

Background

Prior to the COVID-19 pandemic, evidence already pointed to worsening mental health and wellbeing among UK children and adolescents,^{1,2} with emotional disorders such as depression and anxiety increasing among 5-15 year olds in England between 2004 and 2017.³ Young people's levels of happiness with different aspects of their lives, including their friends, appearance, and school were also found to be substantially lower in the UK in 2018-19 compared to 2009-10.⁴ In Wales, one in five (19%) 11-16 year-olds scored very highly on the Strengths and Difficulties Questionnaire (SDQ) when surveyed by the School Health Research Network ([SHRN](#)) in 2019, indicating probable mental health difficulties.⁵

More than two years on from the onset of COVID-19, current evidence suggests the pandemic, and its associated mitigation measures, have likely further exacerbated pre-existing adolescent mental health problems.⁶ School closures have been particularly damaging, with young people's mental health worsening during periods of national lockdown.^{7,8} Data now indicates that one in six (17%) 6-16 year-olds in England have a probable mental health disorder, up from one in nine (12%) in 2017, with around two in five (39%) having experienced worsening mental health over this period.⁹ Given this, it is perhaps unsurprising that demand for specialist mental health services for children and young people has also increased substantially since before the start of the pandemic.¹⁰ In Wales, improving young people's mental health and wellbeing is a policy priority, emphasised by new statutory guidance requiring all schools to embed a whole school approach to mental health and wellbeing into existing practice,¹¹ and efforts to improve youth access to specialist mental health services.¹²

¹ Collishaw S, Maughan B, Natarajan L, Pickles A. Trends in adolescent emotional problems in England: a comparison of two national cohorts twenty years apart. *Journal of child psychology and psychiatry*, 51(8): 885-894; 2010

² Collishaw S. Annual research review: secular trends in child and adolescent mental health. *Journal of Child Psychology and Psychiatry*, 56(3): 370-393; 2015.

³ <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017>

⁴ The Goodchild Report, 2021. <https://www.childrensociety.org.uk/information/professionals/resources/good-childhood-report-2021>

⁵ Page N, Hewitt G, Young H, Moore G, Murphy S. Student health and wellbeing in Wales: report of the 2019 school health research network student health and wellbeing survey. Cardiff University, 2021. https://www.shrn.org.uk/wp-content/uploads/2021/08/SHRN-NR-FINAL-23_03_21-en-AMENDED06.08.21.pdf

⁶ Gunnell D, Kidger J, Elvidge H. Adolescent mental health in crisis. *BMJ*.2018;361: k2608.

⁷ Viner RM, Russell S, Saullé R, Croker H, Stansfield C, Packer J, et al. Impacts of school closures on physical and mental health of children and young people: a systematic review. *MedRxiv*. 2021. <https://doi.org/10.1101/2021.02.10.21251526>.

⁸ Creswell C, Shum A, Pearcey S, Skripkauskaite S, Patalay P, Waite P. Young people's mental health during the COVID-19 pandemic. *Lancet Child Adolescent Health*. 2021;5(8):535–7.

⁹ <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2021-follow-up-to-the-2017-survey>

¹⁰ <https://www.nuffieldtrust.org.uk/news-item/the-pandemic-has-driven-unprecedented-surge-in-demand-for-mental-health-services-for-children-and-young-people>.

¹¹ Welsh Government. Framework on embedding a whole-school approach to emotional and mental well-being, 2021. <https://gov.wales/framework-embedding-whole-school-approach-emotional-and-mental-wellbeing>

¹² Holtom D, Lloyd-Jones S, Bowen R. Evaluation of the Child and Adolescent Mental Health Service (CAMHS) In-Reach to Schools Pilot Programme: Final Report. Welsh Government, 2021.

This report examines change over time in three key mental health and wellbeing measures collected via SHRN's Student Health and Wellbeing (SHW) survey in 2019 and 2021. In so doing, the briefing will provide a snapshot of youth mental health and wellbeing immediately before and 18-months after the start of the pandemic.

The School Health Research Network (SHRN)

SHRN was established in 2013 and is led by the Centre for Development, Evaluation, Complexity and Implementation in Public Health Improvement ([DECIPHer](#)) at Cardiff University as a partnership between Welsh Government, Public Health Wales, Cancer Research UK, and the Wales Institute of Social and Economic Research and Data (WISERD).¹³ School membership as of 2021 includes all maintained secondary and middle schools in Wales (n=205) and seven independent schools.

The Student Health and Wellbeing (SHW) survey

The SHW survey is a biennial cross-sectional survey administered to 11-18 year olds attending SHRN member schools and was developed from the World Health Organisation's Health Behaviour in School-aged Children (HBSC) survey.¹⁴ The SHW survey aims to monitor adolescent health behaviours in Wales to increase understanding and inform policy and practice among key stakeholders.

To ensure a representative sample, only data collected from school years 7 to 11 (11-16 year olds) are included in the current analysis, as not all schools with a sixth-form opted to include these students within data collection. In 2021/22, 123,204 11-16 year-olds from 202 (95%) secondary and middle schools participated in the survey between September 2021 and January 2022. Most responses were collected between September and December (as per previous versions of the survey) with a small proportion (n=183, 0.1%) obtained in January 2022. This is the largest response to the SHW survey to date: in Wales, this represents 73% of Year 7 to 11 students in SHRN schools as well as 56% of all 11-16 year olds.

To examine change over time in youth mental health and wellbeing outcomes, 2021/22 data (hereafter 2021 data) were combined with responses collected between September and December 2019, directly before the COVID-19 pandemic. Detail regarding the 2019 SHW survey can be found elsewhere.⁵ In brief, 119,388 11-16 year-olds from 198 (94%) SHRN schools participated in 2019 (72% of students in years 7 to 11) (see Table A1 for a breakdown of sample characteristics in 2019 and 2021).

Measures that were present in both surveys and which have been analysed in this report are:

- **The Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS)**
- **The short Mood and Feelings Questionnaire (sMFQ)**
- **A single-item measure of loneliness**

¹³ <http://www.shrn.org.uk/>

¹⁴ <https://www.hbsc.org>

The SWEMWBS is a 7-item indicator of mental wellbeing that has been shown to be robust for use in adolescent populations, including within Wales.¹⁵ Individual items are summed to give an overall scale score ranging from 7 to 35. A higher overall score indicates better mental wellbeing. The sMFQ is a 13-item measure designed to capture depressive symptoms in children and adolescents.¹⁶ Scores range from 0 to 26, with a score of 12 or higher commonly used to indicate clinically significant depressive symptoms.^{17,18} Loneliness was assessed based on the frequency students reported feeling alone (response options: 'hardly ever or never'; 'some of the time'; 'often'), with those who reported 'often' feeling alone classed as lonely (see Table A2 for further details).

