

Birmingham Secondary Schools Wellbeing Census 2024

Lay Summary

Why a Wellbeing Census?

The gap between levels of need and the availability of resources to support school-age young people with mental health and wellbeing issues has been rapidly increasing in recent years against a background where half of all mental health disorders are estimated to emerge by age 14. Wellbeing is positively associated with a range of educational outcomes and schools are an ideal environment to provide educational interventions to improve the social and emotional health of young people but need support to systematically measure and appraise the status of pupil mental health in their schools.

Employing wellbeing metrics to annually gauge the emotional health of young people in school settings (Thapar et al., 2021) is a practical way to indicate the current and ongoing wellbeing and future mental health status of pupils, giving schools the opportunity to both monitor and support their young people.

The 2024 Breathe Education Secondary School Wellbeing Census?

Between Jan-July 2024 a “wellbeing census” was conducted in a sample of secondary schools across the Birmingham LEA. The measures used for the survey were:

The Warwick-Edinburgh Mental Wellbeing Scales (WEMWBS, (Tennant et al., 2007). The 14-item scale WEMWBS has 5 response categories, summed to provide a single score ranging between 14-70. All items are suitable for young people and worded positively, covering both emotional and functional aspects of mental wellbeing thereby making the concept more accessible.

The School Connectedness Scale (Resnick et al., 1997) which is assessed by 4 items across 5 response categories, summed to provide a single score ranging between 0-20. Questions are adapted from Resnick et al. (1997). School connectedness is protective against a range of risk behaviours and poor academic achievement.

Demographics for pupils were collected around ethnicity, sex, school year, SEND status, free school meals and persistent absence. For inter-school comparisons we matched overall averages to publicly available school-level information, %SEN support, % Pupils with English as not first language and % Free School Meal (FSM) status (average of last 6 years) from Dfes (2021) and Local Super Output Area (LSOA) deprivation data from www.gov.uk (2019).

Measures are included in appendix i.

Digital delivery of the census was through www.breathe-schools.co.uk, a platform that enables collaborative work to take place across a regional partnership of mental health professionals and individual schools. This is part of an ongoing programme creating resources and interventions for schools via our teacher focused website www.breathe-edu.co.uk.

For more information regarding the census and this report please contact c.palmer@warwick.ac.uk.

Who were involved?

23 secondary schools collected data for 10,230 pupils between the ages of 11-18 years. Participating schools constituted 16 academies, 3 foundation schools, 2 independent schools, 1 state-funded school and 1 voluntary aided school. Birmingham LEA schools spanned across all 5 Birmingham constituencies North (3 schools), East (2 Schools), West (5 Schools), South (5 Schools), Central (7 Schools) and a further 1 school from Staffordshire LEA ¹. Secondary Schools registered 22,218 pupils for the study of which 10,230 took part a 46% rate of response. All pupils from years 7-13 (11-18 years old) were able to take part in the census.

Representation

Census schools were generally representative of the broader picture of schools in Birmingham LEAs. The schools that took part in the survey had a similar percentage of pupils with special educational needs support 12.7%, when compared to the England average of 12.4%(Dfes, 2022). The schools that took part had higher proportions of pupils with their first language other than English with 27%, compared to the England average 18.1%(Dfes, 2022). The percentage of pupils taking part in receipt of FSM was 31.2%, compared to the England average of 27.10% (Dfes, 2022). The West Midlands typically reports higher levels of these indices compared to the rest of the England. An over-representation of pupils from an Asian background (37%) was apparent from the sample in comparison to the actual population of the West Midlands by age group (ONS, 2021).

A note on terminology used in this analysis.

Significant denotes statistical significance – Statistical significance means that our findings are unlikely to have occurred by chance but this does not always indicate a large difference between groups.

Meaningful in the context of this analysis relates to the difference between scores that reaches the WEMWBS threshold for meaningful change, which relates to a scoring difference of 3-8 points(Maheswaran et al., 2012). Although this primarily assesses individual changes it has been used by other researchers (Widnall et al., 2020) to help also understand changes at the group level.

