FINDINGS FROM THE HBSC 2022 SURVEY IN SCOTLAND

HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN:
WORLD HEALTH ORGANIZATION COLLABORATIVE CROSS-NATIONAL STUDY (HBSC)

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Public Health Scotland are proud to have commissioned this latest round of the Health Behaviour in School-aged Children (HBSC) study in Scotland, which occupies a unique role in our public health landscape.

By collecting information directly from young people on a wide range of topics relating to their health, wellbeing and social circumstances, HBSC obtains valuable insight which is used to inform public policy and practice across Scotland and within local areas.

A particular strength of the HBSC study is its longevity, with surveys conducted every four years in Scotland since 1990. This provides unparalleled insight into trends in young people's health and its determinants, which is essential as we experience cultural, economic and technological changes in our society.

A further strength of the study is its international nature, with over 50 countries conducting equivalent surveys using this standardised, robust methodology. This allows us to explore how health outcomes and their associations with various determinants compare to our neighbours in Europe and North America. These comparisons are vital in providing us with a benchmark, helping us to challenge what we're accepting as normal, and in identifying where progress is possible.

The findings from the 2022 Scottish study are particularly eagerly anticipated as this represents the first HBSC survey conducted since the start of the COVID-19 pandemic, allowing us to compare outcomes and contexts of young people across this period of significant change and disruption.

The results highlight several challenges for young people's health and wellbeing, some of which represent continuation of trajectories that were evident pre-pandemic, and others which are newly emerging.

In particular, trends in young people's mental health are both striking and concerning, with some outcomes such as confidence and happiness being at their lowest point in decades. Young people's perception of the impact of COVID-19 is somewhat mixed, varying with age, gender and the domain of impact. Whilst over half of 15-year old girls perceive the pandemic had a negative influence on their mental health and school performance, there are some indications of more positive perceptions, such as the impact on family relationships.

In other topic areas, some improvements have been seen in boys' fruit and vegetable consumption, the proportion of young people meeting physical activity guidelines shows an upward trajectory, and young people’s participation in alcohol and tobacco use are at their lowest recorded levels.

Public Health Scotland welcomes this report and remains committed to working with partners across the public, third and academic sectors to improve outcomes for children and young people and maintain where progress has been made. We encourage those working in any capacity related to the health and wellbeing of young people to consider how they might act upon the findings presented in this report.

Eileen Scott
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EXECUTIVE SUMMARY

This report presents data on adolescent health and wellbeing from the World Health Organisation (WHO) collaborative cross-national Health Behaviour in School-aged Children (HBSC) study in Scotland. Findings from the 2022 HBSC survey are presented and these are compared to equivalent data, where available, from eight previous survey rounds conducted every four years since 1990. A nationally representative sample of 4,388 pupils participated in the 2022 Scottish HBSC survey. The 2022 survey had a special focus on mental health and also enables comparison of adolescent health and wellbeing before and after the COVID-19 pandemic. Key findings are summarised below.

GENERAL HEALTH AND SLEEP

Around a fifth (23%) of adolescents rated their health as ‘excellent’. 15-year-old girls were the least likely to report ‘excellent’ health (13%). The proportion of boys reporting ‘excellent’ health increased between 2018 and 2022 (from 22% to 27%). Nearly half (49%) of young people experienced multiple health complaints every week and prevalence was higher among girls than boys at ages 13 and 15. Prevalence of multiple health complaints is at its highest since 1994 for boys and girls, with a sharp increase from 35% in 2018 (especially for girls, 41% to 61%). The most common health complaints were feeling nervous, sleep difficulties, and feeling irritable. Young people from higher affluence families were more likely to report excellent self-rated health and lower frequency of health complaints.

The average sleep duration on weekdays was 8.0 hours for 13-year-olds and 7.7 hours for 15-year-olds. Adolescents slept for longer at weekends: on average 9.3 hours for 13-year-olds and 9.1 hours for 15-year-olds. The proportion of young people reporting sleep difficulties more than once a week has continued to increase from 30% in 2018 to 37% in 2022. Pupils were asked about sleep quality, covering three different aspects: (i) bedtime behaviours (ii) sleep efficiency (iii) morning wakefulness. Morning wakefulness scores decreased with age and were lower for girls than boys. Girls also had lower scores for sleep efficiency at age 13 and 15. Young people from lower affluence families were more likely to report shorter sleep duration on weekends, more sleep difficulties and lower sleep quality.

MENTAL HEALTH AND WELLBEING

The majority (80%) of young people reported high life satisfaction with younger adolescents more likely to report this than older adolescents. Just over a quarter (27%) of young people reported feeling very happy with their life with boys being more likely to report this than girls (34% versus 21%). For girls, this was the lowest prevalence of feeling very happy since 1994. Overall, 42% of young people reported feeling confident always or often and at every age group, boys were more likely to report this than girls. In 2022, the lowest levels of confidence in 28 years were observed for both boys and girls.

Nearly a quarter (23%) of young people reported feeling left out often or always compared with 11% in 2018 and this increase was seen among both boys and girls. In particular, the proportion of girls reporting feeling left out often or always has more than doubled since 2018, from 13% to 30%. Around a fifth (19%) of young people reported feeling lonely all or most of the time in the past year and feelings of loneliness were highest among 15-year-old girls (31%). Over a third (35%) of young people were classified as having either low mood or risk of depression. Around a third (32%) of young people reported anxiety with higher levels among girls than boys at ages 13 and 15. Nearly all the mental health indicators were significantly associated with family affluence, with poorer outcomes for young people from lower affluence families, except for anxiety and feeling left out which did not vary by family affluence.

EATING BEHAVIOURS AND ORAL HEALTH

Just over half (53%) of young people reported eating breakfast every day on weekdays (61% boys, 46% girls). In 2022, there was a decrease in daily breakfast consumption among boys and girls and particularly in the younger age groups. Overall, 44% of adolescents reported eating fruit every day. In contrast to previous years, fruit consumption did not vary by gender
EXECUTIVE SUMMARY

and an increase was seen among boys between 2018 and 2022 (30% to 43%). Levels of fruit consumption are the highest in 20 years. Four in ten (40%) young people ate vegetables every day and this did not vary significantly by age or gender. In 2022, daily vegetable consumption among boys had increased to its highest level since 2002. Daily consumption of sweets and chocolate, chips and sugary drinks have increased slightly since 2018. Nearly one in ten (9%) young people drank an energy drink every day, up from 5% in 2018. Over a third (36%) of young people reported having a meal every day with their family and a further 38% reported eating a meal most days with their family. Three quarters (74%) of adolescents reported brushing their teeth at least twice a day and at every age, this was more common among girls than boys. In general, healthier eating behaviours were more common among those from higher affluence families.

PHYSICAL ACTIVITY AND LEISURE TIME

Less than a quarter (23%) of adolescents achieved 60 minutes of moderate to vigorous physical activity (MVPA) a day. MVPA has increased since 2018, particularly for boys (from 19% to 28%). Participation in leisure time vigorous physical activity at least three times per week was higher among boys than girls (69% versus 54%), with the greatest gender difference at age 15. Almost three quarters of adolescents (71%) took part in at least one organised activity every week. At age 15, this was more common among boys than girls. Taking part in organised leisure activities was more common amongst 11-year-olds and decreased with age. Boys were more likely to participate in team sports and girls more likely to take part in individual sports and artistic activities. Daily screen time was high with young people spending, on average, 3.0 hours a day gaming, 2.8 hours on social media, 2.4 hours watching TV and 1.2 hours browsing the internet. These may occur simultaneously. Boys were more likely to spend time gaming and girls were more likely to spend time on social media. Young people from more affluent families reported higher levels of moderate-to-vigorous physical activity and leisure time vigorous activity. Young people from low affluence families were less likely to participate in organised leisure activities and spent more time gaming and watching TV.

ELECTRONIC MEDIA USE

The vast majority (85%) of adolescents reported that they kept their smartphone in their bedroom at night and 73% also reported having a television in their bedroom. One-third (35%) of adolescents reported that they had online contact with close friends almost all the time throughout the day, which is described as ‘intense’ contact. Almost one in seven (14%) adolescents reported problematic social media use. Gender differences were observed at all age groups, with girls more likely to report problematic social media use than boys (20% versus 8% respectively). Between 2018 and 2022, there was an increase in problematic social media use among girls in all age groups, but not among boys. Just over half (54%) of 13- and 15-year-olds reported gaming at least 4 days per week, of whom three-quarters reported gaming (almost) every day. Just under a third (30%) reported playing games for more than 4 hours per day but this was more common among boys (41% versus 14% girls). Of those who played video games, 13% reported problematic gaming. Boys were more likely than girls to report problematic gaming (18% versus 7%). Young people from low affluence families were more likely to have a TV in their bedroom and play computer games (weekly and daily). Intense online communication, problematic social media use and problematic gaming did not vary by family affluence.

SUBSTANCE USE

Just under one in ten (9%) adolescents said they had ever smoked cigarettes and prevalence increased with age: 1% of 11-year-olds, 6% of 13-year-olds to 20% of 15-year-olds. Lifetime cigarette smoking is at its lowest level in 32 years. Vaping is now more common than smoking cigarettes, with almost one in five (18%) adolescents reporting having used an e-cigarette at least once in their lifetime. Rates were higher among older adolescents: 4% of 11-year-olds and 16% of 13-year-olds compared to 36% of 15-year-olds. There have been large increases in e-cigarette use since 2018 for girls; in 2022, 40% of 15-year-olds girls had used an e-cigarette in their lifetime compared with 20% in 2018. A quarter (25%) of 15-year-olds had
used an e-cigarette in the last 30 days, with lower rates among 13-year-olds (10%) and 11-year-olds (3%). There have been increases in current e-cigarette use since 2018 for 13-year-old girls (2% to 13%) and larger increases for 15-year-olds (girls 6% to 30% and boys 8% to 20%).

Two-fifths (41%) of adolescents reported that they had drunk alcohol in their lifetime and just over one-fifth (22%) had drunk alcohol in the last 30 days. There have been decreases in lifetime drinking for boys (from 74% in 2014 to 64% in 2022) but current drinking has remained stable over the same period. Overall, 12% of young people reported being drunk two or more times in their life. Prevalence of drunkenness increased with age. Since 1998, levels of drunkenness have declined steadily and are now at their lowest in 32 years. Around a fifth (19%) of 15-year-olds had used cannabis at least once in their lifetime. One in ten (10%) 15-year-olds reported using cannabis in the last 30 days and levels were similar in boys and girls. Levels of cannabis use have remained fairly stable since 2010. Adolescent substance use was not strongly patterned by family affluence. Only current cigarette smoking was found to have a significant association, with higher prevalence among young people from low affluence families.

**SEXUAL HEALTH**

15-year-olds were asked about their sexual orientation: 71% described themselves as heterosexual, 5% as mostly heterosexual, 11% as bisexual, 3% as gay or lesbian, 2% as other, 6% as not sure yet and 3% said that they did not understand the question. The proportion of 15-year-olds who reported having had sexual intercourse was similar for boys and girls (22% and 21%, respectively). Of these, 11% reported having had sex at the age of 13 or younger, 42% at the age of 14 and 47% at age 15 or older. Of those who had had sex, around a third (31%) said they used a condom only, 26% had used birth control pills only, 9% used both a condom and birth control pill and 34% had used neither a condom nor birth control pill when they last had sex. Age at first intercourse did not vary by family affluence.

**BULLYING AND FIGHTING**

Just under a fifth (18%) of young people reported being bullied at least 2–3 times a month in the past couple of months, an increase from 14% in 2018. Seven percent of young people reported being cyberbullied at least 2 to 3 times a month in the past couple of months and this was similar to previous survey years. Just over one-fifth (22%) of young people reported experiencing multiple forms of bullying in the last 2–3 months, this has increased from 15% in 2018. One in ten (10%) young people reported being in a physical fight 3 or more times in the past year and this was more prevalent among boys than girls. Since 2002, involvement in a physical fight has remained stable among girls but has decreased steadily among boys from 23% in 2002 to 13% in 2022. Experiences of bullying and fighting showed no differences by family affluence.

**RELATIONSHIPS AND SUPPORT**

Most young people (69%) lived with both their parents, whilst 20% live in a single parent family, 10% in a stepfamily and 2% in another home environment. Over half (56%) of young people reported high family support but perceived family support decreased with age. Young people were more likely to find it easy to talk about things that bothered them with their mothers (76%) than with their fathers (67%). Levels of ease of communication with parents have remained stable among boys but a lower proportion of girls reported finding it easy to talk to both their mother and father in 2022, when compared with 2018. Half of young people (50%) reported high levels of support from their friends. Since 2014, perceptions of peer support have remained relatively stable among boys but, for girls, there has been a recent decrease in perceiving high peer support from 65% in 2014 to 54% in 2022. Most young people (61%) said they always had a trusted adult they could speak to but 9% of young people said they did not have a trusted adult in their lives. Young people from higher affluence families reported more positive perceptions across the relationship and support measures.
SCHOOL EXPERIENCE
Around one in six young people (16%) reported that they liked school a lot. Since 1990 girls have always been more positive about school than boys but in 2022, 13-year-old girls reported liking school less than boys. Between 1994 and 2018 there was little change in the proportion of young people who liked school a lot but there were decreases in 2022 compared with 2018 (particularly for girls, down from 27% to 15%). Fifteen-year-olds reported higher levels of schoolwork pressure than 11- and 13- year-olds, with the highest levels reported by 15-year-old girls (79%). The proportion of adolescents who felt some or a lot of pressure from schoolwork has been increasing since 2006 and has continued to increase in 2022 for girls, widening the gap between girls and boys. School-related stress scores increased with age and there were gender differences at both ages 13 and 15. Scores for 13-year-old girls were higher than 15-year-old boys (except for stress of school/leisure conflict).

Overall, 28% of pupils reported high teacher support but there was a marked decrease with age; 48% of 11-year-olds reported high teacher support compared with 16% of 13-year-olds and 19% of 15-year-olds. There were significant differences in perceived levels of teacher support by gender at age 15, with boys more likely to report high teacher support than girls. The proportion of adolescents who reported high teacher support increased from 2010 to 2018 but decreased in 2022 for both girls and boys in all age groups. The largest decreases were seen in 11-year-old girls and 13-year-old boys and girls. Around one in six adolescents (17%) reported high classmate support. Perceived classmate support varied by age, with younger adolescents more likely to report high levels of support than older adolescents (26% of 11-year-olds versus 11% of 15-year-olds). The proportion of adolescents who reported high classmate support has been decreasing slowly since 2010 for boys and girls. Young people from more affluent families were more likely to say they liked school a lot and to report high support from classmates, but there was no association between family affluence and schoolwork pressure, school-related stress or teacher support.

IMPACT OF COVID-19 PANDEMIC
In 2022, young people were asked about their experiences of the COVID-19 pandemic and its associated restrictions and to rate its impact on nine different aspects of life as well as their life overall. Across all age and gender groups, the three most positively affected aspects of life were family relations, friendships, and physical activity: 54% reported a positive impact on family relations, 50% on friendships and 43% on physical activity. The three most negatively affected aspects of life were mental health, school performance, and physical activity: 38% reported a negative impact on their mental health, 34% on their school performance and 25% on physical activity. At age 11, there were no gender differences in relation to the perceived impact of the pandemic on any areas of life. However, among the older adolescents, girls were generally more likely to report negative impacts than boys. Across all aspects of life, those from higher affluence families were more likely to report a positive impact and generally less likely to report a negative impact than those from lower affluence families.
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HBSC Scotland National Team: Jo Inchley (Principal Investigator), Dorothy Currie, Judith Mabelis, Judith Brown, Malachi Willis.
INTRODUCTION

IMPROVING YOUNG PEOPLE’S HEALTH IN SCOTLAND
The improvement of young people’s health in Scotland continues to be an important public health priority and is embedded across a range of Scottish Government policies. Adolescence is a critical stage of development with important emotional and social changes coinciding with a period of physical growth and intensive brain development. Important social transitions also occur during this phase of the life course, including school transitions and changing peer and family relationships, all of which have significant implications for adolescents’ health and wellbeing. Health inequalities remain a major challenge with young people from more disadvantaged backgrounds typically experiencing poorer health and educational outcomes. The Scottish Attainment Challenge aims to close the equity gap by improving outcomes for children and young people living in deprived areas. Wellbeing is at the heart of the Getting It Right For Every Child (GIRFEC) approach which underpins all policy and practice affecting children and young people in Scotland. Within the school context, the importance of a health-promoting environment for young people is emphasised in Curriculum for Excellence, which stipulates that mental, emotional, social and physical wellbeing is essential for successful learning.

THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN: A WORLD HEALTH ORGANISATION (WHO) COLLABORATIVE CROSS-NATIONAL STUDY (HBSC).
The Health Behaviour in School-Aged Children (HBSC) Study in Scotland 2022 provides key data on the health and wellbeing of Scottish adolescents and how the health of our young people has changed over 30+ years. HBSC takes a broad perspective, gathering information across a wide range of health and wellbeing domains relevant to young people, with a particular focus on the social contexts in which they are growing up including school, family, peers and the online environment. The HBSC study focuses on young people attending school, aged 11, 13 and 15 years. These age groups cover important stages of physical and emotional development in young people, during a period of rapid physical and neurological change from the onset of adolescence to the middle teenage years, when important life and career decisions are being made. The survey is administered to a nationally representative sample of pupils from each age group in schools via a self-complete survey. In 2022, data were collected online for the first time. As part of a cross-national study, HBSC also provides the opportunity to compare the health and wellbeing of Scotland’s adolescents with their peers in over 50 countries across Europe and North America.

The first national HBSC survey was conducted in Scotland in 1990, and national surveys have been conducted every four years since then, in line with the cross-national survey cycle. The study protocol and a core part of the survey instrument are common to all countries participating in the international study, providing robust cross-national comparable data on adolescents across Europe and North America. The Scottish 2022 HBSC study was funded by Public Health Scotland and based at the MRC/CSO Social and Public Health Sciences Unit (SPHSU), University of Glasgow and is undertaken in collaboration with the School of Medicine, University of St Andrews. SPHSU also hosts the HBSC International Coordinating Centre (ICC).

HBSC is conducted in collaboration with the World Health Organization Regional Office for Europe, a partnership which supports the wide dissemination of research findings from the study to inform and influence health improvement policy and practice at national and international levels. HBSC Scotland data are also used to support school-based health improvement activities through collaboration with the Scottish Schools Health and Wellbeing Improvement Research Network (SHINE), based at the MRC/CSO Social and Public Health Sciences Unit (SPHSU), University of Glasgow. SHINE aims to support improvements in health and wellbeing amongst school-aged children by building a collaboration between schools, researchers and policymakers, and providing data to inform action planning and health improvement activities.

The HBSC Report
The 2022 HBSC survey in Scotland is the 9th consecutive cross-national HBSC survey in which Scotland has participated, providing data on the health of the nation’s young people over the last 32 years. This report provides information on the current health and wellbeing of Scotland’s young people, as well as the social contexts affecting their lives. Where data are
available, trends in health from the early 1990s are presented. The data in the report capture the key priority areas of mental health, physical activity, eating habits, sedentary behaviour, bullying and fighting, substance use and sexual behaviour. Wider aspects of young people’s lives are also included such as the extent to which young people feel supported by family, friends and teachers and life at school. HBSC also places young people’s health in social and economic context and gathers data on family structure and socioeconomic circumstances. New topics included in the national report for the first time in 2022 include: GAD 7 anxiety score, self-efficacy, leisure activities, gaming, gender identity, sexual orientation and school-related stress. New questions on COVID-19 were also included to measure the impact of the pandemic on different aspects of young people’s lives.

METHODOLOGY
As one of the participating countries in the international HBSC study, the Scottish HBSC survey follows the study protocol developed by the HBSC international network of researchers. The study methods are outlined briefly below, and a description of the measures included in the report are available in the Appendix.

Questionnaire Design
The HBSC Scotland questionnaire includes a core set of questions from the HBSC international standard questionnaire which are common to all participating countries, with additional items added that are of relevance to the health and wellbeing of Scottish adolescents. Some items have been included in the international questionnaire for many survey years permitting analysis of cross-national trends, while other items have been added, amended or dropped from one survey round to the next according to national and international priorities and methodological developments.

The HBSC 2021/22 international mandatory questionnaire comprised 115 questions that were ‘core’ to the international study. All member countries of the HBSC network must include these questions in their national questionnaire, to ensure that international comparisons can be made on key social, health and behavioural measures. Additional optional thematic packages, validated internationally, are made available for member teams to include in national questionnaires as appropriate to national priorities. For these items international comparisons will be possible but with a smaller number of countries than for the international mandatory items.

The Scottish version of the HBSC 2022 questionnaire comprised the international mandatory items, selected optional packages to give a more in-depth understanding of some key areas of health and wellbeing, as well as items of specific interest to national stakeholders such as the Scottish Government for monitoring of national frameworks and action plans.

As in previous survey rounds some items are not included in the questionnaires for P7 pupils, to ensure the questionnaire could be completed by this age group within the time available. Some questions are only suitable for certain age groups. Sexual health and cannabis use questions are therefore only asked of 15-year-olds. In addition, a small number of participating secondary schools (16) requested not to include the sexual health questions. The measures of stress and anxiety were not included in the P7 questionnaire. The 2022 Scottish questionnaire was designed to take approximately 30–40 minutes to complete by all age groups and included 148 items for P7 pupils, 185 items for S2 pupils and 192 items for S4 pupils. The final Scottish national questionnaire was piloted in the Autumn Term of 2021.

Sample Design
The HBSC 2022 sample was designed to be nationally representative and produce robust prevalence estimates of the health and wellbeing of 11, 13 and 15-year-olds in Scotland. The survey was conducted in schools, using the class as the sampling unit, with all the pupils in selected classes being asked to complete the confidential questionnaire anonymously. The target population was school children in the final year of primary school (P7, average age 11.5 years) and in the second and fourth years of secondary education (S2, average age 13.5 and S4, average age 15.5 years).