Analysis

Prevalence estimates for all three measures in both 2019 and 2021 are presented overall, as well as by gender, school year, ethnicity, family affluence, and health board. A three category gender measure is used that includes 'boy,' 'girl' and 'neither word describes me' (1% in 2019 and 3% in 2021). Ethnicity has been collapsed into 'Black, Asian and Minority Ethnic' and 'White' (89% in both 2019 and 2021). Family affluence is measured using 5-items of the Family Affluence Scale (FAS),¹⁹ where lower/higher affluence is defined as having a total composite score either below or equal to and above the median score. The sixth FAS item asks: how many times did you and your family travel out of Wales for a holiday/vacation last year? This was excluded from the composite score in both years due to incompatibility between the 2019 and 2021 samples, likely due to COVID-19 imposed travel restrictions. The proportion of students reporting having taken no holidays outside of Wales in the past 12 months increased from 14% in 2019 to 37% in 2021. Due to item non-response, sample base sizes vary. For each of the reported estimates, 95% confidence intervals are available within the Appendix (Table A3).

Statistical significance of any change in mental health and wellbeing measure over time was assessed using either linear or logistic regression (dependent on the outcome measure). All models (where appropriate) included survey year, gender, and school year, with adjustment for school-level clustering. Due to the large sample size available, it is possible that even small changes in estimates may be found to be statistically significant, particularly when assessing changes overall and among boys and girls, respectively. Models may lack the necessary statistical power to detect similar changes in groups with lower sample sizes (e.g. students identifying as neither a boy nor a girl). Non-significance (NS) is indicated in all figures, defined as $p > 0.05$.

¹⁵ Melendez-Torres GJ, Hewitt G, Hallingberg B, Anthony R, Collishaw S, Hall J, Murphy S, Moore G. Measurement invariance properties and external construct validity of the short Warwick-Edinburgh mental wellbeing scale in a large national sample of secondary school students in Wales. *Health and Quality of Life Outcomes*. 2019; 17(139).

¹⁶ Angold A, Costello EJ, Messer CS, Pickles A, Winder F, Silver D. The development of a questionnaire for use in epidemiological studies of depression in children and adolescents. *Int J Methods Psychiatr Res* 1995(5): 237–49.

¹⁷ Thabrew H, Stasiak K, Bavin L-M, Frampton C, Merry S. Validation of the Mood and Feelings Questionnaire (MFQ) and Short Mood and Feelings Questionnaire (SMFQ) in New Zealand help-seeking adolescents. *Int J Methods Psychiatr Res*. 2018; 27(3): e1610.

¹⁸ Weavers B, Heron J, Thapar AK, Stephens A, Lennon J, Bevan Jones R et al. The antecedents and outcomes of persistent and remitting adolescent depressive symptom trajectories: a longitudinal, population-based English study. *Lancet Psychiatry*. 2021; 8: 1053-61.

¹⁹ Hartley JE, Levin K, Currie C. A new version of the HBSC Family Affluence Scale-FAS III: Scottish qualitative findings from the international FAS development study. *Child indicators research*. 2016;9(1):233-45.

Findings

Mental wellbeing

The mean SWEMWBS score for 11-16 year-olds in Wales was marginally lower in 2021 (23.0: 95% confidence interval [CI] 23.0-23.1) compared to 2019 (23.7: 95% CI 23.7-23.8).²⁰ While seemingly only a small reduction, given the large sample, this is a statistically significant decline in mental wellbeing. Breakdowns by gender and year group showed, on average, older students and students self-identifying as neither a boy nor a girl reported lower mental wellbeing in both 2019 and 2021. However, declines in mental wellbeing were observed across all genders and year groups - albeit only a small (but significant) decline in mean SWEMWBS score was observed among boys (Figures 1a-b). Smaller declines in mental wellbeing among boys over time, relative to girls and students self-identifying as neither a boy nor a girl, were consistent across all five year groups. In school years 7 and 11, the observed changes in mean SWEMWBS score for students self-identifying as neither a boy nor a girl were non-significant (Figure 1c). Trends by ethnicity highlighted a smaller relative decline in mental wellbeing among Black, Asian and Minority Ethnic students compared to White students (Figure1d). Breakdown by family affluence showed declines of equal magnitude between 2019 and 2021 among students of lower and higher family affluence, suggesting pre-existing inequalities in mental wellbeing had not widened over this period (Figure 1e). Across health boards, mean SWEMWBS scores were lower in 2021 compared to 2019, with declines found to be statistically significant in all health boards apart from Powys (see Table A4).

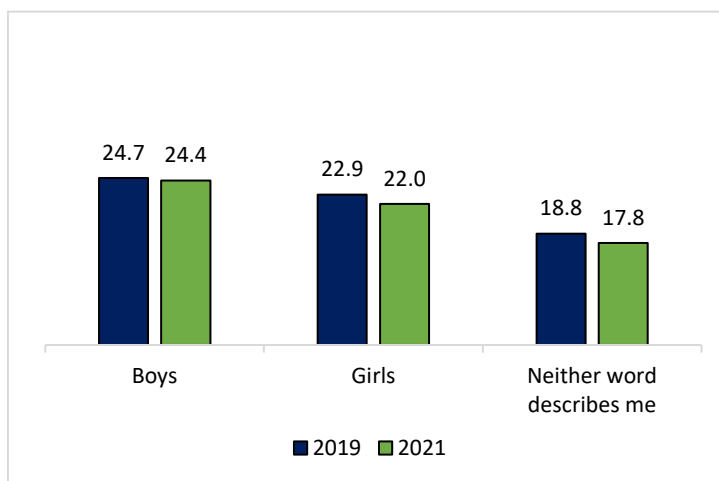


Figure 1a. Mean SWEMWBS score in 2019 (n=106,561) versus 2021 (n=108,931) by gender

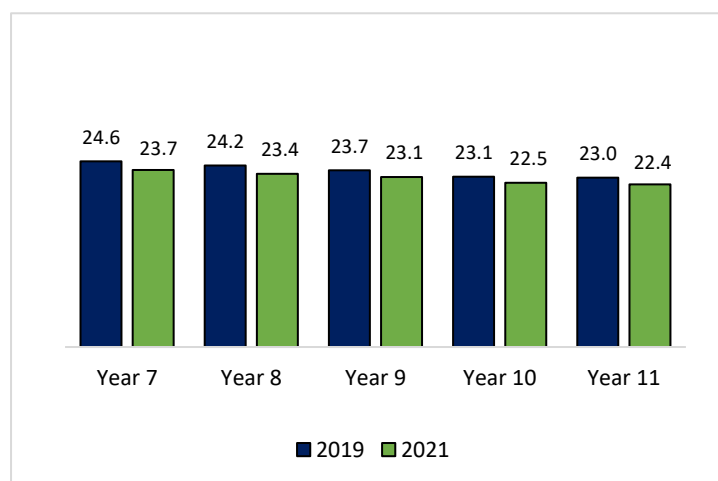


Figure 1b. Mean SWEMWBS score in 2019 (n=107,263) versus 2021 (n=110,349) by school year

²⁰ Due to rounding, 95% confidence intervals may appear to include the point estimate. This occurs throughout the briefing and is a product of large sample sizes resulting in smaller margins of error.

