

Trends in social inequalities in adolescent overweight and low mental health and well-being

Results from Skolebørnsundersøgelsen, the Danish contribution to the international HBSC study

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Preface

This report describes trends in socioeconomic inequality in adolescent overweight and low mental health and well-being, both overall trends in social inequality in the study population and stratified by sex and age group. The analyses are based on data from *Skolebørnsundersøgelsen*, which is the Danish contribution to the international *Health Behaviour in School-aged Children (HBSC)* research project. HBSC has been conducted in Denmark since 1984 and currently involves more than 50 countries worldwide.

The report finds persistent socioeconomic inequalities in adolescent overweight and low mental health and well-being, with lower occupational social class consistently associated with poorer outcomes across three decades. While some indicators showed stable or declining relative inequalities, others - particularly overweight/obesity, low self-esteem, and low mental well-being - revealed widening absolute gaps driven by rising prevalence in the most disadvantaged groups. The findings underscore the importance of continued monitoring and targeted public health efforts to address the uneven distribution of health and well-being among adolescents.

The report is funded by Centre for Childhood Health (Center for Sundt Liv og Trivsel), which commissioned the National Institute of Public Health, University of Southern Denmark, to describe trends in social inequality in overweight and mental health and well-being among 11-, 13-, and 15-year-olds.

We would like to sincerely thank all the participating 11-, 13-, and 15-year-olds in *Skolebørnsundersøgelsen* 1991-2022, as well as the teachers and school management who supported the data collection at their school.

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Content

1 Introduction	5
Aim	6
2 Methods	7
Study design and study population	7
Survey samples	7
Measures	8
Statistical procedures	10
3 Results	11
3.1 Description of study population	11
3.2 Overweight and obesity	12
3.3 Low life satisfaction	18
3.4 Frequent symptoms	23
3.5 Low self-efficacy	30
3.6 Low self-esteem	35
3.7 Loneliness	41
3.8 Low mental well-being	48
Conclusion	52
Funding	53
References	54

1 Introduction

Overweight and low mental health and well-being in childhood and adolescence are leading causes of disease burden amongst adolescents internationally and in Denmark and constitute major public health challenges (GBD 2021 Adolescent BMI Collaborators, 2025; Tian et al., 2025). Both health indicators are associated with immediate and long-term health and academic consequences (Chung et al., 2018; Dalsgaard et al., 2020; Grigorian et al., 2023; Morales-Suárez-Varela et al., 2025; Patel et al., 2007; Puder & Munsch, 2010; Ryder et al., 2020; Tolstrup et al., 2025). Over recent decades, research has documented a substantial increase in the prevalence of both overweight and low mental health and well-being among children and adolescents (Madsen et al., 2023; Marquez & Long, 2021). The rise in low mental health and well-being appears to be particularly pronounced among girls and older adolescents.

In addition to the increasing prevalence of low mental health and well-being and overweight, pronounced social inequalities are evident in both health indicators, with a higher prevalence of overweight and low mental health and well-being, the lower the socioeconomic position (Rasmussen et al., 2020). Social inequality in health refers to systematic differences in health outcomes between socioeconomic groups. Substantial evidence shows that adolescents from lower socioeconomic backgrounds are at higher risk of poor health and more frequently engage in harmful health behaviours (Inchley et al., 2023; Viner et al., 2012). Such inequality in child and adolescent health is a significant public health concern, as it prevents young people from lower socioeconomic groups from realizing their full health potential (Patton et al., 2016; Viner et al., 2012).

Together with marked increases in the prevalence of overweight and low mental health and well-being, research indicates that social inequalities in these health indicators have remained largely stable over time among Danish adolescents (Holstein et al., 2024; Inchley, 2017; *Social ulighed i børn og unges udvikling, sundhed og trivsel*, 2022; Sorensen et al., 2025). For example, in a study of 11- to 15-year-old adolescents, Holstein and colleagues (2024) examined trends in social inequalities in overweight status and indicators of mental health, alongside several other health outcomes over 40 years. They concluded that, despite substantial changes in the overall prevalence of overweight status and low mental health during this period, the magnitude of social inequality in these indicators remained stable.

While overall trends indicate that social inequalities in overweight and mental health and well-being have remained relatively stable over time, important subgroup differences may be obscured in these analyses. It therefore remains unclear whether trends in social inequality are uniform across key demographic groups. Examining trends in social inequalities within strata of sex and age groups may provide insights into whether social gradients have evolved differently in groups that have experienced different trends in weight status and mental health and well-being over time. Understanding which groups are most affected can help pinpoint drivers of trends in mental health and overweight, and is critical for understanding how to improve children's mental health and well-being at the population level (Collishaw & Sellers, 2020).

Aim

This report aims to

- 1) describe trends in socioeconomic inequality in adolescent overweight and low mental health and well-being, and
- 2) further describe these trends in each sex and age group.

2 Methods

Study design and study population

The results of the current report are based on *Skolebørnsundersøgelsen*, which is the Danish contribution to the international *Health Behaviour in School-aged Children* (HBSC) study (Roberts et al., 2009; Samdal et al., 2025). HBSC collects questionnaire data on health and health-related behaviours from nationally representative samples of students in 5th, 7th and 9th grade (corresponding to 11-, 13-, and 15-year-olds) according to a repeated cross-sectional design. Data are collected every fourth year using an international uniform protocol for sampling, measurement procedures, and data collection. This consistent methodology allows for direct comparisons across survey cycles and countries involved in the HBSC study. All questionnaires in the present study were completed by students during regular school lessons.

Denmark has been a member of the HBSC network since the early 1980s, and the current report covers data from the Danish survey rounds in 1991, 1994, 1998, 2002, 2006, 2010, 2014, 2018, and 2022 (Madsen et al., 2023).

Survey samples

In each survey year, schools were selected at random from a complete list of all public and private schools in Denmark, with a new school sample drawn for each survey round. Within participating schools, all students enrolled in grades 5, 7, and 9 were invited to complete the HBSC questionnaire in their classroom setting.

Table 2.1 presents the number of schools, students and participation rates across the nine survey rounds. The overall student response rate was 84.9%, ranging from 90.2% in 1991 to 70.1% in 2022. The average school participation rate across all waves was 37.4%, with participation declining from 82.6% in 1991 to 16.0% in 2022. The main reason for schools opting out was their recent involvement in similar surveys. The particularly low participation rate at the student and school levels in 2022 also reflected competing demands related to the COVID-19 pandemic.

Table 2.1 Number of schools, students, and participation rates by survey year

	Survey year								
	1991	1994	1998	2002	2006	2010	2014	2018	2022
Number of invited schools	23	50	64	78	100	137	168	200	588
Number of participating schools	19	45	55	68	80	73	48	45	94
School participation rate, %	82.6	90.0	85.9	87.2	80.0	53.3	28.6	22.5	16.0
Student participation rate, %	90.2	89.5	89.9	89.3	88.8	86.3	85.7	84.8	70.1
Number of participating students	1,860	4,046	5,205	4,824	6,269	4,922	4,534	3,660	5,823

Measures

Outcome variables

The measures applied for weight status and mental health and well-being indicators are presented in Table 2.2, including the period in which the item has been included in Skolebørnsundersøgelsen and a description of the category modelled in the analyses.

Table 2.2 Indicators of weight status and mental health and well-being

Indicator (period)	Item formulation and response categories	Category modelled in analyses
Weight status (1998-2022)	How much do you weigh without clothes (kg)? How tall are you without shoes (cm)? $BMI = \text{weight (kg)} / (\text{height (m)})^2$	Overweight/Obesity is defined by age and sex specific BMI cut-points corresponding to $BMI \geq 25$ among adults according to the <i>International Obesity Task-force</i> (Cole & Lobstein, 2012)
Life satisfaction (2002-2022)	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? Tick the box next to the number that best describes where you stand. Response options: 0-10	Low life satisfaction: score 0-5, in accordance with (Holstein et al., 2020)
Psychosomatic symptoms (1991-2022)	In the last 6 months: how often have you had the following....? Headache, Stomachache, Backache, Feeling low, Irritability or bad temper, Feeling nervous, Difficulties in getting to sleep, and Feeling dizzy. Response options: About every day, More than once a week, About every week, About every month, Rarely or never.	Frequent symptoms: At least one symptom every day, in accordance with (Madsen et al., 2023)
Self-efficacy (2010-2022)	- How often do you find a solution to a problem if you try hard enough? - How often do you manage to do the things that you decide to do? Response options: Always (1), Most of the time (2), Sometimes (3), Rarely (4), Never (5) Sum score: 2-10	Low self-efficacy: Score 6-10, in accordance with (Madsen et al., 2023)
Self-esteem (2014-2022)	How much do you agree or disagree with the following: - I like myself - I am good enough as I am - Others my age like me Response options: Strongly agree (1), Agree (2), Neither agree nor disagree (3), Disagree (4), and Strongly disagree (5). Sum score: 3-15	Low self-esteem: Score 8-15, in accordance with (Madsen et al., 2023)

Loneliness (1991-2022)	Do you feel lonely? Response options: Yes, very often, Yes, often, Sometimes, Never.	Lonely: Very often or often, in accordance with (Madsen et al., 2019)
Mental well-being scale (2014-2022)	A Danish HBSC derivative of the Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS): How often...? - do you think it will go well in the future - do you feel useful - do you feel relaxed - do you deal with problems well - do you think clearly - do you feel close to other people - are you able to make up your own mind about things Response options: Always, (5), Most of the time (4), Sometimes (3), Rarely (2), and Never (1) Sum score: 7-35	Low mental well-being: Score 7-23, in accordance with (Damsgaard & Madsen, 2020)

Socioeconomic position

Students' socioeconomic background was assessed using information on their parents' occupational social class (OSC). To obtain this information, students were asked a series of questions about each parent: whether the mother or father had a job; if not, the reason for their lack of employment; and if employed, the type of workplace (e.g., hospital, bank, restaurant) and the specific job performed (e.g., teacher, bus driver). Based on the students' answers, the research team coded parental occupations according to the Danish Occupational Social Class classification system (Christensen et al., 2014). This system ranges from I (highest) to V (lowest), with an additional category (VI) for parents who were economically inactive and received benefits such as unemployment or disability compensation.

The same questions and coding framework were used in all survey years. Although job titles may change over time, this did not affect the coding, as the system relies on two general indicators that remain stable: (1) the level of education typically required for the occupation and (2) the degree of control over resources or personnel associated with the job. Each student was assigned an OSC level based on the highest-ranking parent. For analysis, OSC was grouped into three categories: high (I–II, including professional and managerial positions and large business owners), middle (III–IV, such as technical or administrative roles, small business owners, and skilled workers), and low (V–VI, unskilled workers and economically inactive). Students for whom OSC could not be determined were excluded from the current analyses.

Statistical procedures

This study included students with complete information about sex, age group, and the family's Occupational Social Class (OSC). For each outcome indicator, absolute prevalences (percentages) were calculated.

Social inequality was assessed in both relative and absolute terms. Assessment of absolute social inequality was estimated by prevalence differences (PD) between low and high OSC groups. Relative social inequality was estimated by prevalence ratios (PR) between low and high OSC groups and between middle and high OSC groups. 95% confidence limits were calculated for the inequality measures by multilevel regression to account for the cluster sampling by schools in each survey year. Because conclusions about the presence, size, and trends of health inequalities can differ depending on whether they are expressed in relative or absolute terms, reporting both captures complementary aspects of social inequalities and increases transparency (Moonesinghe & Beckles, 2015). The relative measure of inequality describes the proportional difference in health outcomes between low and high OSC and is useful for comparing inequalities across, e.g., time, because it is scale-free and highlights how much more or less likely a given group is to experience an outcome. The absolute measure of inequality quantifies the excess number of percentage-point differences between OSC groups and is particularly informative for assessing the progress in reducing the magnitude of the excess risk between individuals in low and high OSC groups. To fully judge the public health impact of trends in absolute and relative inequalities they must always be related to trends in the overall prevalences.

All outcome measures were standardized by sex and/or age group, depending on whether the outcome was stratified by sex or age. The standardization corresponds to an equal number of sex and/or equal number of age groups in each OSC stratum and in each OSC/sex and OSC/age stratum for each survey year.

3 Results

3.1 Description of study population

Table 3.1 shows for each survey year the distribution of the students' sex, age group, and Occupational Social Class together with the overall prevalences (%) of the analysed outcome measures. The prevalence percent estimates are standardized by sex and age group. For each outcome variable, the total number of non-missing responses (n) used in the analyses is also presented.

Table 3.1 Study population by survey year, sex, age group, OSC, and outcomes

	Survey year								
	1991	1994	1998	2002	2006	2010	2014	2018	2022
Total survey population, N	1,860	4,046	5,205	4,824	6,269	4,922	4,534	3,660	5,823
Applied study population ^a , n	1,696	3,683	4,810	4,306	5,047	4,171	3,946	3,015	4,749
Sex									
Girls, %	49.9	50.2	50.4	51.3	50.8	49.9	51.1	49.9	50.1
Age-group									
11-year-olds (grade 5), %	31.6	31.5	34.0	36.3	37.7	37.4	32.6	40.5	35.9
13-year-olds (grade 7), %	34.6	34.9	35.7	33.6	35.4	33.6	34.7	33.4	35.9
15-year-olds (grade 9), %	33.8	33.6	30.3	30.1	26.9	29.1	32.6	26.1	28.2
Occupational Social Class (OSC)									
High OSC, %	28.2	33.0	27.9	24.7	27.6	38.6	42.2	42.8	52.0
Middle OSC, %	51.8	48.6	49.6	54.3	49.6	42.2	41.5	44.7	37.8
Low OSC, %	20.0	18.4	22.5	21.0	22.9	19.2	16.3	12.4	10.2
Weight status, n			4,193	3,828	4,264	3,454	3,687	2,751	4,381
Overweight and obesity ^b , %			7.7	11.2	10.1	9.7	8.9	10.9	11.3
Life satisfaction, n				4,262	4,994	4,121	3,939	3,012	4,733
Low life satisfaction ^b , %				12.3	9.5	13.4	10.9	11.2	13.7
Multiple health complaints, n	1,690	3,666	4,794	4,296	5,041	4,163	3,929	3,013	4,746
Frequent symptoms ^b , %	16.6	19.3	19.3	21.6	22.1	24.2	25.1	24.9	30.9
Self-efficacy, n						2,661 ^c	3,616	2,588	4,408
Low self-efficacy ^b , %						10.9	13.1	11.1	15.9
Self-esteem, n							3,507	2,638	4,530
Low self-esteem ^b , %							21.9	21.5	31.6
Loneliness, n	1,679	3,675	4,794		5,007	2,675 ^c	3,941	3,008	4,543
Lonely ^b , %	4.5	5.0	6.2		7.2	4.8	7.0	5.6	8.6
Mental well-being scale, n							2,558 ^c	1,696 ^c	3,004 ^c
Low mental well-being ^b , %							13.5	14.8	20.9

^a Study population after exclusion of unclassifiable Occupational Social Class.

^b Sex- and age-standardized prevalences.

^c Only 13- and 15-year-olds.

3.2 Overweight and obesity

Table 3.2a presents the prevalence of overweight and obesity (combined) across high, middle, and low OSC groups for each survey year from 1998 to 2022 in the study population. For each survey year, the table also reports absolute social inequality (prevalence difference, 95% CI) and relative social inequality (prevalence ratio, 95% CI).

Across all survey years, both absolute and relative social inequalities were seen, characterized by overweight and obesity being more prevalent in low OSC compared to high OSC. The absolute inequality ranged from a prevalence difference of 5.4 (95% CI: 3.1–7.7) in 1998 to 8.7 (95% CI: 4.4–13.0) in 2018. The relative inequality ranged from a prevalence ratio of 1.8 (95% CI: 1.4–2.4) in 2002 to 2.4 (95% CI: 1.8–3.1) in 2014. The results indicate a tendency towards growing absolute inequality over time, primarily due to an increase in the prevalence of overweight in low OSC. No clear trend in relative inequality was seen. Generally, all confidence intervals overlap. The results are illustrated in Figure 3.2a.

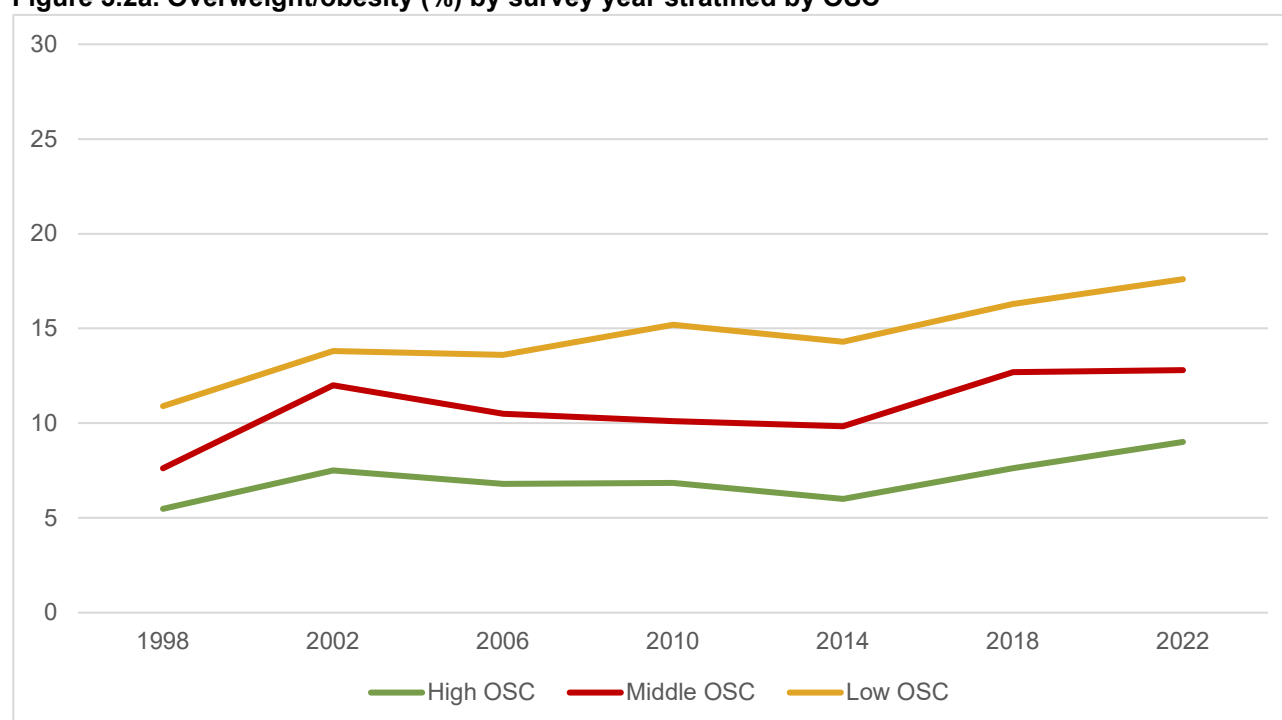
Table 3.2a. Absolute and relative social inequality in overweight and obesity from 1998 to 2022^a

Year	Absolute social inequality				Relative social inequality		
	Prevalence (%) of overweight/obesity by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of overweight/obesity (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
1998	5.5	7.6	10.9	5.4 (3.1-7.7)	1	1.4 (1.1-1.8)	2.0 (1.5-2.7)
2002	7.5	12.0	13.8	6.3 (3.4-9.3)	1	1.6 (1.3-2.0)	1.8 (1.4-2.4)
2006	6.8	10.5	13.6	6.8 (4.2-9.5)	1	1.5 (1.2-1.9)	2.0 (1.5-2.6)
2010	6.8	10.1	15.2	8.3 (4.7-11.9)	1	1.5 (1.2-1.9)	2.2 (1.6-3.1)
2014	6.0	9.8	14.3	8.3 (5.2-11.4)	1	1.6 (1.3-2.1)	2.4 (1.8-3.1)
2018	7.6	12.7	16.3	8.7 (4.4-13.0)	1	1.7 (1.3-2.1)	2.1 (1.6-3.0)
2022	9.0	12.8	17.6	8.6 (4.6-12.6)	1	1.4 (1.2-1.7)	2.0 (1.5-2.6)

^aStandardized by sex and age

^bPrevalence difference: Percent point difference between high and low OSC

Statistically significant estimates are highlighted in bold

Figure 3.2a. Overweight/obesity (%) by survey year stratified by OSC^a^a Standardized by sex and age group

Social inequality in overweight/obesity by sex

Table 3.2b presents the absolute and relative social inequality in overweight/obesity from 1998 to 2022, separately for boys and girls. A few associations were insignificant, but all estimates remained positive, reflecting that overweight and obesity were more prevalent in low OSC compared to high OSC in both boys and girls. The results indicate a larger increase in overweight/obesity over time among girls in low OSC compared to high OSC, causing a tendency towards growing absolute inequality among girls. Neither in the absolute inequality among boys nor in the relative inequality among both boys and girls a trend was seen across survey year. All confidence intervals were overlapping. These results are illustrated in Figure 3.2b.

