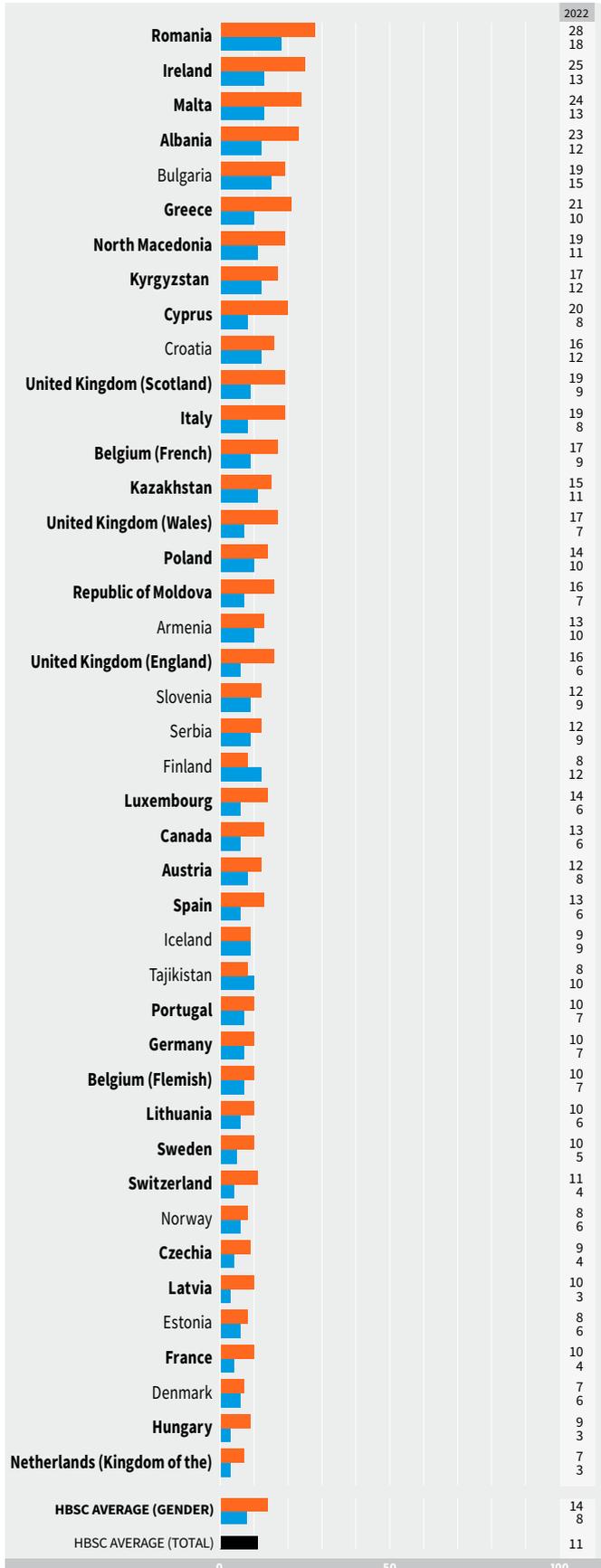
### 13-year-olds who report problematic social media use



Note: country/region name in bold indicates a significant gender difference (at P < 0.05). No data were received from Denmark (11-year-olds), Denmark (Greenland) and Slovakia.

MEASURE: young people were asked to report about symptoms of problematic (addictive-like) social media use using the Social Media Disorder Scale, a nine-item measure to which respondents answered with yes or no. Findings presented here show the proportions who answered yes to six or more symptoms and were therefore categorized as problematic social media users.

### 15-year-olds who report problematic social media use



### Prevalence by family affluence: problematic social media use by country/region and gender



FAS: Family Affluence Scale. Note: **bold** indicates a significant difference in prevalence by family affluence group (at  $P < 0.05$ ). Low- and high-affluence groups represent the lowest 20% and highest 20% in each country/region. No data were received from Denmark (11-year-olds), Denmark (Greenland) and Slovakia.

## Frequency of online contact: individual friendship categories

MEASURE: young people were asked how often they had online contact with friends and others. The five response options ranged from never or almost never to almost all the time throughout the day. Findings presented here show the proportions who had contact almost all of the time throughout the day (continuous online contact) with close friends. This indicator contributes to the combined indicator for intensive electronic communication presented earlier.