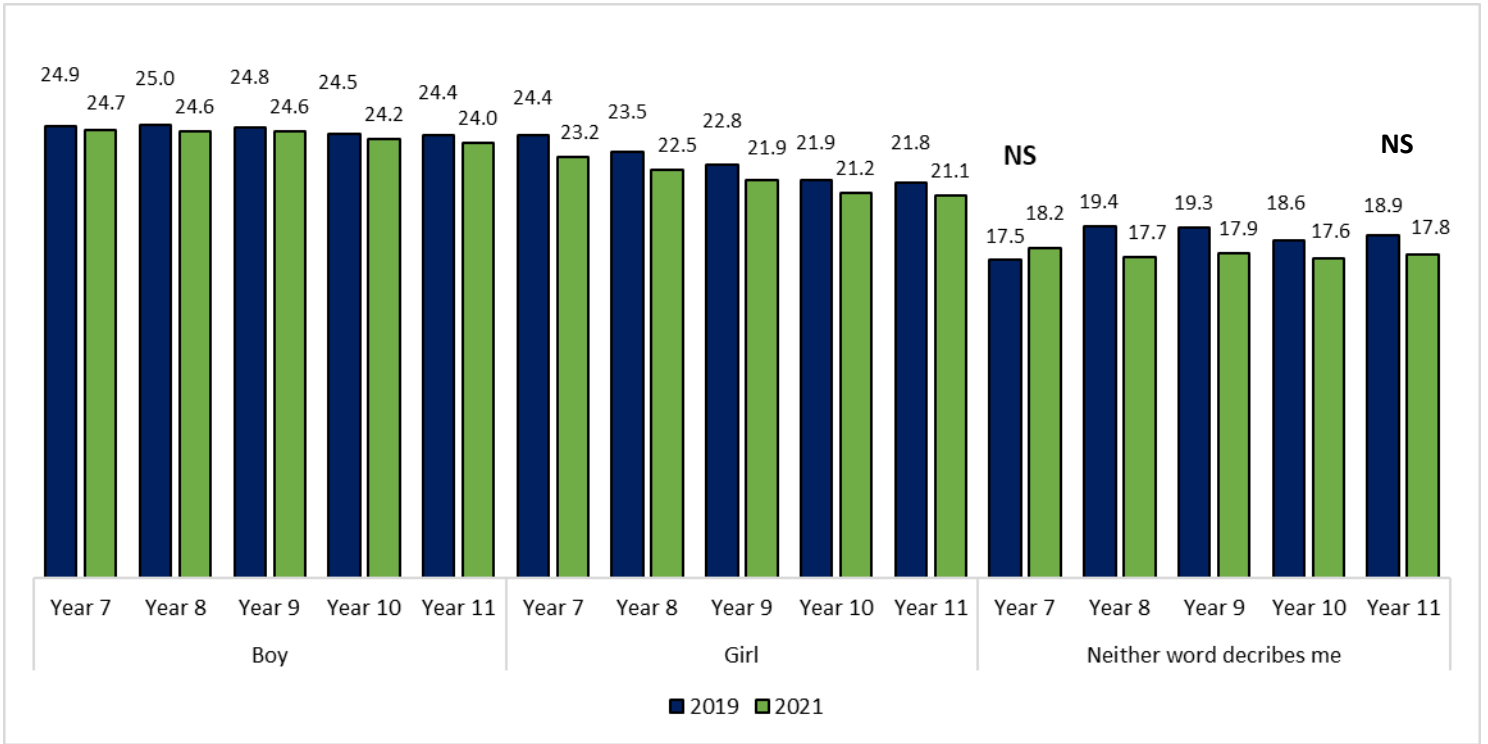


Figure 1c. Mean SWEMWBS score in 2019 (n=106,561) versus 2021 (n=108,931) by gender and school year

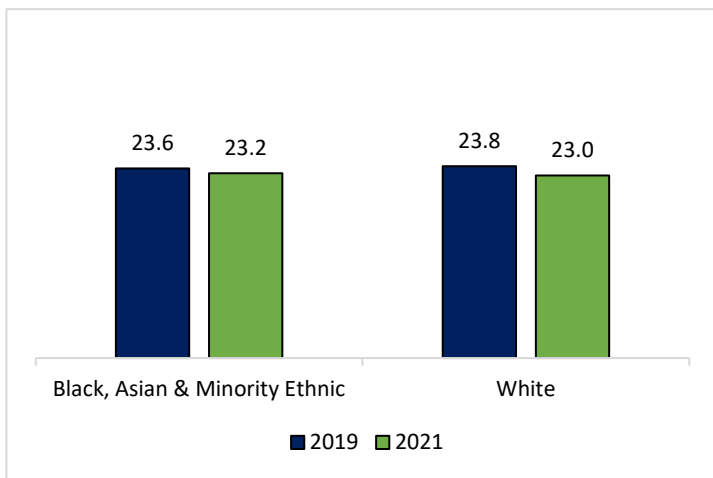


Figure 1d. Mean SWEMWBS score in 2019 (n=105,069) versus 2021 (n=107,844) by ethnicity