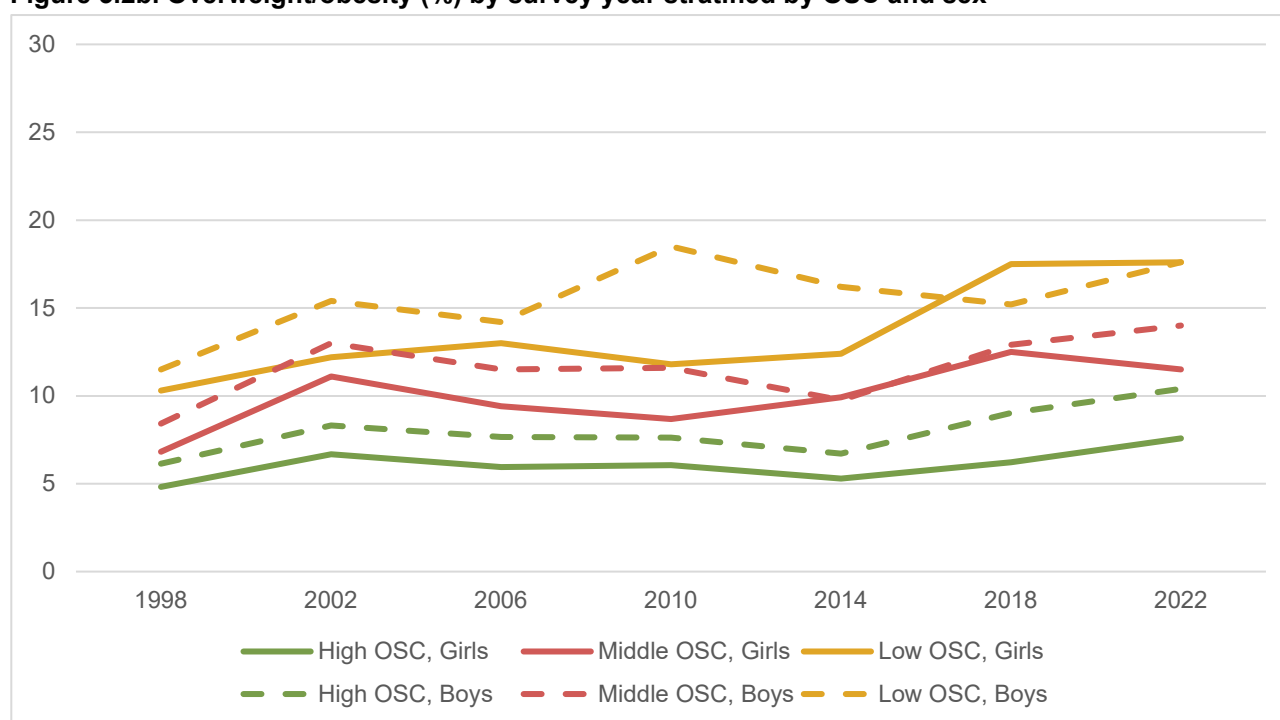
Table 3.2b. Absolute and relative social inequality in overweight and obesity from 1998 to 2022, stratified by sex^a

Year	Absolute social inequality				Relative social inequality		
	Prevalence (%) of overweight/obesity by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of overweight/obesity (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
1998	6.1	8.4	11.5	5.4 (2.1-8.6)	1	1.4 (0.9-2.1)	1.9 (1.3-2.8)
2002	8.3	13.0	15.4	7.1 (2.3-11.9)	1	1.6 (1.1-2.2)	1.9 (1.2-2.8)
2006	7.7	11.5	14.2	6.6 (2.8-10.4)	1	1.5 (1.1-2.1)	1.9 (1.3-2.7)
2010	7.6	11.6	18.5	10.9 (5.6-16.2)	1	1.5 (1.1-2.2)	2.4 (1.6-3.6)
2014	6.7	9.8	16.2	9.5 (5.0-14.1)	1	1.5 (1.0-2.2)	2.4 (1.7-3.5)
2018	9.0	12.9	15.2	6.1 (-0.8-13.1)	1	1.4 (1.1-1.9)	1.7 (1.0-2.8)
2022	10.4	14.0	17.6	7.2 (1.2-13.2)	1	1.7 (1.2-2.5)	1.3 (1.0-1.7)
Girls							

1998	4.8	6.8	10.3	5.4 (2.2-8.7)	1	1.4 (1.0-2.1)	2.1 (1.4-2.3)
2002	6.7	11.1	12.2	5.6 (1.6-9.6)	1	1.7 (1.2-2.3)	1.8 (1.2-2.7)
2006	6.0	9.4	13.0	7.1 (3.3-10.9)	1	1.6 (1.1-2.3)	2.2 (1.4-3.3)
2010	6.1	8.7	11.8	5.7 (2.0-9.5)	1	1.4 (0.9-2.3)	2.0 (1.3-3.0)
2014	5.3	9.9	12.4	7.1 (3.5-10.6)	1	1.9 (1.4-2.5)	2.3 (1.7-3.3)
2018	6.2	12.5	17.5	11.3 (4.4-18.2)	1	2.0 (1.5-2.7)	2.8 (1.7-4.6)
2022	7.6	11.5	17.6	10.0 (4.3-15.7)	1	1.5 (1.2-2.0)	2.3 (1.6-3.4)

^aStandardized by age^bPrevalence difference: percent point difference between high and low OSC, standardized age

Statistically significant estimates are highlighted in bold

Figure 3.2b. Overweight/obesity (%) by survey year stratified by OSC and sex^a^aStandardized by age group

Social inequality in overweight/obesity by age groups

Table 3.2c presents the social inequality in overweight/obesity stratified by age groups from 1998 to 2022. All associations remained positive, but a number of estimates were insignificant – probably reflecting small groups of adolescents. Across all age groups, no clear trends in either absolute or relative social inequality were seen. One deviating finding was the large absolute social inequality among 15-year-olds in 2022. This reflected a markedly higher overweight/obesity prevalence among 15-year-olds in low OSC in 2022 compared to other survey years.

Table 3.2c. Absolute and relative social inequality in overweight and obesity from 1998 to 2022, stratified by age^a

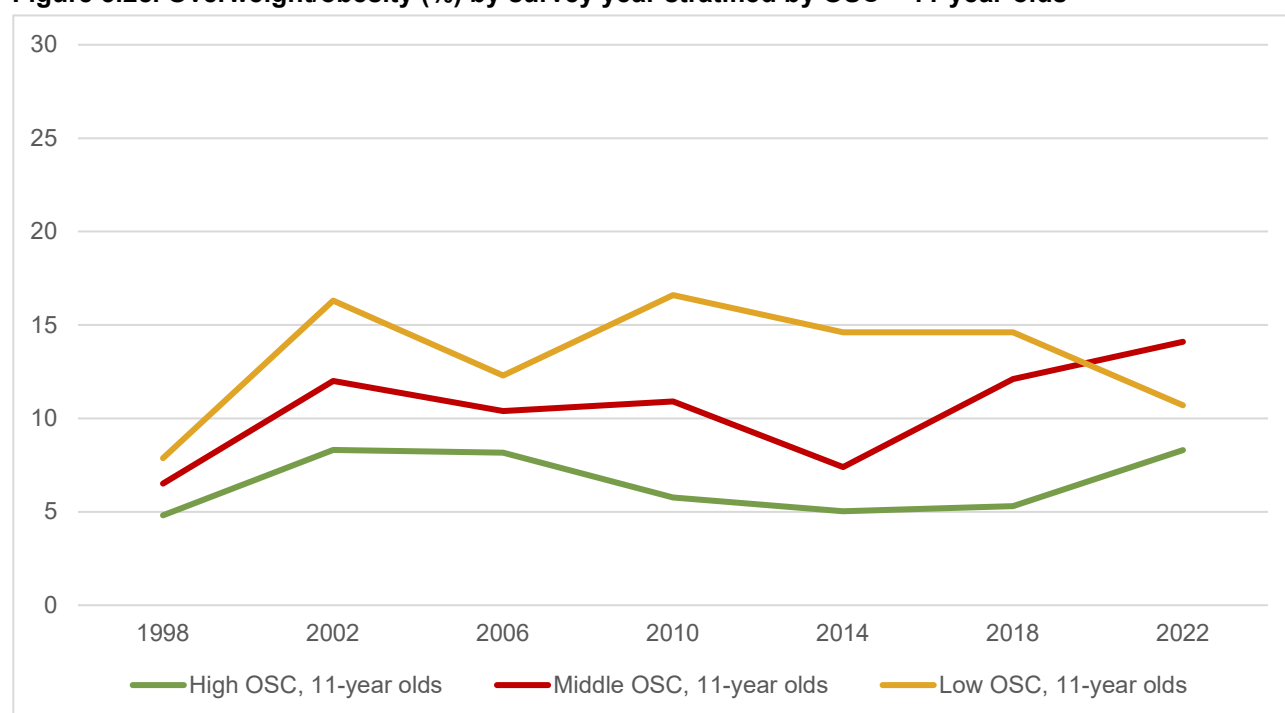
Year	Absolute social inequality				Relative social inequality		
	Prevalence (%) of overweight/obesity by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of overweight/obesity (95% CI) by OSC		
11 years	High	Middle	Low		High	Middle	Low
1998	4.8	6.5	7.9	3.1 (-0.4-6.5)	1	1.4 (0.9-2.1)	1.6 (1.0-2.8)
2002	8.3	12.0	16.3	8.0 (3.4-12.7)	1	1.4 (1.1-2.0)	2.0 (1.4-2.8)
2006	8.2	10.4	12.3	4.2 (-0.2-8.5)	1	1.3 (0.9-1.9)	1.5 (1.0-2.3)
2010	5.8	10.9	16.6	10.9 (5.5-16.2)	1	1.9 (1.2-2.9)	2.9 (1.8-4.7)
2014	5.0	7.4	14.6	9.6 (3.4-15.8)	1	1.5 (0.9-2.4)	2.9 (1.8-4.8)
2018	5.3	12.1	14.6	9.3 (2.2-16.5)	1	2.3 (1.4-3.8)	2.8 (1.5-5.0)
2022	8.3	14.1	10.7	2.4 (-2.9-7.7)	1	1.7 (1.2-2.3)	1.3 (0.8-2.2)
13 years							
1998	5.4	7.8	10.4	5.0 (1.6-8.5)	1	1.5 (1.0-2.2)	1.9 (1.2-3.1)
2002	6.9	10.4	10.3	3.4 (-0.6-7.4)	1	1.5 (1.0-2.3)	1.5 (0.9-2.4)
2006	4.6	8.5	12.2	7.6 (3.7-11.5)	1	1.9 (1.2-3.0)	2.7 (1.7-4.2)
2010	6.6	8.8	15.4	8.8 (2.7-14.9)	1	1.3 (0.9-2.0)	2.3 (1.4-3.8)
2014	4.9	10.3	11.8	6.9 (2.7-11.2)	1	2.1 (1.5-3.0)	2.4 (1.5-4.0)
2018	6.4	10.3	13.7	7.3 (0.1-14.5)	1	1.6 (1.1-2.4)	2.1 (1.2-3.9)
2022	8.6	11.0	14.9	6.3 (0.4-12.2)	1	1.3 (1.0-1.7)	1.7 (1.1-2.6)
15 years							
1998	6.2	8.5	14.4	8.2 (3.3-13.1)	1	1.4 (1.0-1.9)	2.3 (1.5-3.6)
2002	7.2	13.8	14.9	7.6 (1.0-14.2)	1	1.9 (1.1-3.2)	2.1 (1.1-3.7)
2006	7.7	12.4	16.4	8.7 (3.7-13.8)	1	1.6 (1.1-2.5)	2.1 (1.3-3.4)
2010	8.2	10.8	13.4	5.3 (-0.6-11.1)	1	1.3 (0.9-2.1)	1.7 (1.0-2.8)
2014	8.1	11.8	16.5	8.4 (2.9-13.8)	1	1.5 (1.0-2.1)	2.0 (1.4-2.9)
2018	11.1	15.6	20.6	9.5 (0.8-18.1)	1	1.4 (1.0-1.9)	1.9 (1.2-3.0)
2022	10.2	13.3	27.3	17.2 (9.8-24.5)	1	1.3 (0.9-2.0)	2.7 (1.9-3.9)

^aStandardized by sex

^bPrevalence difference: percent point difference between high and low OSC

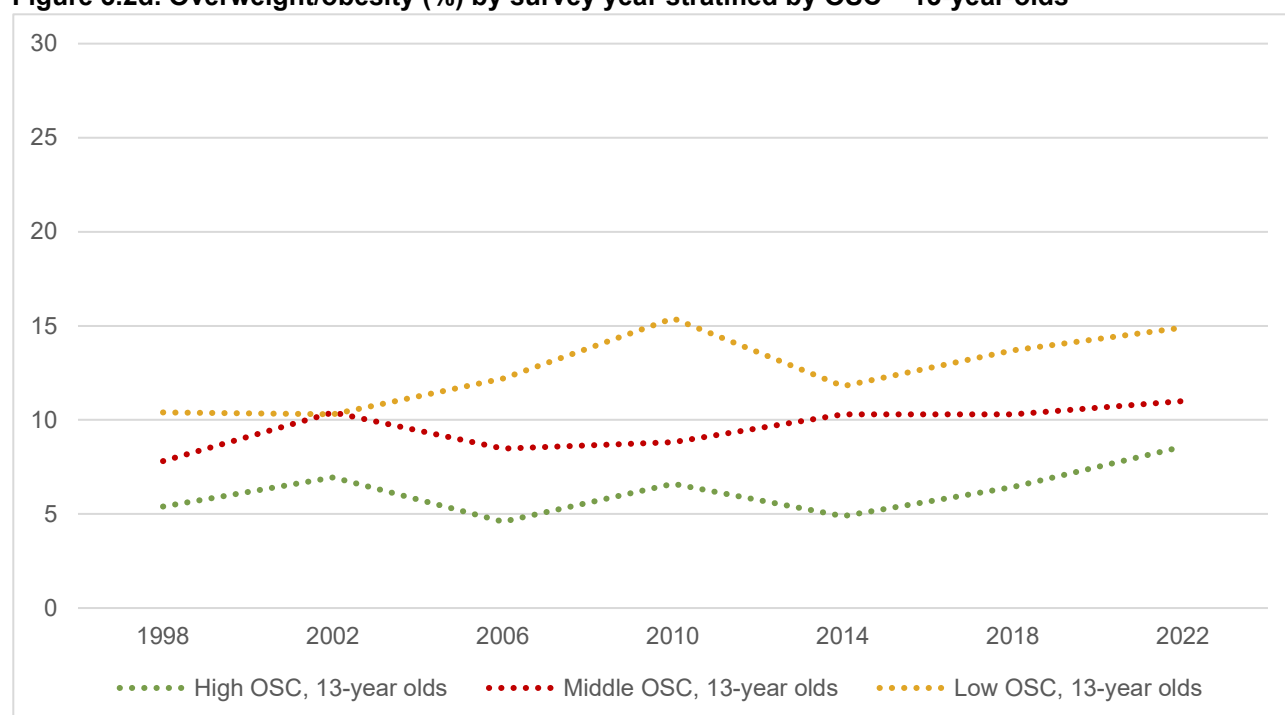
Statistically significant estimates are highlighted in bold

Figure 3.2c. Overweight/obesity (%) by survey year stratified by OSC – 11-year-olds^a



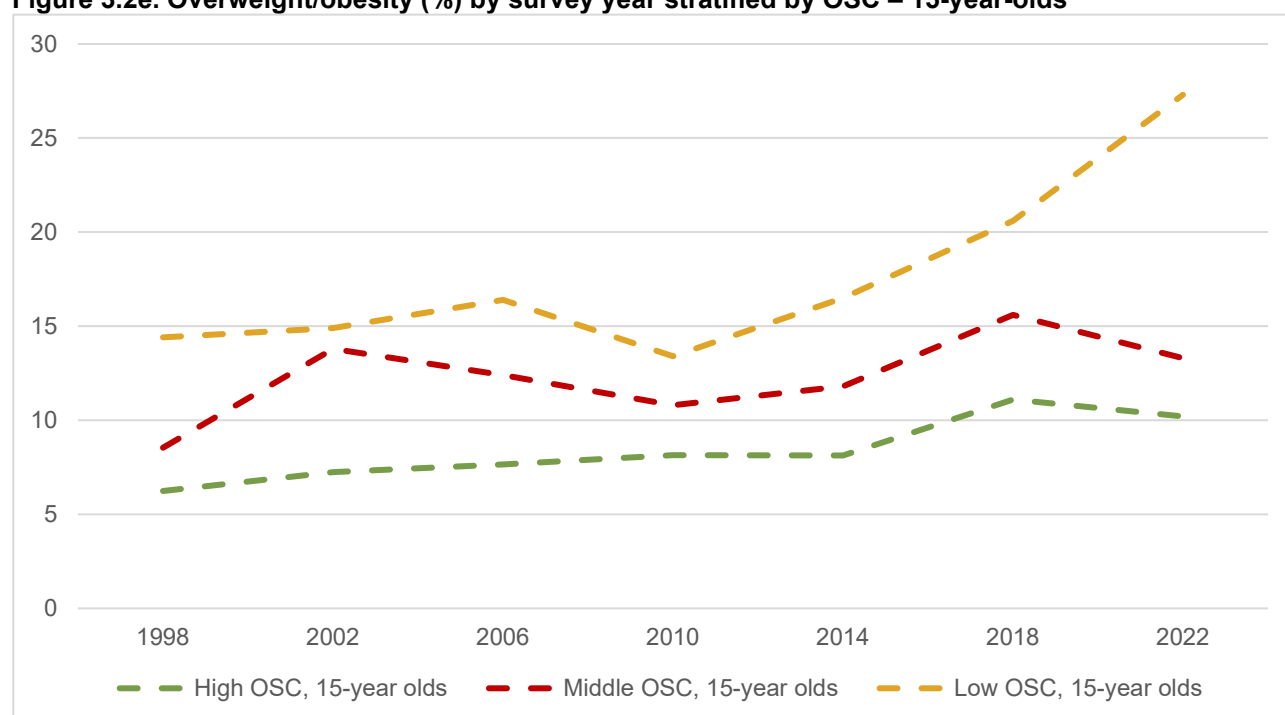
^a Standardized by sex

Figure 3.2d. Overweight/obesity (%) by survey year stratified by OSC – 13-year-olds^a



^a Standardized by sex

Figure 3.2e. Overweight/obesity (%) by survey year stratified by OSC – 15-year-olds^a



^a Standardized by sex

3.3 Low life satisfaction

Table 3.3a. shows the prevalence of low life satisfaction across high, middle, and low OSC groups for each survey year. For each year, the table also shows the absolute social inequality (prevalence difference with 95% CI) and relative social inequality (prevalence ratio with 95% CI) in low life satisfaction. Across all survey years, social inequality in low life satisfaction was evident in both absolute and relative terms and remained relatively stable over time. The absolute inequality ranged from 5.0 (95% CI: 2.3–7.8) in 2002 to 6.5 (95% CI: 2.8–10.2) in 2022, while the relative inequality fluctuated with a prevalence ratio between 1.3 (95% CI: 0.95–1.71) in 2014 and 1.72 (95% CI: 1.38–2.14) in 2010, with overlapping confidence intervals throughout the period. These trends are illustrated in Figure 3.3a.