For example, in our analysis if one group of pupil's average wellbeing score is 3-points or higher than another's we consider this a meaningful difference. This means we think one group is experiencing higher wellbeing in a way that could be important for how we support them. Both could have reasonably high wellbeing but one would be meaningfully higher. It is also important to note that a small difference does not mean there is no difference at all – it could still be important depending on context.

Any difference however may not be *statistically significant* because the sub-samples may be too small to pass statistical testing (for example). This is why we find results that are both '*significant* and *meaningful*' as important findings in our data.

¹ Taking part in the census was open to all schools in the Birmingham LEA however as one academy trust had schools operating in neighbouring LEAs so were permitted to take part

2024 Constituency level Mental Wellbeing and School Connectedness

Table 1. details the wellbeing census result categorised by constituency of school and school type. Assessing wellbeing by constituency revealed that average wellbeing was reported to be the highest in the North constituency 47.4 - which was statistically and meaningfully higher than South (-2) and Other LEA (-3) constituencies. The Other LEA constituency was statistically and meaningfully lower than all other constituencies except from the South. Wellbeing was found to be the highest, as well as statistically and meaningfully higher in voluntary aided schools compared to all other school types. Wellbeing was found to be higher in academies compared with state funded schools. This was also a meaningful and significant difference (-2.7). The North, East and South constituencies had slightly improved from last year's census regarding wellbeing and school connectedness, however the West and Central constituencies has declined in both wellbeing and school connectedness.

Table 1. Constituency and School Type Wellbeing & School Connectedness

Secondary School Variables	Frequency	%	WEMWBS 2024	WEMWBS Avg 2023	2023 Difference	Avg School Connectedness 2024	Avg School Connectedness 2023	2023 Difference
North	2059	20%	47.0	45.9	1.1	12.1	11.4	0.7
East	923	9%	46.7	46.0	0.7	12.3	11.3	1.0
West	2295	22%	47.3	47.6	-0.3	12.4	12.5	-0.1
South	2008	20%	45.4	44.3	1.1	12.5	11.9	0.6
Central	2546	25%	47.4	48.9	-1.5	12.6	13.2	-0.6
Other LEA	399	4%	44.4	44.5	N/A	10.6	10.7	N/A
Academy	7071	69%	46.6	46.1	0.5	12.3	11.9	0.4
State funded	1528	15%	47.3	49.3	-2.0	12.0	12.5	-0.5
Voluntary aided	534	5%	48.5	48.3	0.2	12.5	12.5	0.0
Foundation	573	5.6%	45.4	N/A	N/A	11.5	N/A	N/A
Independent	524	5.1%	46.7	N/A	N/A	13.9	N/A	N/A

2024 Secondary School Wellbeing

Table 2. details 2024 wellbeing scores for secondary schools. Overall average wellbeing score for secondary school pupils in our sample was **46.7** - similar to previous years 2023 (46.5), 2022 (45.9), and 2021 (46.8) data. It is still slightly lower than the UK population average found for adolescents in 2020 (48.1) (Widnall et al., 2020) which was assessed during the pandemic. Our findings suggest that average wellbeing appears relatively stable across years but variable between schools.

Females reported lower mental wellbeing (**45**) in comparison to males (**48.8**) - a significant and meaningful difference of -3.8 between groups, which was also reported in 2023. Pupils reporting from a White and 'Other' ethnicity had slightly lower average wellbeing (White **45.9**, Other **45.8**) compared to all other simplified ethnicities. Whilst this was a statistically significant finding (actual differences in scores) for White ethnicity compared to Asian and Black ethnicities, the differences in scores were small, between -1.3 and -1.7, though approaching "meaningfulness" for some comparisons. Pupils in receipt of free school meals reported slightly lower wellbeing score than those not in receipt, a small but significant difference of -1 (-0.9 in 2023). Pupils reported as persistent absenters also reported slightly lower wellbeing on average than non-absenters, again a small but significant difference of 1.5 (1.6 in 2023).