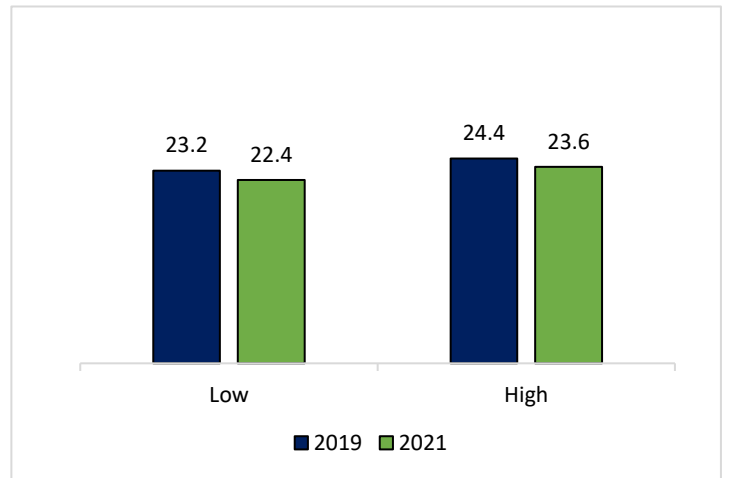


Figure 1e. Mean SWEMWBS score in 2019 (n=104,179) versus 2021 (n=106,918) by family affluence

Depressive symptoms

The overall percentage of 11-16 year-olds scoring 12 or higher on the sMFQ, indicating clinically significant depressive symptoms, increased from 24% (95% CI: 24-25%) in 2019 to 28% (95% CI: 28-28%) in 2021. Girls and students self-identifying as neither a boy nor a girl, were around two and four times more likely than boys, respectively, to reach this threshold in 2019. This disparity had widened further by 2021, following no observed change in the proportion of boys reporting depressive symptoms compared to statistically significant growth for girls and students identifying as neither a boy nor a girl (Figure 2a). Growth in depressive symptoms was highest among students self-identifying as neither a boy nor a girl, rising from 61% (95% CI: 57-65%) scoring 12 or higher on the sMFQ in 2019 to 78% (95% CI: 75-80%) by 2021. In both surveys, the proportion of students reporting clinically significant depressive symptoms was shown to increase with age. However, notwithstanding a larger relative increase among students in Year 7 between 2019 and 2021 (from 15% to 21%), despite lower overall prevalence of depressive symptoms, the magnitude of growth observed over time was consistent across year groups (Figures 2b). Trends by gender and year group revealed that despite no overall change in depressive symptoms among boys in 2021 compared to 2019, significant growth was observed among boys in Year 7 (Figure 1c). Breakdowns by ethnicity and family affluence showed similar increases among both White and Black, Asian and Minority Ethnic students and students of higher and lower family affluence (Figures 1d-e). Significant increases in the proportion of students meeting the threshold for clinically significant depressive symptoms were observed across all health boards, except for Cardiff and Vale and Powys (Table A4).

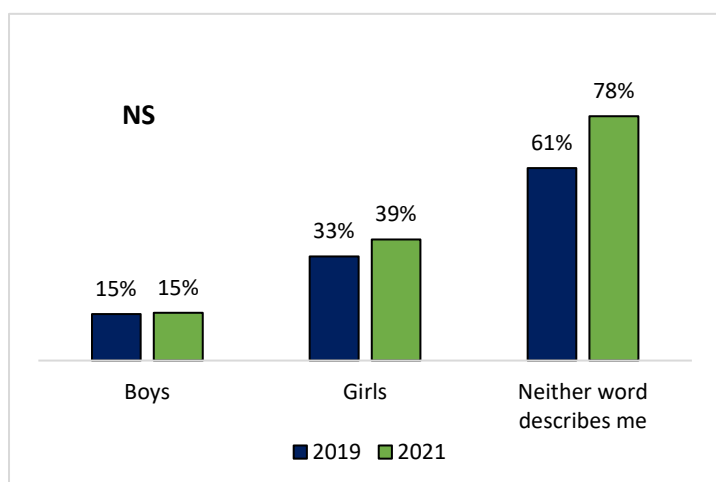


Figure 2a. % of students who scored 12+ on the sMFQ in 2019 (n=52,685) versus 2021 (n=51,715) by gender

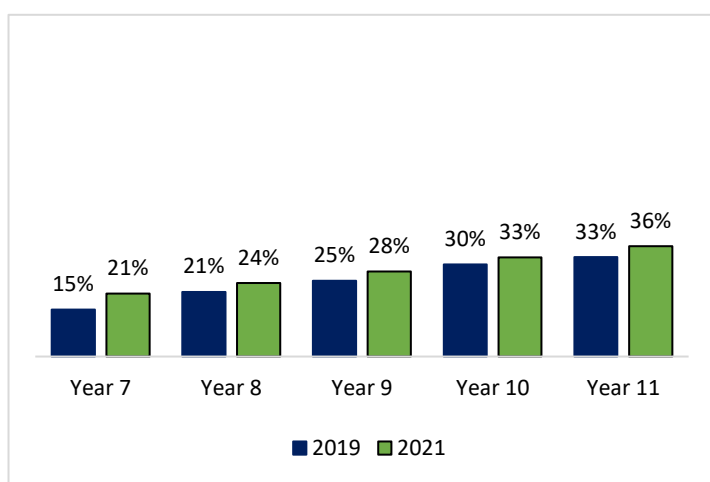


Figure 2b. % of students who scored 12+ on the sMFQ in 2019 (n=52,992) versus 2021 (n=52,363) by school year