The national sample was proportionally stratified by school funding (Local Education Authority (LEA) funded or independent) and by education authority (for LEA funded schools). Samples were selected separately for primary and secondary schools.
Within each stratum, schools were selected with probability proportional to the number of classes in the required year group(s), giving larger schools a higher probability of inclusion in the sample of schools. Within each age group, one class from each selected school was included in the sample, giving pupils within the selected schools a higher probability of inclusion in the sample if they attended smaller schools. This ensured that overall, each pupil (in P7, S2 or S4) within a stratum had the same probability of inclusion in the sample.

The sample size to be achieved in each age group was set at 1500, to give the level of precision required by the HBSC international protocol. This is a smaller sample than previously used in Scotland as the HBSC survey was being carried out at the same time as the schools ‘Health and Wellbeing Census Scotland 2021/2022’ (HWB census). The HWB census aimed to include all pupils from P5 to S6 in all local authorities. In order to minimise the burden on schools and pupils, HBSC Scotland restricted the sample size to the minimum required by the international protocol. The Scottish Government and Public Health Scotland sent a joint letter to local authorities highlighting the importance of having data for both the HWB census and HBSC for national monitoring of adolescent health and encouraged participation in both surveys.

Response rates

Of the 360 schools (comprising 608 classes) asked to participate in the HBSC 2022 survey, 137 schools and 234 classes (38%) took part from 28 local authorities. The breakdown of response rates by class and pupils for each year group are provided in Table 1.1. The 1500 pupils per age group sample size was achieved in the S2 sample (n=1704) and almost in the P7 sample (n=1478). However, the final sample in S4 fell below 1500 (n=1206).

Pupil response rates within participating P7 classes were generally similar to previous survey rounds, with around 87% of pupils registered in the class returning a questionnaire. However, response rates for pupils in secondary schools were substantially lower than in previous years, with the majority of absences being non COVID-19 related. The response rates at school (and therefore class) level were much lower than in previous survey rounds. Schools who refused to participate were asked their reasons, and the main reasons given were too busy, undertaking the HWB census and impact of COVID-19. Prior to recruitment it had been anticipated that response rates would be substantially lower in this survey round due to COVID-19 pressures in schools, and the concurrent HWB census, and therefore a higher number of schools were originally approached. However, three local authorities refused or withdrew permission to approach schools and in another local authority no schools agreed to participate (mainly due to the on-going HWB census), contributing to the reduced school/class response rate. Consequently, additional schools from participating local authorities were added to the sample later in the recruitment process. Many of these later recruited schools planned to survey S4 pupils after exam leave in June but subsequently were unable to complete the survey with this age group.

<table>
<thead>
<tr>
<th>Table 1.1: RESPONSE RATES HBSC SCOTLAND 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPONSE RATES IN 2022 (%)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>Primary 7</strong></td>
</tr>
<tr>
<td>Class response</td>
</tr>
<tr>
<td>Pupil response</td>
</tr>
<tr>
<td>Total response</td>
</tr>
<tr>
<td><strong>Secondary 2</strong></td>
</tr>
<tr>
<td>Class response</td>
</tr>
<tr>
<td>Pupil response</td>
</tr>
<tr>
<td>Total response</td>
</tr>
<tr>
<td><strong>Secondary 4</strong></td>
</tr>
<tr>
<td>Class response</td>
</tr>
<tr>
<td>Pupil response</td>
</tr>
<tr>
<td>Total response</td>
</tr>
<tr>
<td><strong>Whole sample response</strong></td>
</tr>
</tbody>
</table>
Characteristics of respondents

In total, there were 4388 respondents of which 2160 (49%) identified as a boy and 2026 (46%) as a girl, 138 (3%) did not specify gender and 64 (1%) said they identified ‘in another way’. Note that the option to specify ‘in another way’ was only available for P7 pupils and the 64 pupils corresponded to 4% of the P7 sample. Two additional questions on gender identity and sex registered at birth were asked of S2 and S4 pupils only and were combined to give a more nuanced classification of gender identity. In total, 47% identified as cisgender boys and 44% as cisgender girls (i.e. sex at birth was the same as current gender identity). A further 1% identified as transgender boys or girls, 2% as non-binary, 2% as other gender and 5% were missing.

The mean age in primary seven was 11.7 years, secondary 2 was 13.7 years and secondary 4 was 15.7 years. Ninety two percent (92%) were born in the UK (89% in Scotland and 4% in England, Wales or Northern Ireland), while 6% were born in the rest of Europe and the World.

Weighting

Post-stratification weighting of the sample was applied to make the sample representative of Scottish P7, S2 and S4 school pupils with respect to several school and individual level characteristics: proportion of pupils in each local authority; school-funding; school denomination; school Scottish Government 6-point urban-rural classification. The methodology for post-stratification adjustments was the use of raking weights. Raking permits the simultaneous adjustment of weights for several characteristics and is a standard post-estimation technique applied in many national surveys. Data for weighting control variables were obtained from the Scottish Schools Pupil Census 2021 which corresponds to the same school year cohort in which the sample was carried out.

Where prevalence is presented combined across grades, an additional weight is applied to give a standardised prevalence assuming equal contribution from each grade.
Survey Administration
Questionnaires were administered in schools between the end of February and June 2022. The online questionnaires were developed using the SmartSurvey platform and administered in schools by class teachers who were given written instructions on how to carry this out. A class return form was completed by teachers for each participating class, which detailed how many pupils completed the questionnaire, how many were absent and reasons for absence.

Data Cleaning and Access
Coding of responses was conducted according to the HBSC international protocol, and the final national Scottish dataset was cleaned and data quality checks applied as required by the HBSC international study. The anonymised national HBSC 2022 data set will be deposited in the UK data archive in 2024. The data are also submitted to the HBSC International Data Bank, University of Bergen, Norway to be compiled into the HBSC 2021/2022 international dataset. The international dataset excludes some pupils who had extreme ages for their school year group, in order to ensure compliance with the international protocol for 2021/2022 that requires 80% of pupils to have ages within +/- 1 year of the target ages (11.5 years, 13.5 years and 15.5 years). This resulted in the exclusion of 34 pupils compared with the national data set, where school grade (not age) was the inclusion criterion. The Scottish sample available as part of the HBSC 2021/2022 international data set consequently has 4354 pupils. The impact on prevalence estimates is negligible, usually less than one decimal place, but readers should be aware of the potential for slight differences in reporting of Scottish data from the two sources. The international HBSC mandatory 2021/2022 dataset is made publicly accessible via the HBSC Data Management Centre three years after the international dataset is finalised.

ETHICS, CONSENT AND RECRUITMENT
The 2022 Scottish HBSC study design and methodology was given ethical approval by The College of Medical, Veterinary & Life Sciences Ethics Committee of the University of Glasgow. Directors of Education were contacted, and permission was requested to invite schools to take part in the survey. Once permission was granted by Directors of Education, invitation letters were sent to selected schools explaining what was involved in taking part in the HBSC survey along with information about the HBSC survey, and an example questionnaire. Schools who did not respond to the invitation were contacted by email and by telephone. Recruitment was carried out by members of the research team with support from the Population Health Research Facility, MRC/CSO Social and Public Health Sciences Unit, University of Glasgow. Quality Improvement Officers also assisted the research team with recruitment in some local authorities. Queries from schools or parents were directed to the HBSC national research team. Survey materials including pupil information sheets and parental consent forms were sent to participating schools in advance of the survey. Pupils whose parents returned an opt-out consent form were not included in the survey. Pupils themselves could also opt out of the survey on the day by choosing not to take part or skipping any questions they did not want to answer.

PRESENTATION OF RESULTS
Precision of prevalence estimates
The Scottish HBSC national sample uses cluster sampling (i.e. sampling a whole school class) rather than simple random sampling of individual pupils. This results in a loss of precision, and standard statistical methods that assume simple random sampling are therefore not appropriate. Other design factors can also affect precision, such as stratification and weighting. All analyses in this report have therefore used design adjusted analyses and provide robust estimates of precision. The lower number of pupils in the achieved S4 sample will mean that prevalence estimates for this age group will have lower precision than in P7 and S2, reducing the ability to detect small differences between subgroups.

Data Analyses
Design-adjusted tests were carried out to assess the statistical significance of differences between genders, age groups and family affluence groups. All differences or changes reported are statistically significant unless otherwise stated. When comparing proportions, a 99% level of significance was used in preference to the more standard 95% level, to take account of the fact that several tests of differences in proportion are carried out for each outcome. Analyses for age and gender...
took account of the effect of the survey design – stratification, clustering and weighting – on the precision of the estimates presented. The statistical package SPSS v28 (IBM) was used for all design-adjusted analyses. In some cases, reported data appear not to add up to 100%; this is due to rounding error.

**Categorisation by gender**

In 2022 the Scottish HBSC survey collected data on gender identity that had options other than the binary boy/girl responses. It is important to be able to report on the health of adolescents who do not identify as either boy or girl. However, as the number of participants in this group is low basic prevalence breakdowns by age group, such as those presented in this report, would lack precision. Consequently, for this report we present prevalence for most outcomes by age group, split into boys, girls and all. The ‘all’ category comprises those who identified as boy, girl or in any other way, including those who did not respond to the gender question. Future scientific publications will address more fully differences in health outcomes across gender identity groups.

**Family Affluence**

In each chapter, inequalities in health behaviours and outcomes are presented by family affluence. Family affluence is measured in this report using a well-validated measure that assesses the material assets available to children within the household, related to the (mainly) financial position of the family. This way of assessing family socio-economic status is more suitable for self-report from children and adolescents, who cannot accurately answer questions about more standard socio-economic indicators such as parental job type or household income. The Family Affluence Scale (FAS) used in HBSC and other studies combines information from participants on number of bathrooms, cars and computers available to the household, number of holidays outside of Scotland in the last year, whether the household has a dishwasher and whether the participant has a bedroom to themselves.

The family affluence scale is converted to a ridit-based relative rank within each grade and sex. Pupils were categorized into three groups based on their ranked scores: low FAS (bottom 20%), medium FAS (middle 60%), and high FAS (upper 20%) and prevalence is shown for each of these three groups.

**Structure of the report**

This report has a total of 12 chapters. The first provides a general introduction to the HBSC study, including survey methodology. Chapters 2 to 9 focus on young people’s general health and wellbeing, mental health and a range of health-related behaviours. These are followed by chapters on social relationships and school experience. Finally, Chapter 12 presents new data on the impact of the COVID-19 pandemic on different aspects of young people’s lives. For most variables, prevalence by age and gender, as well as trends and socio-economic inequalities in health, are presented in each chapter. A full list of survey items is included in Appendix 1.

**REFERENCES**

6. www.smartsurvey.co.uk
At age 15, more than twice as many boys reported ‘excellent’ health compared with girls.

30%  13%
GENERAL HEALTH AND SLEEP

INTRODUCTION
General health is closely related to mental health, with stress and poor mental wellbeing sometimes causing physical symptoms. The HBSC measure of self-rated health captures young people’s perceptions of their own health. It aligns with the World Health Organisation definition of health as a resource for living which goes beyond simply the absence of disease or the presence of wellbeing. Adolescents with poor self-rated health have been found to have more frequent health complaints, lower life satisfaction, take part in less physical activity and have more difficulty in making friends. Subjective health is also related to wider aspects of young people’s lives. For example, research in Norway found a close relationship between school-related stress and levels of support at school with headache, backache, abdominal pain and dizziness. A recent study has shown worsening trends in health complaints among Scottish adolescents between 1998 and 2018, particularly for girls and adolescents from low affluence families.

Measurement of chronic conditions and disabilities is essential in order to better understand how these can affect adolescents’ lives on a day-to-day basis. Cross-national HBSC research has shown, for example, that adolescents with long-term illness or disability report higher levels of screen time and lower levels of physical activity (boys only) than their peers, and may therefore be more susceptible to the negative health outcomes associated with these behaviours.

Childhood injury is a serious public health concern. Injuries are a leading cause of death and disability among those aged 5–19 years. While many young people are injured through sports and other healthy lifestyles, a recent study suggests that for some people injuries are part of a risk-related cluster of highly physical young people who are very physically active, involved in physical fights and are frequently injured.

Sleep is a key contributor to adolescent health, development and wellbeing. Healthy sleep encompasses many dimensions, including adequate duration, appropriate timing and good quality. Adolescents need sleep to function well but taking longer than they want to fall asleep is one of the biggest problems for adolescents. Sleep difficulties have been associated with a range of other health-related behaviours and outcomes including electronic media use, lack of physical activity, sedentary behaviours, alcohol and tobacco use, and loneliness. Among many factors, the rise in electronic media use may be hindering adolescents’ ability to fall asleep. Electronic media use among young people is associated with delayed sleep onset – both directly through melatonin suppression due to blue light screen exposure, and indirectly through the physiological arousal or negative psychological impact of media content. The Scottish #Sleepyteens project found that sleep quality is poorer for those adolescents who use social media very intensively at night-time. Academic responsibilities and social pressures to stay up later (e.g. driven in part by a fear of missing out) may further exacerbate adolescents’ biological tendency towards a later bedtime, and the increase in anxiety symptoms could also add to problems falling and staying asleep.

There is no ‘right’ amount of sleep that every young person should get. Guidelines recommend for adolescents to get a minimum of 8 to 9 hours of good sleep on a school night and provide top tips for getting a good night’s sleep. Experts recommend that use of screens should be avoided in the hour before planned bedtime to avoid disruption to sleep. The Royal College of Paediatrics and Child Health have produced guides for parents to help them to negotiate the right amount of screen time for their children.

HBSC FINDINGS
In 2022, HBSC collected data on self-rated health, frequency of somatic and psychological symptoms, long term illness or disability diagnosed by a doctor and medically attended injuries. Data on sleep habits were also collected. Adolescents aged 13 and 15 were asked when they go to bed and when they wake up, both on school nights and at weekends/during the holidays. All age groups answered questions about sleep difficulties and sleep quality.
At age 15, over half of the girls reported multiple health complaints compared with just over a third of boys.
SELF-RATED HEALTH
The self-rated health item asks young people to rate their general health and represents a broad measure capturing both physical and mental aspects of health.

Around a fifth (23%) of adolescents rated their health as ‘excellent’ (27% of boys, 20% of girls). A further 58% rated their health as ‘good’, 17% rated it as ‘fair’ and 2% as poor (Figure 2.1). Levels of excellent self-reported health decreased with age for girls but not boys.

At ages 13 and 15, boys were more likely to rate their health as excellent compared to girls. The largest difference between the genders was observed at age 15, with 13% of girls reporting excellent health compared with 30% of boys.

Since 2002, prevalence of ‘good’ health has remained stable among both boys and girls (Figure 2.2). The proportion of boys reporting ‘excellent’ health increased in 2022 to 27%. This rise reflects increases among older boys, particularly 15-year-olds from 20% in 2018 to 30% in 2022.

HEALTH COMPLAINTS
Young people were asked how often in the past 6 months they had experienced certain symptoms, both physical (somatic) and psychological. Figure 2.3 shows those who experienced individual health complaints more than once a week for boys and girls combined. The three most frequently reported complaints were: feeling nervous (38%), sleep difficulties (37%), and feeling irritable (33%). Except for sleep difficulties, the prevalence of all the individual health complaints increased with age, with 15-year-olds most likely to report frequent health complaints.

Multiple health complaints is defined as having two or more symptoms more than once a week. Nearly half (49%) of young people reported multiple health complaints (Figure 2.4). Multiple health complaints increased with age for both boys and girls, from 40% of 11-year-olds to 57% of 15-year-olds. Gender differences were evident at ages 13 and 15, with girls more likely than boys to report multiple health complaints (67% of 13-year-old girls and 73% of 15-year-old girls compared to 35% of 13-year-old boys and 41% of 15-year-old boys).

HBSC has been collecting data on multiple health complaints since 1994. Prevalence of multiple health complaints is at its highest for 28 years for boys and girls (Figure 2.5), with a sharp increase from 2018 especially for girls (41% to 61%).

LONG TERM ILLNESS OR DISABILITY
16% of adolescents reported having a long-term illness, disability, or medical condition (like diabetes, arthritis, allergy or cerebral palsy) that has been diagnosed by a doctor (Figure 2.6). There were no differences by gender or age.

Over half (57%) of the young people who reported having a long-term illness or disability take medicine for their condition. Just under a third (29%) reported that their long-term illness or disability affected school attendance and participation. There were no differences by gender or age.
Figure 2.4
MULTIPLE HEALTH COMPLAINTS

Source: HBSC Scotland 2022 Survey

% who have multiple health complaints

Boys | Girls | All
---|---|---
11-year olds | 36 | 41 | 38
13-year olds | 35 | 41 | 38
15-year olds | 67 | 73 | 70
All | 49 |

Significant gender differences (p<0.05) in multiple health complaints.

Figure 2.5
MULTIPLE HEALTH COMPLAINTS 1994–2022

Source: HBSC Scotland 1994–2022 Surveys

% who have multiple health complaints

---|---|---|---|---|---|---|---
Boys | 37 | 36 | 35 | 33 | 39 | 41 | 61 |
Girls | 27 | 26 | 25 | 22 | 23 | 30 | 37 |

Significant gender differences (p<0.05) in multiple health complaints.

Figure 2.6
LONG-TERM ILLNESS OR DISABILITY

Source: HBSC Scotland 2022 Survey

% who have long-term illness or disability

11-year olds | 18 | 16 | 16
13-year olds | 14 | 14 | 16
15-year olds | 16 | 16 | 16
All | 16 |

Significant gender differences (p<0.05) in long-term illness or disability.

Figure 2.7
MEDICALLY ATTENDED INJURIES

Source: HBSC Scotland 2022 Survey

% injured at least once in the last year

11-year olds | 55 | 43 | 45
13-year olds | 54 | 45 | 51
15-year olds | 51 | 48 | 48
All | 48 |

Significant gender differences (p<0.05) in medically attended injuries.
INJURIES
Nearly half (48%) of adolescents reported having at least one injury that had to be treated by a doctor or nurse in the last year. Boys were more likely to have had a medically attended injury in the last year compared to girls (Figure 2.7).

SLEEP DURATION ON WEEKDAYS
Adolescents were asked to estimate what time they usually went to bed and woke up on a school night. This was then used to estimate the number of hours of sleep on school days. Overall, 13-year-olds slept slightly longer than 15-year-olds (8.0 hours versus 7.7 hours, respectively) (Figure 2.8). There was a gender difference at age 13 only, with boys reporting sleeping longer on weekdays than girls (8.3 and 7.9 hours, respectively). Based on the NHS recommendation of a minimum of 8 to 9 hours of sleep each night the findings suggest that, on average, 13-years-olds meet this guideline whereas 15-year-olds are sleeping for less time than is recommended.

Since 2018, sleep duration on weekdays has decreased slightly, with the largest decrease for 13-year-old girls (from 8.2 hours in 2018 to 7.9 hours in 2022).

SLEEP DURATION AT WEEKENDS
The average amount of sleep time on non-school nights (at the weekend or during the school holidays) was also estimated. Adolescents spent longer sleeping at weekends/holidays than on school nights (9.2 hours versus 7.9 hours). There were no gender differences at either age (Figure 2.9).

Since 2018, sleep duration at weekends decreased slightly, with the largest decrease for 13-year-old girls (from 9.7 hours in 2018 to 9.2 hours in 2022).

SLEEP DIFFICULTIES
Adolescents were asked how often in the past six months they had experienced difficulties in getting to sleep. Overall, almost four in ten (37%) adolescents reported sleep difficulties more than once a week (Figure 2.10). There was no gender difference among 11-year-olds but, at ages 13 and 15, girls were more likely to report sleep difficulties. This difference was greatest at age 13, with 46% of girls having difficulties sleeping more than once a week compared with 29% of boys.

The HBSC survey has been asking young people about difficulties in getting to sleep for 28 years. In 1994, around a quarter (23%) of young people reported sleep difficulties more than once a week. This has remained fairly stable over the years but started to increase in 2018 and continued to rise in 2022 to 37% (Figure 2.11), with the largest increases for 11-year-olds and 13-year-old girls. From 2006 onwards, girls were more likely than boys to report difficulties getting to sleep and this gender difference was particularly evident in 2022: 42% of girls reported sleep difficulties compared with 31% of boys.

SLEEP QUALITY
Pupils were asked ten questions about sleep quality, covering three different aspects: (i) bedtime behaviours (e.g. delaying going to bed), (ii) sleep efficiency (e.g. having trouble settling down, needing help getting to sleep or when waking up during the night) and (iii) morning wakefulness (e.g. waking up feeling rested and alert). For each aspect of sleep, scores range from 1 to 6. A higher score indicates better sleep quality in that aspect.

The mean sleep quality score for bedtime behaviours was 3.5 (Figure 2.12). There were gender differences at age 13 with girls reporting lower scores than boys (3.4 versus 3.6). The bedtime behaviour score decreased with age for girls.

The mean sleep quality score for sleep efficiency was 4.2 (Figure 2.13). At age 11, there were no differences between girls and boys but at ages 13 and 15, girls reported lower sleep efficiency scores than boys.

The mean sleep quality score for morning wakefulness was 2.9 (Figure 2.14). There were differences by gender, with girls reporting lower morning wakefulness scores than boys at all ages. Morning wakefulness scores decreased with age with 11-year olds reporting a score of 3.2, 13-year olds a score of 2.9 and 15-year olds a score of 2.7.
% who have difficulty getting to sleep more than once a week

Boys Girls All

Significant gender difference (p<0.05)

Mean sleep duration on weekdays

Average sleep duration on weekdays

Figure 2.8
SLEEP DURATION ON WEEKDAYS (HRS)
Source: HBSC Scotland 2022 Survey

Figure 2.9
SLEEP DURATION ON WEEKENDS (HRS)
Source: HBSC Scotland 2022 Survey

Figure 2.10
SLEEP DIFFICULTIES
Source: HBSC Scotland 2022 Survey

Figure 2.11
SLEEP DIFFICULTIES 1994–2022
Source: HBSC Scotland 1994–2022 Surveys

8.0 hrs 13 yo
7.7 hrs 15 yo
INEQUALITIES IN GENERAL HEALTH AND SLEEP

The questions on general health and sleep were analysed in relation to family affluence. Those in the highest affluence group were more likely to report good or excellent health (Table 2.1). Multiple health complaints also varied by family affluence, with 56% of those young people in the least affluent group reporting multiple health complaints compared with 45% in the highest affluence group.