### Continuous online contact with close friends

Country/region	11-year-olds			13-year-olds			15-year-olds		
	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)
Albania	24	17	20	38	37	37	38	48	43
Armenia	17	18	17	26	28	27	33	37	35
Austria	20	17	19	19	27	23	24	31	27
Belgium (Flemish)	21	19	20	23	33	28	25	34	29
Bulgaria	19	19	19	19	24	21	21	34	28
Canada	16	23	19	24	37	30	34	48	41
Croatia	15	23	19	16	34	25	23	38	30
Cyprus	25	29	27	30	35	33	33	48	40
Czechia	13	12	12	17	22	20	21	28	25
Denmark	20	19	20	31	31	31	31	37	34
Denmark (Greenland)	1	2	2	2	2	2	2	1	1
Estonia	16	20	18	20	24	22	21	30	25
Finland	13	18	16	21	34	27	21	44	32
France	19	18	19	23	29	26	27	35	31
Germany	15	19	17	15	22	19	16	26	21
Greece	17	16	17	24	36	30	27	38	32
Hungary	14	12	13	15	19	17	18	30	24
Iceland	17	19	18	26	41	33	31	43	37
Ireland	17	15	16	30	45	38	37	52	44
Italy	14	18	16	18	30	24	18	30	24
Kazakhstan	16	16	16	17	20	19	17	24	20
Kyrgyzstan	14	15	14	21	21	21	18	22	20
Latvia	12	12	12	13	20	16	18	25	22
Lithuania	30	33	32	27	34	31	26	34	30
Luxembourg	12	16	14	24	31	28	29	34	31
Malta	27	29	28	32	45	38	31	45	38
Netherlands (Kingdom of the)	7	10	9	18	33	26	25	40	33
North Macedonia	30	26	28	35	40	37	35	47	41
Norway	28	28	28	34	49	41	37	47	42
Poland	18	21	20	22	33	27	29	47	38
Portugal	38	40	39	35	42	38	38	47	43
Republic of Moldova	30	31	31	30	36	33	34	38	36
Romania	24	25	24	28	37	33	31	41	36
Serbia	31	30	31	30	45	37	34	55	45
Slovenia	19	16	18	21	30	25	24	38	31
Spain	11	7	9	14	26	20	15	29	22
Sweden	22	24	23	22	35	29	26	36	31
Tajikistan	13	11	12	15	10	12	15	10	12
United Kingdom (England)	27	30	29	25	38	32	30	42	36
United Kingdom (Scotland)	22	26	24	24	46	35	36	50	43
United Kingdom (Wales)	21	26	23	23	35	29	27	38	33
<b>HBSC total</b>	<b>19</b>	<b>20</b>	<b>20</b>	<b>23</b>	<b>32</b>	<b>27</b>	<b>26</b>	<b>37</b>	<b>31</b>

Note: no data were received from Belgium (French), Slovakia and Switzerland.

## Frequency of online contact: individual friendship categories

MEASURE: young people were asked how often they had online contact with friends and others. The five response options ranged from never or almost never to almost all the time throughout the day. Findings presented here show the proportions who had contact almost all of the time throughout the day (continuous online contact) with a larger friendship group. This indicator contributes to the combined indicator for intensive electronic communication presented earlier.