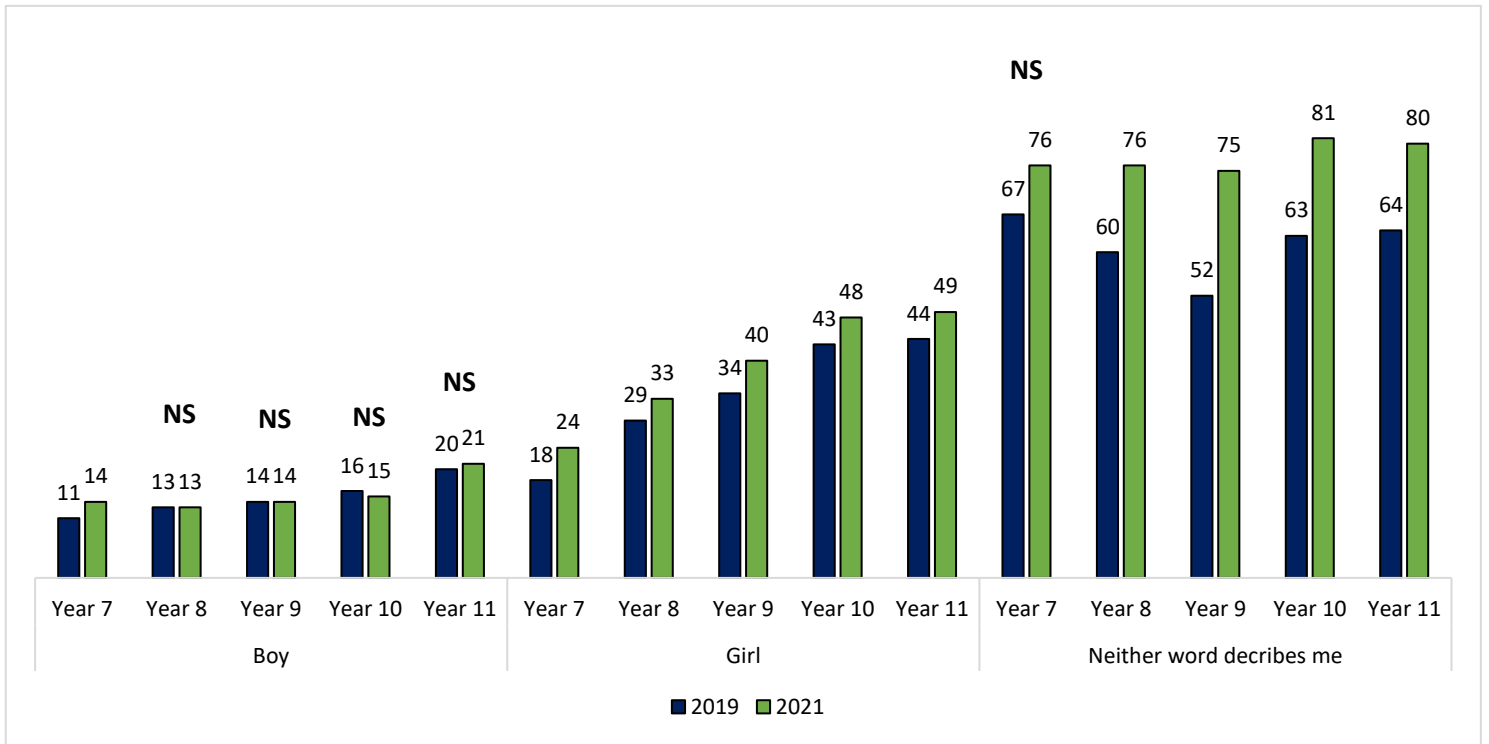


Figure 2c. % of students who scored 12+ on the sMFQ in 2019 (n=52,685) versus 2021 (n=51,715) by gender and school year

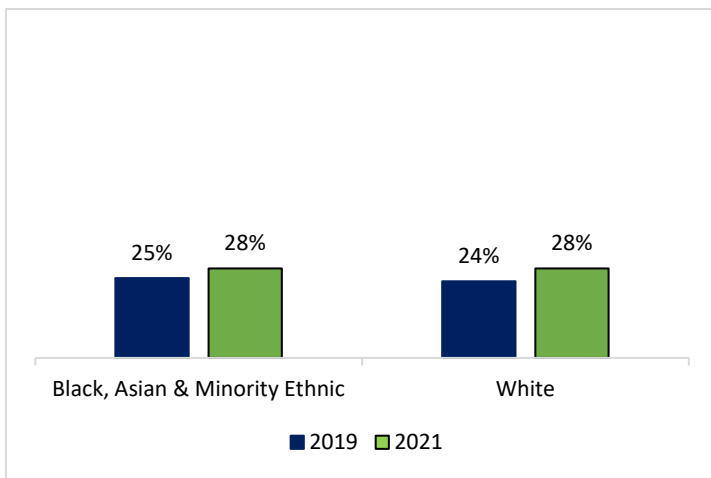


Figure 2d. % of students who scored 12+ on the sMFQ in 2019 (n=51,970) versus 2021 (n=51,265) by ethnicity

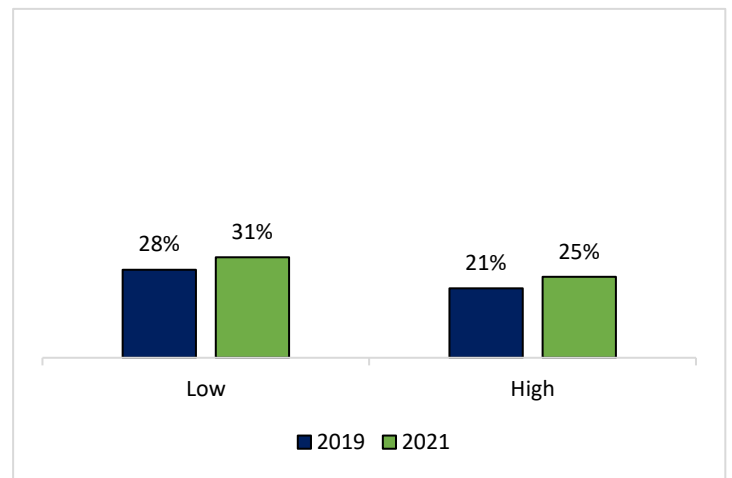


Figure 2e. % of students who scored 12+ on the sMFQ in 2019 (n=51,442) versus 2021 (n=50,806) by family affluence

Loneliness

In 2021, 14% (95% CI: 14-14%) of 11-16 year-olds in Wales reported that they often felt alone, up from 12% (95% CI: 12-12%) in 2019.¹⁹ Breakdown by gender revealed small but statistically significant increases in reported loneliness from 2019 to 2021 among both boys and girls. However, no change was observed among students self-identifying as neither a boy nor a girl (Figure 3a).²¹ Despite this, more than two-fifths of students self-identifying as neither a boy nor a girl reported often feeling alone in both 2019 and 2021 – approximately four and three times greater than the proportion of boys (10% in 2019 and 11% in 2021) and girls (14% in 2019 and 15% in 2021), respectively. Loneliness increased with age, with students in Year 11 around twice as likely as those in Year 7 to report often feeling alone. However, while small increases in reported loneliness were observed in all year groups between 2019 and 2021 – this growth was only statistically significant among students in years 7, 8 and 11 (Figure 3b). Breakdowns by gender and year group suggest that overall rises in loneliness were driven principally by growth among boys and Year 7 girls (Figure 3c). From 2019 to 2021, compared to a small increase in reported loneliness among White students, no change was observed among Black, Asian and Minority Ethnic students (Figure 3d). Breakdown by family affluence showed higher reported loneliness among students of lower affluence compared to higher affluence, with small increases among both groups between 2019 and 2021 (Figure 3e). Despite small variations in reported loneliness between health boards in 2019, the magnitude of increases in loneliness observed in 2021 were relatively similar at around 2-3 percentage points. Purported changes in loneliness in Betsi Cadwaladr, Cwm Taf Morgannwg and Swansea Bay health boards were not found to be statistically significant (Table A4).