Young people in the lowest affluence group were more likely to report having a long-term illness, disability, or medical condition, but were less likely to report having at least one injury that had to be treated by a doctor or nurse in the last year.

The amount of sleep on school days varied by family affluence with young people from the lowest affluence group reporting less sleep. The proportion of young people reporting difficulties in getting to sleep varied by family affluence, with increasing sleep difficulties associated with decreasing family affluence: 47% of those in the lowest affluence group reported difficulties getting to sleep compared with 37% of the middle affluence group and 31% of the highest affluence group. Further, young people in the highest affluence group were more likely to report higher sleep quality scores across all three aspects indicating better overall sleep quality.

Table 2.1

<table>
<thead>
<tr>
<th></th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
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<tbody>
<tr>
<td>Report good or excellent health†</td>
<td>72</td>
<td>83</td>
<td>88</td>
</tr>
<tr>
<td>Multiple health complaints†</td>
<td>56</td>
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<td>45</td>
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<td>Medically attended injuries†</td>
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<td>Sleep duration on weekdays (hrs)†</td>
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<td>7.9</td>
<td>8.1</td>
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<td>Sleep duration weekends (hrs)†</td>
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<td>9.2</td>
<td>9.4</td>
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<td>Sleep difficulties†</td>
<td>47</td>
<td>37</td>
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<td>Sleep quality</td>
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<td>Bedtime behaviours†</td>
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<td>3.6</td>
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<td>Sleep efficiency†</td>
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<td>4.2</td>
<td>4.5</td>
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<td>Morning wakefulness†</td>
<td>2.7</td>
<td>2.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

† Significant linear trend difference (p < 0.01)
Figure 2.12: SLEEP QUALITY – BEDTIME BEHAVIOURS

Source: HBSC Scotland 2022 Survey

Figure 2.13: SLEEP QUALITY – SLEEP EFFICIENCY

Source: HBSC Scotland 2022 Survey

Figure 2.14: SLEEP QUALITY – MORNING WAKEFULNESS

Source: HBSC Scotland 2022 Survey
REFERENCES

The proportion of young people who feel very happy has decreased.
MENTAL HEALTH AND WELLBEING

INTRODUCTION

Mental wellbeing is one of the Scottish Government’s six public health priorities and is defined as: “...feeling good and functioning effectively, maintaining positive relationships and living a life that has a sense of purpose.” Mental health and wellbeing are therefore more than the absence of mental illness but also about emotional wellbeing and functioning well in everyday life.

The World Health Organisation (WHO) estimates that one in seven 10–19-year-olds experience a mental health problem and mental health difficulties represent the leading cause of health-related disability amongst this age group worldwide. There is evidence to suggest that the mental health of young people is worsening, in particular the emotional health of girls. Furthermore, emerging evidence suggests that the COVID-19 pandemic may have exacerbated mental health difficulties, particularly among those who were already vulnerable. A meta-analysis of 29 studies worldwide estimates that, globally, prevalence of depression in children and young people has doubled compared with estimates pre-pandemic.

Adolescence is a formative time in a person’s development both in terms of experiences as well as the development of social-emotional capabilities and the adoption of health behaviours that sets a trajectory for future health and wellbeing. Adolescence is also a significant time because most long-term mental health conditions develop before the age of 24. Poorer mental health may have a significant effect on a young person’s life, negatively impacting social and family relationships and self-esteem as well as engagement at school. Poor mental health in adolescence is a risk factor for future mental health difficulties and has implications for future health and employment.

Many things influence mental health and wellbeing including environmental, social, individual factors and the interaction between these. Good family relationships, peer support and school connectedness all positively influence wellbeing. Individual behaviours such as eating habits, sleep, physical activity and screentime are also independently associated with good overall wellbeing. Deprivation represents a key risk factor for mental health; a systematic review showed that children and adolescents from socio-economically deprived backgrounds were two to three times more likely to develop mental health problems. In addition, young people living in more deprived areas are also more likely to encounter adverse circumstances and experiences which may negatively impact their wellbeing.

The improvement of young people’s mental health and wellbeing is a major target for Scottish Government policies. The longstanding Getting it Right for Every Child (GIRFEC) approach and eight SHANARRI wellbeing outcomes mean that all services working with children and young people must play their part to promote and safeguard young people’s wellbeing.

The Mental Health Strategy (2017–2027) sets out the Scottish Government’s vision to improve mental health in Scotland. It focuses on prevention and early intervention to minimise the risk of poor mental health and its impact across the life course. The ambition of this strategy is that every young person should be able to access suitable mental wellbeing support in school. Part of this has included funding to ensure that every secondary school has access to counselling services and the provision of mental health training for school staff. A review of the personal and social education taught in schools has been undertaken and health and wellbeing outcomes developed to ensure that young people understand how to foster wellbeing and strengthen their resilience. The Scottish Government Covid Recovery Strategy for a fairer future also recognises the detrimental impact that the covid-19 pandemic has had on young people’s mental health and wellbeing and sets out a range of funding to address this.
MENTAL HEALTH AND WELLBEING

Mental Health and Wellbeing

The proportion of young people who always or often feel confident has decreased from 72% in 1998 to 42% in 2022. Over the same period, the proportion of young people who feel very happy with their life has also decreased. Furthermore, the proportion of young people who report high life satisfaction has decreased from 90% in 1998 to 80% in 2022.

Figure 1. FEEL VERY HAPPY

Figure 2. REPORT HIGH LIFE SATISFACTION

Source: HSCS Child and Youth Wellbeing Survey

† Significant gender difference (p < 0.05)
HBSC FINDINGS
The 2022 HBSC survey had a particular focus on mental health and wellbeing. The survey included questions that have been asked for a number of years, such as overall life satisfaction, feeling happy, feeling left out and self-confidence. There were also new questions on anxiety and self-efficacy. The survey also included measures of stress (Cohen Perceived Stress Scale) and low mood/ risk of depression (WHO 5 Wellbeing Index). The anxiety and stress scales were included for 13 and 15-year-olds only.

LIFE SATISFACTION
Young people were asked to rate their life satisfaction using the Cantril Ladder. They were shown a ladder with rungs numbered from 0 ('worst possible life') to 10 ('best possible life') and asked to mark where on the ladder they felt their life was. A score of six or more was defined as high life satisfaction. Eighty percent (80%) of young people reported high life satisfaction (86% boys; 74% girls). Gender differences were present at all ages with the biggest difference seen at age 13, with 88% of boys reporting high life satisfaction compared with 70% of girls. Eleven-year-olds were more likely to report high life satisfaction than the older adolescents (Figure 3.1).

Trends in life satisfaction between 2002 and 2022 have remained relatively stable. However, between 2018 and 2022, there has been a decrease in high life satisfaction among girls from 83% to 74% (Figure 3.2).

HAPPINESS
Young people were asked how happy they felt about their life at the moment. Overall, just over a quarter (27%) reported feeling very happy (34% boys; 21% girls). In every age group, boys were more likely to report feeling very happy than girls and the biggest difference was seen at age 13, with 15% of girls reporting feeling very happy compared with 31% of boys. For both boys and girls, happiness decreased with age: 41% of 11-year olds reported feeling very happy compared with 23% of 13-year-olds and 17% of 15-year-olds (Figure 3.3).

Levels of happiness steadily increased between 1994 and 2006 but have been declining since then. In 2022, the HBSC survey recorded the lowest levels of happiness among girls since 1994. At every survey year, boys were consistently more likely to report feeling very happy than girls (Figure 3.4).

FEELING CONFIDENT
Young people were asked how often they felt confident and four in ten (42%) reported feeling confident often or always. There were differences by gender, with boys at every age reporting feeling confident more often than girls. The most pronounced differences were at ages 13 and 15. For example, at age 13, 57% of boys reported feeling confident often or always compared with 25% of girls. Confidence decreased with age and this pattern was more pronounced among girls than boys (Figure 3.5).

Confidence levels peaked in 1998 when 72% of young people reported that they felt confident often or always, but have declined since then. In 2022, the lowest levels of confidence for boys and girls in 28 years were observed. At every survey year, boys were more likely to report feeling more often confident than girls (Figure 3.6).

FEELING LEFT OUT
Nearly a quarter (23%) of young people reported feeling left out often or always. At every age group, girls were more likely to report feeling left out than boys (Figure 3.7).

Levels of feeling left out have fluctuated slightly since 1998 but between 2018 and 2022, there was a significant increase in feeling left out for both boys and girls. In 2018, 9% of boys reported feeling left out often or always compared with 15% in 2022 and for girls, it was 13% in 2018 compared with 30% in 2022. The prevalence of young people feeling left out in 2022 was the highest observed in 24 years (Figure 3.8).
Figure 3.5
OFTEN OR ALWAYS FEEL CONFIDENT
Source: HBSC Scotland 2022 Survey

Figure 3.6
OFTEN OR ALWAYS FEEL CONFIDENT 1994–2022
Source: HBSC Scotland 1994–2022 Surveys

Figure 3.7
OFTEN OR ALWAYS FEEL LEFT OUT
Source: HBSC Scotland 2022 Survey

Figure 3.8
OFTEN OR ALWAYS FEEL LEFT OUT 1998–2022
Source: HBSC Scotland 1998–2022 Surveys

Figure 3.9
ALWAYS OR MOST OF THE TIME FEEL LONELY TIME
Source: HBSC Scotland 2022 Survey
One in five young people reported feeling lonely always or most of the time.

FEELING LONELY
Young people were asked how often they had felt lonely over the past 12 months. Around a fifth (19%) of young people reported feeling lonely often or all of the time (13% boys; 24% girls). There was no gender difference at age 11, but at ages 13 and 15, girls were more likely to report feeling lonely. For example, at age 13, 26% of girls reported feeling lonely compared with 10% of boys (Figure 3.9).

LOW MOOD AND RISK OF DEPRESSION
The WHO–5 Wellbeing Index is a five item positively worded scale which provides a measure of emotional functioning. Scores are summed and transformed to create a scale ranging from 0 to 100. Scores of less than 50 on the WHO–5 indicate low mood and those with a score of 28 and below are classified as at risk of depression.

Overall, around a third (35%) of young people were classified as having low mood or risk of depression. At every age group, girls were more likely to report low mood and risk of depression than boys. Low mood and risk of depression increased with age for both boys and girls. Over half of 15-year old girls were classified as having either low mood (31%) or risk of depression (25%) (Figure 3.10).

The WHO-5 index was first included in HBSC in 2018, when 37% of young people were classified as having low mood or risk of depression. Levels have remained stable or decreased slightly for most groups in 2022. However, among 13-year-old girls, the proportion of those experiencing either low mood or risk of depression increased from 41% in 2018 to 49% in 2022.

PERCEIVED STRESS
General stress is measured using the Cohen Perceived Stress Scale which asks young people four questions about how they feel they are coping with problems and whether they have felt in control of their life over the past month. Answers to the four questions are combined to create a total score ranging from 0 to 16. Higher scores reflect higher levels of perceived stress. At both 13 and 15 years, girls were more likely to report higher mean stress scores than boys. For example, at age 15, girls had a mean score of 8.4 compared with 6.9 for boys. There were significant age differences among boys, with 15-year old boys reporting a higher mean stress score than 13-year old boys (Figure 3.11).

ANXIETY
Young people were asked to complete the Generalised Anxiety Disorder Scale (GAD 7). This asks seven questions about how often, over the past two weeks, young people have been bothered by feelings such as feeling nervous, being unable to stop worrying, having trouble relaxing and feeling easily annoyed. The answers are summed to produce a score between 0 to 21. A score of 11 or more indicates moderate anxiety and a score of 17 or more indicates severe anxiety.

Just under a third (32%) of young people aged 13 and 15 were classified as having either moderate (18%) or severe anxiety (14%). There was little difference by age but, at both ages, girls were more likely than boys to report anxiety (47% versus 16%) (Figure 3.12).
MENTAL HEALTH AND WELLBEING

32% 1 in 3 young people were classified as having moderate or severe anxiety
SELF-EFFICACY
In 2022, for the first time, young people were asked two questions to measure their self-efficacy. The questions asked young people how often they felt able to find a solution to a problem and how often they managed to do things they decided to do. Self-efficacy is a measure of an individual’s perception of their ability to deal effectively with challenges. The answers to the two questions are combined to create a score between 2–10, with higher scores indicating higher levels of self-efficacy.

Overall, four in ten (39%) young people were classified as having low self-efficacy (31% boys, 45% girls). At every age group, girls were more likely to have a low self-efficacy score than boys and the biggest difference was seen at age 15, where 51% of girls were classified as having low self-efficacy compared with 34% of boys. There was no gender difference at age 11, but among 13- and 15-year-olds, boys were more likely to be classified as having high self-efficacy than girls.

Low self-efficacy varied by age for girls, with 15-year-old girls more likely to report lower self-efficacy than 11-year-old girls (Figure 3.13).

PERCEPTION OF BODY WEIGHT
In 2022, young people were asked, for the first time, about their perceived body weight and whether they thought their body was underweight, overweight or neither under- or overweight. Over half (56%) of young people thought their body was neither under- or overweight and this did not vary significantly by age or gender.

One quarter (25%) of young people thought they were overweight, and this did not vary by age or gender, except at age 15 when girls were more likely than boys to say that their body was overweight (32% versus 22% respectively).

Nearly a fifth (18%) of young people thought they were underweight (23% boys; 13% girls). At ages 13 and 15, boys were more likely than girls to say they thought their body was underweight, with the biggest difference seen at age 15 (25% versus 15%). (Figure 3.14).

In previous survey rounds of HBSC, young people were asked a different question about body image that asked if they felt their body was too fat/too thin or about right. It is interesting to note that in 2018, 40% of girls perceived their body to be ‘too fat’, which is substantially higher than the proportion of girls who in 2022 describe themselves as overweight (27%). This may indicate that the term ‘fat’ includes a negative perception of body image, rather than being purely about body size or weight.

INEQUALITIES IN MENTAL HEALTH AND WELLBEING BY FAMILY AFFLUENCE
All the mental health and wellbeing measures were analysed by family affluence. On nearly all the measures, more negative outcomes were associated with lower affluence (Table 3.1). Those in the highest family affluence group were more likely to report high life satisfaction, feeling very happy with life, feeling confident more often and to say they were about the right weight. Those in the lowest family affluence group were more likely to feel lonely, have a higher mean stress score, be classified as having low mood/risk of depression and to report being overweight. Levels of anxiety and feeling left out did not vary by family affluence.
Table 3.1
MENTAL HEALTH AND WELLBEING BY FAMILY AFFLUENCE

<table>
<thead>
<tr>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report high life satisfaction</td>
<td>71</td>
<td>80</td>
</tr>
<tr>
<td>Feel very happy</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Often or always feel confident</td>
<td>32</td>
<td>43</td>
</tr>
<tr>
<td>Often or always feel left out</td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>Always or most of the time feel lonely</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Low mood/risk of depression</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Perceived Stress Scale mean score</td>
<td>8.0</td>
<td>7.3</td>
</tr>
<tr>
<td>Moderate or severe anxiety</td>
<td>40</td>
<td>30</td>
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<tr>
<td>Low self efficacy</td>
<td>48</td>
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Perception of body weight

<table>
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<tr>
<th></th>
<th>Underweight</th>
<th>Neither under or overweight</th>
<th>Overweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low FAS (%)</td>
<td>20</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Medium FAS (%)</td>
<td>45</td>
<td>56</td>
<td>65</td>
</tr>
<tr>
<td>High FAS (%)</td>
<td>35</td>
<td>25</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey

† Significant gender difference (p < 0.01)
REFERENCES


Daily breakfast consumption was higher among boys than girls.

61% boys vs. 46% girls.
EATING BEHAVIOURS AND ORAL HEALTH

INTRODUCTION
Healthy eating is essential for good overall physical and mental health. Nutrition in adolescence is particularly important due to the rapid growth and development that take place, including biological, psychological and emotional changes. Healthy eating in adolescence is associated with improved mental wellbeing as well as helping to prevent obesity, eating disorders and tooth decay. It may also contribute to the prevention of coronary heart disease, cancer and stroke in adulthood. Adolescence is a critical period because many health behaviours established during this period are maintained into adulthood. It is therefore important to establish healthy eating behaviours for both short-term and long-term benefits.

During adolescence there are marked changes to dietary behaviours with adolescents becoming more independent and exercising greater autonomy over their health-related choices. There are many factors that influence adolescent eating behaviours including biological, social, physical, economic and psychological. The role of friends is significant, with adolescents spending more time with their peers and the desire to conform to social norms. Evidence shows that regular and nutritious daily meals are important for good physical and mental development in adolescence. A systematic review of the effects of eating breakfast on children and adolescents concluded that it had a positive impact on cognitive performance, academic achievement, quality of life and overall wellbeing. However, evidence also suggests that many young people do not regularly have breakfast, in particular girls, older adolescents and adolescents from low income families. Family life also plays a role, for example, research has found that adolescents who frequently eat meals with their family are less likely to take part in risky behaviour when compared to peers who never eat meals with their family. Another review also found that frequent family meals were associated with increased self-esteem, school success and less disordered eating.

There have been some recent improvements in eating habits in Scotland, but recent data indicates that only 20% of children and young people aged 2-15 years-old are meeting the dietary recommendations for fruit and vegetable intake. There is also evidence of socio-economic differences in food intake with children from more affluent families more likely to eat fruit and vegetables and less likely to eat crisps and chips.

The Scottish Government’s sixth health priority concerns eating well, having a healthy weight and being physically active. This is because dietary risk factors are the second biggest contributing factor to death and disability in Scotland. The Scottish Government has introduced several national initiatives to support promotion of healthy eating among young people, in particular by recognising the importance of schools in influencing young people’s eating habits. In 2014, the Scottish Government published the ‘Beyond the School Gate’, which provides information and guidance for local authorities, schools, retailers and caterers to help them improve the food environment around schools. More recently, the Nutritional Requirements for Food and Drink in Schools (Scotland) 2020 was developed and sets nutritional standards for the food and drink served in schools and, from 2022, free school meals are now provided to primary pupils from P1 to P5.

Oral health is an essential part of overall health and wellbeing. Tooth decay is one of the most common chronic diseases among adolescents and if untreated may cause pain and also impact on diet, sleep and academic performance. Regular tooth brushing can help prevent oral diseases and whilst evidence suggests that young people consider dental health important, they do not always follow the recommendations.

In 2006, the Scottish Government launched Childsmile. This is a national programme to improve the oral health in Scotland and reduce inequalities in dental health by providing access to dental services and preventative care for children up to the age of 5. Building on Childsmile, Action 3 of the 2018 Scottish Government Oral Health Improvement Plan makes changes to how dentists are paid and introduces a monitoring system so all dental practices provide care for older children as well.
EATING BEHAVIOURS AND ORAL HEALTH

Figure 4.1
EAT BREAKFAST EVERY MORNING ON WEEKDAYS

![Bar chart showing the percentage of boys, girls, and all who eat breakfast every morning on weekdays across different age groups.](chart1)

Figure 4.2
EAT BREAKFAST EVERY MORNING ON WEEKDAYS 2002–2022

![Line graph showing the percentage of boys, girls, and all who eat breakfast every morning on weekdays from 2002 to 2022.](chart2)

Figure 4.3
DAILY FRUIT CONSUMPTION

![Bar chart showing the percentage of boys, girls, and all who eat fruit daily across different age groups.](chart3)

Figure 4.4
DAILY FRUIT CONSUMPTION 2002–2022

![Line graph showing the percentage of boys, girls, and all who eat fruit daily from 2002 to 2022.](chart4)

Figure 4.5
DAILY VEGETABLE CONSUMPTION

![Bar chart showing the percentage of boys, girls, and all who eat vegetables daily across different age groups.](chart5)
**HBSC FINDINGS**

HBSC collects a variety of information on eating behaviours, including eating breakfast on weekdays, family meals and food and drink consumption. Many items have been asked for over 20 years, but some newer items, such as energy drink consumption were first introduced in 2018 to reflect changing habits. The survey has collected data on toothbrushing since 1990, providing trend data over 32 years.

**BREAKFAST CONSUMPTION ON WEEKDAYS**

Over half (53%) of young people reported eating breakfast every day on weekdays (61% of boys, 46% of girls). Younger adolescents were more likely to eat breakfast on weekdays: 64% of 11-year-olds compared with 46% of 15-year-olds. There were gender differences at ages 13 and 15, with boys being more likely to eat breakfast every day than girls (Figure 4.1).

Between 2006–2018, the proportion of young people eating breakfast every day remained fairly stable. However, in 2022, there has been a decrease in daily breakfast consumption in both boys and girls, particularly in the younger age groups (11- and 13-year-olds) (Figure 4.2).

**DAILY FRUIT CONSUMPTION**

Overall, 44% of adolescents reported eating fruit every day. Daily fruit consumption decreased with age, with 53% of 11-year-olds eating fruit every day compared with 37% of 15-year-olds (Figure 4.3). In contrast to previous years, fruit consumption did not vary by gender; this is due to increases among boys in all age groups. In 2022, 43% of boys ate fruit every day compared with 30% in 2018. Levels of fruit consumption in 2022 for both genders are the highest in 20 years (Figure 4.4).

**DAILY VEGETABLE CONSUMPTION**

Four in ten (40%) young people ate vegetables every day. There were no significant age or gender differences in vegetable consumption (Figure 4.5). This is in contrast to previous years when girls were consistently more likely to eat vegetables every day than boys. In 2022, boys' vegetable consumption was at its highest since 2002, with a particular increase between 2018 and 2022 from 31% to 40%. Trends in daily vegetable consumption have remained stable for girls during the same period (Figure 4.6).

**DAILY CONSUMPTION OF SWEETS OR CHOCOLATE**

A third (34%) of adolescents reported eating sweets or chocolates every day and this did not vary by age or gender (Figure 4.7). Compared with 2018, there was an increase in daily consumption of sweets or chocolate in 2022, from 27% to 35% among boys and from 28% to 34% among girls. However, current prevalence is in line with results observed between 2006-2014 (Figure 4.8).