### Continuous online contact with a larger friendship group

Country/region	11-year-olds			13-year-olds			15-year-olds		
	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)
Albania	18	11	14	26	21	23	24	21	23
Armenia	16	16	16	19	17	18	23	15	19
Austria	16	10	13	12	13	12	10	9	10
Belgium (Flemish)	17	13	15	13	15	14	12	13	13
Bulgaria	16	15	16	13	19	16	17	18	18
Canada	11	11	11	14	19	17	21	22	21
Croatia	13	13	13	11	14	12	13	12	13
Cyprus	15	14	14	16	15	15	15	14	14
Czechia	7	5	6	9	8	8	8	6	7
Denmark	14	7	10	18	11	14	17	10	13
Denmark (Greenland)	<0.5	2	1	1	2	2	2	<0.5	1
Estonia	12	13	13	13	10	12	13	8	11
Finland	8	10	9	16	13	15	14	16	15
France	13	9	11	13	11	12	14	11	13
Germany	9	10	10	8	9	8	6	5	5
Greece	12	7	10	13	12	12	12	10	11
Hungary	7	3	5	5	6	6	6	5	5
Iceland	11	9	10	16	17	16	19	14	16
Ireland	10	8	9	15	23	19	19	24	21
Italy	11	8	10	8	8	8	8	7	7
Kazakhstan	14	9	12	15	12	13	13	11	12
Kyrgyzstan	9	8	8	13	9	11	11	7	9
Latvia	8	3	6	7	6	7	7	6	6
Lithuania	16	9	13	15	11	13	14	7	11
Luxembourg	8	11	9	15	12	13	15	11	13
Malta	13	9	11	15	12	14	12	13	12
Netherlands (Kingdom of the)	4	5	4	9	8	9	12	9	10
North Macedonia	17	11	14	15	11	13	16	14	15
Norway	14	9	12	17	16	17	22	18	20
Poland	14	8	11	15	11	13	17	17	17
Portugal	26	21	24	22	15	18	20	16	18
Republic of Moldova	20	11	16	14	11	13	17	10	13
Romania	17	13	15	18	16	17	18	16	17
Serbia	16	12	14	15	15	15	19	17	18
Slovenia	13	8	10	12	12	12	10	10	10
Spain	8	5	6	8	7	7	6	8	7
Sweden	10	11	11	13	14	13	16	13	14
Tajikistan	12	9	11	13	7	10	12	6	9
United Kingdom (England)	16	12	14	12	14	13	14	12	13
United Kingdom (Scotland)	14	13	13	13	16	15	18	17	17
United Kingdom (Wales)	11	12	12	11	13	12	12	13	13
<b>HBSC total</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>12</b>	<b>13</b>

Note: no data were received from Belgium (French), Slovakia and Switzerland.

## Frequency of online contact: individual friendship categories

MEASURE: young people were asked how often they had online contact with friends and others. The five response options ranged from never or almost never to almost all the time throughout the day. Findings presented here show the proportions who had contact almost all of the time throughout the day (continuous online contact) with friends they got to know online but didn't know before. This indicator contributes to the combined indicator for intensive electronic communication presented earlier.

### Continuous online contact with friends met online

Country/region	11-year-olds			13-year-olds			15-year-olds		
	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)
Albania	8	4	6	10	8	9	10	5	8
Armenia	12	9	11	13	8	10	13	10	11
Austria	7	3	5	7	9	8	8	6	7
Belgium (Flemish)	8	5	7	8	9	8	8	8	8
Bulgaria	10	6	8	11	8	9	13	10	12
Canada	5	5	5	9	9	9	14	11	12
Croatia	6	6	6	7	10	8	8	8	8
Cyprus	8	5	6	10	7	8	9	9	9
Czechia	5	4	4	8	8	8	9	9	9
Denmark	8	4	6	10	8	9	13	8	10
Denmark (Greenland)	1	2	2	<0.5	4	2	2	1	1
Estonia	7	6	6	11	8	10	12	10	11
Finland	5	5	5	13	9	11	9	8	9
France	7	4	6	7	8	7	10	8	9
Germany	5	4	4	6	5	6	7	6	7
Greece	5	3	4	4	5	4	6	8	7
Hungary	5	3	4	6	9	8	6	6	6
Iceland	5	2	4	10	9	9	14	10	12
Ireland	5	2	4	8	8	8	10	10	10
Italy	4	4	4	4	7	6	5	5	5
Kazakhstan	7	5	6	6	5	6	5	5	5
Kyrgyzstan	7	5	6	9	8	9	7	6	6
Latvia	4	4	4	6	7	6	7	8	7
Lithuania	12	7	9	12	11	12	13	8	11
Luxembourg	4	4	4	7	8	7	9	8	8
Malta	5	5	5	9	12	10	6	6	6
Netherlands (Kingdom of the)	4	2	3	6	5	5	7	9	8
North Macedonia	9	4	6	9	7	8	7	8	8
Norway	7	5	6	9	9	9	14	11	12
Poland	8	7	7	11	14	12	12	10	11
Portugal	11	7	9	14	11	12	12	10	11
Republic of Moldova	11	7	9	7	8	8	9	7	8
Romania	9	6	7	12	10	11	13	10	11
Serbia	10	6	8	11	7	9	11	8	9
Slovenia	9	5	7	10	12	11	8	9	8
Spain	3	1	2	4	4	4	3	6	4
Sweden	7	5	6	7	6	7	7	6	6
Tajikistan	9	6	8	9	5	7	6	4	5
United Kingdom (England)	8	5	7	7	9	8	8	11	9
United Kingdom (Scotland)	6	4	5	7	10	9	11	9	10
United Kingdom (Wales)	5	4	4	6	8	7	8	9	9
<b>HBSC average</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>8</b>	<b>8</b>