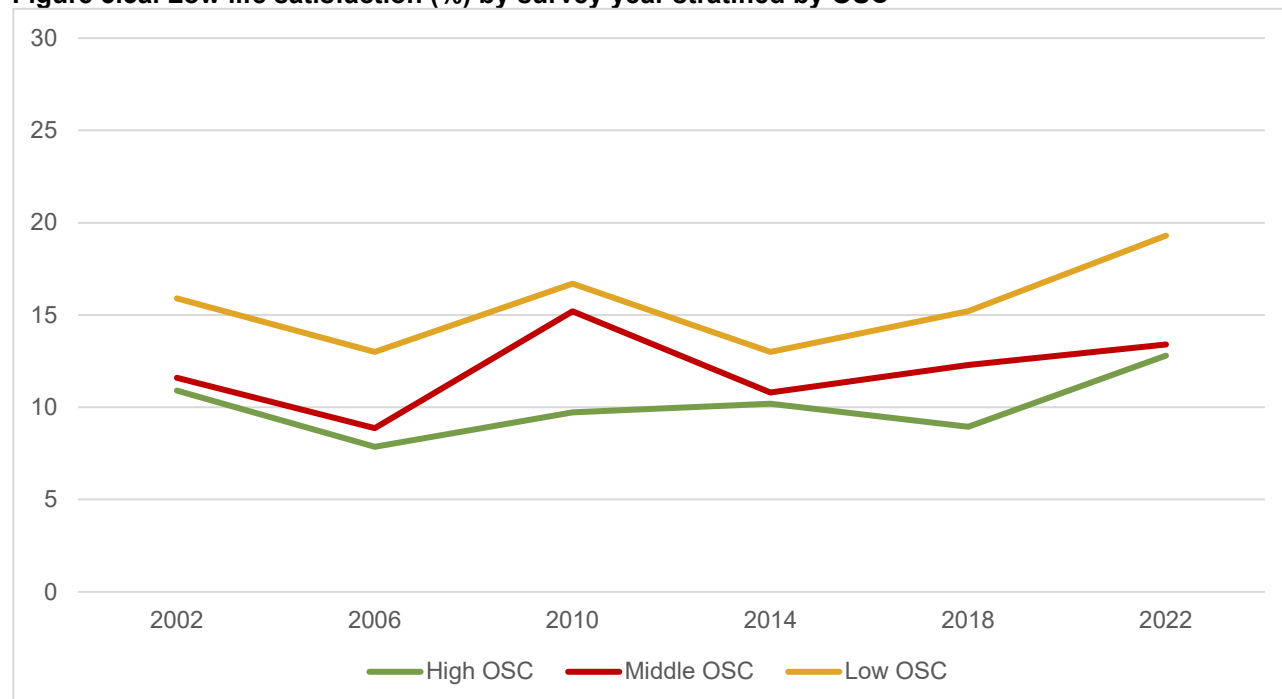
Table 3.3a. Absolute and relative social inequality in low life satisfaction from 2002 to 2022^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low life satisfaction by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low life satisfaction (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
2002	10.9	11.6	15.9	5.0 (2.3-7.8)	1	1.1 (0.9-1.3)	1.5 (1.2-1.8)
2006	7.9	8.9	13.0	5.1 (2.6-7.6)	1	1.1 (0.9-1.4)	1.7 (1.3-2.1)
2010	9.7	15.2	16.7	7.0 (3.9-10.1)	1	1.6 (1.3-1.9)	1.7 (1.4-2.1)
2014	10.2	10.8	13.0	2.8 (-0.8-6.3)	1	1.1 (0.9-1.2)	1.3 (1.0-1.7)
2018	9.0	12.3	15.2	6.3 (1.4-11.2)	1	1.4 (1.1-1.7)	1.7 (1.2-2.4)
2022	12.8	13.4	19.3	6.5 (2.8-10.2)	1	1.1 (0.9-1.2)	1.5 (1.2-1.8)

^aStandardized by sex and age

^bPrevalence difference: percent point difference between high and low OSC, standardized by sex and age
Statistically significant estimates are highlighted in bold

Figure 3.3a. Low life satisfaction (%) by survey year stratified by OSC^a



^aStandardized by sex and age group

Social inequality in low life satisfaction by sex

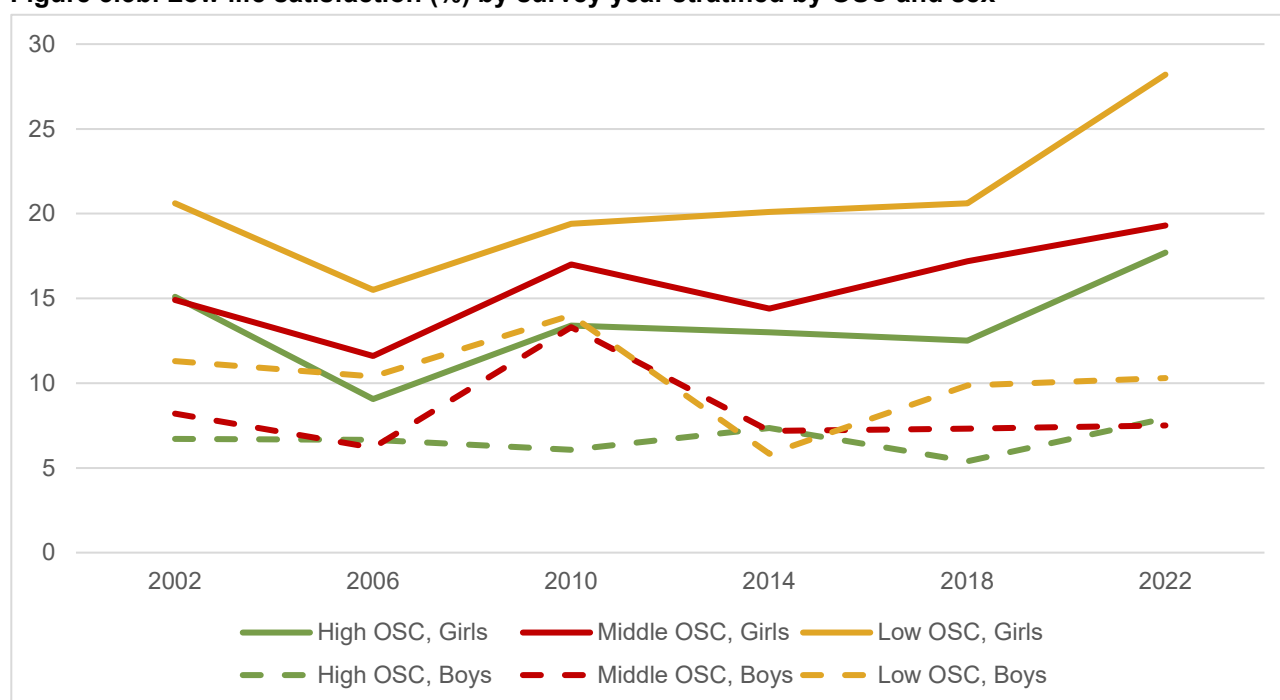
Table 3.3b presents the absolute and relative social inequality in low life satisfaction from 2002 to 2022, separately for boys and girls. Among boys, no systematic trends in absolute or relative social inequality were seen, and both prevalence differences and ratios fluctuated across years with overlapping and insignificant confidence intervals. For girls, the prevalence difference increased from 5.5 (1.1-9.9) in 2002 to 10.5 (4.1-16.9) in 2022, indicating an increase in the social inequality in low life satisfaction across time among girls, primarily driven by an increase in the prevalence of low life satisfaction among girls in low OSC. However, confidence intervals were broad and overlapping. The relative social inequality among girls was relatively stable throughout the period. The results are depicted in Figure 3.3b.

Table 3.3b. Absolute and relative social inequality in low life satisfaction from 2002 to 2022, stratified by sex^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low life satisfaction by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low life satisfaction (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
2002	6.7	8.2	11.3	4.6 (1.2-8.0)	1	1.2 (0.8-1.8)	1.7 (1.2-2.5)
2006	6.7	6.2	10.4	3.7 (0.3-7.1)	1	0.9 (0.6-1.4)	1.6 (1.0-2.4)
2010	6.1	13.3	14.0	7.9 (4.3-11.5)	1	2.2 (1.6-3.0)	2.3 (1.6-3.3)
2014	7.4	7.2	5.8	-1.5 (-4.6-1.6)	1	1.0 (0.7-1.3)	0.8 (0.5-1.3)
2018	5.4	7.3	9.9	4.5 (-1.6-10.5)	1	1.4 (0.9-2.1)	1.8 (0.9-3.9)
2022	7.9	7.5	10.3	2.4 (-1.7-6.5)	1	1.0 (0.7-1.3)	1.3 (0.9-2.0)
Girls							
2002	15.1	14.9	20.6	5.5 (1.1-9.9)	1	1.0 (0.8-1.2)	1.4 (1.1-1.8)
2006	9.1	11.6	15.5	6.5 (2.4-10.5)	1	1.3 (0.9-1.8)	1.7 (1.2-2.5)
2010	13.4	17.0	19.4	6.0 (0.7-11.3)	1	1.3 (1.0-1.6)	1.5 (1.1-2.0)
2014	13.0	14.4	20.1	7.1 (1.6-12.6)	1	1.1 (0.9-1.4)	1.5 (1.1-2.1)
2018	12.5	17.2	20.6	8.1 (1.0-15.2)	1	1.4 (1.1-1.7)	1.7 (1.1-2.4)
2022	17.7	19.3	28.2	10.5 (4.1-16.9)	1	1.1 (0.9-1.3)	1.6 (1.3-2.0)

^aStandardized by age

^bPrevalence difference: percent point difference between high and low OSC, standardized age
Statistically significant estimates are highlighted in bold

Figure 3.3b. Low life satisfaction (%) by survey year stratified by OSC and sex^a^aStandardized by age group

Social inequality in low life satisfaction by age groups

Table 3.3c shows the social inequality in low life satisfaction from 2002 to 2022 stratified by age groups, which is also illustrated graphically in Figure 3.3c-e. No clear trends in either absolute or relative social inequality in low life satisfaction are seen in any of the three age groups. Confidence intervals were broad and overlapping, reflecting small groups of adolescents.

Table 3.3c. Absolute and relative social inequality in low life satisfaction from 2002 to 2022, stratified by age^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low life satisfaction by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of low life satisfaction (95% CI) by OSC		
11 years	High	Middle	Low		High	Middle	Low
2002	11.6	10.5	11.4	-0.2 (-5.1-4.7)	1	0.9 (0.6-1.3)	1.0 (0.6-1.5)
2006	4.7	8.1	12.0	7.3 (4.1-10.5)	1	1.7 (1.1-2.7)	2.6 (1.7-3.9)
2010	9.7	12.0	16.6	7.0 (2.0-12.0)	1	1.2 (0.9-1.8)	1.7 (1.2-2.5)
2014	9.1	8.2	11.1	2.0 (-4.1-8.1)	1	0.9 (0.6-1.5)	1.2 (0.7-2.2)
2018	6.2	9.5	11.3	5.2 (-0.4-10.7)	1	1.5 (1.1-2.2)	1.8 (1.1-3.1)
2022	9.6	9.6	17.8	8.2 (3.0-13.4)	1	1.0 (0.7-1.4)	1.9 (1.3-2.6)
13 years							
2002	13.1	13.0	17.9	4.7 (-0.7-10.2)	1	1.0 (0.7-1.4)	1.4 (0.9-2.0)
2006	7.8	9.3	11.5	3.6 (-0.1-7.4)	1	1.2 (0.9-1.6)	1.5 (1.0-2.2)
2010	10.8	17.7	16.9	6.1 (2.2-10.1)	1	1.6 (1.2-2.2)	1.6 (1.2-2.1)
2014	9.8	12.3	15.2	5.4 (-0.8-11.6)	1	1.3 (0.9-1.7)	1.6 (1.0-2.5)
2018	11.1	15.6	16.0	4.9 (0.3-9.5)	1	1.4 (1.1-1.9)	1.4 (1.0-2.0)

2022	14.8	14.5	20.1	5.3 (-1.7-12.3)	1	1.0 (0.8-1.3)	1.4 (0.9-2.0)
15 years							
2002	8.0	11.1	18.6	10.6 (4.6-16.6)	1	1.4 (0.9-2.1)	2.3 (1.5-3.7)
2006	11.1	9.3	15.4	4.3 (-0.3-9.0)	1	0.8 (0.6-1.2)	1.4 (1.0-2.0)
2010	8.7	15.8	16.5	7.8 (2.9-12.7)	1	1.8 (1.3-2.6)	1.9 (1.3-2.8)
2014	11.7	11.8	12.6	1.0 (-5.8-7.8)	1	1.0 (0.8-1.3)	1.1 (0.6-1.9)
2018	9.6	11.7	18.4	8.8 (-0.8-18.4)	1	1.2 (0.8-2.0)	1.9 (1.0-3.6)
2022	13.9	16.1	19.9	5.9 (-2.7-14.6)	1	1.2 (0.9-1.5)	1.4 (0.9-2.2)

^aStandardized by sex^bPrevalence difference: percent point difference between high and low OSC

Statistically significant estimates are highlighted in bold

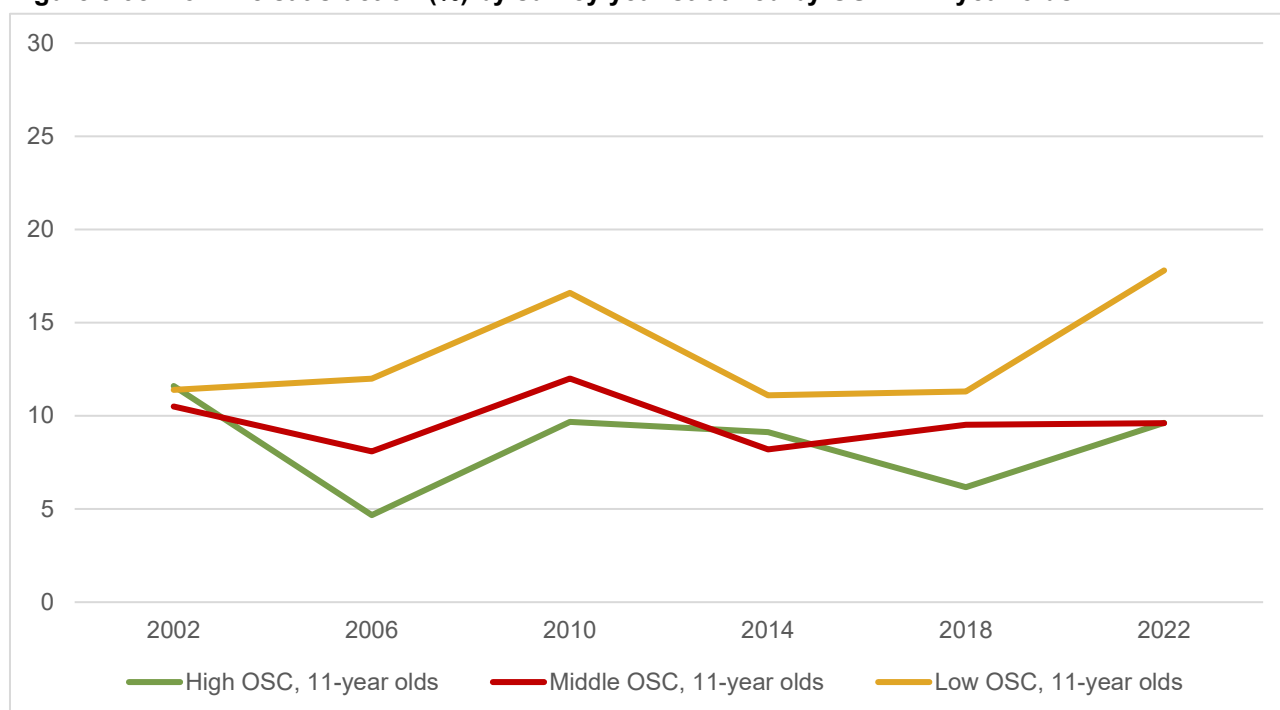
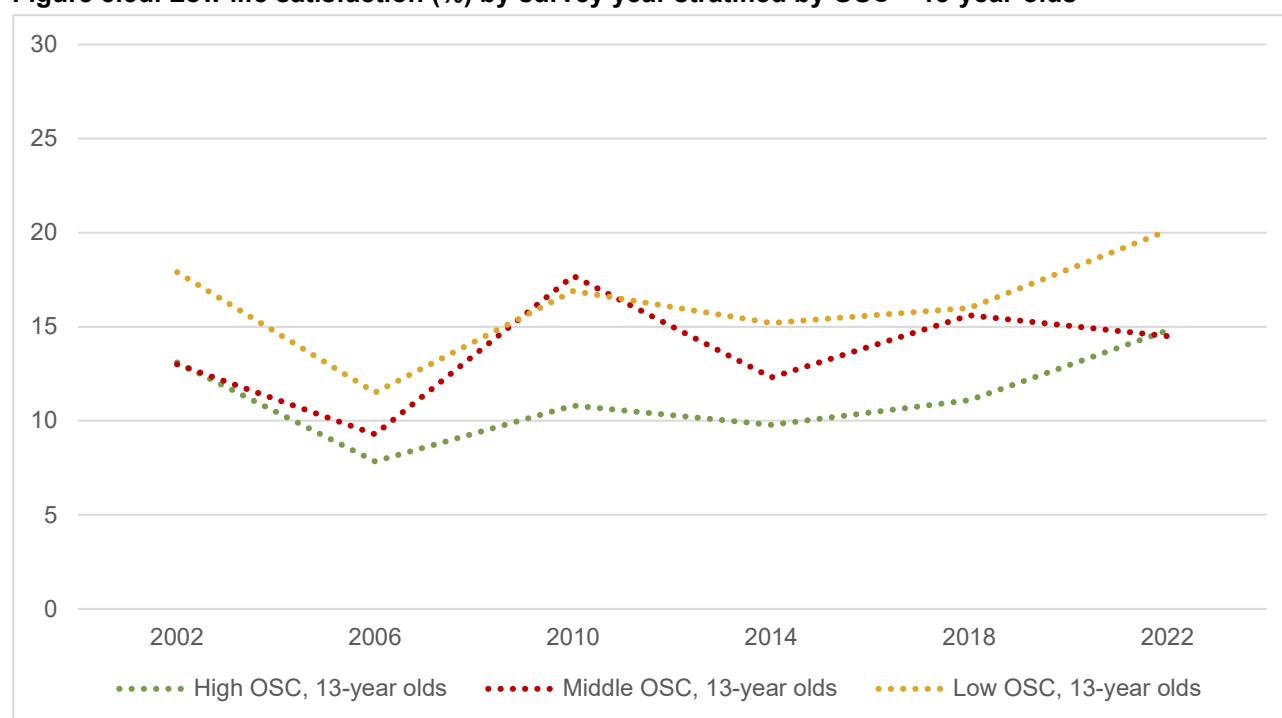
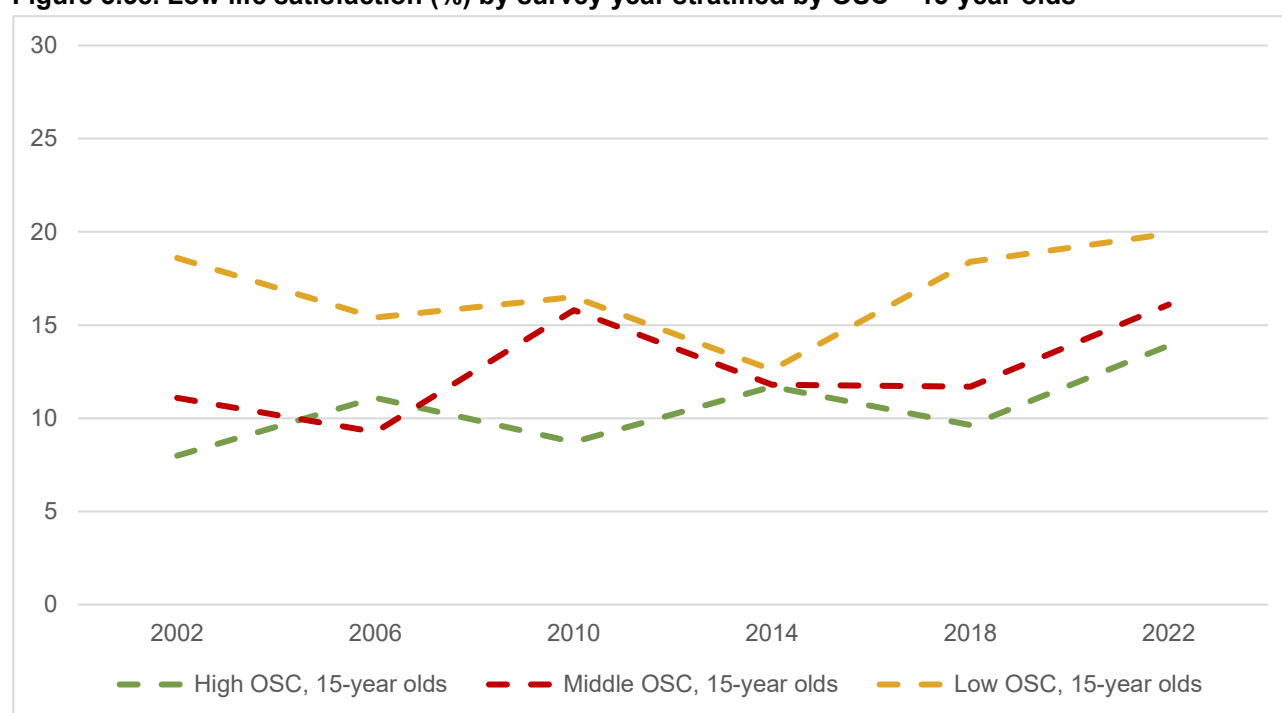
Figure 3.3c. Low life satisfaction (%) by survey year stratified by OSC – 11-year-olds^a^aStandardized by sex

Figure 3.3d. Low life satisfaction (%) by survey year stratified by OSC – 13-year-olds^a



^aStandardized by sex

Figure 3.3e. Low life satisfaction (%) by survey year stratified by OSC – 15-year-olds^a



^aStandardized by sex

3.4 Frequent symptoms

Table 3.4a. shows the prevalence of frequent symptoms across high, middle, and low OSC groups for each survey year in the study population. For each year, the table also shows the absolute social inequality (prevalence difference with 95% CI) and relative social inequality (prevalence ratio with 95% CI) in low life satisfaction. There is social inequality in frequent symptoms in both absolute and relative terms, with a decline in both across the 30 years. The absolute inequality was highest in the early 1990s (11.8; CI: 7.0-16.6 in 1991), declined with some fluctuation down to a PD of 5.3 (95% CI: 1.4–9.2) in 2022. The relative inequality followed a similar pattern with a small decline in PR from 2.0 (95% CI: 1.5-2.6) in 1991 to 1.2 (95% CI: 1.05–1.31) in 2022. This change was primarily driven by an increase in frequent symptoms among adolescents from high (and middle) OSC across time. The results are reflected in Figure 3.4a.