**DAILY CONSUMPTION OF CHIPS OR FRIED POTATOES**

Sixteen percent (16%) of young people reported eating chips or fried potatoes every day and this did not vary by age or gender (Figure 4.9). Levels of chip consumption have decreased since 2002, remaining relatively stable between 2010–2018. However, there was a slight increase in daily consumption of chips and fried potatoes in 2022 (Figure 4.10).
Daily fruit consumption has increased over the last 20 years.
DAILY CONSUMPTION OF SUGARY DRINKS
One fifth (21%) of young people reported consuming a sugary drink every day. There were no gender differences at age 11, but at ages 13 and 15, boys were more likely than girls to report doing this. Among boys, daily consumption of sugary drinks increased with age, from 19% of 11-year-old boys to 28% of 15-year old boys. There were no age differences among girls (Figure 4.11).

The proportion of young people who drink sugary drinks every day has decreased considerably since 2002, from 50% to 24% for boys and from 43% to 18% for girls. There has, however, been a small increase in daily sugary drink consumption for both boys and girls in 2022 when compared with 2018 results (Figure 4.12).

DAILY CONSUMPTION OF FRUIT JUICE OR SMOOTHIES
Over a quarter (28%) of young people said they drink fruit juice or smoothies on a daily basis (30% boys, 26% girls). Consumption of fruit juice or smoothies was highest among 11-year olds (34% compared with 22% of 15-year-olds). No gender differences were observed (Figure 4.13).

DAILY CONSUMPTION OF ENERGY DRINKS
Nearly one in ten (9%) of young people reported consuming energy drinks every day and this did not vary by gender. Fifteen-year-olds were more likely to consume energy drinks than 11-year-olds (11% versus 6%, respectively) (Figure 4.14). The proportion of young people drinking an energy drink every day has increased from 5% in 2018 to 9% in 2022.

FAMILY MEALS
Over one third (36%) of young people reported having a meal every day with their family and a further 38% of young people reported eating a meal most days of the week with their family (Figure 4.15). This did not vary significantly by age or gender, except at age 13, when boys were more likely to report this than girls (37% versus 32%).

The frequency of eating family meals has decreased since 1994 but remained fairly consistent since 2006. Although there was a marked decrease between 2014 and 2018, these figures are not directly comparable due to the change in the question on family meals from 2018 onwards. Prior to 2018, young people were asked specifically about evening meals rather than family meals in 2018 and 2022. Frequency of family meals in 2022 are similar to those observed in 2018 (Figure 4.16).
Boys | Girls | % who drink sugary drinks daily
--- | --- | ---
11-year olds | 19 | 19
13-year olds | 24 | 17
15-year olds | 28 | 18
All | 21 | 16

Source: HBSC Scotland 2022 Survey

Significant gender difference (p<0.001)
TOOTHBRUSHING
Three quarters (74%) of Scottish adolescents reported brushing their teeth at least twice a day. At every age, this was more common among girls than boys. There was little difference in the proportion of boys who brush their teeth at least twice a day between ages 11 and 15. Among girls, the proportion who brushed their teeth at least twice a day increased with age from 78% of 11-year-olds to 85% of 15-year olds (Figure 4.17).

From 1990 to 2014 there was a steady increase in the proportion of boys and girls who brushed their teeth at least twice a day, although there has been little change since 2014. Among boys, the proportion has risen from 48% in 1990 to 68% in 2022 and for girls from 70% in 1990 to 81% in 2022. Since 1990, the gender gap has persisted but narrowed over time (Figure 4.18).

The proportion of young people who brush their teeth twice a day has increased over the last 2 decades

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
<th>Gender</th>
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<tbody>
<tr>
<td>1990</td>
<td>48%</td>
<td>BOYS</td>
</tr>
<tr>
<td>2022</td>
<td>68%</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>70%</td>
<td>GIRLS</td>
</tr>
<tr>
<td>2022</td>
<td>81%</td>
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</tr>
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INEQUALITIES IN EATING BEHAVIOURS AND ORAL HEALTH
Healthy eating behaviours were more common among the high affluence groups. For example, eating breakfast on a weekday, daily family meals and consumption of fruit and vegetables were positively associated with family affluence whilst daily consumption of sugary drinks was negatively associated with family affluence. Daily consumption of fruit juice or smoothies was positively associated with family affluence. There were, however, no socio-economic differences in daily consumption of chips, sweets or chocolate or energy drinks. Toothbrushing was also positively associated with family affluence. (Table 4.1).

![Graph showing toothbrushing rates](image_url)

Table 4.1
EATING BEHAVIOURS AND ORAL HEALTH BY FAMILY AFFLUENCE

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat breakfast every morning</td>
<td>41</td>
<td>54</td>
<td>62</td>
</tr>
<tr>
<td>on weekdays†</td>
<td></td>
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</tr>
<tr>
<td>Daily fruit consumption†</td>
<td>35</td>
<td>45</td>
<td>49</td>
</tr>
<tr>
<td>Daily vegetable consumption†</td>
<td>28</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Daily consumption of sweets or</td>
<td>33</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>chocolate</td>
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</tr>
<tr>
<td>Daily consumption of chips</td>
<td>17</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Daily consumption of sugary</td>
<td>29</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>drinks†</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Daily consumption of fruit juice</td>
<td>21</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>or smoothies†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily consumption of energy</td>
<td>11</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>drinks†</td>
<td></td>
<td></td>
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<tr>
<td>Daily family meals†</td>
<td>27</td>
<td>37</td>
<td>43</td>
</tr>
<tr>
<td>Brush teeth at least twice a day</td>
<td>64</td>
<td>75</td>
<td>81</td>
</tr>
</tbody>
</table>
4

EATING BEHAVIOURS AND ORAL HEALTH

Figure 4.14
DAILY CONSUMPTION OF ENERGY DRINKS

Source: HBSC Scotland 2022 Survey

Figure 4.15
FREQUENCY OF FAMILY MEALS

Source: HBSC Scotland 2022 Survey

Figure 4.16
DAILY FAMILY MEALS* 1994–2022

Source: HBSC Scotland 1994–2022 Surveys

Figure 4.17
BRUSH TEETH AT LEAST TWICE A DAY

Source: HBSC Scotland 2022 Survey

Figure 4.18
BRUSH TEETH AT LEAST TWICE A DAY 1990–2022

Source: HBSC Scotland 1990–2022 Surveys
REFERENCES


Less than a quarter of adolescents achieved 60 minutes of moderate-to-vigorous physical activity per day.
PHYSICAL ACTIVITY AND LEISURE TIME

INTRODUCTION

Physical activity (PA) is an important part of a healthy lifestyle and regular physical activity is associated with a reduced risk of many chronic conditions such as cardiovascular disease, type 2 diabetes and some cancers. As well as helping to maintain a healthy weight, young people’s participation in physical activity is also associated with improved bone mineral density, aerobic fitness, muscular strength, higher life satisfaction and improved mental health. The World Health Organisation updated its physical activity guidelines in 2020 and recommends that children should participate in at least an average of 60 minutes of moderate-to-vigorous activity daily across the week. The WHO guidelines also state that vigorous intensity physical activities, including those to strengthen muscle and bone, should be incorporated at least 3 days per week.

Levels of physical activity vary by gender, with boys typically more active than girls. Participation in physical activity also decreases with age for both boys and girls. Other factors which are associated with physical activity in adolescents include ethnicity, previous physical activity, intention to be active, opportunities to exercise, perceived competence, and social support.

Sedentary behaviour is defined as time spent sitting or lying with low energy expenditure, while awake, in the context of educational, home, and community settings and transportation. Although for some young people sedentary activities may replace more active ones, levels of sedentary behaviour are generally not strongly correlated with levels of physical activity. This means that an adolescent may be highly active but also engage in high levels of sedentary behaviour. Sedentary behaviour has a negative impact on health outcomes, regardless of levels of physical activity. For example, sedentary behaviour is associated with greater consumption of sugary drinks and snacks as well as higher levels of obesity and poorer mental health. As a result of children and adolescents spending greater time engaged in sedentary behaviours, particularly for recreation (e.g. screen-based entertainment including television and computers) and digital communications (e.g. such as mobile phones), the 2020 WHO physical guidelines provided a new recommendation that children and adolescents should limit the amount of time spent being sedentary, particularly the amount of recreational screen time.

Organised leisure-time activities are linked to healthy youth development and are an important aspect in the positive social and psychological development of young people. Links have been found between participation in organised activities and higher school wellbeing and better school performance. In addition, recent international studies demonstrated that involvement in organised activities was associated with improved subjective wellbeing regardless of age, gender and other socio-economic factors and that team sport participation may be a vehicle to support child and adolescent mental health.

The Scottish Government’s vision for a more active Scotland is described in the Active Scotland Outcomes Framework which aims to encourage children and young people to experience the joys of movement and the social, emotional and physical wellbeing that comes with leading an active lifestyle. A key outcome is to ensure that all children and young people in Scotland develop the physical confidence and competence required for a foundation of lifelong participation in physical activity and sport. The Framework is supported by Scotland’s Physical Activity Delivery Plan ‘A More Active Scotland’ along with other national strategies including ‘Let’s Get Scotland Walking’, and ‘Raising the Bar’ and ‘Levelling the Playing Field’. In 2022 Public Health Scotland published a new framework that provides a pragmatic systems-based approach to physical activity that can be applied strategically at a national and local level.

HBSC FINDINGS

The 2022 HBSC survey asked adolescents about their physical activity, including both moderate and vigorous physical activity, as well as their leisure time activities. Modest to vigorous physical activity (MVPA) has been included in HBSC since 2002, thus allowing for the analysis of long term trends of the proportion of adolescents meeting the current physical activity guidelines. The frequency of vigorous physical activity outside of school has been measured since 1990. For the
three in five of young people took part in vigorous exercise in their free time at least 3 times a week.

**Figure 5.1**

MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year olds</td>
<td>35%</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>13-year olds</td>
<td>28%</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>15-year olds</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Figure 5.2**

MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY 2002-2022

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002%</td>
<td>24%</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>2006%</td>
<td>29%</td>
<td>19%</td>
<td>29%</td>
</tr>
<tr>
<td>2010%</td>
<td>19%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>2014%</td>
<td>15%</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>2018%</td>
<td>15%</td>
<td>28%</td>
<td>28%</td>
</tr>
</tbody>
</table>

**Figure 5.3**

FREQUENCY OF LEISURE TIME VIGOROUS EXERCISE (3 OR MORE TIMES PER WEEK)

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year olds</td>
<td>72%</td>
<td>64%</td>
<td>70%</td>
</tr>
<tr>
<td>13-year olds</td>
<td>70%</td>
<td>54%</td>
<td>66%</td>
</tr>
<tr>
<td>15-year olds</td>
<td>66%</td>
<td>43%</td>
<td>61%</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey.
first time in 2022 adolescents were asked how often they took part in different types of organised leisure activities such as team sports (e.g. football, netball), organised individual sports (e.g. tennis, gymnastics, swimming), artistic activities (e.g. art and music school, playing a musical instrument), children’s and youth organisations (e.g. Scouts or Guides), club in a leisure centre or at school (e.g. board games, model-making, language or debating club), or religious activities (e.g. going to church, mosque, synagogue).

MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY
In 2022, 23% of adolescents (28% boys, 19% girls) engaged in moderate to vigorous physical activity (MVPA) for at least 60 minutes every day. Boys reported more physical activity than girls at ages 13 and 15 (13-year-olds: 28% versus 17% and 15-year-olds: 22% versus 12%). Daily MVPA was more common amongst 11-year-olds and decreased with age (Figure 5.1). There was little change in the proportion of girls and boys meeting physical activity guidelines up to 2018. However in 2022 there was sharp increase for boys (from 19% in 2018 to 28% in 2022) (Figure 5.2).

LEISURE TIME VIGOROUS PHYSICAL ACTIVITY
In 2022, 61% of young people took part in leisure time vigorous exercise (outside of school hours) at least three times a week. Vigorous physical activity (VPA) was higher among boys than girls (69% versus 54%). The gender difference was greatest at age 15 (66% versus 43%). Participation in VPA was highest at age 11 (72% of boys, 64% of girls) and decreased with age (Figure 5.3).

PARTICIPATION IN ORGANISED LEISURE ACTIVITIES
In 2022 almost three quarters of adolescents (71%) took part in at least one organised activity every week. Boys reported taking part in organised leisure activities more than girls at age 15. Taking part in organised leisure activities was more common amongst 11-year olds and decreased with age (Figure 5.4).

TYPE OF ORGANISED ACTIVITIES UNDERTAKEN BY YOUNG PEOPLE EVERY WEEK
Participation in organised leisure activities at least once per week is shown in Table 5.1. Overall, 43% of young people took part in team sports, 37% in individual sports, 32% in artistic activities, 15% in youth organisations, 10% in club activities and 9% in religious activities at least weekly.

Boys were more likely to take part in team sports than girls (56% versus 31%). Girls were more likely to take part in individual sports than boys at ages 11 and 13 (53% versus 38% at age 11 and 40% versus 30% at age 13). Girls were more likely to undertake organised artistic activities than boys (37% versus 26%). Of those young people who took part in organised youth organisations, club activities and religious activities there were no differences by gender. Participation decreased with age for all types of activities.
Levels of moderate-to-vigorous physical activity have increased especially for boys.
SCREEN TIME

In 2022, pupils were asked for the first time to estimate how many hours a day in their free time they spend on a computer/console/tablet/phone playing games, on social media, watching TV/DVDs/videos or for other purposes such as homework, email, messaging, surfing the internet. The mean number of hours spent on various screen time activities was determined. The mean hours per day spent gaming was 3.0 (Figure 5.5), 2.8 for social media (Figure 5.6), 2.4 for watching TV (Figure 5.7) and 1.2 for browsing the internet (Figure 5.8). Boys were more likely to spend time gaming per day (3.5 hours versus 2.5 hours) which deceased with age for girls only. Girls were more likely to spend time on social media (3.2 hours versus 2.5 hours) and this increased with age. At age 11 boys were more likely than girls to watch TV and browse the internet. Watching TV and browsing the internet did not change with age.

INEQUALITIES IN PHYSICAL ACTIVITY AND LEISURE TIME

Young people from more affluent families reported higher levels of moderate-to-vigorous physical activity and leisure time vigorous activity (Table 5.2). This difference was greatest for leisure time vigorous activity. For example, almost three quarters (72%) of adolescents from high affluence families took part in VPA three or more times a week compared to half (48%) of those from low affluence families. Young people from low affluence families were also less likely to participate in organised leisure activities at least once per week compared to high affluence groups (57% versus 81%). Young people from low affluent families had higher daily screentime activities (gaming and watching TV).

<table>
<thead>
<tr>
<th>Table 5.2</th>
<th>PHYSICAL ACTIVITY AND LEISURE TIME BY FAMILY AFFLUENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low FAS (%)</td>
</tr>
<tr>
<td>Moderate-to-vigorous physical activity†</td>
<td>16</td>
</tr>
<tr>
<td>Frequency of leisure time vigorous exercise (3 or more times per week)†</td>
<td>48</td>
</tr>
<tr>
<td>Participation in organised leisure activities (at least once per week)†</td>
<td>57</td>
</tr>
<tr>
<td>Screen time</td>
<td></td>
</tr>
<tr>
<td>Gaming†</td>
<td>3.5</td>
</tr>
<tr>
<td>Social Media</td>
<td>3.1</td>
</tr>
<tr>
<td>Watching TV†</td>
<td>2.8</td>
</tr>
<tr>
<td>Browsing internet</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Young people from higher affluent families were more likely to be physically active, take part in organised activities in their leisure time and spend less time gaming or watching TV.

REFERENCES

Young people spent, on average:

- **3.0** hours a day gaming
- **2.8** hours a day on social media
- **2.4** hours a day watching TV
- **1.2** hours a day browsing the internet

**Figure 5.3**
SCREEN TIME – GAMING

![Screen Time Gaming Graph](image)

**Source**: HBSC Scotland 2013 Survey

**Figure 5.4**
SCREEN TIME – SOCIAL MEDIA

![Screen Time Social Media Graph](image)

**Source**: HBSC Scotland 2013 Survey

**Figure 5.5**
SCREEN TIME – WATCHING TV

![Screen Time Watching TV Graph](image)

**Source**: HBSC Scotland 2013 Survey

**Figure 5.6**
SCREEN TIME – BROWSING INTERNET

![Screen Time Browsing Internet Graph](image)

**Source**: HBSC Scotland 2013 Survey
Almost one in seven young people reported problematic social media use. This was more common among girls than boys.
ELECTRONIC MEDIA USE

INTRODUCTION

Digital technology plays a huge part in adolescents’ lives. The explosion in the use of technology and social media by adolescents has many potential benefits. Several studies have suggested that use of social media may have a positive effect on self-esteem, friendship closeness, social competence and empathy, though other studies have found that online social interactions are only beneficial when communicating with existing friends, rather than relationships with strangers which have been created online. The internet allows adolescents to quickly and easily access a wide range of information and learning possibilities and also provides opportunities for adolescents who have difficulty making friends, for example adolescents who are home schooled or socially anxious, to develop new and rewarding social connections. However, there are increasing concerns that the amount of time children and young people spend engaged in screen-based activities, and excessive use of social media in particular, may be detrimental to their mental health and wellbeing. Some studies have suggested that screen time and electronic media may be linked to poor mental wellbeing, but the evidence is not yet clear that screen time causes poor mental wellbeing. A 2019 review of research into the impact of the use of television, computers, videos, mobile phones and other electronic devices found strong links between screen time and obesity, lack of exercise, depression and poor diet. However, only weak links were found between screen time and behavioural problems, low self-esteem, poor wellbeing, low educational attainment, and anxiety. There is also a growing concern about the potential association between social media use, mental health and wellbeing and sleep.

A recent study across 18 countries found that intense and problematic social media use was associated with shorter sleep duration, later bedtimes and greater social jetlag in adolescents. Research into the health impact of electronic media use has shown the importance of assessing two aspects of social media use: the intensity of social media use (the frequency of communication with peers and others) and problematic social media use (addiction-like symptoms that reflect one’s inability to control social media use to the extent to which it causes impairments in daily life). Problematic social media use is associated with lower mental, school, and social wellbeing while intense social media use is related positively to specific domains of wellbeing. The relationship between the intensity of social media use and problematic social media use and wellbeing outcomes has been explored further in an international study across 42 countries using four categories of social media user. Non-active use and problematic use were associated with lower social wellbeing than active and intense use. Problematic and non-active users reported lower life satisfaction than active users while intense and especially problematic users were more likely to engage in substance use. This study supports the goldilocks hypothesis by highlighting potential risks to very low social media users on the one hand and problematic users on the other.

Playing computer and video games is a popular leisure activity for adolescents and for many young people is a fun way of spending time. Adolescence is characterized by a period of increased experimentation with different behaviours such as smoking, drinking and sexual behaviour which can contribute to an unhealthy behavioural pattern. While gaming is common among adolescents, intensive gaming has been linked to the development of addictive-like behaviours. Studies have provided evidence that Internet Gaming Disorder increases depressive symptoms and social anxiety in adolescents and negatively impacts school performance and quality of the relationship with parents. In 2013, the Scottish Government provided guidance to schools and local authorities on how to develop policies to encourage safe and responsible use of personal mobile technology in schools. It reiterated that policies should be designed to protect staff, children and young people from harassment and abuse which can arise from the misuse of technology and encouraged the promotion of digital citizenship. As part of ‘Getting It Right For Every Child’,
of adolescents keep their smartphone in their **bedroom at night**

---

**Figure 6.1**

SMARTPHONE KEPT IN BEDROOM AT NIGHT

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year olds</td>
<td>73</td>
<td>76</td>
<td>74</td>
</tr>
<tr>
<td>13-year olds</td>
<td>84</td>
<td>88</td>
<td>86</td>
</tr>
<tr>
<td>15-year olds</td>
<td>93</td>
<td>94</td>
<td>94</td>
</tr>
</tbody>
</table>

**Figure 6.2**

TELEVISION IN BEDROOM

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year olds</td>
<td>76</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>13-year olds</td>
<td>80</td>
<td>68</td>
<td>74</td>
</tr>
<tr>
<td>15-year olds</td>
<td>81</td>
<td>67</td>
<td>73</td>
</tr>
</tbody>
</table>

---

**Table 6.1**

ELECTRONIC MEDIA USE – INTENSE ONLINE CONTACT

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With close friends</td>
<td>23</td>
<td>28</td>
<td>24</td>
<td>47</td>
<td>38</td>
<td>51</td>
<td>35</td>
</tr>
<tr>
<td>With friends from a larger friendship group</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>17</td>
<td>19</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>With friends you got to know through the internet but didn’t know before</td>
<td>11</td>
<td>8</td>
<td>10</td>
<td>14</td>
<td>15</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>With other people</td>
<td>19</td>
<td>19</td>
<td>13</td>
<td>20</td>
<td>14</td>
<td>20</td>
<td>17</td>
</tr>
</tbody>
</table>

*Intense online contact: online contact ‘almost all the time throughout the day’.

† Significant gender difference (p < 0.01).

Source: HBSC Scotland 2022 Survey
the National Action Plan on Internet Safety for Children and Young People was published in 2017 to ensure that the appropriate frameworks of training, support and information were in place for professionals and families, including children and young people. In 2019, the UK Chief Medical Officers’ and the Royal College of Paediatrics and Child Health published guidance for parents on balancing screen use with healthy living. More recently, the US Surgeon General (2023) published an advisory public statement calling attention to the growing concern about the effects of social media on young peoples’ mental health. The statement also provided actionable recommendations for policymakers, technology companies, parents and carers and children and young people.

**HBSC FINDINGS**

In 2022, HBSC included a number of measures on access to digital devices (smartphones and televisions) and electronic media use. Young people were asked about how much they use electronic media for communication with family members, friends and others. Data were also collected on problematic social media use and, for the first time in 2022, on gaming.

**SMARTPHONES AND TELEVISIONS**

Young people were asked about the devices (smartphone and television) they had in their bedrooms. Most adolescents (97%) have a smartphone. Eighty-five percent of adolescents reported that they kept their smartphone in their bedroom at night but this varied with age, from 75% of 11-year-olds to 93% of 15-year-olds (Figure 6.1). There were no gender differences in any age group. The majority of adolescents (73%) also reported having a television in their bedroom, but this was more common among boys than girls across all age groups (Figure 6.2).