Note: no data were received from Belgium (French), Slovakia and Switzerland.

## Frequency of online contact: individual friendship categories

MEASURE: young people were asked how often they had online contact with friends and others. The five response options ranged from never or almost never to almost all the time throughout the day. Findings presented here show the proportions who had contact almost all of the time throughout the day (continuous online contact) with people other than friends (such as parents, siblings, classmates and teachers). This indicator contributes to the combined indicator for intensive electronic communication presented earlier.

### Continuous online contact with people other than friends

Country/region	11-year-olds			13-year-olds			15-year-olds		
	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)	BOYS (%)	GIRLS (%)	TOTAL (%)
Albania	26	22	24	35	35	35	32	38	35
Armenia	21	21	21	24	19	21	12	15	14
Austria	6	6	6	5	5	5	5	4	4
Belgium (Flemish)	17	15	16	15	14	14	11	11	11
Bulgaria	15	17	16	13	16	15	15	18	17
Canada	13	15	14	14	17	16	15	20	17
Croatia	16	16	16	13	12	13	11	11	11
Cyprus	23	24	24	18	18	18	16	16	16
Czechia	11	10	10	10	10	10	8	9	9
Denmark	13	12	13	12	10	11	10	9	10
Denmark (Greenland)	<0.5	1	1	1	2	1	<0.5	1	<0.5
Estonia	15	17	16	11	12	11	10	12	11
Finland	9	12	10	13	11	12	12	10	11
France	19	18	18	18	18	18	17	15	16
Germany	12	13	13	10	10	10	7	8	7
Greece	11	10	10	11	11	11	10	9	10
Hungary	17	16	17	15	14	15	13	13	13
Iceland	15	15	15	13	15	14	16	12	14
Ireland	13	12	13	18	20	19	14	17	16
Italy	14	13	13	10	10	10	6	10	8
Kazakhstan	24	25	24	21	22	22	18	20	19
Kyrgyzstan	16	18	17	18	16	17	14	14	14
Latvia	17	16	16	15	13	14	10	9	10
Lithuania	32	32	32	26	21	24	18	16	17
Luxembourg	14	15	14	21	15	18	16	11	14
Malta	23	23	23	20	19	19	15	18	16
Netherlands (Kingdom of the)	13	11	12	13	13	13	11	12	12
North Macedonia	22	18	20	18	20	19	19	21	20
Norway	16	16	16	14	15	15	14	12	13
Poland	14	15	14	14	13	13	14	13	13
Portugal	29	34	31	25	26	26	25	26	26
Republic of Moldova	31	32	32	27	29	28	23	24	23
Romania	22	25	24	20	19	19	18	20	19
Serbia	24	28	26	17	28	23	19	24	21
Slovenia	24	23	23	17	15	16	14	12	13
Spain	16	12	14	17	15	16	14	13	14
Sweden	17	20	19	10	13	12	9	10	10
Tajikistan	17	15	16	16	11	14	20	13	16
United Kingdom (England)	21	18	19	12	16	14	15	14	14
United Kingdom (Scotland)	16	17	17	12	19	15	13	19	16
United Kingdom (Wales)	13	15	14	9	14	11	10	12	11
<b>HBSC average</b>	<b>17</b>	<b>18</b>	<b>17</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>14</b>	<b>15</b>	<b>14</b>

Note: no data were received from Belgium (French), Slovakia and Switzerland.

## The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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Greece	Sweden
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