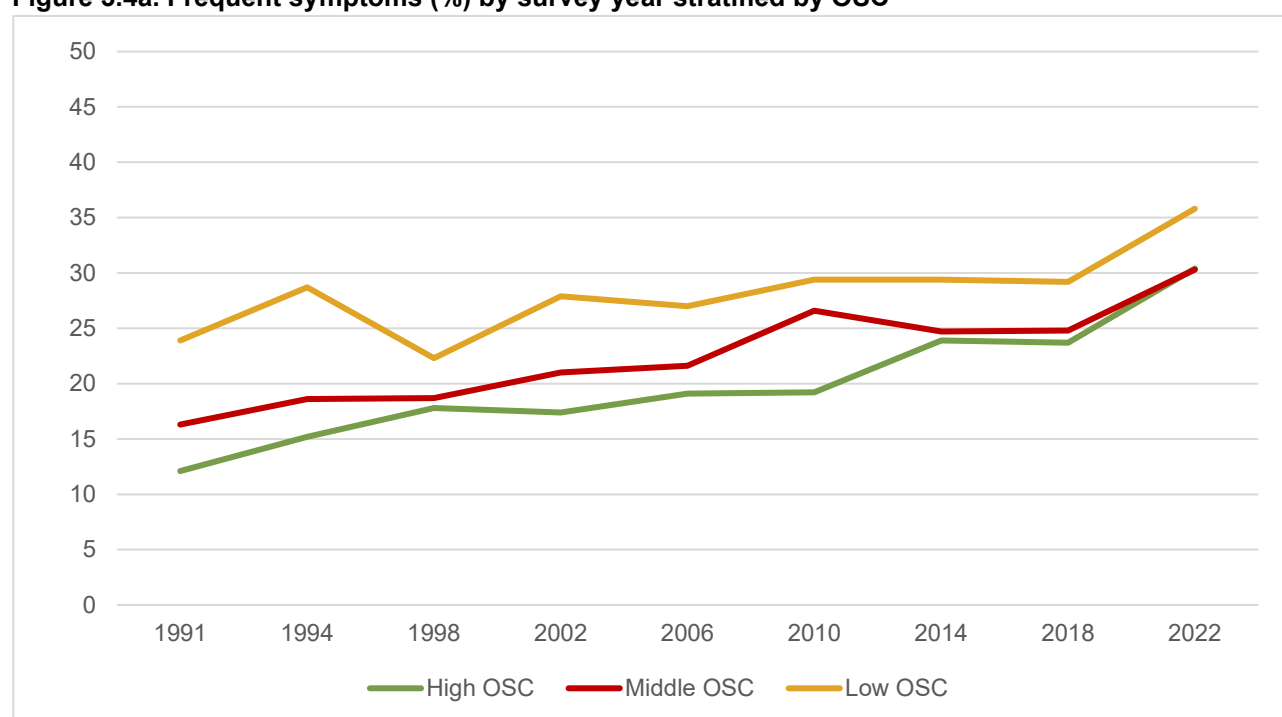
Table 3.4a. Absolute and relative social inequality in frequent symptoms from 1991 to 2022^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of frequent symptoms by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of frequent symptoms (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
1991	12.1	16.3	23.9	11.8 (7.0-16.6)	1	1.4 (1.1-1.6)	2.0 (1.5-2.6)
1994	15.2	18.6	28.7	13.5 (9.3-17.6)	1	1.2 (1.1-1.4)	1.9 (1.6-2.3)
1998	17.8	18.7	22.3	4.5 (1.5-7.5)	1	1.1 (0.9-1.2)	1.3 (1.1-1.5)
2002	17.4	21.0	27.9	10.5 (6.2-14.7)	1	1.2 (1.0-1.4)	1.6 (1.3-1.9)
2006	19.1	21.6	27.0	8.0 (4.1-11.8)	1	1.1 (1.0-1.3)	1.4 (1.2-1.7)
2010	19.2	26.6	29.4	10.2 (6.8-13.6)	1	1.4 (1.2-1.6)	1.5 (1.3-1.8)
2014	23.9	24.7	29.4	5.5 (0.7-10.3)	1	1.0 (0.9-1.2)	1.2 (1.0-1.5)
2018	23.7	24.8	29.2	5.5 (-1.2-12.1)	1	1.0 (0.9-1.2)	1.2 (1.0-1.6)
2022	30.4	30.3	35.8	5.3 (1.4-9.2)	1	1.0 (0.9-1.1)	1.2 (1.1-1.3)

^aStandardized by sex and age

^bPrevalence difference: percent point difference between high and low OSC, standardized by sex and age
Statistically significant estimates are highlighted in bold

Figure 3.4a. Frequent symptoms (%) by survey year stratified by OSC^a



^aStandardized by sex and age group

Social inequality in frequent symptoms by sex

In most survey years, sex-stratified analyses (Table 3.4b) showed larger relative and absolute social inequalities among girls than boys, but with large and overlapping confidence intervals. For girls, prevalence differences were highest in the early 1990s and declined with some fluctuation during the period. The change in PD over time was primarily driven by an increase in frequent symptoms among girls from high (and middle) OSC across the period. The prevalence ratio, indicating the relative social inequality, among girls decreased from 2.3 (CI: 1.5-3.4) in 1991 to 1.2 (CI: 1.1-1.4) in 2022. Among boys, inequalities were large, but smaller than among girls and often non-significant in later years, with prevalence differences dropping from 7.3 (CI: 1.6-13.1) in 1991 to 2.0 (CI: -2.6-6.6) in 2022.

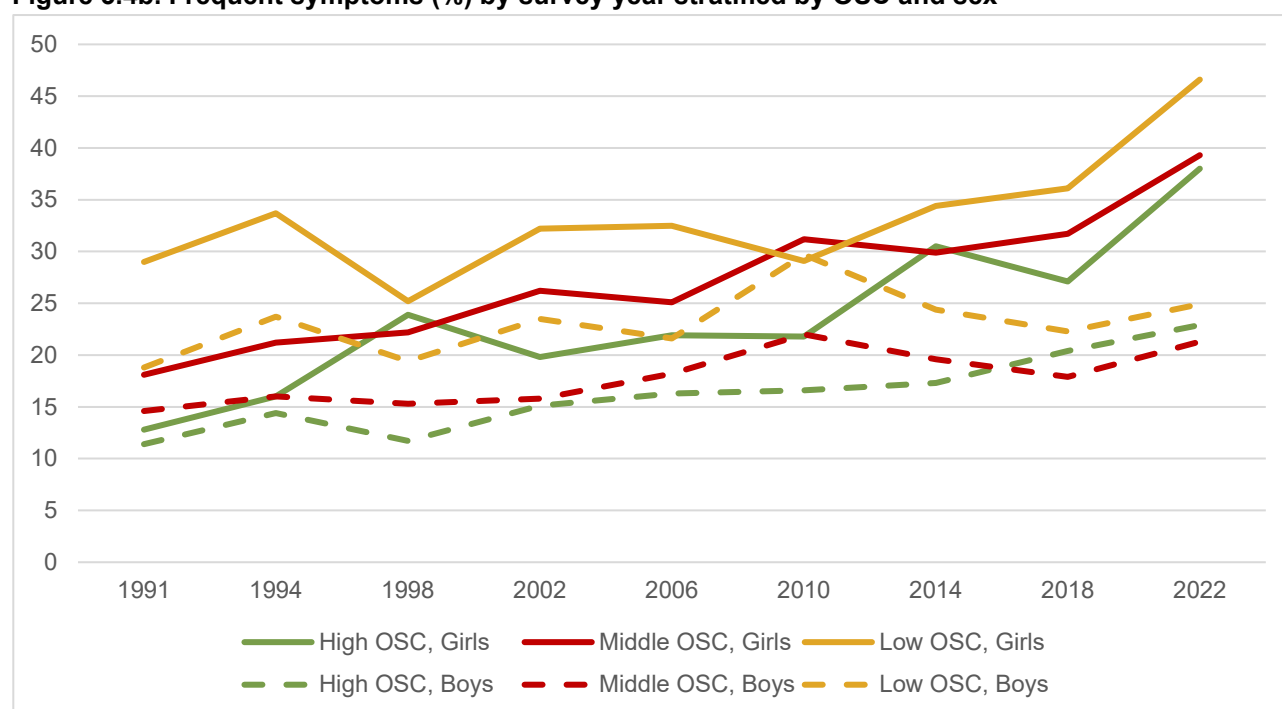
Table 3.4b. Absolute and relative social inequality in frequent symptoms from 1991 to 2022, stratified by sex^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of frequent symptoms by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of frequent symptoms (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
1991	11.4	14.6	18.8	7.3 (1.6-13.1)	1	1.3 (0.9-1.9)	1.6 (1.1-2.6)
1994	14.4	16.0	23.7	9.3 (4.3-14.2)	1	1.1 (0.9-1.3)	1.6 (1.3-2.1)
1998	11.7	15.3	19.4	7.7 (4.1-11.3)	1	1.3 (1.0-1.7)	1.7 (1.3-2.1)
2002	15.1	15.8	23.5	8.4 (2.7-14.1)	1	1.1 (0.8-1.4)	1.6 (1.2-2.1)
2006	16.3	18.2	21.6	5.3 (0.7-9.9)	1	1.1 (0.9-1.4)	1.3 (1.0-1.7)
2010	16.6	22.0	29.7	13.2 (7.7-18.6)	1	1.3 (1.1-1.6)	1.8 (1.5-2.2)
2014	17.3	19.6	24.4	7.1 (1.1-13.1)	1	1.1 (0.9-1.4)	1.4 (1.1-1.9)
2018	20.4	17.9	22.3	1.9 (-6.7-10.5)	1	0.9 (0.7-1.1)	1.1 (0.7-1.6)
2022	22.9	21.3	24.9	2.0 (-2.6-6.6)	1	0.9 (0.8-1.1)	1.1 (0.9-1.3)
Girls							
1991	12.8	18.1	29.0	16.2 (7.5-24.9)	1	1.4 (1.0-2.0)	2.3 (1.5-3.4)
1994	16.0	21.2	33.7	17.7 (11.9-23.4)	1	1.3 (1.1-1.6)	2.1 (1.7-2.7)
1998	23.9	22.2	25.2	1.4 (-3.6-6.3)	1	0.9 (0.8-1.1)	1.1 (0.9-1.3)
2002	19.8	26.2	32.2	12.5 (7.1-17.9)	1	1.3 (1.1-1.6)	1.6 (1.3-2.0)
2006	21.9	25.1	32.5	10.6 (5.6-15.6)	1	1.2 (1.0-1.3)	1.5 (1.2-1.8)
2010	21.8	31.2	29.1	7.3 (1.9-12.6)	1	1.4 (1.2-1.7)	1.3 (1.1-1.6)
2014	30.5	29.9	34.4	3.9 (-2.2-10.1)	1	1.0 (0.8-1.1)	1.1 (0.9-1.4)
2018	27.1	31.7	36.1	9.0 (0.6-17.4)	1	1.2 (1.0-1.4)	1.3 (1.0-1.7)
2022	38.0	39.3	46.6	8.6 (2.5-14.7)	1	1.0 (0.9-1.2)	1.2 (1.1-1.4)

^aStandardized by age

^bPrevalence difference: percent point difference between high and low OSC, standardized age
Statistically significant estimates are highlighted in bold

Figure 3.4b. Frequent symptoms (%) by survey year stratified by OSC and sex^a



^aStandardized by age group

Social inequality in frequent symptoms by age groups

Age-stratified analyses of trends in social inequality in frequent symptoms (Table 3.4c) indicated a decline over time in both absolute and relative inequality, although confidence intervals were wide and largely overlapping. Absolute prevalence differences were highest in all three age groups in the early 1990s, followed by a decline and stabilization at lower levels. Prevalence ratios followed the same pattern. The trends were primarily driven by an increase in frequent symptoms among high (and middle) OSC, which are illustrated graphically in Figures 3.4c–e.

Table 3.4c. Absolute and relative social inequality in frequent symptoms from 1991 to 2022, stratified by age^a

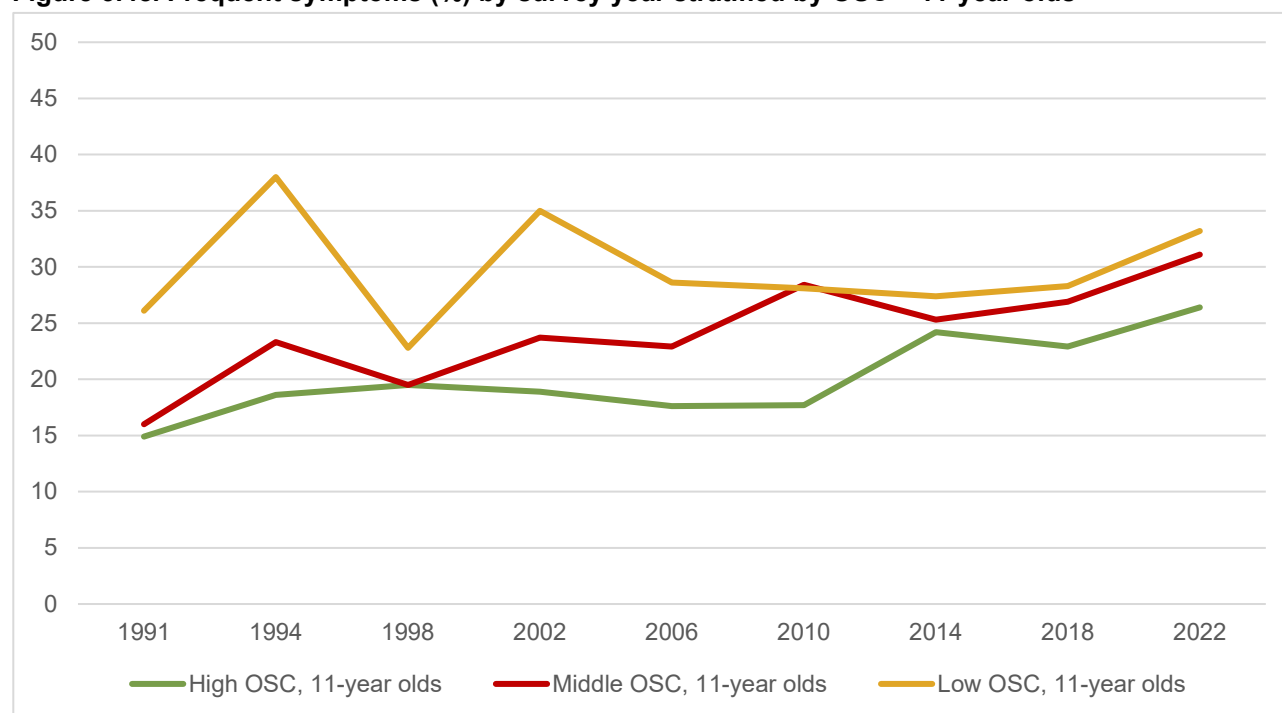
	Absolute social inequality				Relative social inequality		
	Prevalence (%) of frequent symptoms by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of frequent symptoms (95% CI) by OSC		
11 years	High	Middle	Low		High	Middle	Low
1991	14.9	16.0	26.1	11.2 (3.4-19.0)	1	1.1 (0.7-1.6)	1.8 (1.2-2.7)
1994	18.6	23.3	38.0	19.4 (12.7-26.1)	1	1.3 (1.0-1.5)	2.0 (1.6-2.6)
1998	19.5	19.5	22.8	3.2 (-1.8-8.3)	1	1.0 (0.8-1.3)	1.2 (0.9-1.5)
2002	18.9	23.7	35.0	16.1 (9.2-22.9)	1	1.3 (1.0-1.7)	1.9 (1.4-2.4)
2006	17.6	22.9	28.6	11.0 (5.7-16.3)	1	1.3 (1.1-1.6)	1.6 (1.3-2.0)
2010	17.7	28.4	28.1	10.4 (4.6-16.2)	1	1.6 (1.3-2.0)	1.6 (1.2-2.0)
2014	24.2	25.3	27.4	3.2 (-4.6-11.1)	1	1.1 (0.8-1.4)	1.1 (0.8-1.5)
2018	22.9	26.9	28.3	5.3 (-2.6-13.3)	1	1.2 (0.9-1.5)	1.2 (0.9-1.7)
2022	26.4	31.1	33.2	6.8 (-0.5-14.2)	1	1.2 (1.0-1.4)	1.3 (1.0-1.6)
13 years							
1991	9.6	17.5	21.9	12.3 (3.8-20.8)	1	1.8 (1.3-2.5)	2.3 (1.4-3.9)
1994	16.3	17.3	27.8	11.5 (4.8-18.2)	1	1.1 (0.9-1.3)	1.7 (1.3-2.2)
1998	19.5	18.9	22.2	2.7 (-3.3-8.7)	1	1.0 (0.8-1.2)	1.1 (0.9-1.5)
2002	18.1	22.7	28.0	9.9 (3.4-16.5)	1	1.3 (1.0-1.6)	1.6 (1.2-2.1)
2006	19.8	21.8	25.9	6.1 (0.5-11.7)	1	1.1 (0.9-1.4)	1.3 (1.0-1.7)
2010	19.9	26.3	31.2	11.3 (5.7-16.9)	1	1.3 (1.1-1.6)	1.6 (1.3-1.9)
2014	24.3	25.0	33.1	8.8 (0.2-17.3)	1	1.0 (0.9-1.2)	1.4 (1.0-1.8)
2018	24.3	23.4	30.4	6.1 (-2.3-14.5)	1	1.0 (0.8-1.2)	1.3 (0.9-1.7)
2022	33.5	28.9	36.4	2.9 (-5.5-11.3)	1	0.9 (0.7-1.0)	1.1 (0.9-1.4)
15 years							
1991	11.8	15.4	23.6	11.8 (6.4-17.2)	1	1.3 (0.8-2.0)	2.0 (1.4-2.8)
1994	10.8	15.1	20.2	9.5 (1.4-17.5)	1	1.4 (1.0-1.9)	1.9 (1.2-3.0)
1998	14.3	17.8	22.0	7.7 (1.8-13.5)	1	1.2 (0.9-1.7)	1.5 (1.1-2.1)
2002	15.2	16.7	20.6	5.4 (-0.9-11.6)	1	1.1 (0.8-1.5)	1.4 (1.0-1.9)
2006	19.8	20.1	26.6	6.8 (-0.7-14.2)	1	1.0 (0.8-1.3)	1.3 (1.0-1.8)
2010	19.9	25.0	28.8	8.9 (1.7-16.1)	1	1.3 (1.0-1.6)	1.5 (1.1-1.9)
2014	23.2	23.9	27.7	4.5 (-2.0-11.0)	1	1.0 (0.9-1.2)	1.2 (0.9-1.5)
2018	24.0	24.1	29.0	5.0 (-10.0-19.9)	1	1.0 (0.8-1.4)	1.2 (0.7-2.1)
2022	31.4	30.9	37.6	6.2 (-1.8-14.2)	1	1.0 (0.8-1.2)	1.2 (1.0-1.5)

^aStandardized by sex

^bPrevalence difference: percent point difference between high and low OSC

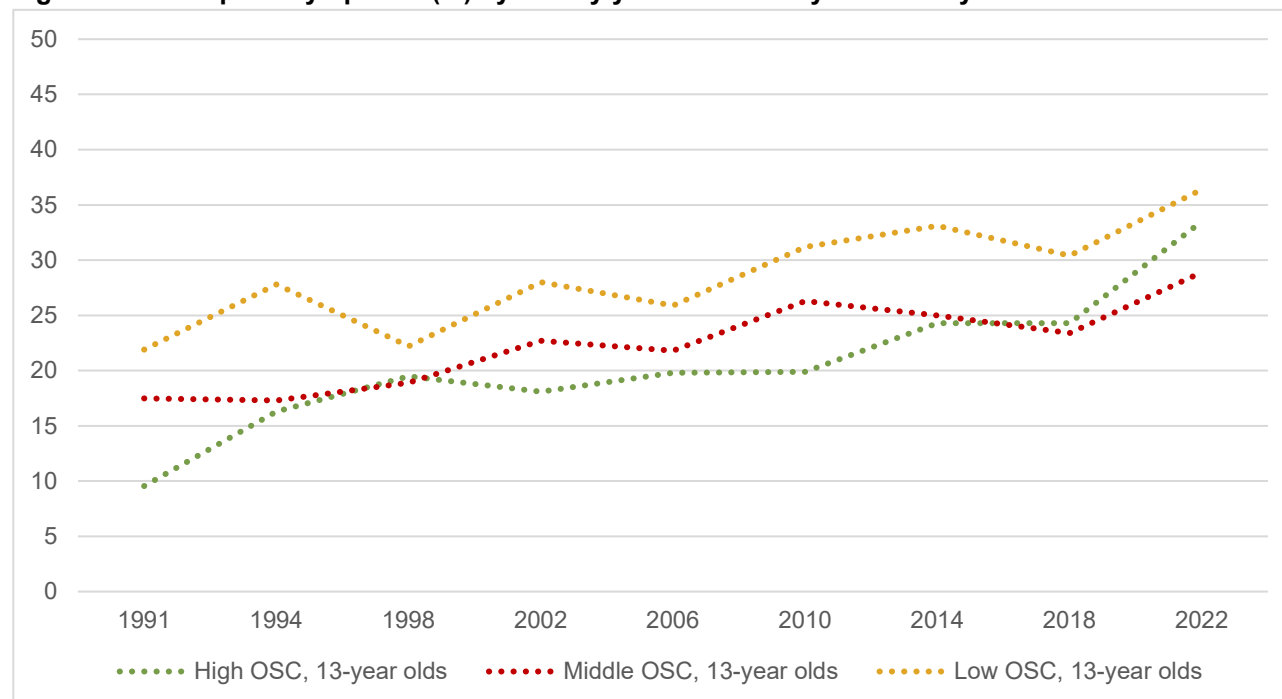
Statistically significant estimates are highlighted in bold

Figure 3.4c. Frequent symptoms (%) by survey year stratified by OSC – 11-year-olds^a