**ELECTRONIC MEDIA COMMUNICATION**

One-third (35%) of adolescents reported that they had online contact with close friends almost all the time throughout the day, which is described as ‘intense’ contact. Gender differences were observed at ages 13 and 15, with girls more likely to report intense online contact with close friends (Table 6.1). Sixteen percent of adolescents reported having intense contact with friends from a larger group of friends and 12% with friends that they met online. Seventeen percent of adolescents reported intense online contact with other people such as their parents, brothers/sisters and classmates. There were gender differences at ages 13 with girls more likely than boys (20% versus 13%) to report intense online contact with people other than their friends (Table 6.1).

Overall, 42% of Scottish adolescents reported intense online contact with at least one of the four groups. At ages 13 and 15, girls were more likely to report intense online communication than boys (Figure 6.3). Frequency of online communication also increased with age.

HBSC started collecting data on intensity of electronic media communication in 2018. There has been no change in intense online contact since 2018.

**SOCIAL MEDIA DISORDER SCALE**

Adolescents were asked nine questions about their social media use. Combined, these items were used to create a measure of problematic social media use. Use of social media was classified as problematic if they responded ‘yes’ to 6 or more of the questions.

According to this classification, almost one in seven (14%) adolescents reported problematic social media use. Gender differences were observed at ages 13 and 15, with girls more likely to report problematic social media use than boys (at age 13, 22% for girls and 7% for boys and at age 15, 21% for girls and 8% for boys) (Figure 6.4). This was also reflected in responses to the individual items with 13-year-old and 15-year-old girls more likely than boys to report problematic social media use across all nine questions (Table 6.2). Eleven year olds girls were more likely than boys to say they tried to spend less time on social media but failed.
35% of adolescents reported online contact with close friends almost all the time throughout the day. This was more common among girls and older adolescents.

**Figure 6.3**

**ELECTRONIC MEDIA USE – INTENSE ONLINE CONTACT* WITH AT LEAST ONE GROUP**

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year olds</td>
<td>33</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>13-year olds</td>
<td>32</td>
<td>33</td>
<td>32</td>
</tr>
<tr>
<td>15-year olds</td>
<td>43</td>
<td>44</td>
<td>42</td>
</tr>
<tr>
<td>All</td>
<td>42</td>
<td>42</td>
<td>42</td>
</tr>
</tbody>
</table>

*Significant gender differences (p<0.05) in online contact throughout the day.

**Figure 6.4**

**PROBLEMATIC SOCIAL MEDIA USE**

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year olds</td>
<td>10</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>13-year olds</td>
<td>17</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>15-year olds</td>
<td>22</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>All</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

*Significant gender differences (p<0.05) in social media use.

Source: HMSC Scotland 2022 Survey
Of those who reported playing computer games, over **one in ten** 13- and 15-year-olds reported **problematic levels** of gaming. This was **more common among boys** than girls.

HBSC started collecting data on problematic social media use in 2018. Between 2018 and 2022, there was an increase in problematic social media use among girls in all age groups, but not among boys. For example, 11% of 13-year-old girls reported problematic social media use in 2018 compared with 22% in 2022. In 2018, gender differences were only observed among 13-year-olds. In 2022, gender differences were observed for 13-year-olds and 15-year-olds, with higher levels among girls. In terms of the individual items, in 2018 only 6 of the 9 items showed gender differences at age 13 and 2 of the 9 items at age 15. In 2022 all items showed gender differences at ages 13 and 15 (Table 6.2).

**FREQUENCY OF GAMING – WEEKLY AND DAILY**
Gaming questions were introduced in the 2022 survey for secondary school pupils. Young people were asked to think about all the games that they play on a smartphone, tablet, laptop, PC, Mac or console (e.g., PlayStation, Wii, Xbox) and then report how often they played games.

Just over half (54%) of 13- and 15-year-olds reported playing games at least 4 days per week, of whom three-quarters reported gaming (almost) every day. Boys were more likely than girls (75% versus 34%) to game at least 4 days a week (Figure 6.5). Further 13-year-olds were more likely than 15-year-olds to game at least 4 days a week (81% of 13-year-old boys versus 70% of 15-year-old boys and 38% of 13-year-old girls versus 29% of 15-year-old girls).

Just under a third (30%) of 13- and 15-year-olds reported playing games for more than 4 hours per day. Boys were more likely than girls (41% versus 14%) to game for more than 4 hours a day (Figure 6.6).

**PROBLEMATIC GAMING**
Pupils who gamed at least weekly (79%) were asked to complete the Internet Gaming Disorder (IGD) Scale which distinguishes between ‘normative’ and ‘problematic’ gaming. Just over one in ten (13%) 13- and 15-year-olds met the criteria for problematic gaming. Boys were more likely than girls to report problematic gaming (18% versus 7%) (Figure 6.7) but there was no difference between 13- and 15-year-olds.

**INEQUALITIES IN ELECTRONIC MEDIA USE AND GAMING**
Young people from low affluent families were more likely to have a TV in their bedroom and play computer games (weekly and daily) (Table 6.3). Intense online communication, problematic social media use and problematic gaming did not vary by family affluence.
ELECTRONIC MEDIA USE

Figure 6.5
PLAYED COMPUTER GAMES AT LEAST 4 DAYS PER WEEK
Source: HBSC Scotland 2022 Survey

Figure 6.6
PLAYED COMPUTER GAMES MORE THAN 4 HOURS PER DAY
Source: HBSC Scotland 2022 Survey

Figure 6.7
PROBLEMATIC GAMING*
Source: HBSC Scotland 2022 Survey

Table 6.2
PROBLEMATIC SOCIAL MEDIA USE*
Source: HBSC Scotland 2022 Survey

<table>
<thead>
<tr>
<th>Regularly found you can’t think of anything else except when you can use social media again</th>
<th>11-year olds</th>
<th>12-year olds</th>
<th>15-year olds</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>ALL</td>
</tr>
<tr>
<td>Regularly felt dissatisfied because you wanted to spend more time on social media</td>
<td>26</td>
<td>31</td>
<td>21</td>
<td>35†</td>
</tr>
<tr>
<td>Often felt bad when you could not use social media</td>
<td>26</td>
<td>27</td>
<td>21</td>
<td>35†</td>
</tr>
<tr>
<td>Tried to spend less time on social media, but failed</td>
<td>35</td>
<td>52†</td>
<td>27</td>
<td>52†</td>
</tr>
<tr>
<td>Regularly neglected other activities because you wanted to use social media</td>
<td>15</td>
<td>20</td>
<td>14</td>
<td>27†</td>
</tr>
<tr>
<td>Regularly had arguments with others because of your social media use</td>
<td>23</td>
<td>29</td>
<td>21</td>
<td>34†</td>
</tr>
<tr>
<td>Regularly lied to parents or friends about amount of time you spend on social media</td>
<td>17</td>
<td>18</td>
<td>16</td>
<td>26†</td>
</tr>
<tr>
<td>Often used social media to escape negative feelings</td>
<td>45</td>
<td>52†</td>
<td>41</td>
<td>65†</td>
</tr>
<tr>
<td>Had serious conflict with parents or family because of your social media use</td>
<td>12</td>
<td>15</td>
<td>8</td>
<td>22†</td>
</tr>
</tbody>
</table>

*Use of social media was classified as problematic if they responded “yes” to at least five of the nine questions.
†Significant gender difference (p < 0.01).
REFERENCES


Table 6.3

<table>
<thead>
<tr>
<th>ELECTRONIC MEDIA USE AND GAMING BY FAMILY AFFLUENCE</th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smartphone kept in bedroom at night</td>
<td>84</td>
<td>86</td>
<td>83</td>
</tr>
<tr>
<td>Television in bedroom</td>
<td>82</td>
<td>72</td>
<td>66</td>
</tr>
<tr>
<td>Electronic media use – intense online contact with at least one group</td>
<td>42</td>
<td>41</td>
<td>40</td>
</tr>
<tr>
<td>Problematic social media use</td>
<td>16</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Played computer games at least 4 days per week</td>
<td>60</td>
<td>56</td>
<td>49</td>
</tr>
<tr>
<td>Played computer games more than 4 hours per day</td>
<td>39</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>Problematic gaming</td>
<td>16</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey

† Significant linear trend difference (p < 0.01). * Intense online contact: online contact ‘almost all the time throughout the day’.
Over a third of 15-year-olds had used an e-cigarette at least once in their lifetime and a quarter were current users.
SUBSTANCE USE

INTRODUCTION

The prevalence of substance use (cigarettes, alcohol, drugs) among adolescents in Scotland has decreased over the last few decades. Nonetheless, frequent and excessive drinking is associated with a range of problems such as future alcohol and drug use, poorer academic outcomes, risky sexual behaviour and various physical and emotional problems. The use of e-cigarettes among adolescents has been increasing dramatically and has become a significant public health concern.

Tobacco smoking remains an important public health problem and is the world’s leading cause of preventable poor health and premature death. In 2021, smoking accounted for an estimated 8,260 deaths in those aged 35 and over in Scotland. Tobacco smoking continues to be a strong risk factor for respiratory and allergic diseases, cardiovascular diseases, and cancer. The short-term health consequences to young people of smoking include respiratory and non-respiratory effects, nicotine addiction and associated risk of other drug use. For adolescents who start smoking tobacco at a young age there may be particularly damaging effects. Smoking affects lung development, increasing the risk of developing Chronic Obstructive Pulmonary Disease (COPD) in later life and at a higher chance of developing lung cancer regardless of the amount smoked.

Nicotine vaping products or electronic cigarettes (e-cigarettes) have become popular over the past decade as an alternative to smoking tobacco. E-cigarettes or vapes are battery powered devices that heat up a liquid, usually containing nicotine, into a vapour that is inhaled by the user. While current evidence shows that e-cigarettes are less harmful than smoking tobacco, they are not harm-free and the damage they could cause to human health in the long term is unknown. Therefore, their use is only recommended as a way to stop smoking.

The consumption of nicotine in children and adolescents has deleterious impacts on brain development, leading to long-term consequences for brain functioning and potentially leading to learning and anxiety disorders. Another study found that teenagers who used e-cigarettes had increased rates of chronic bronchitic symptoms. Nicotine is highly addictive and some evidence suggests that children who have never previously smoked but use e-cigarettes can double their chance of starting to smoke tobacco cigarettes later in life. Good quality evidence is now required to determine the long term effects of e-cigarettes on adolescent health. The UK and Scottish government recommend these products are not used by children or young people and sale of products to under 18s is banned.

Recently there has been a rapid growth and popularity of disposable (including flavoured) e-cigarettes particularly amongst young people. Research that explored adolescent’s perceptions and engagement with disposable e-cigarettes found that they were attractive to young people and highlighted concerns around exploitative marketing to young people on social media.

Although alcohol consumption amongst adolescents in Scotland has shown a downward trend and weekly drinking is around average compared with other European countries there remains a commitment to reduce alcohol consumption further. As young people’s bodies are still growing, alcohol can interfere with their development and this makes adolescents particularly vulnerable to the long-term damage caused by alcohol. In addition to health risks (cancer, heart disease, brain damage), alcohol consumption in adolescents has been shown to be associated with physical injury and violent behaviour. It is also linked to risky behaviour such as unsafe sex, anti-social behaviour, getting in trouble with the police, criminal behaviour and failing to meet one’s potential at school. Further, alcohol use in adolescence is associated with more regular and higher rates of alcohol use and dependence in adulthood as well as more mental health problems and wider social harms.

Cannabis is the most widely used illicit drug by adolescents in Scotland and is associated with increased depression, conduct problems, smoking and excessive drinking. There is some evidence that the adolescent brain is particularly vulnerable to the effects of cannabis and use may lead to subtle but lasting neurobiological changes affecting brain
1 in 5 15-year-olds had ever smoked cigarettes and 1 in 10 had smoked in the past 30 days.
functions and behaviour. These changes to the brain may impact on academic functioning and also have implications for social functioning and employment in later life. There are particular concerns of the increased risk of depression and other mental health problems. For example, a recent systematic review showed that cannabis use in adolescence is associated with an increased risk of developing depression and suicidal behaviour later in life.

Reducing the use of and harm from alcohol, tobacco and other drugs is one of Scotland’s six public health priorities. In 2018, the Scottish Government published, “Raising Scotland’s tobacco-free generation: our tobacco control action plan 2018” which sets out interventions and policies to help reduce the use of tobacco. This included introducing legislative measures to reduce the harms associated with smoking and a bold ambition exists for a tobacco-free Scotland by 2034. The new Alcohol Framework 2018 contains 20 policy actions to tackle Scotland’s alcohol-related harm including consulting on potential restrictions to alcohol marketing to protect young people. Also in 2018, the Scottish Government published the “Rights, respect and recovery” strategy to improve health by preventing and reducing alcohol and drug use, harm and related deaths. Substance use education work in Scottish schools continues through the Curriculum for Excellence and the Choices for Life programme delivered in partnership with Police Scotland and Young Scot.

The school environment has an important role to play in reducing smoking amongst pupils. For example, research has shown that exposure to teachers smoking during school hours is associated with higher smoking among older adolescents whereas a zero-tolerance approach to smoking in school, both for pupils and staff, has been found to be effective in reducing tobacco use in adolescents. Identifying with media messages and peer pressure are shown to be risk factors for substance use in adolescence. Conversely, the ability to think critically about media messages and positive parental influences have both been shown to reduce substance use.

HBSC FINDINGS

The HBSC survey has asked young people about cigarette smoking, alcohol consumption, and cannabis use since 1990. Cannabis use is only measured among 15-year-olds. A question on e-cigarette use was introduced in 2018. These questions ask about lifetime use and use within the last 30 days (current use).

TOBACCO IN LIFETIME

Just under one in ten (9%) adolescents reported that they had smoked cigarettes in their lifetime and this increased with age, from 1% of 11-year-olds, 6% of 13-year-olds to 20% of 15-year-olds (Figure 7.1). There were gender differences in lifetime cigarette smoking at age 13 only (4% of boys and 8% of girls).

HBSC has asked about lifetime cigarette use since 1990, when over half (53%) of 15-year-olds reported that they had tried smoking cigarettes (Figure 7.2). The proportion of 15-year-olds who had ever smoked reached its peak in 1998 when nearly two-thirds (63%) reported they had used cigarettes. Since then rates declined steadily to reach the lowest level in 2018. In 2022 rates remain the same as 2018 with one fifth (20%) of 15-year-olds reporting they had ever smoked cigarettes.

CURRENT CIGARETTE SMOKING

One in twenty (5%) young people said they currently smoked cigarettes and this increased with age, from 3% of 13-year-olds to 11% of 15-year-olds (Figure 7.3). There were no gender differences in the prevalence of smoking at either age.

HBSC has asked young people about current smoking status since 1990. Among 15-year-olds, around a fifth (21%) were current smokers in 1990 and this had increased to almost a third (30%) by 1998. Since then prevalence has declined steadily to reach the lowest level in 2018. In 2022 rates remain the same as 2018 with 11% of 15-year-olds currently smoking cigarettes. This is the lowest rate in 32 years (Figure 7.4).
Current e-cigarette use amongst 15-year-olds has increased.

7% 25%

Figure 7.5
EVER USED E-CIGARETTE

Source: HBSC Scotland 2022 Survey

Figure 7.6
CURRENT E-CIGARETTE USE

Source: HBSC Scotland 2022 Survey

Figure 7.7
EVER DRANK ALCOHOL

Source: HBSC Scotland 2022 Survey
E-CIGARETTE USE IN LIFETIME
In 2022 all adolescents were asked about their use of e-cigarettes. This included products such as flavour vape, e-smoker, e-cigarette, e-hookah, shisha-pen. Overall, 18% of adolescents reported having used an e-cigarette at least once in their lifetime (Figure 7.5). Rates were higher among older adolescents with 4% of 11-year-olds and 16% of 13-year-olds reporting using an e-cigarette in their lifetime compared to 36% of 15-year-olds. Gender differences were present at age 13, with girls more likely than boys to report having used e-cigarettes (19% versus 12%). There have been large increases in lifetime use of e-cigarette since 2018 for girls. In 2022, 19% of 13-year-olds girls had used an e-cigarette in their lifetime compared with 7% in 2018 and 40% of 15-year-olds girls compared with 20% in 2018. These rates are now higher than the rates of ever smoking cigarettes.

CURRENT E-CIGARETTE USE
The 15-year-olds (25%) were more likely to have used an e-cigarette in the last 30 days than 13-year-olds (10%) and 11-year-olds (3%). At age 13 and 15, girls were more likely to have used an e-cigarette than boys (Figure 7.6). There have been increases in current e-cigarette use since 2018 for 13-year-old girls (2% to 13%) and larger increases for 15-year-olds (girls 6% to 30% and boys 8% to 20%).

ALCOHOL CONSUMPTION IN LIFETIME
Overall, 41% of adolescents reported that they had drunk alcohol in their lifetime and this increased with age, from 17% of 11-year-olds, 39% of 13-year-olds to 68% of 15-year-olds (Figure 7.7). There were gender differences in lifetime alcohol use at ages 13 and 15 with girls more likely than boys to have ever drunk alcohol (45% versus 34% at age 13 and 73% versus 64% at age 15).

Lifetime drinking has been measured by HBSC since 2014. Initiating alcohol consumption by age 15 is lower now than in 2014 with greater decreases seen among boys (74% in 2014 to 64% in 2022) (Figure 7.8).

CURRENT ALCOHOL CONSUMPTION
Just over one in five (22%) young people said they currently drank alcohol and this increased with age from 5% of 11-year-olds, 16% of 13-year-olds to 45% of 15-year-olds (Figure 7.9). There were gender differences at ages 11 and 13 with boys more likely to have consumed alcohol in the last 30 days than girls at age 11 (6% versus 3%) and girls more likely to consumed alcohol at age 13 (19% versus 13%).

HBSC has asked young people about current drinking since 2014. There have been no changes for boys or girls (Figure 7.10).
DRUNKNESS IN LIFETIME
Overall, 12% of young people reported having been drunk two or more times in their life. Prevalence of drunkenness increased with age: just under one third (29%) of 15-year-olds reported being drunk at least twice compared with 6% of 13-year-olds and 1% of 11-year-olds (Figure 7.11). There were only gender differences in reports of drunkenness for 13-year-olds (girls 9% and boys 4%).

Questions about drunkenness have been included in HBSC since 1990. Among 15-year-olds, prevalence of drunkenness increased from 40% in 1990 to 55% in 1998. Since 1998, levels have declined steadily and are now at their lowest in 32 years (Figure 7.12).

CANNABIS IN LIFETIME
Overall, 19% of 15-year-olds had used cannabis at least once in their lifetime and levels were similar for boys and girls (Figure 7.13). HBSC has asked about lifetime cannabis use for the past 20 years. In 2002, 37% of 15-year-olds had used cannabis at least once in their life. Since then, the prevalence of ever using cannabis has fallen, remaining relatively stable since 2010.

CURRENT CANNABIS USE
One in ten (10%) of 15-year-olds reported using cannabis in the last 30 days and levels were similar in boys and girls (Figure 7.14). HBSC has been collecting data on current cannabis use since 2006. Levels of cannabis use have remained fairly stable since 2010.

INEQUALITIES IN SUBSTANCE USE
In general, adolescent substance use was not strongly patterned by family affluence (Table 7.1). Only current cigarette smoking was found to have a significant association, with higher prevalence among young people from low affluence families (15-year-olds: 17% versus 8%).

REFERENCES
One in ten 15-year-olds had used cannabis in the last 30 days.

Table 7.1
SUBSTANCE USE BY FAMILY AFFLUENCE

<table>
<thead>
<tr>
<th>Substance</th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever smoked cigarettes</td>
<td>12</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Ever smoked cigarettes; 15-year olds</td>
<td>25</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Current smoking</td>
<td>8</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Current smoking; 15-year olds</td>
<td>17</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Ever used e-cigarette</td>
<td>19</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Current e-cigarette use</td>
<td>14</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Ever drank alcohol</td>
<td>40</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Current drinking</td>
<td>20</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>Been drunk 2 or more times in lifetime</td>
<td>13</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Ever used cannabis; 15-year olds</td>
<td>21</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Current cannabis use; 15-year olds</td>
<td>12</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey

† Significant gender difference (p < 0.01)


One in five 15-year old boys and girls reported having ever had sex. This has not changed since 2018.
SEXUAL HEALTH

INTRODUCTION
Sexual health is an important contributor to people's overall wellbeing and ultimately to the social and economic development of communities. Achieving optimal sexual health depends on having access to relevant information, knowledge about the potential risks and consequences of sexual activities, and access to good quality sexual health care. Sexual orientation is also a key component of a young person's health and wellbeing. Indeed, adolescence is a critical period for the development of sexual orientation—which continues into young adulthood and can coincide with various health inequities among sexual minorities (e.g., substance use, bullying, suicidality). Adolescents in general are prone to poor sexual health outcomes, such as sexually transmitted infections (STIs) and unintended pregnancy. Young people tend to partake in risky sexual behaviours with high rates of sexual partner change and low levels of contraceptive use, particularly condom use. They are also less likely to access health care, either due to a lack of appropriate services or difficulty in accessing services provided. Teenage pregnancy is associated with poorer health outcomes for the child, such as low birth weight and increased risk of mortality, as well as poorer socioeconomic status for the adolescent themselves. Risky behaviour during adolescence is associated with ongoing development of the prefrontal cortex, which is the area of the brain that controls reasoning and helps us think before we act. As a result of these developmental processes that continue into young adulthood, adolescents may be less capable of understanding the relationship between behaviour and the consequences of their actions.