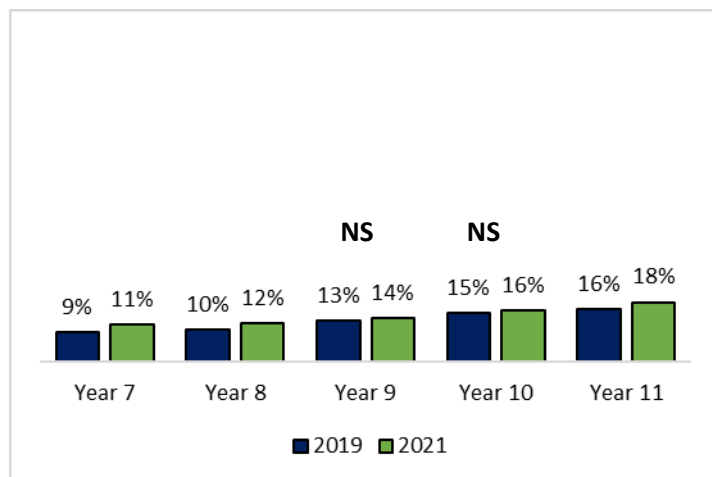
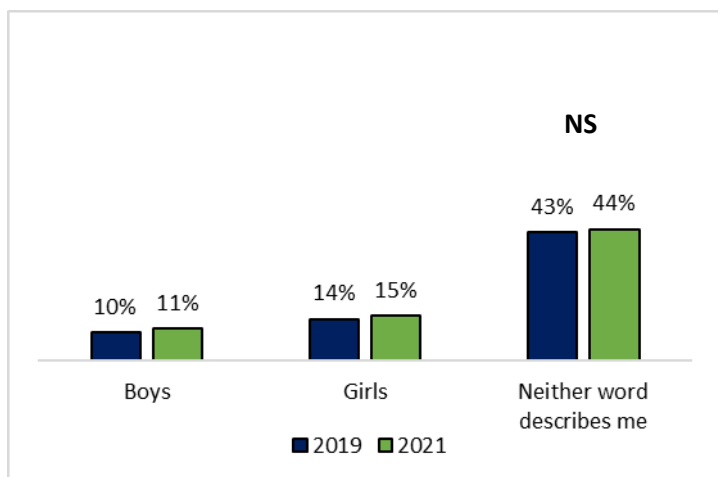


Figure 3a. % of students who reported often feeling alone in 2019 (n=112,997) versus 2021 (n=57,392) by gender

Figure 3b. % of students who reported often feeling alone in 2019 (n=113,827) versus 2021 (n=58,248) by school year

²¹ Failure to detect a change in estimate, despite an increase of equal magnitude to that observed among boys and girls, is likely a product of the smaller sample size for students self-identifying as neither a boy nor a girl.

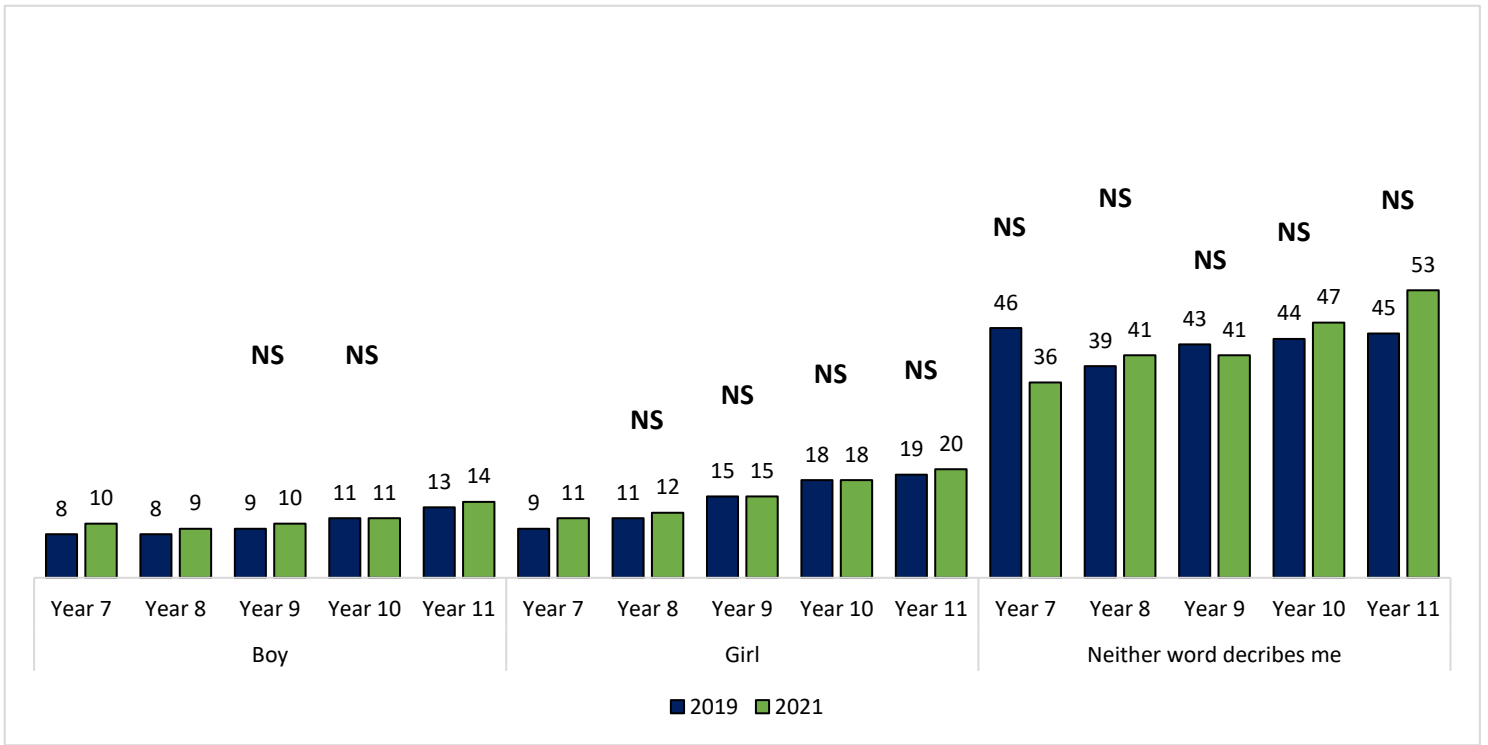


Figure 3c. % of students who reported often feeling alone in 2019 (n=112,997) versus 2021 (n=57,392) by gender and school year