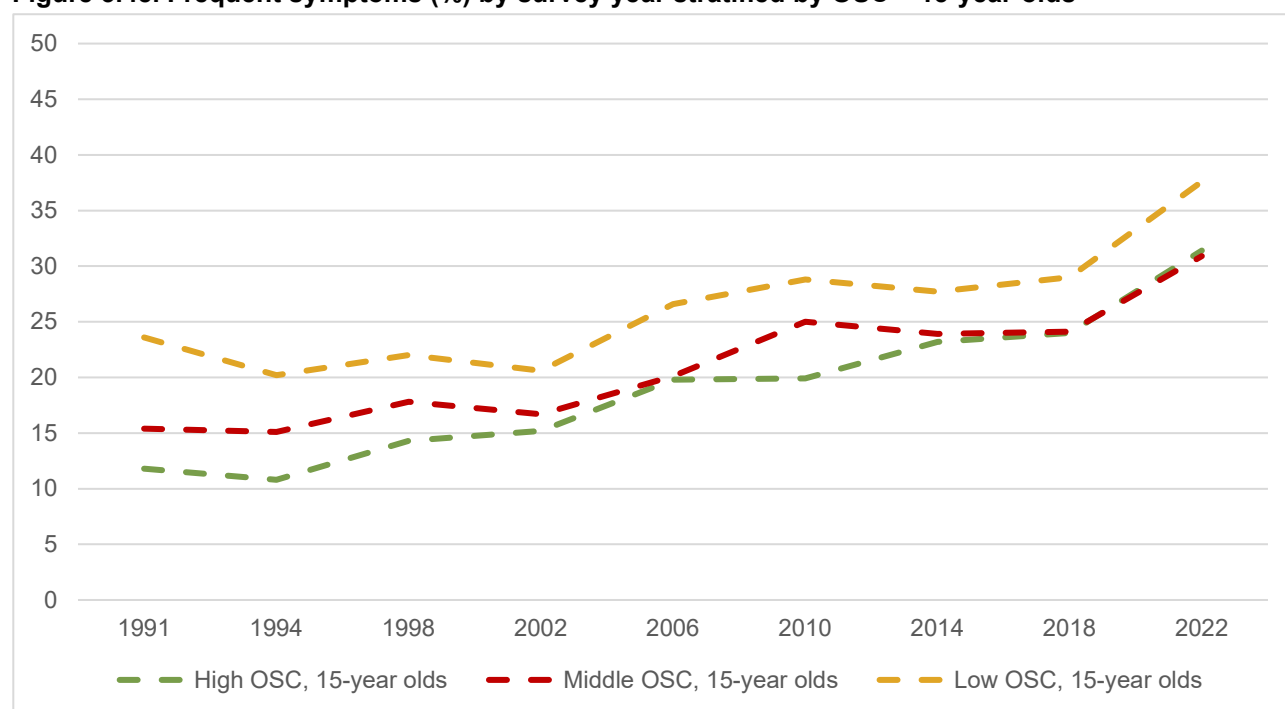
^aStandardized by sex

Figure 3.4d. Frequent symptoms (%) by survey year stratified by OSC – 13-year-olds^a



^aStandardized by sex

Figure 3.4e. Frequent symptoms (%) by survey year stratified by OSC – 15-year-olds^a



^aStandardized by sex

3.5 Low self-efficacy

Table 3.5a. shows the prevalence of low self-efficacy across high, middle, and low OSC groups for each survey year. For each year, the table also shows the absolute social inequality (prevalence difference with 95% CI) and relative social inequality (prevalence ratio with 95% CI) in low life satisfaction. Both absolute and relative social inequalities were observed in low self-efficacy from 2010 to 2022. However, both measures fluctuated over time, indicating no clear or systematic trend in social inequality in low self-efficacy across the period, a pattern that is also reflected in Figure 3.5a.

Table 3.5a. Absolute and relative social inequality in low self-efficacy from 2010 to 2022^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low self-effi- cacy by OSC			Prevalence differ- ence ^b (95% CI)	Prevalence ratio of low self-efficacy (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
2010 ^c	8.1	12.3	13.2	5.1 (2.3-7.9)	1	1.5 (1.2-1.9)	1.6 (1.2-2.1)
2014	9.5	14.3	19.8	10.3 (6.6-14.1)	1	1.5 (1.2-1.9)	2.1 (1.6-2.7)
2018	8.0	12.3	17.7	9.7 (4.2-15.3)	1	1.5 (1.1-2.1)	2.2 (1.6-3.2)
2022	15.0	15.6	22.6	7.7 (3.1-12.3)	1	1.0 (0.9-1.2)	1.5 (1.2-1.9)

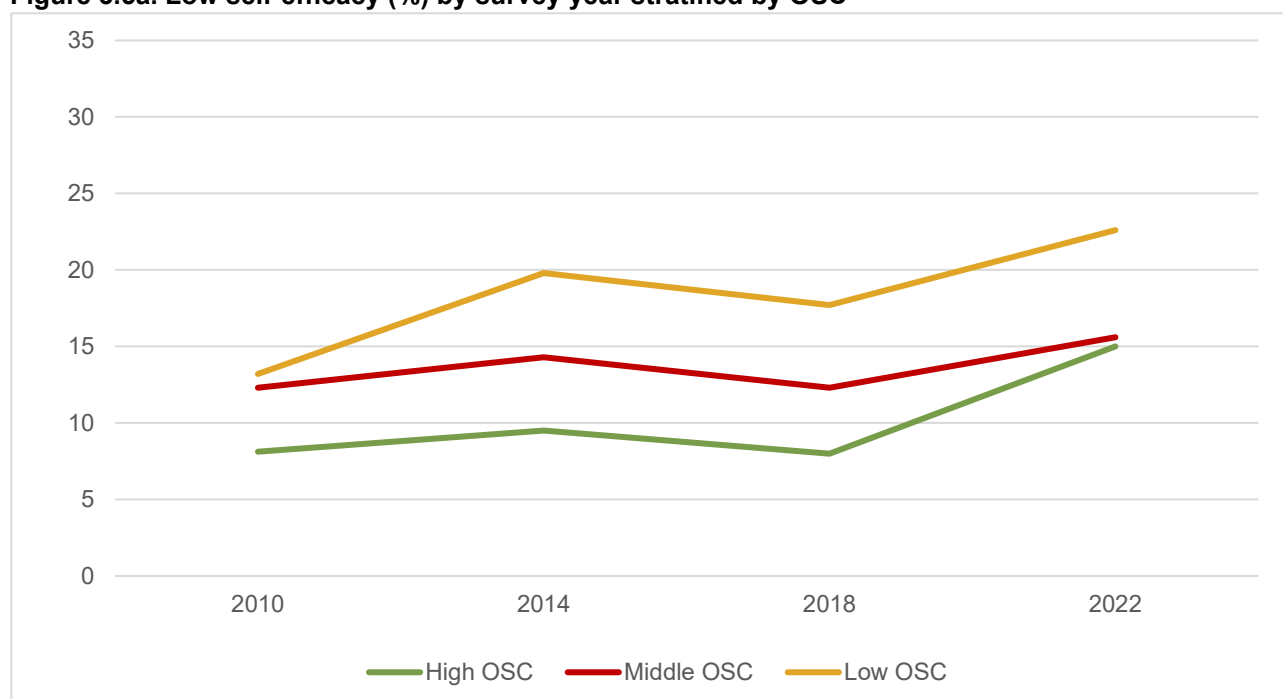
^aStandardized by sex and age

^bPrevalence difference: percent point difference between high and low SEP, standardized by sex and age

^cOnly 13- and 15-year-olds.

Statistically significant estimates are highlighted in bold

Figure 3.5a. Low self-efficacy (%) by survey year stratified by OSC^a



^aStandardized by sex and age group

Social inequality in low self-efficacy by sex

Sex-stratified analyses (Table 3.5b.) showed larger and more persistent absolute and relative social inequality in low self-efficacy among girls than boys, where inequalities were smaller and often non-significant. However, both the relative and absolute social inequality fluctuated across the years, indicating no clear or systematic trend in social inequality in low self-efficacy among either boys or girls. The patterns are reflected in Figure 3.5b.

Table 3.5b. Absolute and relative social inequality in low self-efficacy from 2010 to 2022, stratified by sex^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low self-efficacy by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low self-efficacy (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
2010 ^c	7.9	11.0	11.8	3.9 (-0.9-8.7)	1	1.4 (0.9-2.1)	1.5 (0.9-2.4)
2014	6.9	11.8	11.6	4.8 (-0.6-10.1)	1	1.7 (1.1-2.7)	1.7 (1.0-2.9)
2018	6.5	10.4	17.5	10.9 (5.4-16.4)	1	1.6 (1.0-2.5)	2.7 (1.7-4.1)
2022	11.2	10.2	15.2	4.0 (-1.5-9.5)	1	0.9 (0.7-1.2)	1.4 (0.9-2.0)
Girls							
2010 ^c	8.3	13.6	14.5	6.2 (1.9-10.5)	1	1.6 (1.2-2.3)	1.8 (1.2-2.6)
2014	12.2	16.9	28.1	15.9 (9.7-22.1)	1	1.4 (1.1-1.8)	2.3 (1.7-3.2)
2018	9.5	14.1	18.0	8.6 (0.7-16.4)	1	1.5 (1.1-2.4)	1.9 (1.2-3.1)
2022	18.8	21.0	30.1	11.4 (4.1-18.6)	1	1.1 (1.0-1.3)	1.6 (1.2-2.1)

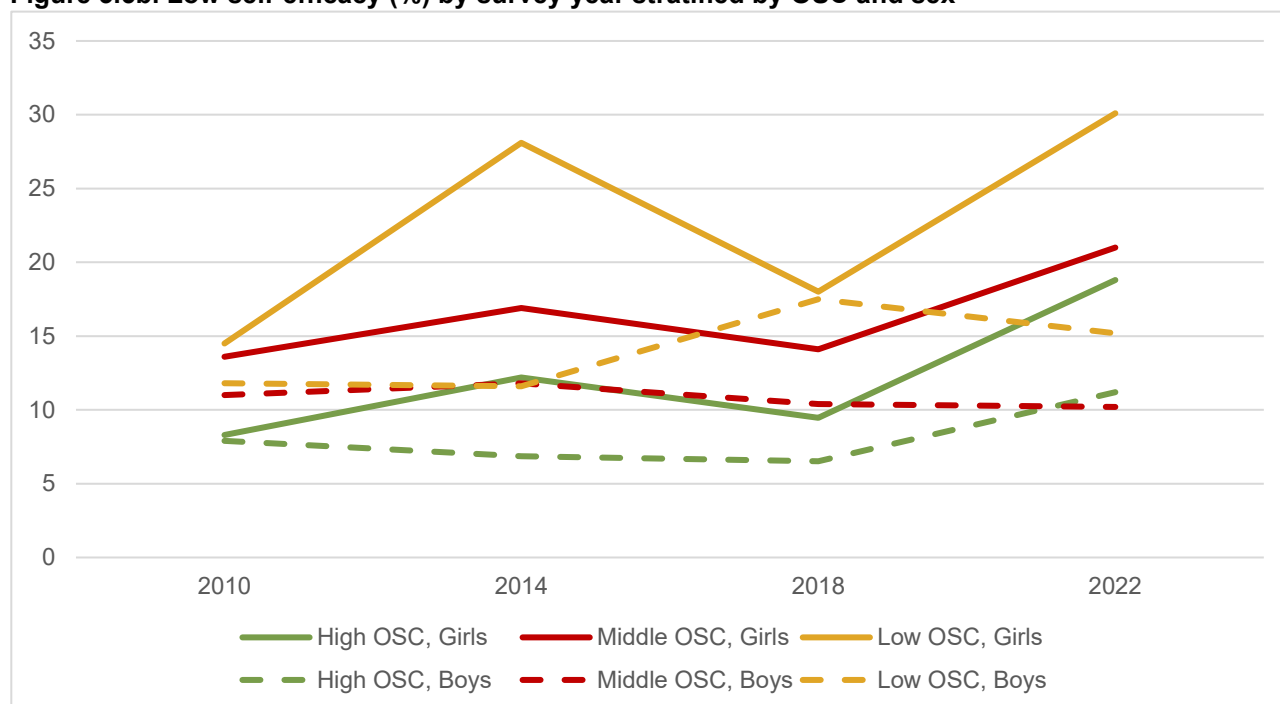
^aStandardized by age

^bPrevalence difference: percent point difference between high and low OSC, standardized age

^cOnly 13- and 15-year-olds.

Statistically significant estimates are highlighted in bold

Figure 3.5b. Low self-efficacy (%) by survey year stratified by OSC and sex^a



^aStandardized by age group

Social inequality in low self-efficacy by age group

Age-stratified analyses of trends in social inequality in low self-efficacy (Table 3.5c) showed the largest absolute inequality among 11-year-olds. Among 13- and 15-year-olds, differences were smaller and often non-significant in later years. Across all three age groups, confidence intervals were large and overlapping. The results indicated a relatively stable trend in relative social inequality in low self-efficacy among all three age groups.

Table 3.5c. Absolute and relative social inequality in low self-efficacy from 2010 to 2022, stratified by age^a

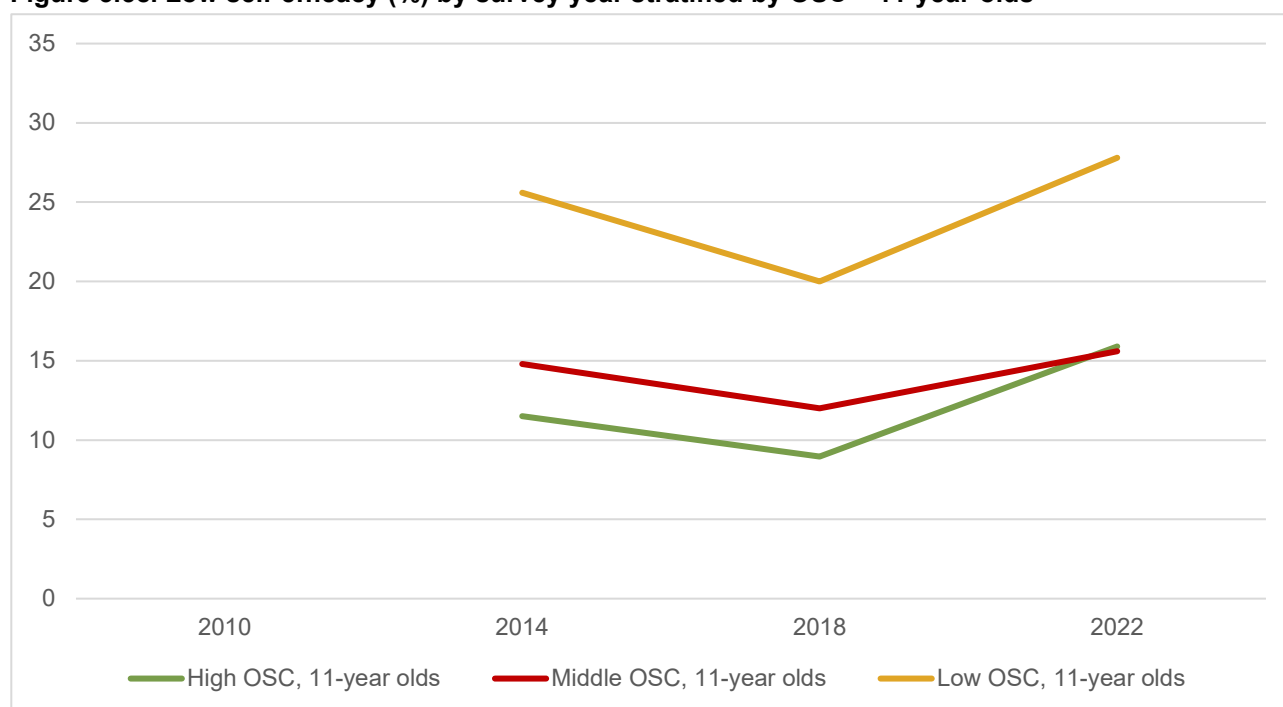
	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low self-efficacy by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of low self-efficacy (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
11 years							
2010	-	-	-	-	-	-	-
2014	11.5	14.8	25.6	14.1 (6.4-20.2)	1	1.3 (0.8-2.0)	2.2 (1.5-3.3)
2018	9.0	12.0	20.0	11.0 (3.0-19.1)	1	1.3 (0.9-2.0)	2.2 (1.4-3.5)
2022	15.9	15.6	27.8	12.0 (4.6-19.3)	1	1.0 (0.7-1.3)	1.8 (1.3-2.4)
13 years							
2010	10.7	14.4	15.5	4.9 (0.5-9.3)	1	1.4 (1.0-1.9)	1.5 (1.0-2.0)
2014	8.5	15.6	18.9	10.4 (5.8-15.1)	1	1.8 (1.4-2.4)	2.2 (1.6-3.0)
2018	7.3	12.7	17.3	10.0 (2.4-17.5)	1	1.7 (1.0-3.0)	2.4 (1.3-4.3)
2022	15.6	17.0	20.1	4.5 (-1.8-10.8)	1	1.1 (0.9-1.4)	1.3 (0.9-1.8)
15 years							
2010	5.5	10.3	10.8	5.3 (0.6-10.0)	1	1.9 (1.2-2.8)	2.0 (1.1-3.4)
2014	8.5	12.6	15.0	6.5 (0.9-12.1)	1	1.5 (1.1-2.1)	1.8 (1.1-2.7)
2018	7.7	12.1	15.9	8.2 (-1.2-17.6)	1	1.6 (1.0-2.6)	2.1 (1.1-4.0)
2022	13.5	14.1	20.0	6.6 (-2.4-15.6)	1	1.1 (0.8-1.4)	1.5 (0.9-2.4)

^aStandardized by sex

^bPrevalence difference: percent point difference between high and low OSC

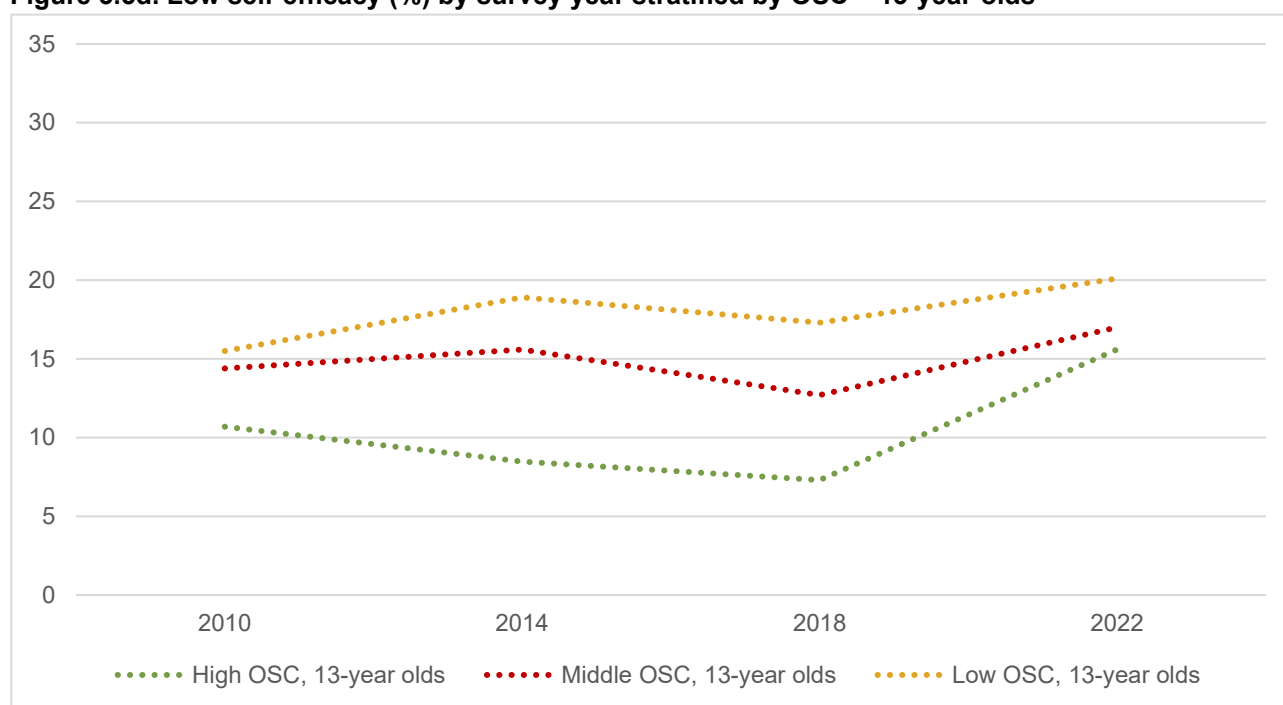
Statistically significant estimates are highlighted in bold

Figure 3.5c. Low self-efficacy (%) by survey year stratified by OSC – 11-year-olds^a



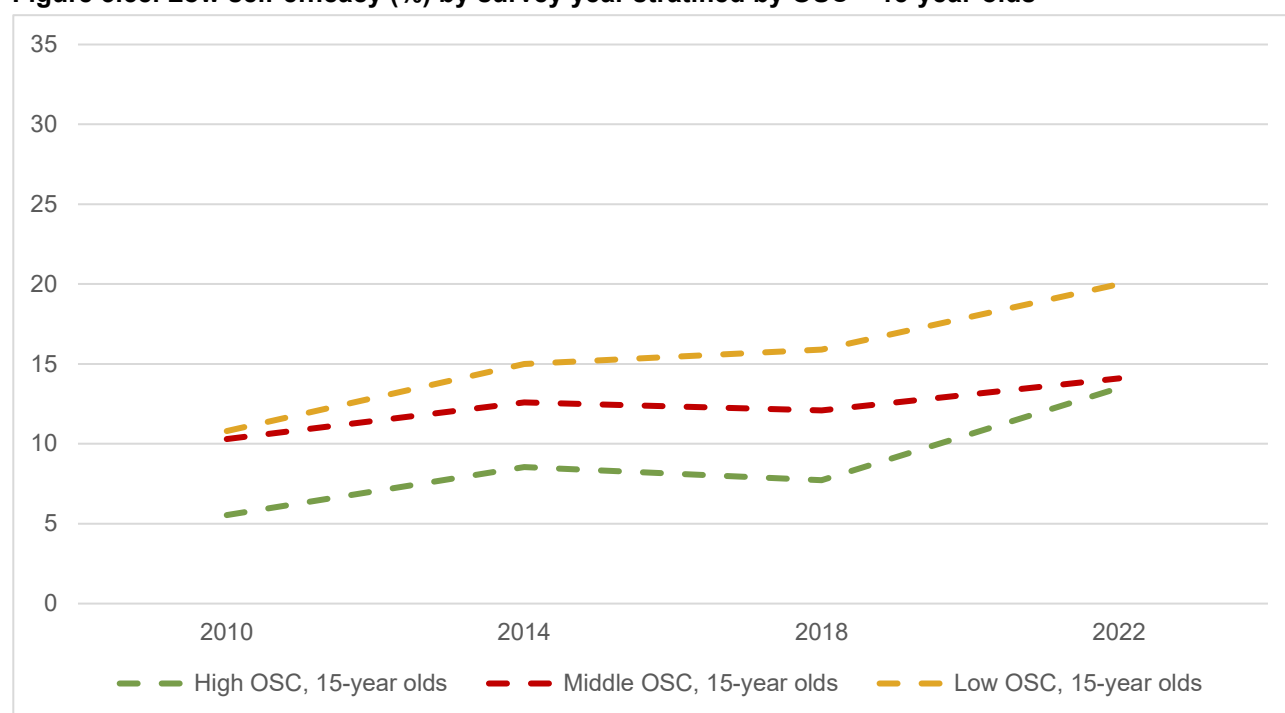
^aStandardized by sex

Figure 3.5d. Low self-efficacy (%) by survey year stratified by OSC – 13-year-olds^a



^aStandardized by sex

Figure 3.5e. Low self-efficacy (%) by survey year stratified by OSC – 15-year-olds^a



^aStandardized by sex

3.6 Low self-esteem

Table 3.6a presents the prevalence of low self-esteem across high, middle, and low OSC groups from 2014 to 2022. From 2014 to 2022, absolute social inequality in low self-esteem increased from 2.8 (95% CI: -1.5-7.2) in 2014 to 10.1 (95% CI: 5.0–15.2) in 2022. Confidence intervals were wide and overlapping. The increase in absolute inequality was primarily driven by a rising prevalence of low self-esteem among adolescents in the low OSC group. No relative social inequality was observed in low self-esteem in 2014; however, relative inequality emerged in 2018 and remained largely stable through 2022. These patterns are also illustrated in Figure 3.6a.