The National Survey of Sexual Attitudes and Lifestyles (Natsal) survey in the UK found that 29% of females and 31% of males have their first sexual encounter before the age of 16 and many have been sexually active by 18 years old. The next survey (Natsal-4) is currently being conducted. Data from Natsal-COVID showed that young people engaged in less risky sexual behaviour during the first year of the COVID-19 pandemic (i.e., lower reporting of multiple partners, new partners, and new condomless partners). Monitoring the sexual health of today's adolescents is crucial because many may have missed out on formal sex education due to school closure and disruption related to the pandemic. The HBSC survey provides an important source of information on sexual health of adolescents in Scotland. The proportion of girls who reported having sexual intercourse declined between 2014 and 2018 (from 27% to 19%). This represents an almost 50% reduction in prevalence since 2010. There was little change among boys during this period (from 24% in 2014 to 21% in 2018). Compared with other HBSC countries, girls in Scotland were more likely to have had sex by age 15 whereas the proportion of boys was similar to the HBSC average. Risky behaviour during adolescence is associated with ongoing development of the prefrontal cortex, which is the area of the brain that controls reasoning and helps us think before we act. Adolescents must understand and respect that consent needs to be fully informed, voluntary, and ongoing as a basis for any sexual relationship to reduce vulnerability to sexual exploitation.

In September 2015, the Scottish Government published the Sexual Health and Blood Borne Virus Framework 2015–2020 update, which was integrated into Scotland's 2016–2026 strategy on Pregnancy and Parenthood in Young People. From September 2020, Relationships and Sex Education (RSE) has been compulsory for students at secondary schools in England and Wales. However, such statutory guidance still does not exist for Scotland and the current guidance related to national standards does not address sexual risk or contraception, despite unintended pregnancy and STIs remaining relevant among Scottish adolescents.

HBSC FINDINGS
HBSC Scotland has collected data from 15-year-olds about sexual intercourse since 1990 in some schools, and across the whole sample since 1998. Information on 15-year-olds' condom and contraceptive pill use has been collected since 2002. Questions are also included on age at first intercourse and, for the first time in 2022, on sexual orientation. It should be noted that the numbers of boys and girls reporting having had sex are small (85 boys, 75 girls) and therefore the results presented in this chapter should be interpreted with caution.
Of those that had had sex, two-thirds had used a condom and/or contraceptive pill at last intercourse, but one third had used neither.

**Figure 8.1**

**SEXUAL ORIENTATION: 15-YEAR OLDS**

Source: HBS Scotland 2022 Survey

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>82%</td>
<td>62%</td>
</tr>
<tr>
<td>Mostly heterosexual</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Bisexual</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Gay or lesbian</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Not sure yet</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Don’t understand question</td>
<td>0%</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Figure 8.2**

**HAD SEXUAL INTERCOURSE: 15-YEAR OLDS 1990–2022**

Source: HBS Scotland 1990-2022 Surveys

<table>
<thead>
<tr>
<th>Year</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>25%</td>
<td>35%</td>
</tr>
<tr>
<td>1994</td>
<td>37%</td>
<td>37%</td>
</tr>
<tr>
<td>1998</td>
<td>39%</td>
<td>35%</td>
</tr>
<tr>
<td>2002</td>
<td>35%</td>
<td>34%</td>
</tr>
<tr>
<td>2006</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>2010</td>
<td>27%</td>
<td>24%</td>
</tr>
<tr>
<td>2014</td>
<td>27%</td>
<td>21%</td>
</tr>
<tr>
<td>2018</td>
<td>21%</td>
<td>22%</td>
</tr>
</tbody>
</table>

**Figure 8.3**

**CONTRACTION USE AT LAST SEXUAL INTERCOURSE: 15-YEAR OLDS**

Source: HBS Scotland 2022 Survey

<table>
<thead>
<tr>
<th>Method of Contraception</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condom only</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Contraceptive pill only</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Condom &amp; pill</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Neither condom nor pill</td>
<td>34%</td>
<td></td>
</tr>
</tbody>
</table>
SEXUAL ORIENTATION
15-year-olds were asked about their sexual orientation. 71% of 15-year-olds described themselves as heterosexual, 5% as mostly heterosexual, 11% as bisexual, 3% as gay or lesbian, 2% as other, 6% as not sure yet and 3% said that they didn’t understand question (Figure 8.1). Girls were more likely than boys to describe their sexual orientation as bisexual (15% versus 5%) or not sure yet (9% versus 2%).

SEXUAL INTERCOURSE
The proportion of 15-year-olds who reported having had sexual intercourse was similar for boys and girls (22% and 21%, respectively). These proportions remain unchanged from 2018 (Figure 8.2). Prior to 2018 there had been downward trend in 15-year-olds reporting having had sexual intercourse.

AGE AT FIRST INTERCOURSE
Amongst those 15-year-olds that reported having had sexual intercourse, 11% said they first had sex at the age of 13 or younger, 42% at the age of 14 and 47% at age 15 or older.

CONTRACEPTION USE AT LAST SEXUAL INTERCOURSE
Of those 15-year-olds who had had sex, around a third (31%) said they used a condom only at last sexual intercourse and 26% had used contraceptive pill only. Around one in ten (9%) used both a condom and birth control pill and 34% had used neither a condom nor birth control pill when they last had sex (Figure 8.3). This compared with 41% of 15 year-olds in 2018 who said used a condom only at last sexual intercourse, 13% used pill only, 17% used both a condom and birth control pill and 29% who used neither a condom nor birth control pill when they last had sexual intercourse.

INEQUALITIES IN SEXUAL HEALTH
There was no association between experience of sexual intercourse and family affluence (Table 8.1). Due to low numbers it was not possible to analyse age at first intercourse or contraceptive use by family affluence.

<table>
<thead>
<tr>
<th>Table 8.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Health by Family Affluence</td>
</tr>
<tr>
<td>Sexual health by family affluence</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey
REFERENCES


Almost 1 in 5 young people reported that they had been bullied at school at least 2-3 times in the past couple of months.
BULLYING AND FIGHTING

INTRODUCTION
Bullying generally involves the repetitive, intentional hurting of one person or group by another person or group, involving an imbalance of power in the relationship. It can be physical, verbal or psychological, and can happen face-to-face or online. Cyberbullying may be considered more pervasive than traditional bullying because it does not entail in-person contact so can take place at any time, in any place and offers anonymity. Given the greater accessibility and widespread use of technology, cyberbullying has become more frequent in recent years.

A systematic review that examined the consequences of being a victim of bullying in adolescence found that it was related to a range of detrimental health outcomes and psychological difficulties. A casual association was found between bully victimisation and depression and anxiety symptoms, suicide ideation and poor general health. Some studies also indicate that female victims tend to report more severe psychological difficulties than male victims. Bullying may also impact considerably on the quality of life in other areas; being a victim of bullying is related to difficulties in social relations with friends and family, lower levels of school connectedness and poorer academic performance. The impact of cyberbullying is similar to traditional bullying, associated with depressive symptoms, school disengagement and suicide ideation. Evidence suggests that the detrimental effects of bullying on an individual can be long-lasting, being felt several years after the bullying occurred. For example, a longitudinal study found that being bullied in adolescence was associated with the development of depressive symptoms in adulthood.

Evidence also indicates negative outcomes for perpetrators. Being a bully is associated with a 1.7 times higher risk of depression when compared with those who do not bully. For those who bully and are also bullied, the odds of reporting depression is over three times higher than for individuals who are bullied but do not bully others. Longitudinal studies demonstrate that being a bully at school is a predictor of aggression and offending in later life and physical fighting in adolescence is associated with poorer education and employment outcomes.

Given the impact of bullying on both victim and perpetrator, bullying is considered an important public health concern. In 2017, the Scottish Government launched Respect for All which provides a holistic framework for adults working with children and young people to address bullying. It ensures that all sectors at both national and local level adopt a consistent and holistic approach to anti-bullying. In Scotland, schools adopt a whole school approach to health and wellbeing and schools are encouraged to develop policies to promote positive relationships as well as anti-bullying and equalities legislation. A Scottish Government working group has also developed guidance for local authorities and schools to record and monitor bullying incidents in schools, ensuring a consistent approach across Scotland. Resources have also been published to provide guidance for schools to address homophobic, biphobic and transphobic bullying as well as guidance on addressing racist bullying in the school setting. The Scottish Government has more recently established a working group to develop a national framework to prevent and respond to harmful behaviour and gender-based violence and harassment in schools.

HBSC FINDINGS
The 2022 survey asked young people about their experiences of bullying at school, as either a victim or perpetrator and these data have been collected since 2002. Young people were also asked more detailed questions about their experience of specific forms of bullying at school. In 2014, the survey started collecting data on the prevalence of cyberbullying. For twenty years, the HBSC survey has been asking young people about their involvement in physical fights.

BEING BULLIED AND CYBERBULLIED
Just under a fifth (18%) of young people reported being bullied at least 2-3 times a month in the past couple of months. Boys and girls experienced similar levels of bullying at all ages and there were no significant differences in prevalence of bullying between the different groups (Figure 9.1). Overall prevalence of bullying in 2022 has increased compared with 2018 (14%), and this increase has been driven by increased bullying among girls from 14% in 2018 to 19% in 2022. There was no
The most common form of bullying was being called mean names, made fun of and teased in a hurtful way.
significant change among boys over this same period. Levels of being bullied in 2022 are the highest since data on bullying was first collected in 2002.

Seven percent of young people reported being cyberbullied at least 2 to 3 times a month in the past couple of months. There was very little variation by age and gender. Prevalence of cyberbullying has remained fairly consistent between 2014 and 2022. It is important to note, however, that the question on cyberbullying changed between the 2014 and 2018 survey rounds. In 2014, young people were asked two separate questions, one that asked about being cyberbullied through email or text and another about unflattering pictures being posted online. From 2018 onwards, one question incorporating any form of cyberbullying (both messages and pictures) was asked.

BULLYING AND CYBERBULLYING OTHERS

Overall, 6% of young people reported that they had bullied others at least 2–3 times a month in the past couple of months. At ages 11 and 13 there were no gender differences but, at age 15, boys were more likely to report having bullied others than girls (9% versus 3%, respectively).

Between 2002–2018, there had been a small downward trend in bullying others, but 2022 saw an increase in prevalence compared with 2018, for both boys (4% to 7%) and girls (1% to 5%). In contrast to previous years when boys were more likely to report bullying others, there were no gender differences in 2022 when all age groups are combined.

Five percent (5%) of young people reported cyberbullying others at least 2–3 times a month in the past couple of months. This did not vary significantly by age or gender.

SPECIFIC VICTIMISATION (MULTIPLE FORMS OF BULLYING)

Young people were asked how often they had experienced specific types of bullying at school over the past couple of months. The type of bullying most frequently reported was “being called mean names, made fun of and teased in a hurtful way” with 23% of young people saying they had experienced this at least two to three times over the past couple of months. Differences by gender were observed at age 13, with girls more likely to report this than boys (31% versus 20% respectively). The second most common form of bullying was “other students told lies or spread false rumours about me and tried to make others dislike me” experienced by 16% of adolescents at least twice in the past couple of months. Again, there was a significant gender difference at age 13, with girls more likely than boys to report this (22% versus 14%).

More than a fifth (22%) of young people reported experiencing multiple forms of bullying at least twice in the past couple of months, with the highest level reported by 13-year-old girls (30%). There has been a small increase in the overall prevalence of experiencing multiple forms of bullying in 2022 when compared with 2018 (22% versus 17% respectively).
6% Around 1 in 20 young people said they had bullied others or cyberbullied others at least 2-3 times in the past couple of months.

5%
### Table 9.1

**EXPERIENCED SPECIFIC TYPES OF BULLYING AT LEAST 2–3 TIMES IN SCHOOL IN THE PAST COUPLE OF MONTHS**

<table>
<thead>
<tr>
<th></th>
<th>11-year olds</th>
<th>13-year olds</th>
<th>15-year olds</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td><strong>Called mean names, made fun of or teased in hurtful way</strong></td>
<td>24</td>
<td>21</td>
<td>20</td>
<td>31†</td>
</tr>
<tr>
<td><strong>Purposely excluded</strong></td>
<td>14</td>
<td>18</td>
<td>9</td>
<td>22†</td>
</tr>
<tr>
<td><strong>Hit, kicked, shoved around or locked indoors</strong></td>
<td>17</td>
<td>10</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td><strong>Others spread lies or false rumours to try to make others dislike me</strong></td>
<td>16</td>
<td>19</td>
<td>14</td>
<td>22†</td>
</tr>
<tr>
<td><strong>Called names because of my race or colour</strong></td>
<td>7</td>
<td>7</td>
<td>4</td>
<td>9†</td>
</tr>
<tr>
<td><strong>Called names because of my religion</strong></td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Other students made sexual jokes or gestures to me</strong></td>
<td>10</td>
<td>8</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td><strong>Experienced multiple forms of bullying (at least 2 of above)</strong></td>
<td>23</td>
<td>22</td>
<td>17</td>
<td>30†</td>
</tr>
</tbody>
</table>

† Significant gender difference (p < 0.01)

Source: HBSC Scotland 2022 Survey

### PHYSICAL FIGHTING

Young people were asked how often they had been in a physical fight in the past 12 months. Overall, one in ten (10%) reported being in a physical fight 3 or more times in the past year and in every age group, boys were more likely to report this than girls (overall 13% boys, 6% girls). Eleven-year-olds were more likely to report being in a physical fight than older adolescents (Figure 9.8). Since 2002, involvement in a physical fight has remained stable among girls but has decreased steadily among boys from 23% in 2002 to 13% in 2022. At every survey year, boys have been more likely to report involvement in a physical fight than girls (Figure 9.9).

### INEQUALITIES IN BULLYING AND FIGHTING

Experiences of bullying and fighting showed no differences by family affluence (Table 9.2).

### Table 9.2

**BULLYING BY FAMILY AFFLUENCE**

<table>
<thead>
<tr>
<th></th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Been bullied at least 2–3 times a month in the past couple of months</strong></td>
<td>20</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td><strong>Been cyberbullied at least 2–3 times a month in the past couple of months</strong></td>
<td>8</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td><strong>Bullied others at least 2–3 times a month in the past couple of months</strong></td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Cyberbullied others at least 2–3 times a month in the past couple of months</strong></td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Involved in physical fight at least 3 times in past 12 months</strong></td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Experienced multiple forms of bullying</strong></td>
<td>27</td>
<td>21</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey

### REFERENCES:

1 in 10 young people had been in a physical fight 3 or more times in the past year, and this was more common among boys than girls.

Figure 9.8
INVOLVED IN PHYSICAL FIGHT AT LEAST 3 TIMES IN PAST 12 MONTHS
Source: HBSC Scotland 2022 Survey

Figure 9.9
INVOLVED IN PHYSICAL FIGHT AT LEAST 3 TIMES IN PAST 12 MONTHS 2002–2022
Source: HBSC Scotland 2002–2022 surveys

† Significantly different from gender difference (p < 0.01)


Three-quarters (75%) of adolescents brush their teeth more than once a day. Girls were more likely than boys to brush their teeth more than once a day (68% of boys and 83% of girls).

There has been a steady increase in the proportion of boys and girls who brush their teeth more than once a day since 1990 (from 48% to 68% boys and 70% to 83% girls).

Adolescents from low affluence families brushed their teeth less often and were more likely to report having crooked teeth or spaces between teeth, discoloured teeth or spots on teeth.

Young people were more likely to find it easy to talk about things that bothered them with their mother than with their father.
RELATIONSHIPS AND SUPPORT

INTRODUCTION
Experiencing a sense of belonging and feeling socially connected are fundamental to overall health and wellbeing and good relationships are essential for adolescent development, socialisation and happiness. Adolescents develop relationships and receive support from different groups: parents, wider family members, teachers, friends and classmates, with each group influencing adolescents in different ways.

Family life is the most important aspect in early development and evidence demonstrates the benefits of growing up in a nurturing and supportive family environment. During adolescence, young people become more independent and redefine the relationship with their parents or carers, which may sometimes lead to conflict. Despite this, family support remains essential throughout adolescence and to assist young people’s successful transition to adulthood. Good paternal and maternal relationships are associated with lower likelihood of mental health difficulties and higher levels of happiness for both boys and girls. They may also help young people develop resilience to cope in adversity. In particular, good communication with parents is associated with higher life satisfaction and adolescents who report positive communication with their parents are less likely to engage in risky behaviour such as harmful sexual activity and substance use. High parental support is also associated with better educational outcomes. Growing up in an unsupportive family may have a lasting impact across the life course, with studies showing an association between poor family relations and an increased risk of mental health difficulties in adulthood.

Some young people grow up experiencing adverse childhood experiences and may not receive positive family support due to neglect, family dysfunction, parental substance misuse or parental mental illness. Whilst these experiences may be harmful, some research indicates that for these young people having trusted adult, broadly defined as someone who young people can turn to for help and who will take them seriously, can help protect against a range of negative outcomes where the relationship is high-quality, consistent and built on trust.

During adolescence, relationships outside the home become more significant with friends becoming increasingly influential and providing support. Friendships and romantic relationships at this stage also provide the opportunity for young people to explore their identity. Research demonstrates that there is an association between positive friendship experiences and subjective wellbeing for both boys and girls. A systematic review that examined the impact of friendship during adolescence found that quality friendships were associated with lower levels of depression, higher life satisfaction and happiness as well as increased levels of self-esteem. Conversely, poor peer relations were associated with loneliness and conflicts with friends can be a source of unhappiness for young people.

As part of the longstanding Getting It Right for Every Child (GIRFEC) approach, the Scottish Government’s ambition is to create the conditions to allow children, young people and families to flourish. More recent policy has focused on alleviating the financial pressures on families and recognising the harm of growing up in poverty. The Government’s Tackling Child Poverty Action Delivery Plan (2022–26) focuses on creating long-term employment opportunities for parents, strengthened social security (Scottish Child Payment) and support for households to reduce costs. As part of the 2020 ‘promise’ to care experienced children, the Scottish Government is committed to helping children to stay in families where they feel safe and loved and for families to be given the support to overcome difficulties. This has included investment in the Whole Family Wellbeing fund that provides family support to move from chronic to preventative action through community-based health and social care.

HBSC FINDINGS
Family structure and parental communication have been included in the Scottish HBSC survey since 1990. Since 2014, young people have also been asked about their perceptions of family and peer support. This year, for the first time, data on whether the young person has a trusted adult in their life is presented.
62% BOYS
51% GIRLS
Reported high levels of family support

Figure 10.1
FAMILY STRUCTURE
Source: HBSC Scotland 2022 Survey (unweighted data)

Figure 10.2
FAMILY STRUCTURE 1990–2022
Source: HBSC Scotland 1990–2022 Surveys

Figure 10.3
FAMILY SUPPORT
Source: HBSC Scotland 2022 Survey

Figure 10.4
FAMILY SUPPORT 2014–2022
Source: HBSC Scotland 2014–2022 Surveys

Significant gender difference (p < 0.05)
FAMILY STRUCTURE
In 2022, 69% of young people lived with both parents, 20% with a single parent, 10% in a step-family and 2% in another home environment, such as a foster home or with extended family (Figure 10.1). Between 1990 and 2002, there was a decrease in the proportion of young people living with both parents, from 79% to 69% but since 2002, this proportion has remained relatively stable (Figure 10.2).

FAMILY SUPPORT
Pupils were asked four questions about family support, including items on family help, emotional support, problem solving and decision making. These were combined to create a family support scale, ranging from 1–7. A score above 5.5 was classified as high family support.

Overall, over half (56%) of young people reported high family support (62% boys; 51% girls). Perception of family support decreased with age; 66% of 11-year-olds reported high family support compared with 45% of 15-year-olds. Boys reported higher levels of family support at ages 13 and 15 but there were no gender differences among 11-year-olds (Figure 10.3). Compared with 2014, perceptions of support have decreased slightly for boys but for girls it has decreased more, from 65% in 2014 to 51% in 2022 (Figure 10.4).

FAMILY COMMUNICATION
Young people were more likely to find it easy to talk about things that bothered them with their mother (76%) than with their father (67%). Eleven-year-olds were more likely to find it easier to talk to both their father and mother than older adolescents (Figure 10.5 and 10.6). At ages 13 and 15, boys reported finding it easier to talk to their fathers than girls, but there were no gender differences among 11-year-olds. In terms of maternal communication, there were gender differences only at age 13, with boys reporting it easier to talk to their mothers than girls (81% versus 69% respectively). Since 1990 there has been an increase in the proportion of adolescents who find it easy to talk to their fathers, particularly for girls, increasing from 48% in 1990 to 61% in 2022 (Figure 10.7). Figures have remained fairly steady over time for adolescents’ communication with their mothers, though there was a small decrease for girls between 2018 (83%) and 2022 (74%) (Figure 10.8).

PEER SUPPORT
Young people were asked four questions about their perception of support from peers. These items were averaged to create a peer support score ranging from 1 to 7. A score of 5.5 and above indicates high peer support.
RELATIONSHIPS AND SUPPORT

Figure 10.5
COMMUNICATION WITH FATHER

Source: HBC Scotland 2022 Survey

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year-olds</td>
<td>78</td>
<td>74</td>
<td>77</td>
</tr>
<tr>
<td>13-year-olds</td>
<td>77</td>
<td>56</td>
<td>66</td>
</tr>
<tr>
<td>15-year-olds</td>
<td>66</td>
<td>54</td>
<td>67</td>
</tr>
</tbody>
</table>

Figure 10.6
COMMUNICATION WITH MOTHER

Source: HBC Scotland 2022 Survey

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Boys</th>
<th>Girls</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-year-olds</td>
<td>85</td>
<td>82</td>
<td>81</td>
</tr>
<tr>
<td>13-year-olds</td>
<td>81</td>
<td>69</td>
<td>74</td>
</tr>
<tr>
<td>15-year-olds</td>
<td>74</td>
<td>70</td>
<td>76</td>
</tr>
</tbody>
</table>

Figure 10.7
COMMUNICATION WITH FATHER 1990–2022

Source: HBC Scotland 1990–2022 Surveys

<table>
<thead>
<tr>
<th>Year</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>64</td>
<td>60</td>
</tr>
<tr>
<td>1994</td>
<td>68</td>
<td>61</td>
</tr>
<tr>
<td>1998</td>
<td>72</td>
<td>64</td>
</tr>
<tr>
<td>2002</td>
<td>70</td>
<td>67</td>
</tr>
<tr>
<td>2006</td>
<td>74</td>
<td>67</td>
</tr>
<tr>
<td>2010</td>
<td>74</td>
<td>67</td>
</tr>
<tr>
<td>2014</td>
<td>74</td>
<td>67</td>
</tr>
<tr>
<td>2018</td>
<td>74</td>
<td>67</td>
</tr>
<tr>
<td>2022</td>
<td>74</td>
<td>67</td>
</tr>
</tbody>
</table>

Figure 10.8
COMMUNICATION WITH MOTHER 1990–2022

Source: HBC Scotland 1990–2022 Surveys

<table>
<thead>
<tr>
<th>Year</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>81</td>
<td>77</td>
</tr>
<tr>
<td>1994</td>
<td>78</td>
<td>74</td>
</tr>
<tr>
<td>1998</td>
<td>81</td>
<td>79</td>
</tr>
<tr>
<td>2002</td>
<td>83</td>
<td>80</td>
</tr>
<tr>
<td>2006</td>
<td>81</td>
<td>80</td>
</tr>
<tr>
<td>2010</td>
<td>84</td>
<td>81</td>
</tr>
<tr>
<td>2014</td>
<td>83</td>
<td>80</td>
</tr>
<tr>
<td>2018</td>
<td>80</td>
<td>74</td>
</tr>
<tr>
<td>2022</td>
<td>80</td>
<td>74</td>
</tr>
</tbody>
</table>
Half (50%) of young people reported high peer support. At age 13, girls were more likely to report high peer support than boys but there was no gender difference among 11- or 15-year-olds. In terms of age differences, peer support was highest among 11-year-olds and declined with age (Figure 10.9).