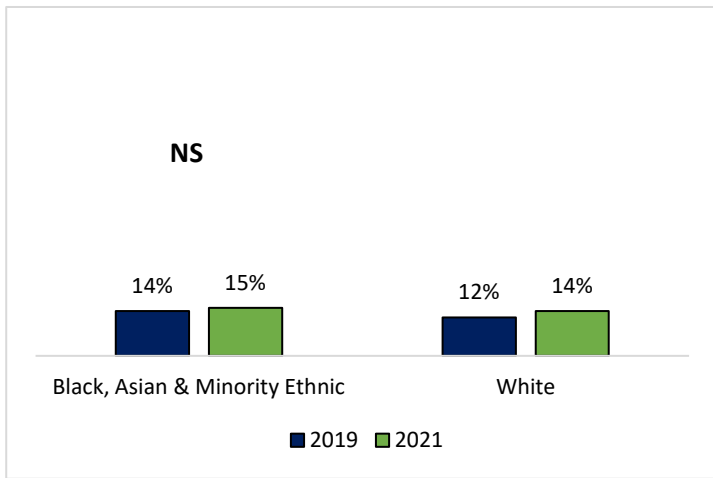


Figure 3d. % of students who reported often feeling alone in 2019 (n=110,916) versus 2021 (n=56,703) by ethnicity

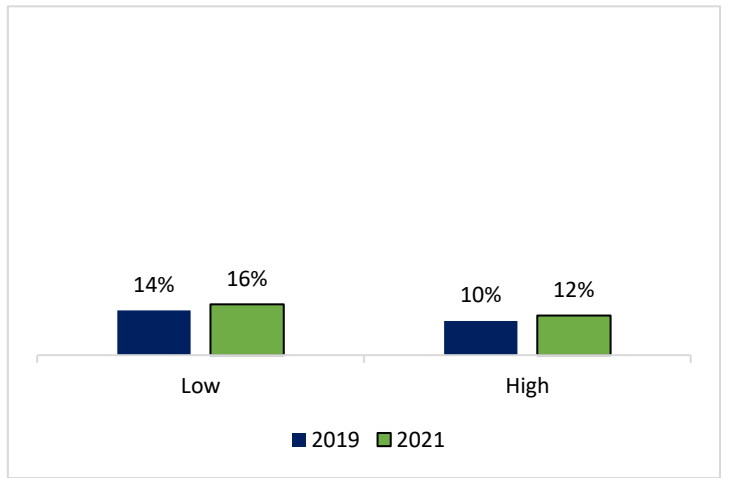


Figure 3e. % of students who reported often feeling alone in 2019 (n=109,807) versus 2021 (n=56,128) by family affluence

Methodological considerations

- This analysis uses a large sample of secondary school students, with over 70% of Year 7 to 11 students in SHRN schools participating in the SHW survey in 2019 and 2021, respectively.
- While the purpose of the analysis is to detect population trends, rather than follow the same young people over time, the large response rates mean that students in school years 7 to 9 in 2019 may have been surveyed again in 2021. Examining change in outcomes by school year reduces the possibility of bias associated with non-independence of observations when assessing statistical significance. Findings by year group were widely supportive of poorer mental health and wellbeing outcomes for students in 2021 relative to 2019.
- A smaller overall sample size for students self-identifying as neither a boy nor a girl (1% and 3% of the total sample in 2019 and 2021, respectively), may have prevented small changes in estimates from being detected.
- Data were collected immediately before and 18-months after the onset of COVID-19. However, the extent to which changes reported here represent effects of the pandemic or the continuation of pre-existing trends (or other potentially influencing factors) cannot be established.
- The SHW survey is a school-based survey undertaken in maintained schools and a small number of independent schools in Wales. It does not include the mental health and wellbeing of 11-16 year-olds outside of mainstream education (e.g. pupil referral units). Non-mainstream settings and primary schools are the focus of a SHRN development study funded by Welsh Government.

Summary

Continued monitoring of adolescent health behaviours, particularly indicators of mental health and wellbeing, is integral to informing effective COVID-19 recovery strategies for children and young people. Due to its almost universal coverage of secondary schools in Wales (over 90% of maintained schools participated in 2019 and 2021) the SHW survey can provide valuable insights into young people's mental health and wellbeing in Wales at near population level for secondary school children. Consistent with evidence from the UK and elsewhere, SHW data from 2019 and 2021 (collected immediately before and 18-months after the onset of the COVID-19 pandemic) suggest an overall decline in young people's mental health and wellbeing in Wales since 2019 - signalled here by small reductions in mental wellbeing, increased loneliness, and a higher proportion of young people reporting clinically significant depressive symptoms. However, the magnitude of changes over time were not always uniform, with variations evident across different socio-demographic groups, reinforcing the need for approaches that address this. Moving forward, it will be important to continue to monitor these (and other) indicators of adolescent mental health and wellbeing to better understand longer-term population trends in Wales, and to identify groups potentially in need of targeted intervention.

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Appendix

Table A1: Sample characteristics for 2019 and 2021

	2019		2021	
	N	%	N	%
Gender				
Boy	58,115	49	60,315	50
Girl	58,610	50	57,219	47
Neither word describes me	1,472	1	3,691	3
Year Group				
Year 7	26,786	22	26,657	22
Year 8	25,808	22	25,895	21
Year 9	24,375	20	25,814	21
Year 10	22,210	19	23,588	19
Year 11	20,209	17	21,250	17
Ethnicity				
Black, Asian & Minority Ethnic	12,456	11	13,430	11
White	103,083	89	105,594	89
Family Affluence				
Lower	55,424	49	54,910	47
Higher	58,603	51	62,562	53
Local Health Board				
Aneurin Bevan	23,730	20	24,582	20
Betsi Cadwaladr	27,801	23	28,816	23
Cardiff & Vale	17,434	15	18,674	15
Cwm Taf Morgannwg	15,876	13	16,031	13
Hwyel Dda	13,838	12	14,415	12
Powys	4,114	3	5,293	4
Swansea Bay	16,595	14	15,393	12