Table 3.6a. Absolute and relative social inequality in low self-esteem from 2014 to 2022^a

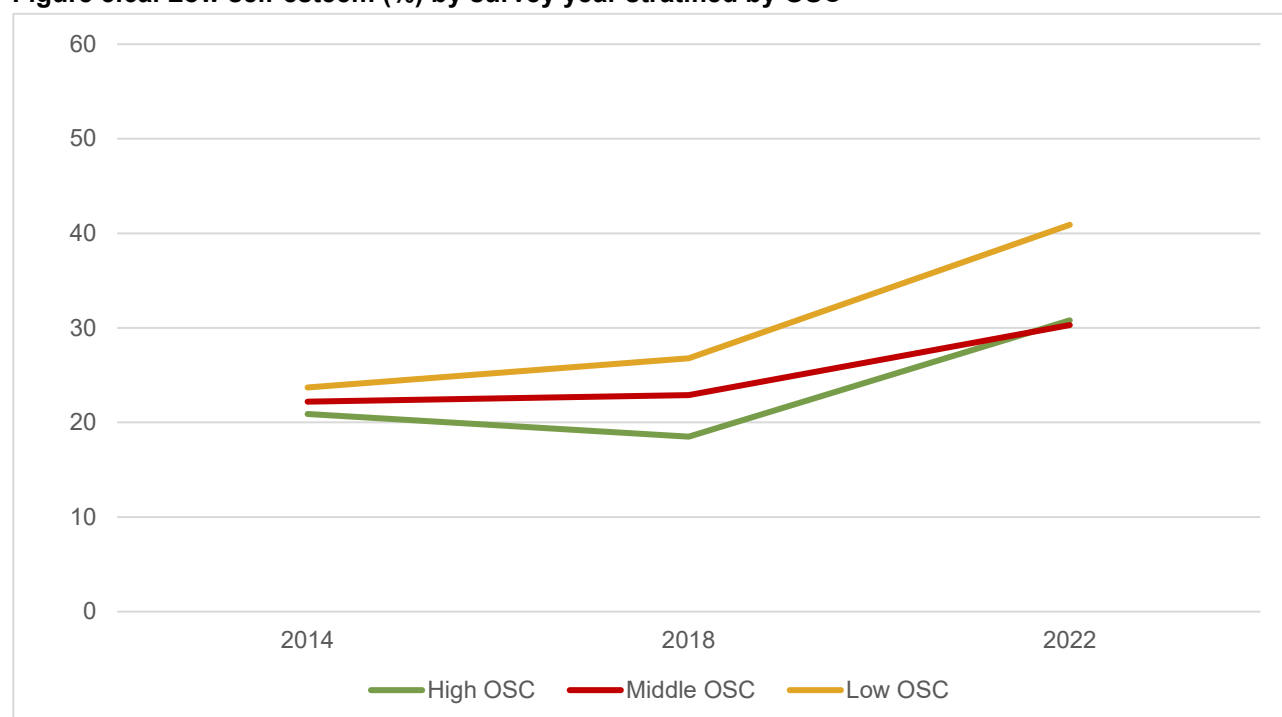
	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low self-esteem by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low self-esteem (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
2014	20.9	22.2	23.7	2.8 (-1.5-7.2)	1	1.1 (0.9-1.2)	1.1 (0.9-1.4)
2018	18.5	22.9	26.8	8.3 (2.2-14.4)	1	1.2 (1.0-1.5)	1.5 (1.1-1.8)
2022	30.8	30.3	40.9	10.1 (5.0-15.2)	1	1.0 (0.9-1.1)	1.3 (1.2-1.5)

^aStandardized by sex and age

^bPrevalence difference: percent point difference between high and low OSC, standardized by sex and age

Statistically significant estimates are highlighted in bold

Figure 3.6a. Low self-esteem (%) by survey year stratified by OSC^a



^aStandardized by sex and age group

Social inequality in low self-esteem by sex

Table 3.6b shows the absolute and relative social inequality in low self-esteem from 2014 to 2022, separately for boys and girls. Consistent with patterns observed in the full study population, absolute inequality increased over time among both boys and girls, but with a more pronounced increase among girls. Confidence intervals were large and overlapping. In contrast, a relatively stable relative inequality was observed among girls, and a more fluctuating relative inequality among boys. As in the full study population, the increase in inequality over time appears to be driven by a greater rise in the prevalence of low self-esteem among both boys and girls from the low OSC group.

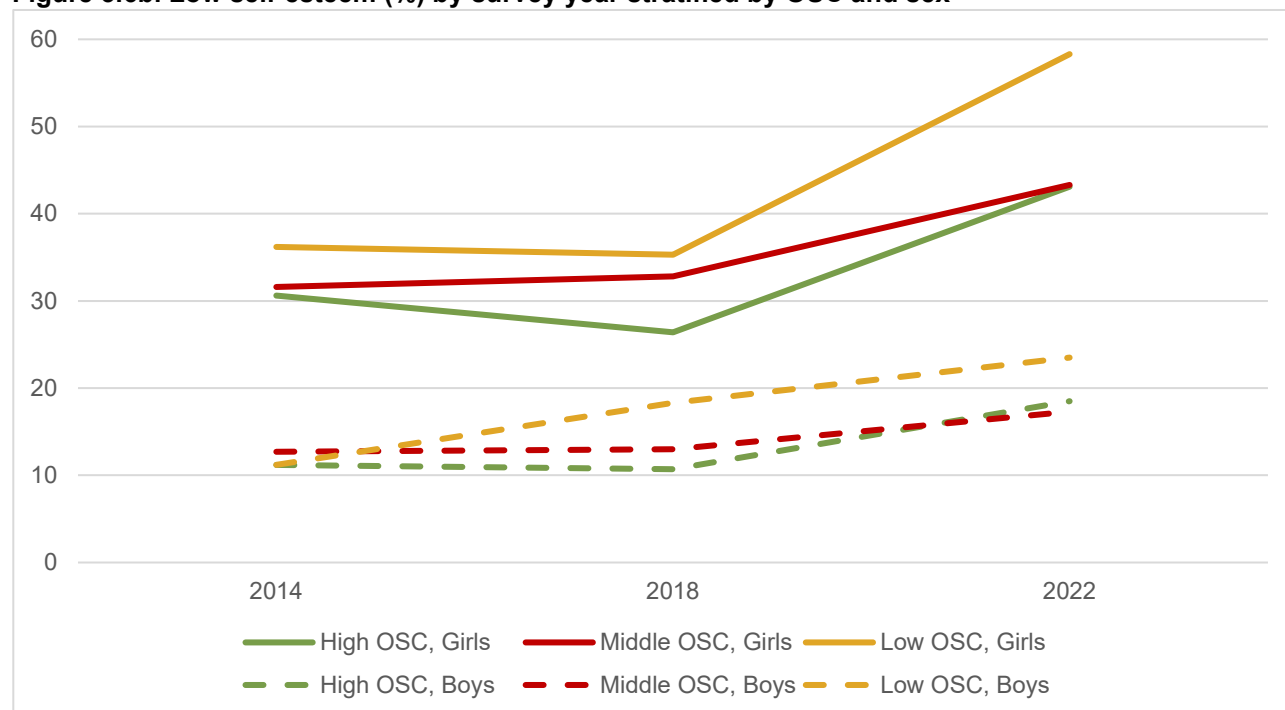
Table 3.6b. Absolute and relative social inequality in low self-esteem from 2014 to 2022, stratified by sex^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low self-esteem by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low self-esteem (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
2014	11.2	12.7	11.2	-0.0 (-4.2-4.2)	1	1.1 (0.9-1.5)	1.0 (0.7-1.5)
2018	10.7	13.0	18.3	7.7 (0.0-15.4)	1	1.2 (0.9-1.7)	1.7 (1.1-2.7)
2022	18.5	17.3	23.5	4.9 (-0.2-10.0)	1	0.9 (0.8-1.1)	1.3 (1.0-1.6)
Girls							
2014	30.6	31.6	36.2	5.7 (-0.9-12.2)	1	1.0 (0.9-1.2)	1.2 (1.0-1.4)
2018	26.4	32.8	35.3	8.9 (0.1-17.7)	1	1.2 (1.0-1.5)	1.3 (1.0-1.7)
2022	43.1	43.3	58.3	15.2 (7.9-22.5)	1	1.0 (0.9-1.1)	1.4 (1.2-1.5)

^aStandardized by age

^bPrevalence difference: percent point difference between high and low OSC, standardized age
Statistically significant estimates are highlighted in bold

Figure 3.6b. Low self-esteem (%) by survey year stratified by OSC and sex^a



^aStandardized by age group

Social inequality in low self-esteem by age group

Overall, the age-stratified analyses of trends in social inequality in low self-esteem (Table 3.6c) revealed a similar pattern of increasing absolute inequality from 2014 to 2022 as in the full study population and in the sex-stratified results. However, the increase in inequality was greatest among 15-year-olds. The relative inequality was more stable over the years, and no clear trend patterns appeared across the three age groups. Confidence intervals were often insignificant and overlapping, reflecting the small number of individuals in each stratum. The results are illustrated in Figure 3.6c-e.

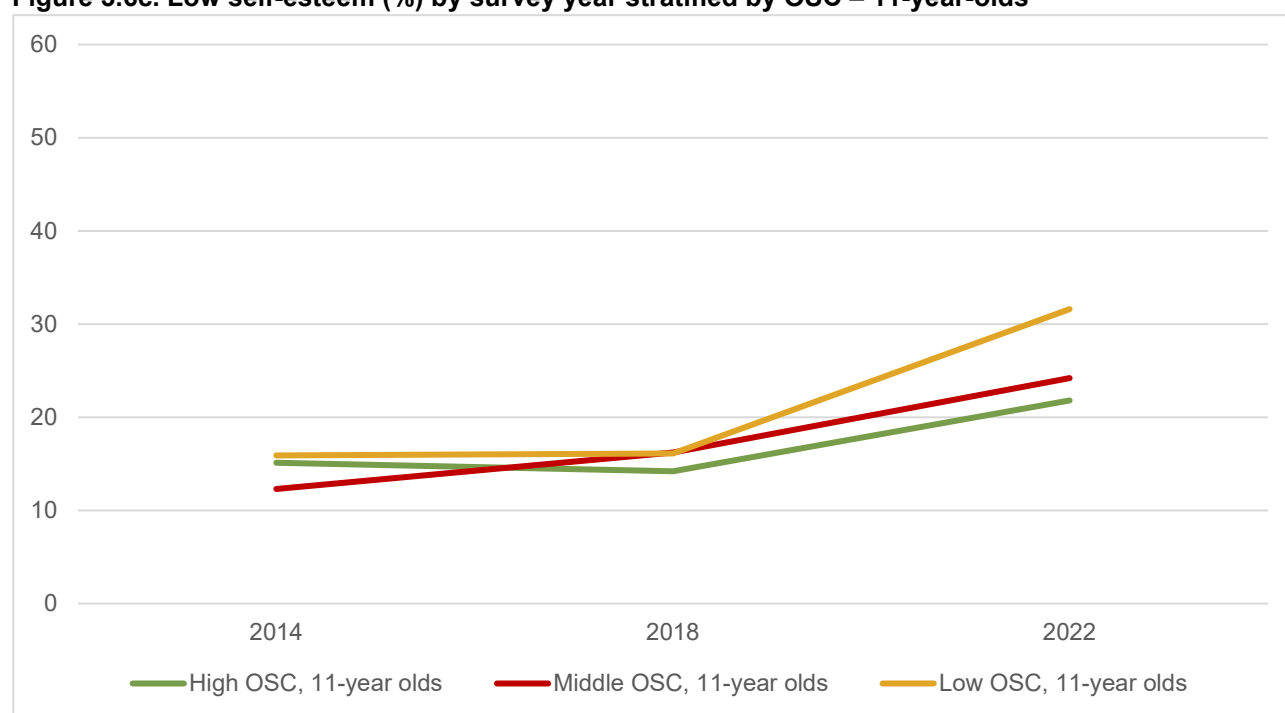
Table 3.6c. Absolute and relative social inequality in low self-esteem from 2014 to 2022, stratified by age^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low self-esteem by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of low self-esteem (95% CI) by OSC		
11 years	High	Middle	Low		High	Middle	Low
2014	15.1	12.3	15.9	0.9 (-5.3-7.1)	1	0.8 (0.6-1.1)	1.1 (0.7-1.6)
2018	14.2	16.2	16.1	2.0 (-5.0-8.9)	1	1.1 (0.9-1.5)	1.1 (0.7-1.8)
2022	21.8	24.2	31.6	9.8 (3.2-16.4)	1	1.1 (0.9-1.4)	1.5 (1.2-1.8)
13 years							
2014	24.3	25.8	28.1	3.8 (-4.4-12.1)	1	1.1 (0.8-1.4)	1.2 (0.9-1.6)
2018	21.0	24.2	26.7	5.8 (-1.5-13.1)	1	1.2 (0.9-1.5)	1.3 (1.0-1.7)
2022	37.2	31.8	43.7	6.5 (-3.8-16.7)	1	0.9 (0.7-1.0)	1.2 (0.9-1.5)
15 years							
2014	23.4	28.3	27.1	3.8 (-4.2-11.7)	1	1.2 (1.0-1.4)	1.2 (0.9-1.6)
2018	20.5	28.3	37.6	17.1 (1.6-32.5)	1	1.4 (1.0-1.9)	1.8 (1.2-2.9)
2022	33.4	35.0	47.4	13.9 (4.4-23.5)	1	1.1 (0.9-1.2)	1.4 (1.2-1.8)

^aStandardized by sex

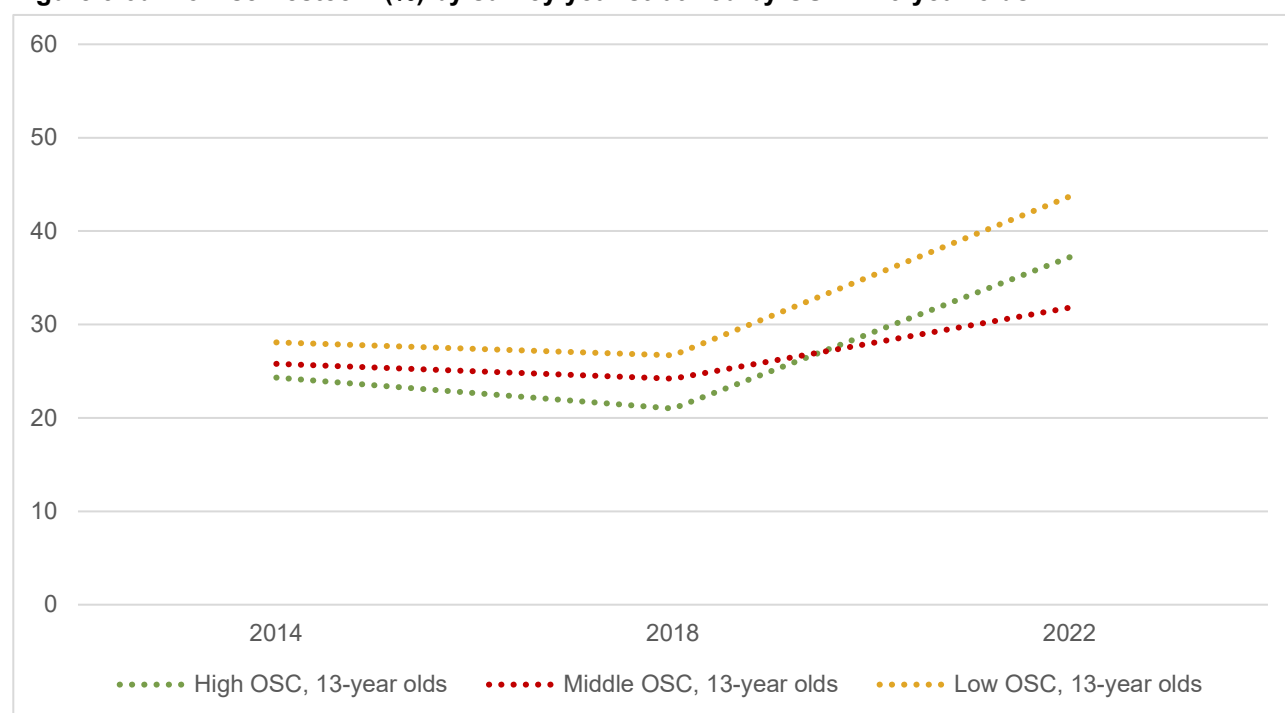
^bPrevalence difference: percent point difference between high and low OSC
Statistically significant estimates are highlighted in bold

Figure 3.6c. Low self-esteem (%) by survey year stratified by OSC – 11-year-olds^a



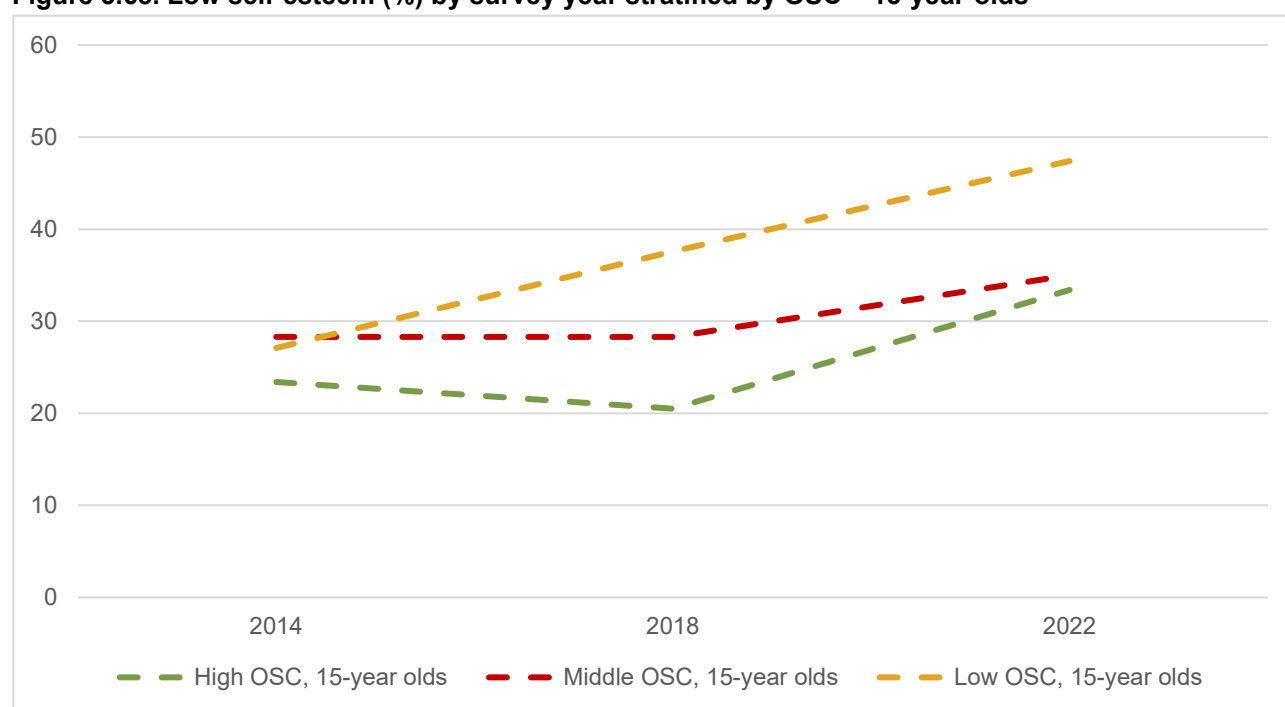
^aStandardized by sex

Figure 3.6d. Low self-esteem (%) by survey year stratified by OSC – 13-year-olds^a



^aStandardized by sex

Figure 3.6e. Low self-esteem (%) by survey year stratified by OSC – 15-year-olds^a



^aStandardized by sex

3.7 Loneliness

Table 3.7a presents the prevalence of loneliness across high, middle, and low OSC groups from 1991 to 2022. For each survey year, the table also reports measures of absolute and relative social inequality. Across the entire study period, persistent social inequalities in loneliness were observed, largely driven by a higher prevalence of loneliness among adolescents in the low OSC group compared with their peers in the high and middle OSC groups. However, the magnitude of both absolute and relative inequality fluctuated over time, with the relative inequality being most stable, but indicating no clear or systematic trend in social inequality in loneliness. Confidence intervals were often wide and overlapping, reflecting the small number of individuals in the groups, and indicating considerable statistical uncertainty. The results are illustrated in Figure 3.7a.