Since 2014, perceptions of peer support have remained relatively stable among boys but, for girls, there has been a recent decrease from 65% in 2014 to 54% in 2022. However, at each survey year girls have been more likely to report high peer support than boys (Figure 10.10).

TRUSTED ADULT

Young people were asked if they had a trusted adult in their life with whom they could speak to about things that bothered them. The majority of young people (61%) said they always had an adult they could speak to. There were gender differences at age 13, with boys being more likely to report this than girls (68% versus 52% respectively). Always having a trusted adult varied by age, with 11-year-olds more likely to report this than 15-year-olds (Figure 10.11). Nearly one in ten (9%) young people said they did not have a trusted adult they could speak to.

INEQUALITIES IN RELATIONSHIPS AND SUPPORT

All of the measures of relationships and support showed a significant association with family affluence. Young people from higher affluence families were more likely to report higher family support, easier communication with father and mother, higher peer support and were more likely to have a trusted adult they can always speak to. (Table 10.1).

Table 10.1

<table>
<thead>
<tr>
<th>RELATIONSHIPS AND SUPPORT BY FAMILY AFFLUENCE</th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High family support †</td>
<td>48</td>
<td>57</td>
<td>60</td>
</tr>
<tr>
<td>Communication with father †</td>
<td>56</td>
<td>67</td>
<td>73</td>
</tr>
<tr>
<td>Communication with mother †</td>
<td>68</td>
<td>76</td>
<td>81</td>
</tr>
<tr>
<td>High peer support †</td>
<td>44</td>
<td>50</td>
<td>54</td>
</tr>
<tr>
<td>Always has trusted adult to talk to †</td>
<td>55</td>
<td>60</td>
<td>67</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey

† Significant linear trend difference (p < 0.01)

REFERENCES

Three-fifths of pupils reported having a trusted adult they could always talk to about personal problems.
Three-quarters (75%) of adolescents brush their teeth more than once a day. Girls were more likely than boys to brush their teeth more than once a day (68% of boys and 83% of girls).

There has been a steady increase in the proportion of boys and girls who brush their teeth more than once a day since 1990 (from 48% to 68% boys and 70% to 83% girls).

Adolescents from low affluence families brushed their teeth less often and were more likely to report having crooked teeth or spaces between teeth, discoloured teeth or spots on teeth.

The proportion of pupils who like school a lot has decreased:

- 2018: 27%
- 2022: 15%
- 2018: 23%
- 2022: 18%
SCHOOL ENVIRONMENT

INTRODUCTION
A substantial amount of young people’s lives are spent in school and the school environment has many effects on pupil wellbeing. A positive school experience can bring many benefits not only in terms of education but also in health and wellbeing and potentially mitigate some negative effects of other social factors. School connectedness is the belief held by pupils that teachers and staff in their school community not only care about their learning but also about them as individuals. There is some evidence to suggest that school connectedness serves as a protective factor against risk behaviours and is an important determinant of adolescent mental health. In particular, school connectedness is associated with lower levels of tobacco, alcohol and cannabis use, higher levels of physical activity, as well as having fewer depressive symptoms. A recent study also showed that higher teacher support, classmate support and offline contact with friends predicted lower levels of loneliness. Better relationships with school staff are also associated with positive subjective wellbeing. Whilst school connectedness decreases as adolescents get older, there is also evidence to suggest that school and family connectedness during adolescence may offer long-lasting protective effects into adulthood across multiple health outcomes related to mental health, sexual behaviour, substance use and violence.

Young people who feel they are able to handle their work, have good teacher support and are satisfied with school are more likely to report high life satisfaction. A sense of belonging to school has also been associated with increased academic motivation, participation and school engagement.

School can also be a source of stress, anxiety and unhappiness for adolescents. Recent studies have shown an increase in school pressure across time, especially in girls, as well as significant links between school pressure and trends in mental wellbeing. Young people who feel under pressure to perform well academically are more likely to report depressive symptoms and lower life satisfaction. Academic pressure also appears to impact on girls more than boys. For younger adolescents experiencing high stress school environments, higher academic expectations have been associated with increased school-related stress which in turn may impede academic achievement later on.

An important aspect of school is the support provided by friends and forming meaningful bonds with others which facilitates a sense of relatedness, connectedness and belonging. Peer attachment style has been related to low mood and depressive symptoms over and above school connectedness and individual self-esteem. Greater connections with school peers are associated with better subjective wellbeing and mental health. In addition, peer acceptance is related to liking school and school engagement while being rejected by one’s peers is related to disengagement from school, lower school achievement, as well as lower aspirations and social participation.

The Getting it Right For Every Child (GIRFEC) approach is central to all Scottish Government policies that support children, young people and their families and has been delivered through services including schools across Scotland, since 2006. Health and wellbeing is one of the eight curricular areas in the Curriculum for Excellence and, along with literacy and numeracy, it is one of the three core areas recognised as being particularly important and the responsibility of all staff. A refreshed narrative on the Curriculum for Excellence was published in 2019. Educational settings provide opportunities for sustained participation in activities that develop mental, emotional, social and physical wellbeing. It is the Scottish Government’s aspiration that at school all children and young people learn about health and wellbeing to ensure they acquire the skills to live healthy, happy lives. In 2021 the Scottish Government produced a whole school approach framework to support local authorities and schools embed support for children and young people’s mental health and wellbeing across all aspects of the school environment. It provides guidance on approaches that can be used by schools to complement or strengthen existing approaches. Also in 2021 the ‘Children and Young People’s Mental Health & Wellbeing: A Knowledge and Skills Framework for the Scottish Workforce’ framework was published that sets out the levels of knowledge and skills required by staff, across agencies, to deliver wellbeing and mental health supports and interventions within the framework of GIRFEC.
One in six young people said they liked school a lot.
HBSC FINDINGS
The HBSC survey collects data on young people’s life at school. This includes: how much pupils like school, perceived pressure from schoolwork, school-related stress, and support received at school from teachers and classmates.

SCHOOL SATISFACTION
One in six young people (16%) reported that they liked school a lot, with younger adolescents more likely to like school than older adolescents (Figure 11.1). Liking school decreased steadily with age: 27% of 11-year-olds said they liked school a lot compared with 12% of 13-year-olds and 9% of 15-year-olds. There were gender differences at age 13 with boys liking school more than girls.

HBSC has tracked school satisfaction since 1990. Between 1994 and 2018 there was little change in the proportion of young people who said they liked school a lot but prevalence decreased in 2022 for girls (from 27% in 2018 to 15% in 2022) and boys (from 23% in 2018 to 18% in 2022).

FELT PRESSURED BY SCHOOLWORK
Half (49%) of young people reported that they felt ‘some’ or ‘a lot’ of pressure from schoolwork (Figure 11.3). Feeling pressured by schoolwork increased with age: 69% of 15-year-olds reported feeling some or a lot of pressure compared with 42% of 13-year-olds and 36% of 11-year-olds. There were gender differences at all age groups with girls feeling more pressure than boys. This is a change from 2018 when gender differences were only observed at age 15.

Perceived pressure from schoolwork has been measured since 1994. The proportion of adolescents who felt some or a lot of pressure from schoolwork has been increasing since 2006 and has continued to increase in 2022 for girls, widening the gap between girls and boys (Figure 11.4).

SCHOOL-RELATED STRESS
Young people aged 13 and 15 were asked nine questions about school-related stress from the Adolescent Stress Questionnaire. Answers to the first three questions are combined to create a score for stress of school performance ranging from 0 to 12. Responses to the questions four to six are combined to create a score for stress of future uncertainty. Answers to questions seven to nine are combined to create a score for stress of school/leisure conflict. Responses to all nine questions are combined to create a total school-related stress score ranging from 0 to 36. Higher scores reflect higher levels of school-related stress.

Mean stress of school performance scores varied by age and gender (Figure 11.5). Scores increased from age 13 to 15 and girls scored higher than boys. For example, the mean stress of school performance scores at age 15 were 8.1 for girls and 6.0 for boys.

Mean stress of future uncertainty scores varied by age and gender (Figure 11.6). Scores increased from age 13 to 15 and girls scored higher than boys. For example, the mean stress of future uncertainty scores at age 15 were 8.1 for girls and 5.9 for boys.

Mean stress of school/leisure conflict scores varied by age and gender (Figure 11.7). Scores increased from age 13 to 15 and girls scored higher than boys. For example, the mean stress of future uncertainty scores at age 15 were 6.5 for girls and 4.7 for boys.

Mean total school-related stress scores varied by age and gender (Figure 11.8). Scores increased from age 13 to 15 and girls scored higher than boys. For example, the mean stress of future uncertainty scores at age 15 were 22.9 for girls and 16.7 for boys.
School Environment

Figure 11.5
SCHOOL RELATED STRESS – PERFORMANCE

Source: HMSC Scotland 2022 Survey

Figure 11.6
SCHOOL RELATED STRESS – FUTURE UNCERTAINTY

Source: HMSC Scotland 2022 Survey

Figure 11.7
SCHOOL RELATED STRESS – LEISURE CONFLICT

Source: HMSC Scotland 2022 Survey

Figure 11.8
SCHOOL RELATED STRESS – TOTAL

Source: HMSC Scotland 2022 Survey

felt pressured by schoolwork some or a lot

Source: HMSC Scotland 2022 Survey

felt pressured by schoolwork some or a lot
TEACHER SUPPORT
Young people were asked three questions about support from teachers, with items covering feelings of acceptance, trust and caring. The response to these items were summed to create a teacher support scale ranging from 0 to 12. Those scoring 10 or above were classified as having high teacher support.

Overall, 28% of pupils reported high teacher support, however, this varied considerably by age (Figure 11.9). Almost half (48%) of 11-year-olds reported high teacher support but this dropped to 16% of 13-year-olds and 19% of 15-year-olds. There were significant differences in perceived levels of teacher support by gender with 15-year-old boys more likely to report high teacher support than girls.

Teacher support has been measured since 2010. The proportion of adolescents who reported high teacher support increased from 2010 to 2018 for both girls and boys. Since 2018, there have been decreases in teacher support across ages and gender (Figure 11.10). The largest decreases were seen in 11-year-old girls and 13-year-old boys and girls.

CLASSMATE SUPPORT
Young people were asked three questions about support from classmates: whether they enjoyed being with them, felt accepted by them, and if they were kind and helpful. The response to these items were summed to create a classmate support score ranging from 0 to 12. Those scoring 10 or above were classified as having high classmate support.

One in six adolescents (17%) reported high classmate support (Figure 11.11). Perceived classmate support varied by age, with younger adolescents more likely to report high levels of support than older adolescents (26% of 11-year-olds versus 11% of 15-year-olds). There were differences by gender at age 13 (girls 10%, boys 15%).

Classmate support has been measured since 2010. The proportion of adolescents who reported high classmate support has been decreasing slowly since 2010 for boys and girls (Figure 11.12).

INEQUALITIES IN SCHOOL EXPERIENCE
School experience was found to vary by family affluence (Table 11.1). Young people from more affluent families were more likely to say they liked school a lot and report higher levels of support from their classmates. However, perceived teacher support, schoolwork pressure and school-related stress did not vary by family affluence.

Table 11.1
SCHOOL ENVIRONMENT BY FAMILY AFFLUENCE

<table>
<thead>
<tr>
<th></th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like school a lot†</td>
<td>13</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Feel pressured by schoolwork</td>
<td>50</td>
<td>49</td>
<td>47</td>
</tr>
<tr>
<td>School related stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>6.4</td>
<td>6.3</td>
<td>6.2</td>
</tr>
<tr>
<td>Future uncertainty</td>
<td>6.4</td>
<td>6.1</td>
<td>6.1</td>
</tr>
<tr>
<td>Leisure conflict</td>
<td>4.8</td>
<td>4.9</td>
<td>4.9</td>
</tr>
<tr>
<td>Total school stress</td>
<td>17.6</td>
<td>17.3</td>
<td>17.3</td>
</tr>
<tr>
<td>Teacher support</td>
<td>27</td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>Classmate support†</td>
<td>14</td>
<td>16</td>
<td>21</td>
</tr>
</tbody>
</table>

† Significant linear trend difference (p < 0.01)

Source: HBSC Scotland 2022 Survey
Support from classmates has decreased.
REFERENCES


The areas of life most positively impacted by COVID-19 were family relationships and friendships.

“Why are the birds so loud?”

“It’s because the roads are so quiet.”
IMPACT OF COVID-19 PANDEMIC

INTRODUCTION

In March 2020, the World Health Organisation (WHO) declared COVID-19 a worldwide pandemic.\(^1\) In response to this, and to reduce the spread of the virus, governments implemented societal restrictions. This included school closures, social distancing and a stay at home mandate; all these measures disrupted daily life considerably for young people and their families, creating additional stressors.\(^2\) The closure of schools not only meant remote learning but also the loss of opportunities to develop social skills, friendships and take part in wider activities that are important for health and development in adolescence.\(^3\) In addition, the pandemic impacted on parental wellbeing, family circumstances and access to support services.\(^4\)

Previous research has established that disruption to routines, social isolation and increased family stress are risk factors for psychiatric difficulties in adolescence.\(^5\) A systematic review of the mental impacts of the COVID-19 pandemic on young people found that there was a high rate of fear of COVID-19 as well as an increase in depressive and anxious symptoms.\(^6\) A meta-analysis of 29 studies worldwide estimates that, globally, prevalence of depression in children and young people has doubled compared with estimates pre-pandemic.\(^6\) The mental health consequences of the pandemic have not been equally experienced with certain groups more at risk such as older adolescents, girls, those from more deprived backgrounds and young people with pre-existing mental health conditions, neuro-diversities and chronic physical health conditions.\(^5,\,7,\,8\) Conversely, other evidence indicates that lockdown brought about improvements and some young people reported feeling less stressed during lockdown.\(^9\) Similarly, some young people experienced improved wellbeing due to the increased focus and awareness of mental health during the pandemic and feeling more able to talk about their wellbeing.\(^10\) Some young people also benefitted from improved relations with family members\(^10\) and many reported enjoying spending time with their family during lockdown.\(^4\) However, some found the lack of privacy and personal space and parental stress in the family home difficult.\(^11\)

The pandemic brought about changes to friendships; with adolescents particularly impacted by social restrictions due to the typical shift away from family towards friends for social support and exploration of identity that occurs during this part of life.\(^12\) During the pandemic, adolescents missed their friends and the lack of opportunity to physically gather with others but some also felt friendships had improved by friends showing support during the lockdown.\(^11\) Nevertheless most studies indicate that young people found that the lack of closeness in online exchanges with friends heightened feelings of isolation and loneliness.\(^13\) Positive family relationships and social support were associated with better mental health outcomes among adolescents during the pandemic.\(^5,\,13\)

The shift to remote learning represented a significant change and some young people found the move to online learning difficult and struggled to concentrate.\(^13\) Older adolescents also reported feeling concerned about the impact of lockdown on their education and future careers, particularly those about to sit national exams.\(^4,\,14\)

Experiences of the pandemic have been mixed but many existing health issues have been exacerbated by the pandemic and inequalities have widened.\(^15\) In response to this, the Scottish Government launched its Covid Recovery Strategy: for a fairer future.\(^16\) The strategy recognises the particular impact of the pandemic on children and young people and outlines funding in a number of areas to improve their health and wellbeing including community-based health and social care preventative funding (Whole Family Wellbeing Fund), investment in sport and physical activity and funds to local authorities to deliver locally-based mental health support for young people.

HBSC FINDINGS

In 2022, young people were asked about their experiences of the COVID-19 pandemic and its associated restrictions. Specifically, they were asked to say how they felt various aspects of their life had been impacted by the pandemic, choosing from the options: very negative / quite negative / neutral, no impact / quite positive / very positive.
The areas of life most negatively impacted were mental health, school performance and physical activity.
TOP 3 MOST IMPACTED ASPECTS OF LIFE
Overall, the three most positively affected (quite or very positive) aspects of life were family relations (54%), friendships (50%) and physical activity (43%). These three domains were the most positively rated across all age and gender groups. The three most negatively affected (quite or very negative) aspects of life were mental health (38%), school performance (34%) and physical activity (29%). These three aspects of life were the most negatively rated across nearly all age and gender groups, with older girls also mentioning diet (joint third for 13-year-olds and second for girls aged 15).

IMPACT OF COVID-19 PANDEMIC BY GENDER AND AGE
At age 11, there were no gender differences in relation to the perceived impact of the pandemic on any areas of life (Figures 12.2, 12.3). However, there were gender differences among the older adolescents. At age 13, girls were more likely than boys to perceive a negative impact on life overall, mental health, their future, school performance and physical activity. There were particular differences in the perceived impact on mental health, with nearly half (49%) of 13-year-old girls reporting a negative impact on their mental health compared with a quarter of boys (26%). Similarly, 30% of 13-year-old girls perceived covid to have had a negative impact on their life overall compared with 20% of boys, and at age 13 girls were also more likely to say that the pandemic had negatively impacted their future (20% girls versus 13% boys) (Figures 12.4, 12.5).

At age 15, girls were also more likely to report a negative impact on their life overall, health, family relations, mental health, friendships, physical activity, diet and their future than boys. There were particular differences in relation to the impact on their life as a whole with 36% of girls reporting a negative impact compared with 25% of boys. In terms of mental health over half of girls (55%) reported a negative impact compared with a third of boys (32%). Forty-one percent (41%) of 15-year-old girls reported a negative impact on their diet compared with 27% of boys. Girls were also more likely than boys to report a negative impact on their future (37% and 26%, respectively) (Figures 12.6, 12.7).

In terms of age differences, there were few differences between the boys across the age groups. 11-year-old boys were more likely to perceive a positive impact from the pandemic on family life and school and less likely to perceive a negative impact on school and their future than the older adolescent boys (Figure 12.2, 12.4, 12.6).

More marked age differences were seen among the girls. For nearly all aspects of life, 11-year-old girls were more likely to perceive a positive impact from the pandemic and older girls more likely to perceive a negative impact, in particular on diet, school, mental health and the future. For example, 17% of 11-year-old girls reported a negative impact on their diet compared with 31% of 13-year-olds and 41% of 15-year-olds. Similarly, 23% of 11-year-old girls reported a negative impact on their school performance compared with 51% of 15-year-old girls. There were no age differences in terms of the perceived impact of the pandemic on girls’ friendships (Figures 12.3, 12.5, 12.7).
Figure 12.4
IMPACT OF COVID-19 ON 13–YEAR OLD BOYS

Source: HBSC Scotland 2022 Survey

Figure 12.5
IMPACT OF COVID-19 ON 13–YEAR OLD GIRLS

Source: HBSC Scotland 2022 Survey

Figure 12.6
IMPACT OF COVID ON 15–YEAR OLD BOYS

Source: HBSC Scotland 2022 Survey

Figure 12.7
IMPACT OF COVID ON 15–YEAR OLD GIRLS

Source: HBSC Scotland 2022 Survey
INEQUALITIES IN THE IMPACT OF COVID-19 PANDEMIC

Perceived impact (both positive and negative) of the Covid-19 pandemic were analysed by family affluence. Across all aspects of life, those in the highest family affluence group were more likely to report a positive impact. Conversely, those in the low family affluence group were more likely to report more negative impacts, except for life overall and friendships which did not differ by family affluence (Table 12.1).

REFERENCES

Table 12.1  IMPACT OF COVID-19 BY FAMILY AFFLUENCE

<table>
<thead>
<tr>
<th></th>
<th>Low FAS (%)</th>
<th>Medium FAS (%)</th>
<th>High FAS (%)</th>
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<tr>
<td><strong>Life as a whole</strong></td>
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<tr>
<td>Positive impact†</td>
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<tr>
<td>Negative impact†</td>
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</tr>
<tr>
<td>Negative impact†</td>
<td>26</td>
<td>16</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: HBSC Scotland 2022 Survey

† Significant linear trend difference (p < 0.01)
This Appendix describes the questions included in the 2022 HBSC survey in Scotland. This does not replicate the full survey but lists only items presented in the 2022 HBSC Scotland National Report. Source information is provided for some questions. Further information is available at www.hbsc.org
**CHAPTER 1: INTRODUCTION**

**SOCIO-DEMOGRAPHIC CHARACTERISTICS**

**GENDER**
Primary: Are you a boy or girl? (Boy / Girl / In another way).
Secondary: Are you a boy or girl? (Boy / Girl).

**SEX REGISTERED AT BIRTH**
Here are two other questions on your sex and gender. Most people are born as male or female – this is what we call sex. How people feel inside about being a man or boy, woman or girl, or some other gender – this is what we call gender identity.

What sex were you registered at birth? (Male / Female).

**GENDER IDENTITY**
Identities of people are varied: some people identify themselves as boys, others as girls, and there are people who don’t feel represented by either boy or girl.

Please choose the option that best describes you:
(I identify myself as a boy / I identify myself as a girl / I identify myself as neither a boy nor a girl / I identify in some other way. Please write here: ).