Table A2: Mental health and wellbeing measures

Question	Response options*	Reported in analyses
<p>SWEMWBS: Below are some statements about feelings and thoughts. Please select the option that best describes your experience of each over the last 2 weeks.</p> <p>a) I've been feeling optimistic about the future</p> <p>b) I've been feeling useful</p> <p>c) I've been feeling relaxed</p> <p>d) I've been dealing with problems well</p> <p>e) I've been thinking clearly</p> <p>f) I've been feeling close to other people</p> <p>g) I've been able to make up my own mind about things</p>	<ul style="list-style-type: none"> • None of the time (1) • Rarely (2) • Some of the time (3) • Often (4) • All of the time (5) 	<p>Mean score</p>
<p>SMFQ: This form is about how you might have been feeling or acting recently. For each question, please check how you have been feeling or acting in the past two weeks. If a sentence was not true about you, check NOT TRUE. If a sentence was only sometimes true, check SOMETIMES. If a sentence was true about you most of the time, check TRUE.</p> <p>a) I felt miserable or unhappy.</p> <p>b) I didn't enjoy anything at all.</p> <p>c) I felt so tired I just sat around and did nothing.</p> <p>d) I was very restless.</p> <p>e) I felt I was no good anymore.</p> <p>f) I cried a lot.</p> <p>g) I found it hard to think properly or concentrate.</p> <p>h) I hated myself.</p> <p>i) I was a bad person.</p> <p>j) I felt lonely.</p> <p>k) I thought nobody really loved me.</p> <p>l) I thought I could never be as good as other kids.</p> <p>m) I did everything wrong.</p>	<ul style="list-style-type: none"> • Not true (0) • Sometimes (1) • True (2) 	<p>% Scoring 12 or above</p>
<p>Loneliness: The next questions are about relationships with others. For each one, please say how often you feel...</p> <p>c) ... alone?</p>	<ul style="list-style-type: none"> • Hardly ever or never • Some of the time • Often 	<p>% Often alone</p>

* All questions included an option of 'I do not want to answer' which was omitted from analyses

Table A3: 95% confidence intervals for prevalence estimates within Figures 1a-3e

	SWEMWBS		sMFQ		Loneliness	
	Mean score		% Scoring 12+		% Often alone	
	2019	2021	2019	2021	2019	2021
Wales	23.7, 23.8	23.0, 23.1	24, 25	28, 28	12, 12	14, 14
Boy	24.7, 24.8	24.4, 24.5	14, 15	15, 16	9, 10	10, 11
Girl	22.9, 23.0	21.9, 22.0	33, 34	38, 39	14, 14	14, 15
NWDM*	18.4, 19.2	17.6, 18.0	57, 65	75, 80	41, 46	41, 46
Year 7	24.5, 24.6	23.7, 23.8	15, 16	20, 21	9, 9	11, 12
Year 8	24.1, 24.2	23.3, 23.4	20, 22	23, 25	10, 10	11, 12
Year 9	23.6, 23.8	23.0, 23.1	24, 26	27, 29	12, 13	13, 14
Year 10	23.0, 23.2	22.4, 22.6	29, 31	32, 33	14, 15	15, 16
Year 11	22.9, 23.0	22.3, 22.4	32, 34	35, 37	16, 17	18, 19
Year 7 (boy)	24.8, 25.0	24.6, 24.8	11, 12	13, 15	8, 9	10, 11
Year 8 (boy)	24.9, 25.1	24.5, 24.7	12, 14	12, 14	7, 8	8, 10
Year 9 (boy)	24.7, 24.9	24.5, 24.7	14, 15	13, 15	9, 10	9, 10
Year 10 (boy)	24.4, 24.6	24.1, 24.3	15, 17	14, 16	10, 11	10, 12
Year 11 (boy)	24.3, 24.5	23.9, 24.1	19, 21	19, 22	12, 13	13, 15
Year 7 (girl)	24.3, 23.6	23.1, 23.3	17, 19	23, 26	9, 10	10, 12
Year 8 (girl)	23.4, 23.6	22.4, 22.6	27, 30	31, 34	11, 12	11, 13
Year 9 (girl)	22.7, 22.9	21.8, 22.0	33, 36	39, 41	14, 15	14, 16
Year 10 (girl)	21.8, 22.0	21.1, 21.3	42, 45	46, 49	17, 19	17, 19
Year 11 (girl)	21.7, 21.9	21.0, 21.2	43, 46	47, 50	18, 19	19, 21
Year 7 (NWDM)	16.3, 18.6	17.7, 18.6	56, 77	71, 82	39, 53	31, 41
Year 8 (NWDM)	18.5, 20.3	17.3, 18.1	49, 69	70, 81	33, 46	36, 46
Year 9 (NWDM)	18.5, 20.2	17.5, 18.3	42, 61	70, 80	37, 49	36, 46
Year 10 (NWDM)	17.7, 19.5	17.1, 18.0	55, 71	76, 85	39, 50	42, 52
Year 11 (NWDM)	17.9, 19.9	17.3, 18.3	55, 73	75, 84	39, 51	48, 59
Black, Asian & Minority Ethnic	23.5, 23.7	23.1, 23.7	24, 26	27, 29	13, 15	14, 16
White	23.8, 23.8	23.0, 23.1	24, 25	28, 28	12, 12	13, 14
Lower affluence	23.1, 23.2	22.4, 22.5	27, 28	31, 32	14, 14	15, 16
Higher affluence	24.3, 24.4	23.6, 23.7	21, 22	24, 25	10, 10	11, 12

*NWDM = Neither word describes me

Table A4: Prevalence estimates (95% CI) by local health board

	SWEMWBS Mean score		sMFQ % Scoring 12+		Loneliness % Often alone	
	2019	2021	2019	2021	2019	2021
Aneurin Bevan	23.7 (23.6, 23.7)	23.0 (22.9, 23.1)	25 (24, 26)	29 (28, 30)	13 (13, 13)	15 (14, 15)
Betsi Cadwaladr	23.5 (23.5, 23.6)	22.9 (22.8, 22.9)	24 (23, 25)	28 (28, 29)	12 (12, 13)	14 (14, 15)
Cardiff & Vale	24.2 (24.1, 24.3)	23.4 (23.3, 23.5)	23 (22, 24)	26 (25, 27)	11 (11, 12)	13 (12, 14)
Cwm Taf Morgannwg	23.6 (23.5, 23.7)	22.9 (22.9, 23.0)	24 (23, 25)	28 (27, 29)	12 (12, 13)	14 (13, 14)
Hywel Dda	23.7 (23.6, 23.8)	22.9 (22.8, 23.0)	25 (24, 26)	29 (28, 30)	12 (12, 13)	14 (13, 15)
Powys	23.5 (23.4, 23.7)	23.1 (23.0, 23.3)	28 (25, 30)	30 (28, 32)	13 (11, 14)	16 (14, 17)
Swansea Bay	23.9 (23.8, 24.0)	23.1 (23.0, 23.2)	24 (24, 25)	27 (26, 28)	12 (12, 13)	13 (12, 14)

NS (P>0.05)