Table 3.7a. Absolute and relative social inequality in loneliness from 1991 to 2022^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of loneliness by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of loneliness (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
1991	4.2	3.9	6.7	2.5 (-0.9-5.9)	1	0.9 (0.6-1.5)	1.6 (0.9-2.9)
1994	3.8	4.7	8.2	4.4 (2.3-6.5)	1	1.2 (0.9-1.7)	2.2 (1.5-3.2)
1998	5.6	5.6	8.3	2.8 (0.6-4.9)	1	1.0 (0.8-1.3)	1.5 (1.1-2.0)
2006	7.0	6.9	8.0	1.0 (-1.4-3.4)	1	1.0 (0.8-1.3)	1.1 (0.8-1.6)
2010 ^c	3.6	5.2	6.3	2.7 (0.5-5.0)	1	1.4 (1.0-2.0)	1.8 (1.2-2.7)
2014	7.0	6.8	7.8	0.8 (-1.9-3.6)	1	1.0 (0.8-1.3)	1.1 (0.8-1.6)
2018	4.0	6.7	7.5	3.6 (-0.4-7.5)	1	1.7 (1.2-2.3)	1.9 (1.1-3.4)
2022	7.5	8.8	13.6	6.1 (2.5-9.7)	1	1.2 (1.0-1.4)	1.8 (1.4-2.4)

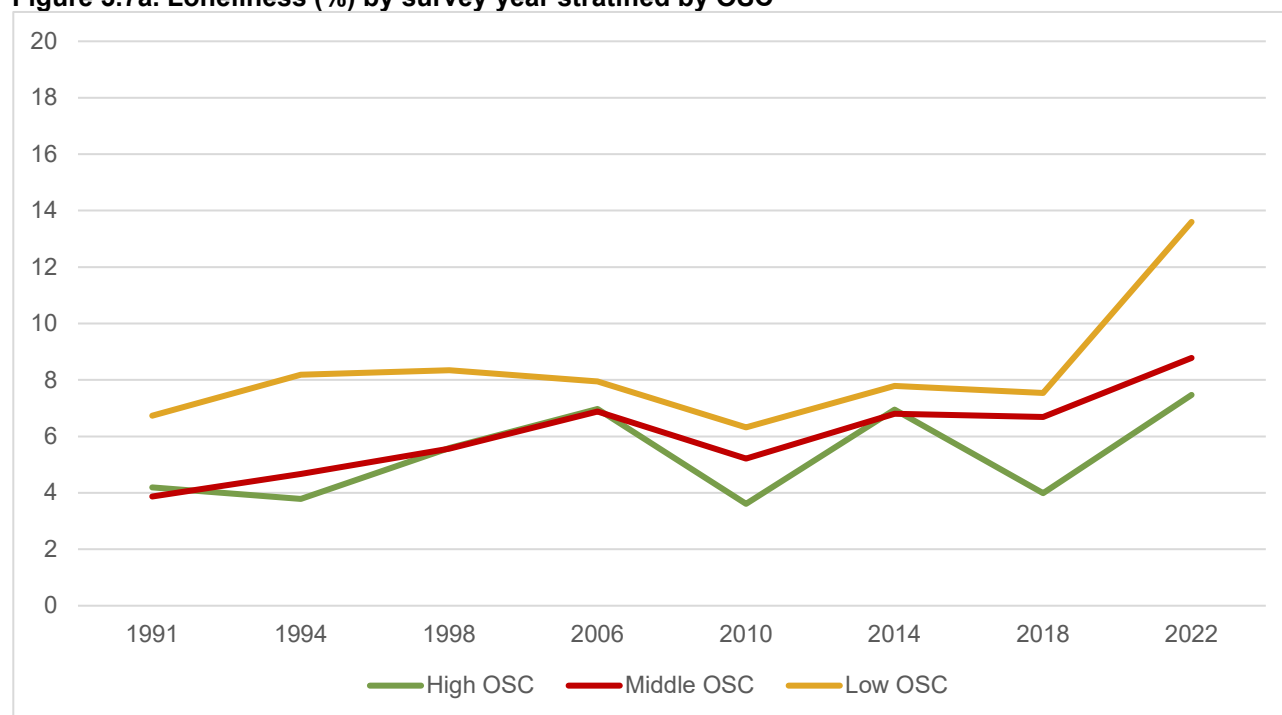
^aStandardized by sex and age

^bPrevalence difference: percent point difference between high and low OSC, standardized by sex and age

^cOnly 13- and 15-year-olds.

Statistically significant estimates are highlighted in bold

Figure 3.7a. Loneliness (%) by survey year stratified by OSC^a



^aStandardized by sex and age group

Social inequality in loneliness by sex

Table 3.7b presents absolute and relative social inequality in loneliness from 1991 to 2022, stratified by sex. Social inequality was observed across the 30 years for both boys and girls. However, both prevalence differences and prevalence ratios fluctuated over time, with overlapping confidence intervals, indicating no clear or systematic trend in social inequality in loneliness.

Table 3.7b. Absolute and relative social inequality in loneliness from 1991 to 2022, stratified by sex^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of loneliness by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of loneliness (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
1991	3.1	2.8	7.0	3.9 (-0.2-8.1)	1	0.9 (0.4-2.1)	2.3 (1.0-5.4)
1994	3.4	3.8	6.7	3.3 (0.9-5.6)	1	1.1 (0.7-1.9)	2.0 (1.2-3.2)
1998	3.2	2.6	5.6	2.4 (-0.5-5.2)	1	0.8 (0.5-1.4)	1.7 (0.9-3.3)
2006	6.0	5.5	7.3	1.3 (-1.6-4.2)	1	0.9 (0.6-1.4)	1.2 (0.8-1.9)
2010 ^c	2.5	4.3	6.4	3.9 (0.7-7.1)	1	1.7 (0.8-3.4)	2.5 (1.3-5.0)
2014	4.9	6.1	4.3	-0.7 (-3.6-2.3)	1	1.2 (0.8-1.8)	0.9 (0.4-1.7)
2018	1.5	3.5	5.8	4.3 (0.6-7.9)	1	2.3 (1.3-4.0)	3.8 (1.7-8.6)
2022	5.3	4.9	8.3	3.1 (-1.2-7.3)	1	0.9 (0.7-1.3)	1.6 (0.9-2.7)
Girls							
1991	5.3	5.0	6.5	1.1 (-3.7-5.9)	1	0.9 (0.6-1.5)	1.2 (0.5-2.7)
1994	4.1	5.5	9.7	5.5 (2.7-8.4)	1	1.3 (0.9-2.0)	2.3 (1.5-3.6)
1998	8.0	8.6	11.1	3.2 (-0.6-6.9)	1	1.1 (0.8-1.5)	1.4 (0.9-2.1)
2006	7.9	8.3	8.6	0.7 (-3.1-4.5)	1	1.0 (0.7-1.6)	1.1 (0.7-1.7)
2010 ^c	4.7	6.2	6.2	1.6 (-1.3-4.4)	1	1.3 (0.9-2.0)	1.3 (0.8-2.2)
2014	9.0	7.5	11.3	2.4 (-2.0-6.7)	1	0.8 (0.6-1.2)	1.3 (0.8-1.9)
2018	6.5	9.8	9.3	2.8 (-2.8-8.5)	1	1.5 (1.1-2.1)	1.4 (0.8-2.7)
2022	9.7	12.6	18.9	9.2 (3.6-14.7)	1	1.3 (1.1-1.6)	2.0 (1.4-2.7)

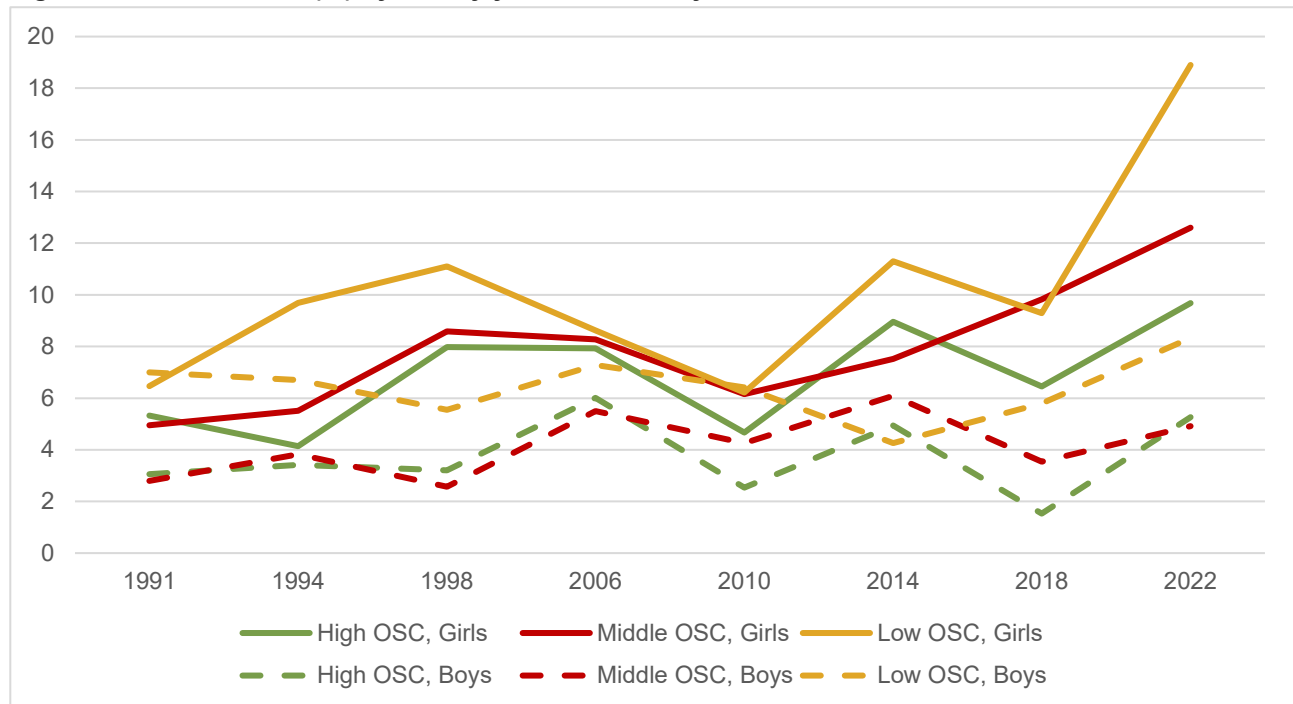
^aStandardized by age

^bPrevalence difference: percent point difference between high and low OSC, standardized age

^cOnly 13- and 15-year-olds.

Statistically significant estimates are highlighted in bold

Figure 3.7b. Loneliness (%) by survey year stratified by OSC and sex^a



^aStandardized by age group

Social inequality in loneliness by age group

Age-stratified analyses (Table 3.7c.) of absolute and relative social inequality in loneliness revealed evidence of social inequality across the study period in all three age groups. However, the patterns of fluctuating social inequality over time mirrored those across the full study population. Confidence intervals were wide and largely overlapping, and estimates were often insignificant, reflecting the small number of individuals in each stratum. Overall, these results do not indicate a clear or systematic age-specific trend in social inequality in loneliness.

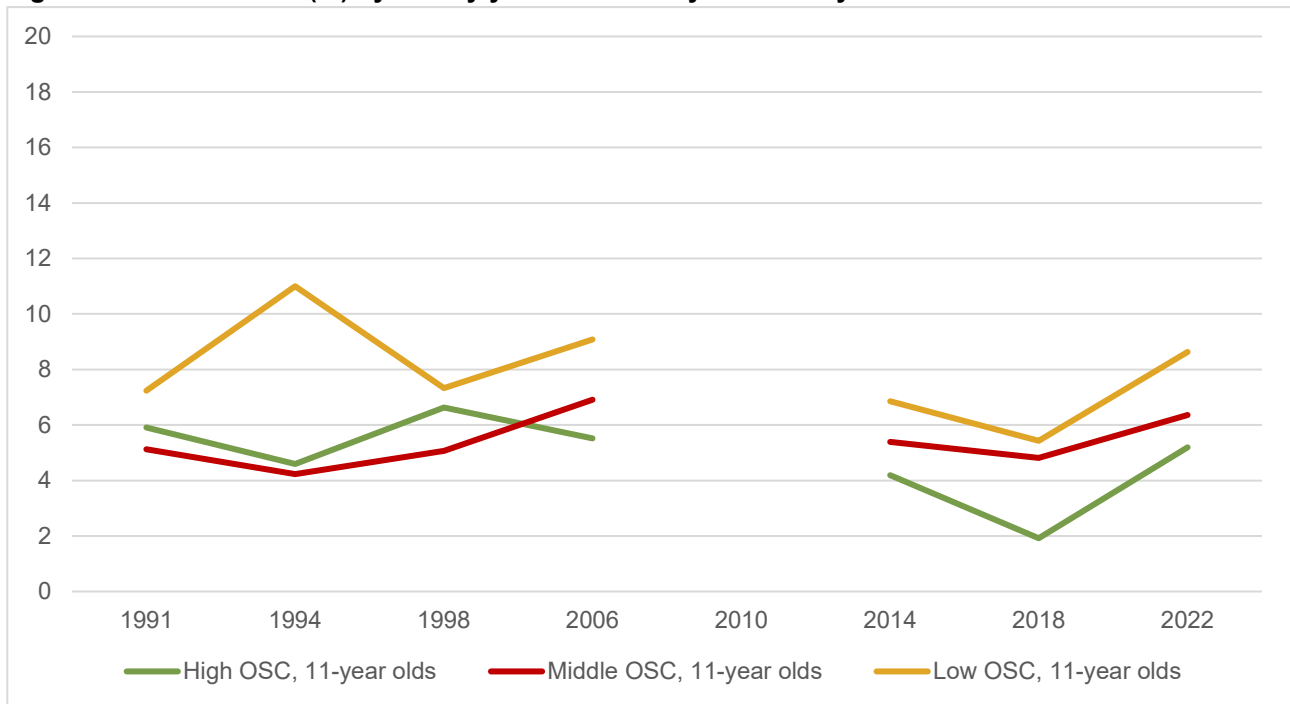
Table 3.7c. Absolute and relative social inequality in loneliness from 1991 to 2022, stratified by age^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of loneliness by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of loneliness (95% CI) by OSC		
11 years	High	Middle	Low		High	Middle	Low
1991	5.9	5.1	7.2	1.3 (-5.0-7.6)	1	0.9 (0.3-2.7)	1.2 (0.5-3.2)
1994	4.6	4.2	11.0	6.4 (1.5-11.3)	1	0.9 (0.5-1.7)	2.4 (1.2-4.6)
1998	6.6	5.1	7.3	0.7 (-2.6-4.0)	1	0.8 (0.5-1.2)	1.1 (0.7-1.8)
2006	5.5	6.9	9.1	3.6 (0.4-6.8)	1	1.3 (0.9-1.8)	1.7 (1.1-2.5)
2010	-	-	-	-	-	-	-
2014	4.2	5.4	6.9	2.7 (-0.2-5.5)	1	1.3 (0.7-2.3)	1.6 (1.0-2.7)
2018	1.9	4.8	5.4	3.5 (-0.8-7.8)	1	2.5 (1.2-5.3)	2.8 (1.2-6.4)
2022	5.2	6.4	8.6	3.4 (-0.4-7.3)	1	1.2 (0.8-1.8)	1.7 (1.0-2.8)
13 years							
1991	1.7	2.1	3.6	2.0 (-1.4-5.3)	1	1.3 (0.4-4.0)	2.2 (0.6-8.1)
1994	4.4	5.1	7.2	2.8 (-0.4-5.9)	1	1.2 (0.7-1.9)	1.6 (1.0-2.8)
1998	5.3	6.4	6.6	1.4 (-1.7-4.4)	1	1.2 (0.8-1.7)	1.3 (0.8-2.1)
2006	5.8	7.3	8.1	2.3 (-1.2-5.9)	1	1.3 (0.9-1.9)	1.4 (0.8-2.3)
2010	3.5	5.2	7.0	3.5 (0.5-6.4)	1	1.5 (0.9-2.6)	2.0 (1.2-3.4)
2014	8.0	6.8	9.0	1.0 (-4.2-6.3)	1	0.9 (0.6-1.2)	1.1 (0.6-2.1)
2018	4.7	7.2	4.0	-0.7 (-4.2-2.9)	1	1.5 (1.0-2.3)	0.9 (0.4-2.0)
2022	9.4	9.2	13.8	4.4 (-2.2-11.1)	1	1.0 (0.7-1.3)	1.5 (0.9-2.5)
15 years							
1991	5.0	4.4	9.3	4.3 (-3.2-11.9)	1	0.9 (0.5-1.7)	1.9 (0.7-5.3)
1994	2.3	4.7	6.4	4.1 (0.5-7.7)	1	2.0 (0.8-5.1)	2.8 (1.1-7.3)
1998	4.9	5.3	11.1	6.2 (1.9-10.4)	1	1.1 (0.6-1.8)	2.3 (1.3-3.9)
2006	9.6	6.4	6.6	-3.0 (-8.0-2.1)	1	0.7 (0.4-1.1)	0.7 (0.4-1.3)
2010	3.7	5.2	5.7	2.0 (-1.3-5.3)	1	1.4 (0.9-2.2)	1.5 (0.8-2.9)
2014	8.7	8.3	7.5	-1.2 (-6.3-3.9)	1	1.0 (0.7-1.3)	0.9 (0.5-1.7)
2018	5.3	8.0	13.2	7.8 (-0.9-16.5)	1	1.5 (1.0-2.3)	2.5 (1.1-5.5)
2022	7.8	10.8	18.4	10.5 (3.9-17.2)	1	1.4 (1.0-1.9)	2.4 (1.6-3.5)

^aStandardized by sex

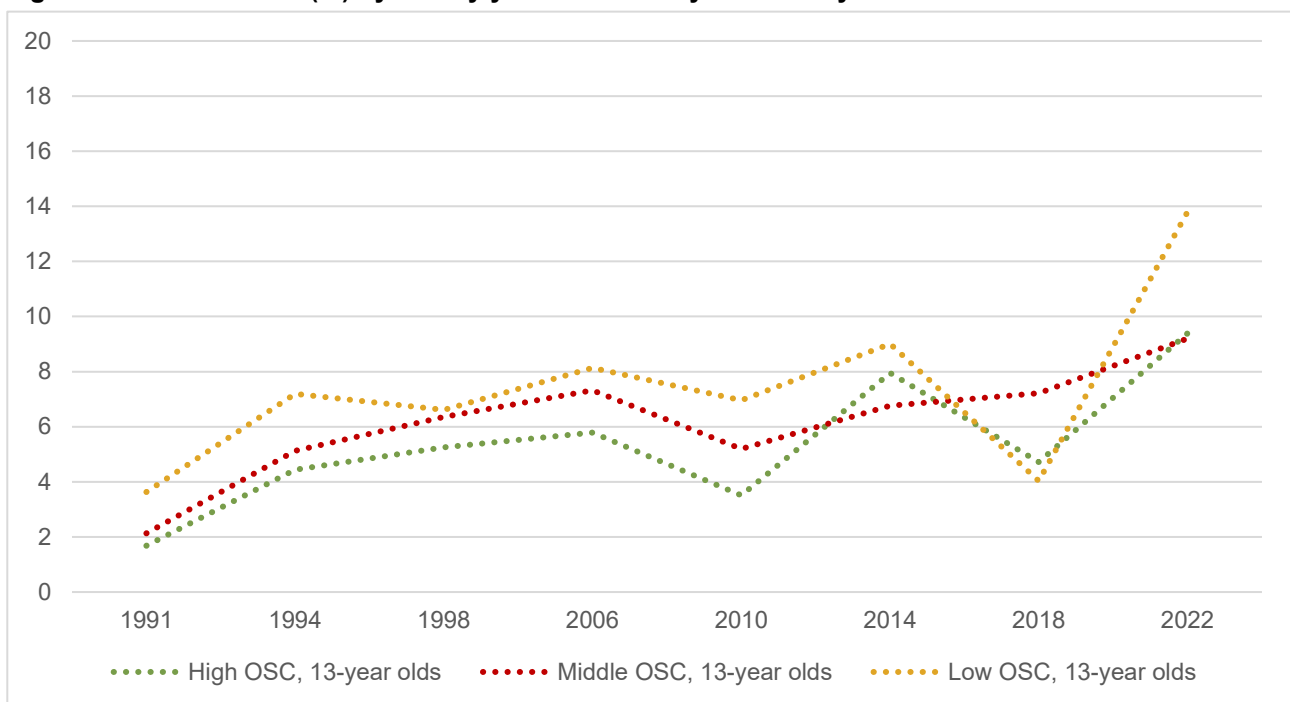
^bPrevalence difference: percent point difference between high and low OSC
Statistically significant estimates are highlighted in bold