**YEAR GROUP**
What class are you in? (Primary 7 / Secondary 2 / Secondary 4).

**COUNTRY OF BIRTH**
In which country were you born? (Scotland / England, Wales or Northern Ireland / Republic of Ireland / Poland / Pakistan / Another country (please say where)).

**FAMILY AFFLUENCE**
The Family Affluence Scale (FAS) is an indicator of young people’s socioeconomic status comprising items on material assets in the family. Scale scores were calculated by summing up the responses to all of the items. A measure of relative FAS within each grade and gender (or grade for those not identifying as boy or girl) was used to create 3 groups: low (bottom 20%), medium (middle 60%) and high (highest 20%) family affluence households.

Does your family own a car, van or truck? (No / Yes, one / Yes, two or more).

Do you have your own bedroom for yourself? (No / Yes).

How many computers do your family own (including PCs, Macs, laptops and tablets, not including game consoles and smartphones)? (None / One / Two / More than two).

How many times did you and your family travel out of Scotland for a holiday/vacation last year? (Not at all / Once / Twice / More than twice).

How many bathrooms (room with a bath/shower or both) are in your home? (None / One / Two / More than two).

Does your family have a dishwasher at home? (No / Yes).

**CHAPTER 2: GENERAL HEALTH AND SLEEP**

**SELF-RATED HEALTH**
Would you say your health is…..? (Excellent / Good / Fair / Poor).

**HEALTH COMPLAINTS**
In the last 6 months, how often have you had the following …?
Headache / Stomach-ache / Backache / Feeling low / Irritability or bad temper / Feeling nervous / Difficulties in getting to sleep/ Feeling dizzy. (About every day / More than once a week / About every week / About every month / Rarely or never).

Multiple health complaints are defined as having 2 or more symptoms more than once a week.


**LONG TERM ILLNESS OR DISABILITY**
Do you have a long-term illness, or medical condition (like diabetes, arthritis, allergy or cerebral palsy) that has been diagnosed by a doctor? (Yes / No).

Do you take medicine for your long-term illness, disability or medical condition? (Yes / No).

Does your long-term illness, disability or medical condition affect your attendance and participation at school? (Yes / No).

**INJURIES**
Many young people get hurt or injured from activities such as playing sports or fighting with others at different places such as the street or home. Injuries can include being poisoned or burned. Injuries do not include illnesses such as measles or the flu.

The following question is about injuries you may have had during the past 12 months. During the past 12 months, how many times were you injured and had to be treated by a doctor or nurse? (I was not injured in the past 12 months / 1 time / 2 times / 3 times / 4 times or more).

**SLEEP DURATION**
When do you usually go to bed: if you have to go to school the next morning? / at weekends or during holidays? (No later than 21:00 / 21:30 / 22:00 / 22:30 / 23:00 / Midnight 00:00 / 00:30 / 01:00 / 01:30 / 02:00 or later)

When do you usually wake up: on school mornings? / at weekends or during holidays? (No later than 05:00 / 05:30 / 06:00 / 06:30 / 07:00 / 07:30 / 08:00 / 08:30 / 09:00 / 09:30 or later) / (No later than 07:00 / 07:30 / 08:00 / 08:30 / 09:00 / 09:30 / 10:00 / 10:30 / 11:00 / 11:30 / 12:00 / 12:30 / 13:00 / 13:30 / 14:00 or later).

Average nightly sleep duration was calculated for weekdays and weekends.

**SLEEP DIFFICULTIES**
This question is one of the eight items in the health complaints question.

In the last 6 months: how often have you had the following...?
Difficulties in getting to sleep. (About every day / More than once a week / About every week / About every month / Rarely or never). Respondents were classified as having sleep difficulties if they reported this at least more than once a week.

SLEEP QUALITY

Using the statements below, please indicate how often the following things have happened during the past month: When it’s time to go to bed, I want to stay up and do other things / In general, I am ready for bed at bedtime / In general, I try to “put off” or delay going to bed / When it’s time to go to sleep, I have trouble settling down / In general, I need help getting to sleep (for example, I need to listen to music, watch TV or take medication) / After waking up during the night, I have trouble going back to sleep / After waking up during the night, I have trouble getting comfortable / After waking up during the night, I need help to go back to sleep (for example: I need to watch TV or read) / In the morning, I wake up and feel ready to get up for the day / In the morning, I wake up feeling rested and alert. (Never / Once in a while / Sometimes / Quite often / Frequently / Always).


CHAPTER 3 MENTAL HEALTH AND WELLBEING

LIFE SATISFACTION

Young people were shown a picture of a ladder (with the numbers 0 to 10 running up the rungs) and given the following description and question: Here is a picture of a ladder. The top of the ladder ‘10’ is the best possible life for you and the bottom ‘0’ is the worst possible life for you. In general, where on the ladder do you feel you stand at the moment? In this adapted version of the Cantril Ladder, a score of six or more was defined as high life satisfaction.


HAPPINESS

In general, how do you feel about your life at present? (I feel very happy / I feel quite happy / I don’t feel very happy / I’m not happy at all).

FEELING CONFIDENT

How often do you feel confident in yourself? (Never / Hardly ever / Sometimes / Often / Always).

FEELING LEFT OUT

How often do you feel left out of things? (Never / Hardly ever / Sometimes / Often / Always).

FEELING LONELY

During the past 12 months, how often have you felt lonely? (Never / Rarely / Sometimes / Most of the time / Always).

WHO-5 WELLBEING INDEX

Please indicate for each of the five statements which is closest to how you have been feeling during the last two weeks.

During the last two weeks... I have felt cheerful and in good spirits / I have felt calm and relaxed / I have felt active and vigorous / I woke up feeling fresh and rested / My daily life has been filled with things that interest me. (All of the time / Most of the time / More than half of the time / Less than half of the time / Some of the time / At no time).

A sum score is calculated from the responses to the five statements and multiplied by four to obtain a percentage score ranging from 0 to 100. A score of 50 or less is classified as low mood. A score of 28 or less is classified as being at risk of depression.


COHEN PERCEIVED STRESS SCALE

In the last month, how often have you: felt that you were unable to control the important things in your life? / felt confident about your ability to handle personal problems? / felt that things were going your way? / felt difficulties were piling up so high that you could not overcome them? (Never / Almost never / Sometimes / Fairly often / Very often).

A total score is calculated from the 4 items, with a range from 0 to 16 (higher stress). The mean perceived stress score for subgroups is presented.


GENERALISED ANXIETY DISORDER SCALE (GAD 7)

How often, over the past 2 weeks, have you been bothered by: Feeling nervous, anxious or on edge / Not being able to stop or control worrying / Worrying too much about different things / Trouble relaxing / Being so restless that it is hard to sit still / Becoming easily annoyed or irritable / Feeling afraid as if something awful might happen (Not at all / Several days / More than half of the days / Nearly every day).

The GAD-7 sum score ranges from 0 to 21. Moderate anxiety is classified as having a score of 11 –16. A score of 17 or above is classified as severe anxiety.


SELF-EFFICACY

The following questions are about the way you deal with things. How often do you find a solution to a problem if you try hard enough? / How often do you manage to do the things you decide to do? / How often do you find a solution to a problem if you try hard enough? / How often do you feel confident in yourself? / How often do you manage to do the things you decide to do?

The following questions are about the way you deal with things. How often do you feel confident in yourself? / How often do you manage to do the things you decide to do? / How often do you find a solution to a problem if you try hard enough? / How often do you feel confident in yourself? / How often do you manage to do the things you decide to do?

A score is calculated from both items with a range from 2 to 10. Using this, three self-efficacy groups were created: 2–6 is defined as low self-efficacy, 7–8 is defined as medium self-efficacy and 9–10 as high self-efficacy.

PERCEPTION OF BODY WEIGHT
Do you think your body is...? (Very underweight / A bit underweight / Neither underweight nor overweight / A bit overweight / Very overweight).

CHAPTER 4: EATING BEHAVIOURS AND ORAL HEALTH
BREAKFAST CONSUMPTION
How often do you usually have breakfast (more than a glass of milk or fruit juice)? Weekdays (I never have breakfast during weekdays / One day / Two days / Three days / Four days / Five days).

FOOD AND DRINKS CONSUMPTION
How many times a week do you usually eat or drink...? Fruit / Vegetables / Fruit juice or smoothies / Sweets or chocolate / Chips or fried potatoes / Coke or other soft drinks that contain sugar / Energy drinks (e.g. Red Bull, Lucozade, Monster). (Never / Less than once a week / Once a week / 2–4 days a week / 5–6 days a week / Once a day, every day / Every day, more than once).

FAMILY MEALS
How often do you and your family usually have a meal together? (Every day / Most days / About once a week / Less often / Never).

TOOTH BRUSHING
How often do you brush your teeth? (More than once a day / Once a day / At least once a week but not daily / Less than once a week / Never).

CHAPTER 5: PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR
MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY
Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time. Physical activity can be done in sports, school activities, playing with friends, or walking to school. Some examples of physical activity are running, walking quickly, cycling, dancing, skateboarding, swimming, football and gymnastics.

LEISURE TIME VIGOROUS PHYSICAL ACTIVITY
OUTSIDE SCHOOL HOURS: How often do you usually exercise in your free time so much that you get out of breath or sweat? (Every day / 4 to 6 times a week / 3 times a week / 2 times a week / Once a week / Once a month / Less than once a month / Never).

PARTICIPATION IN ORGANISED LEISURE ACTIVITIES
Leisure time should be understood as time you have for yourself when you do not have to do any homework or housework; you can, for example, do your hobbies (sport, drawing, reading, and many others).

In your leisure time, how often do you do any of the following organised activities? (Organised activities should be understood as activities carried out under the leadership of a coach, teacher, instructor, or leader). Organised team sports (e.g. football, netball, hockey, rugby) / Organised individual sports (e.g. tennis, gymnastics, swimming, dancing, martial arts) / Artistic activities (e.g. art and music school, playing a musical instrument, singing, drama) / Children’s and youth organisations (e.g. Scouts or Guides, YMCA/YWCA, cadets) / Club in a leisure centre or at school (e.g. board games, model-making, language or debating club) / Religious activities (e.g. going to church, mosque, synagogue), (I don’t do this type of activity / About once or twice a month / Once a week / Twice a week or more).

CHAPTER 6: ELECTRONIC MEDIA USE
SMARTPHONES
Do you keep your smartphone in your bedroom during the night? (Yes / No / I don’t have my own smartphone).

TELEVISIONS
In your bedroom, do you have a television? (Yes / No).

ELECTRONIC MEDIA COMMUNICATION
The next question is about ‘online contact’ and ‘online communication’. When we use these terms we mean sending and receiving text messages, emotions, and photo, video or audio messages through instant messaging (e.g. WhatsApp, Snapchat), social networking sites (e.g. Instagram, TikTok, Twitter) or video calling (e.g. Zoom, Facetime, Teams).

How often do you have online contact with the following people? Close friend(s) / Friends from a larger friend group / Friends that you got to know through the internet but you didn’t know before / People other than friends (e.g. parents, brothers/sisters, classmates, teachers). (Don’t know / doesn’t apply / Never or almost never / At least every week / Daily or almost daily / Several times each day / Almost all the time throughout the day).

Intense contact was defined as contact almost all the time throughout the day.

SOCIAL MEDIA DISORDER SCALE
We are interested in your experiences with social media. The term social media refers to social network sites (e.g. Instagram, TikTok, Twitter), instant messengers (e.g. WhatsApp, Snapchat) and video calling (e.g. Zoom, Facetime, Teams).

During the past year, have you... regularly found that you can't think of anything else but the moment that you will be able to use social media again? / ...regularly felt dissatisfied because you wanted to spend more time on social media? / ...often felt bad when you could not use social media? / tried to spend less time on social media but failed? / regularly neglected other activities (e.g. hobbies, sport)
because you wanted to use social media? / ...regularly had arguments with others because of your social media use? / ...regularly lied to your parents or friends about the amount of time you spend on social media? / ...often used social media to escape from negative feelings? / ...had serious conflict with your parents, brother(s) or sister(s) because of your social media use? (No / Yes).

Problematic use is classified as responding ‘yes’ to at least 6 of the 9 items.


FREQUENCY OF GAMING
When answering these questions, please think about all the games that you play on a smartphone, tablet, laptop, pc, Mac or console (e.g. PlayStation, Wii, Xbox).

How often do you play games? (Never or Almost never / Less than one day a week / 1 day a week / 2 or 3 days a week / 4 or 5 days a week / Almost every day).

On a day that you play games, about how much time do you spend gaming? (0 to 2 hours / 2 to 4 hours / 4 to 6 hours / 6 to 8 hours / 8 hours or more).

PROBLEMATIC GAMING
During the past year ... have there been periods when all you could think of was the moment that you could play a game? / ... have you felt unsatisfied because you wanted to play more? / ... have you been feeling miserable when you were unable to play a game? / ... were you unable to reduce your time playing games, after others had repeatedly told you to play less? / ... have you played games so that you would not have to think about annoying things? / ... have you had arguments with others about the consequences of your gaming behaviour? / ... have you hidden the time you spend on games from others? / ... have you experienced serious conflict with family or friends because of gaming? (No / Yes).

Problematic gaming is classified as responding yes to at least 5 of the 9 items.


CHAPTER 7: SUBSTANCE USE

TOBACCO USE (LIFETIME AND CURRENT)
On how many days (if any) have you smoked cigarettes? In your lifetime / In the last 30 days. (Never / 1–2 days / 3–5 days / 6–9 days / 10–19 days / 20–29 days / 30 days or more).

E-CIGARETTE USE (LIFETIME AND CURRENT)
On how many days (if any) have you used electronic cigarettes (e.g. flavour vape, e-smoker, e-cigarette, e-hookah, shisha-pen)? In your lifetime / In the last 30 days. (Never / 1–2 days / 3–5 days / 6–9 days / 10–19 days / 20–29 days / 30 days or more).

ALCOHOL CONSUMPTION (LIFETIME AND CURRENT)
On how many days (if any) have you drunk alcohol? In your lifetime / In the last 30 days. (Never / 1–2 days / 3–5 days / 6–9 days / 10–19 days / 20–29 days / 30 days or more).

DRUNKENESS IN LIFETIME
Have you ever had so much alcohol that you were really drunk? In your lifetime. (No, never / Yes, once / Yes, 2–3 times / Yes, 4–10 times / Yes, more than 10 times).

CANNABIS USE (LIFETIME AND LAST 30 DAYS) (15-YEAR-OLDS ONLY)
Have you ever taken cannabis? In your lifetime / In the last 30 days. (Never / 1–2 days / 3–5 days / 6–9 days / 10–19 days / 20–29 days / 30 days or more).

CHAPTER 8: SEXUAL HEALTH

SEXUAL ORIENTATION (15-YEAR-OLDS ONLY)
How would you describe your sexual orientation? By this, we mean, the gender of partners you are attracted to. (Heterosexual (straight, attracted to the opposite gender) / Mostly heterosexual / Bisexual (attracted to both girls and boys) / Gay or lesbian (attracted to the same gender) / Other / I am not sure yet / I don’t understand this question / Please say what your sexual orientation is: ).

SEXUAL INTERCOURSE (15-YEAR-OLDS ONLY)
Have you ever had sexual intercourse (this is also called “having sex”)? (Yes / No)

AGE AT FIRST INTERCOURSE (15-YEAR-OLDS ONLY)
How old were you when you had sexual intercourse for the first time? (13 years old or younger / 14 years old / 15 years old / 16 years old or older).

CONTRACEPTION USE AT LAST SEXUAL INTERCOURSE (15-YEAR-OLDS ONLY)
The last time you had sexual intercourse, did you or your partner use a condom? The last time you had sexual intercourse, did you or your partner use birth control pills? (Yes / No / Don’t know).

CHAPTER 9 BULLYING AND FIGHTING

BEING BULLIED AND BULLYING OTHERS
Here are some questions about bullying. We say a person is being bullied when another person, or group of people, repeatedly say or do nasty and unpleasant things to him or her. It is also bullying when a person is teased in a way he or she does not like or when he or she is left out of things on purpose. The person that bullies has more power than the person being bullied and wants to cause harm to him or her. It is not bullying when two people of about the same strength or power argue or fight.

How often have you been bullied at school in the past couple of months? (I have not been bullied at school in the past couple of months / It has happened once or twice / 2 or 3 times a month / About once a week / Several times a week).

How often have you taken part in bullying another person(s) at school in the past couple of months? (I have not bullied another person(s) at
school in the past couple of months / It has happened once or twice / 2 or 3 times a month / About once a week / Several times a week).

**BEEN CYBERBULLIED**
In the past couple of months, how often have you been cyberbullied (e.g., someone sent mean instant messages, email or text messages about you; wall postings; created a website making fun of you; posted unflattering or inappropriate pictures of you online without permission or shared them with others)? (I have not been cyberbullied in the past couple of months / It has happened once or twice / 2 or 3 times a month / About once a week / Several times a week).

**CYBERBULLYING OTHERS**
In the past couple of months, how often have you taken part in cyberbullying? (e.g., sent someone mean instant messages, email or text messages; wall postings; created a website making fun of someone; posted unflattering or inappropriate pictures online without permission or shared them with others)? (I have not cyberbullied another person in the past couple of months / It has happened once or twice / 2 or 3 times a month / About once a week / Several times a week).

**SPECIFIC VICTIMISATION (MULTIPLE FORMS OF BULLYING)**
How often have you been bullied AT SCHOOL in the past couple of months in the ways listed below? I was called mean names, was made fun of, or teased in a hurtful way / Other students left me out of things on purpose, excluded me from their group of friends, or completely ignored me / I was hit, kicked, pushed, shoved around, or locked indoors / Other students told lies or spread false rumours about me and tried to make others dislike me / I was bullied with mean names or comments about my race or colour / I was bullied with mean names or comments about my religion / Other students made sexual jokes or gestures to me. (I have not been bullied in this way in the past couple of months / Once or twice / 2 or 3 times a month / About once a week / Several times a week).

**PHYSICAL FIGHT**
During the past 12 months, how many times were you in a physical fight? (I have not been in a physical fight in the past 12 months / 1 time / 2 times / 3 times / 4 times or more).

**CHAPTER 10: SOCIAL RELATIONSHIPS AND SUPPORT**

**FAMILY STRUCTURE**
All families are different (for example, not everyone lives with both their parents, sometimes people live with just one parent, or they have two homes or live with two families) and we would like to know about yours.

Please answer this first question for the home where you live all or most of the time and select the people who live there. (Mother / Father / Stepmother (or Father’s partner) / Stepfather (or Mother’s partner) / I live in a foster home or children’s home / Someone or somewhere else (e.g. grandparents). Please type it in.

**FAMILY SUPPORT**
My family really tries to help me / I get the emotional help and support I need from my family / I can talk about my problems with my family / My family is willing to help me make decisions (Very strongly disagree = 1 to Very strongly agree = 7). Scores were calculated by taking the mean of the responses to the four items below. A mean score above 5.5 was classified as high family support

**FAMILY COMMUNICATION**
How easy is it for you to talk to the following people about things that really bother you? Father / Mother (Very easy / Easy / Difficult / Very difficult / Don’t have or see this person).

**PEER SUPPORT**
My friends really try to help me / I can count on my friends when things go wrong / I have friends with whom I can share my joys and sorrows / I can talk about my problems with my friends. (Very strongly disagree = 1 to Very strongly agree = 7). Scores were calculated by taking the mean of the responses to the four items below. Scores of 5.5 or more were classified as high peer support.

**TRUSTED ADULT**
Do you have an adult in your life who you can trust and talk to about any personal problems? (No, I don’t / Yes, I sometimes do / Yes, I always do).

**CHAPTER 11: SCHOOL ENVIRONMENT**

**SCHOOL SATISFACTION**
How do you feel about school at present? (I like it a lot / I like it a bit / I don’t like it very much / I don’t like it at all).

**FEEL PRESSURED BY SCHOOLWORK**
How pressured (stressed) do you feel by the schoolwork you have to do? (Not at all / A little / Some / A lot).

**SCHOOL-RELATED STRESS**
How stressful have these situations been for you during the last 6 months? Having to study things you do not understand / Teachers expecting too much from you / Keeping up with schoolwork / Concern about your future / Having to make decisions about future work or education / Putting pressure on yourself to meet your future goals / Not getting enough time for leisure / Not enough time for activities outside of school hours / Having too much homework. (Not at all stressful (or has not happened) / A little stressful / Moderately stressful / Quite stressful / Very stressful).

Answers to the first three questions are combined to create a score for stress of school performance ranging from 0 to 12. Responses to questions four to six are combined to create a score for stress of future uncertainty. Answers to questions seven to nine are combined to create a score for stress of school/leisure conflict. Responses to all nine questions are combined to create a total school-related stress score ranging from 0 to 36.


**TEACHER SUPPORT**
Here are some statements about the teachers in your class(es). Please show how much you agree or disagree with each one. I feel that my teachers accept me as I am / I feel that my teachers care about me as
a person / I feel a lot of trust in my teachers. (Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree).

A sum score was generated from the responses to the three items. Scores of 10 or more were classified as high teacher support.

CLASSMATE SUPPORT
Here are some statements about the pupils in your class(es). Please show how much you agree or disagree with each one. The pupils in my class(es) enjoy being together/ Most of the pupils in my class(es) are kind and helpful/ Other pupils accept me as I am. (Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree).

A sum score was generated from the responses to the three items. Scores of 10 or more were classified as high classmate support.

CHAPTER 12: COVID-19 PANDEMIC

IMPACT OF COVID-19 PANDEMIC
Since the start of the COVID-19 pandemic, the lives of many people have been affected, for example, by lockdowns, school closures, home and online learning and social distancing.

What impact did these measures have on the following aspects of your life? (A negative impact means it made things worse, a positive impact means it made things better). Your life as a whole / Your health / Relationships with your family / Relationships with your friends / Your mental health (e.g. dealing with your emotions, stress etc) / Your school performance / Physical activity (e.g. sports, cycling, walks, etc) / What you ate or drank / Your future expectations (e.g. exams, jobs, etc) / Your family financial situation (Very negative/Quite negative/Neither positive nor negative/Quite positive/Very positive).