Figure 3.7c. Loneliness (%) by survey year stratified by OSC – 11-year-olds^a



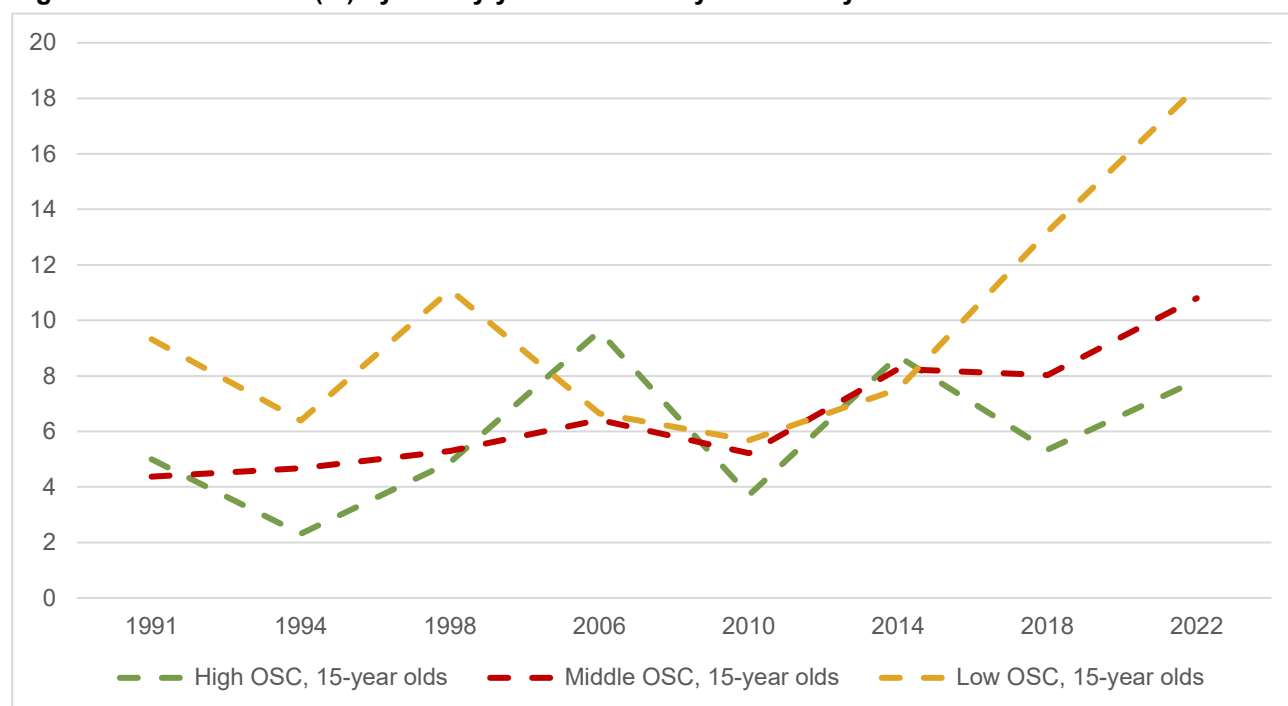
^aStandardized by sex

Figure 3.7d. Loneliness (%) by survey year stratified by OSC – 13-year-olds^a



^aStandardized by sex

Figure 3.7e. Loneliness (%) by survey year stratified by OSC – 15-year-olds^a



^aStandardized by sex

3.8 Low mental well-being

Table 3.8a. shows the prevalence of low mental well-being across high, middle, and low OSC groups for 2014, 2018, and 2022. For each year, the table also shows the absolute social inequality (prevalence difference with 95% CI) and relative social inequality (prevalence ratio with 95% CI) in low life satisfaction. Overall, absolute inequality widened from 6.0 (1.0–11.0) in 2014 to 13.7 (7.5–19.9) in 2022, driven by a marked increase in the prevalence of low mental well-being among adolescents in the low OSC group. The relative inequality remained stable across all three survey years. The results are illustrated in Figure 3.8a.

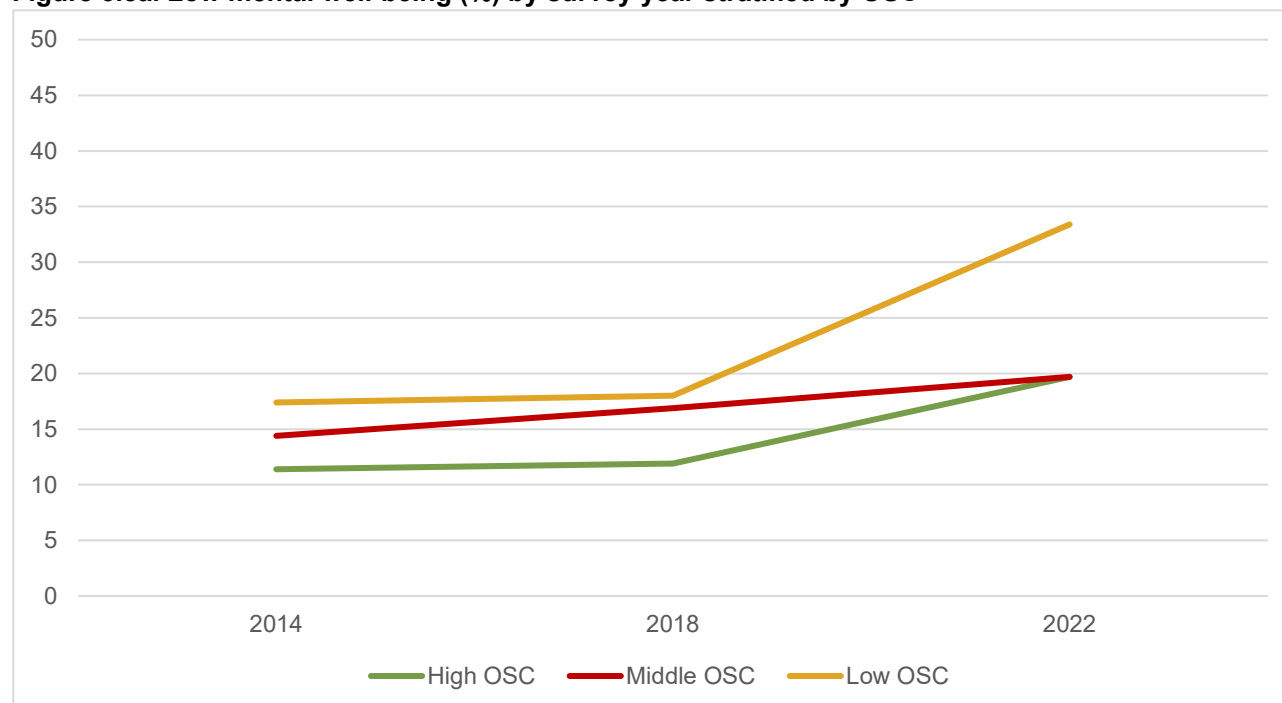
Table 3.8a. Absolute and relative social inequality in low mental well-being from 2014 to 2022, 13-15-year-olds^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low mental well-being by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low mental well-being (95% CI) by OSC		
	High	Middle	Low		High	Middle	Low
2014	11.4	14.4	17.4	6.0 (1.0-11.0)	1	1.3 (1.0-1.6)	1.5 (1.1-2.2)
2018	11.9	16.9	18.0	6.1 (-3.9-16.1)	1	1.4 (1.2-1.7)	1.5 (0.9-2.7)
2022	19.7	19.7	33.4	13.7 (7.5-19.9)	1	1.0 (0.8-1.2)	1.7 (1.4-2.1)

^aStandardized by sex and age

^bPrevalence difference: percent point difference between high and low OSC, standardized by sex and age
Statistically significant estimates are highlighted in bold

Figure 3.8a. Low mental well-being (%) by survey year stratified by OSC^a



^aStandardized by sex and age group

Social inequality in low mental well-being by sex

Sex-stratified analyses of social inequality in low mental well-being (Table 3.8b.) revealed patterns consistent with those observed in the full study population, with a widening gap in the absolute inequality for both sexes. In contrast, relative social inequality was relatively stable from 2014 to 2022. The increase in absolute inequality was more pronounced among girls and was primarily driven by a substantial rise in the prevalence of low mental well-being in girls from the low OSC, which is also illustrated in Figure 3.8b. Confidence intervals were broad and overlapping across years and inequality measures.

Table 3.8b. Absolute and relative social inequality in low mental well-being from 2014 to 2022, stratified by sex, 13-15-year-olds^a

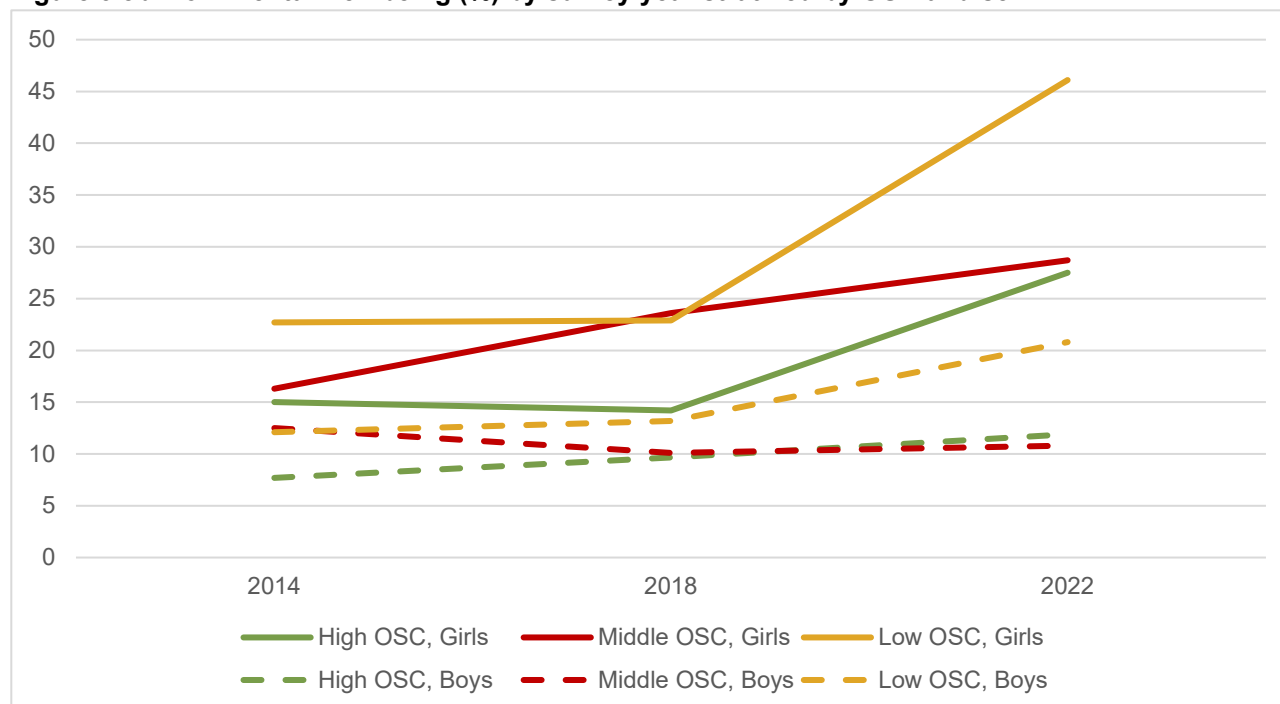
	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low mental well-being by OSC			Prevalence difference ^b (95% CI)	Prevalence ratio of low mental well-being (95% CI) by OSC		
Boys	High	Middle	Low		High	Middle	Low
2014	7.7	12.5	12.1	4.4 (-1.1-9.9)	1	1.6 (1.1-2.5)	1.6 (0.9-2.7)
2018	9.7	10.1	13.2	3.5 (-9.6-16.5)	1	1.1 (0.7-1.7)	1.4 (0.5-3.8)
2022	11.9	10.8	20.8	8.9 (2.5-15.2)	1	0.9 (0.6-1.3)	1.7 (1.2-2.5)
Girls	High	Middle	Low		High	Middle	Low
2014	15.0	16.3	22.7	7.7 (0.8-14.5)	1	1.1 (0.9-1.4)	1.5 (1.1-2.2)
2018	14.2	23.6	22.9	8.7 (-0.9-18.3)	1	1.7 (1.3-2.1)	1.6 (1.0-2.5)
2022	27.5	28.7	46.1	18.5 (9.1-28.0)	1	1.0 (0.9-1.2)	1.7 (1.3-2.1)

^aStandardized by age

^bPrevalence difference: percent point difference between high and low OSC, standardized age

Statistically significant estimates are highlighted in bold

Figure 3.8b. Low mental well-being (%) by survey year stratified by OSC and sex^a



^aStandardized by age group

Social inequality in low mental well-being by age group

Age-stratified analyses (Table 3.8c) showed the same tendencies as in the full study population and the sex-stratified analyses, with an overall widening gap in absolute social inequality in low mental well-being and a relatively stable relative social inequality across from 2014 to 2022. The patterns were similar among both 13- and 15-year-olds.

Table 3.8c. Absolute and relative social inequality in low mental well-being from 2014 to 2022, stratified by age^a

	Absolute social inequality				Relative social inequality		
	Prevalence (%) of low mental well-being by OSC			Prevalence difference (95% CI) ^b	Prevalence ratio of low mental well-being (95% CI) by OSC		
13 years	High	Middle	Low		High	Middle	Low
2014	11.2	15.0	16.4	5.3 (-0.0-10.5)	1	1.3 (0.9-2.0)	1.5 (1.0-2.2)
2018	12.4	16.2	18.7	6.3 (-2.1-14.6)	1	1.3 (1.0-1.7)	1.5 (0.9-2.4)
2022	20.8	19.1	33.9	13.1 (5.1-21.1)	1	0.9 (0.8-1.1)	1.6 (1.3-2.1)
15 years							
2014	11.5	13.8	18.3	6.8 (-0.4-14.0)	1	1.2 (0.9-1.6)	1.6 (1.0-2.5)
2018	11.4	17.6	17.4	5.9 (-7.7-19.6)	1	1.5 (1.1-2.2)	1.5 (0.7-3.5)
2022	18.7	20.4	32.9	14.3 (3.7-24.9)	1	1.1 (0.9-1.4)	1.8 (1.3-2.5)

^aStandardized by sex

^bPrevalence difference: percent point difference between high and low OSC

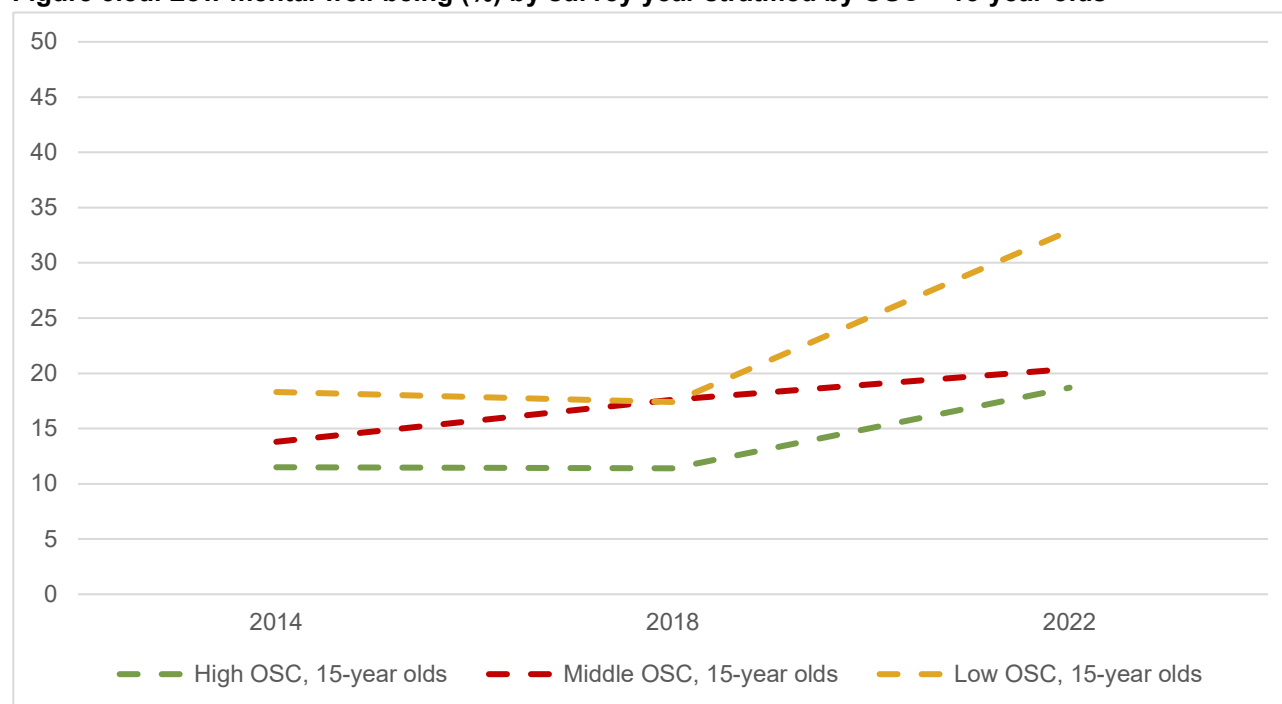
Statistically significant estimates are highlighted in bold

Figure 3.8c. Low mental well-being (%) by survey year stratified by OSC – 13-year-olds^a



^aStandardized by sex

Figure 3.8d. Low mental well-being (%) by survey year stratified by OSC – 15-year-olds^a



^aStandardized by sex

Conclusion

In this report, we examined long-term trends in socioeconomic inequality in adolescent overweight and multiple indicators of mental health and well-being across repeated survey waves from 1991–2022 with outcome-specific time coverage. We also explored whether these patterns differed by sex and age. Overall, a consistent absolute and relative socioeconomic gradient was observed across outcomes, with adolescents from lower occupational social class (OSC) experiencing a higher burden of overweight/obesity and poorer mental health and well-being than their peers from higher OSC.

For **overweight/obesity** (1998–2022), both absolute and relative inequalities were present throughout the period. Absolute inequality showed a tendency to increase over time - primarily driven by rising prevalence in low OSC - whereas relative inequality did not display a clear temporal pattern. Sex-stratified analyses suggested a more pronounced widening of absolute inequality among girls, while patterns among boys and relative inequalities for both sexes were comparatively stable. Age-stratified results did not indicate systematic trends, although a marked absolute inequality among 15-year-olds in 2022 stood out as a notable deviation.

Across mental health and well-being outcomes, the picture was **heterogeneous**. Relative and absolute socioeconomic inequalities in **low life satisfaction** (2002–2022) were evident and largely stable overall, although analyses by sex indicated increasing absolute inequality among girls. Inequalities in **frequent health complaints** (1991–2022) were also apparent but tended to decline over time in both absolute and relative terms, largely reflecting increases in frequent symptoms among adolescents from higher (and middle) OSC. For **low self-efficacy** (2010–2022), socioeconomic inequalities persisted but fluctuated without a clear overall trend; inequalities were generally larger and more consistently observed among girls. In contrast, **low self-esteem** (2014–2022) showed a pattern of widening absolute inequality, driven by rising prevalence in low OSC, with relative inequality emerging after 2014 and remaining present thereafter. **Loneliness** (1991–2022) displayed persistent socioeconomic inequalities, but with considerable fluctuation and statistical uncertainty, yielding no clear long-term trend. Finally, **low mental well-being** (2014–2022; 13–15-year-olds) demonstrated a clear widening in absolute inequality, while relative inequality remained comparatively stable; this widening was particularly pronounced among girls and was driven by a substantial increase in low mental well-being in the low OSC group.

Taken together, these findings indicate that socioeconomic inequalities remain a persistent feature of adolescent health, but with important outcome-specific dynamics: some indicators suggest widening absolute gaps, whereas others show stability or even declining inequality. The subgroup analyses further underscore that trends are not uniform across sex and age, with several patterns pointing to a disproportionate and, in some cases, increasing disadvantage among girls in lower OSC. Across indicators, many confidence intervals for the inequality estimates were large and overlapping. Strong conclusions about trends in inequalities are therefore difficult to draw, especially in age- and sex-stratified analyses.

Overall, the results emphasize the need for sustained public health focus on reducing socioeconomic inequalities in both physical and mental health among adolescents. Continued monitoring of health inequalities over time, and within specific subgroups, is essential for informing policies and interventions capable of improving health trajectories early in life.

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