A very weak trend was found between secondary pupil wellbeing and school year (i.e. pupil age) with wellbeing slightly decreasing as school year (pupil age) increased.

2024 Secondary School Connectedness

Table 2. details 2024 school connectedness for secondary schools. Overall average school connectedness for secondary school pupils was calculated as **12.3**, a slight increase on the overall average score in 2023. School connectedness was slightly higher for nearly all demographic groups

compared to 2023, except for those categorised as 'other'. A strong positive relationship was found again between 2024 secondary school pupil wellbeing and school connectedness **with higher wellbeing related to higher school connectedness. As we have observed our previous census school connectedness is much lower on average at secondary schools in comparison to primary schools where we observed an average school connectedness score of 15.2.**

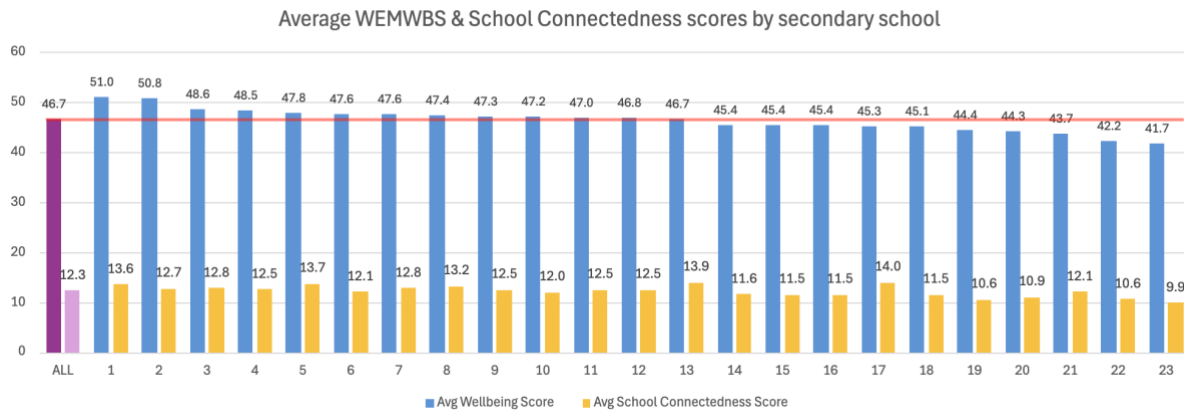
Table 2. 2024 Wellbeing and School Connectedness with 2023 differences

Secondary School Variables	Frequency (2024)	Percentages (2024)	Avg	Avg	2023 Diff	Avg School	Avg School	2023 Diff
			WEMWBS 2024	WEMWBS 2023		Connectedness 2024	Connectedness 2023	
Overall	10230	100	46.7	46.5	0.2	12.3	12	0.3
Male	4587	45%	48.8	48.8	0.0	12.8	12.5	0.3
Female	5643	55%	45.0	44.5	0.5	12.0	11.6	0.4
Year 7	2318	23%	47.3	47.1	0.2	12.6	12.3	0.3
Year 8	2439	24%	46.4	46.9	-0.5	11.9	11.9	-0.1
Year 9	2171	21%	47.5	46.6	0.9	12.3	11.5	0.8
Year 10	2151	21%	46.2	46	0.2	12.2	11.9	0.3
Year 11	431	4%	45.8	46.5	-0.7	13.2	12.8	0.4
Year 12	476	5%	46.3	44.9	1.4	13.0	13.1	-0.1
Year 13	244	2%	45.9	44.4	1.5	13.3	13.3	0.0
White	2844	28%	45.9	45.5	0.4	11.9	11.7	0.2
Asian	3762	37%	47.1	47.2	-0.1	12.5	12.4	0.1
Black	765	8%	47.6	47.2	0.4	12.1	11.4	0.7
Mixed	713	7%	46.8	46.9	-0.1	12.3	12.2	0.1
Other	359	4%	45.8	48.2	-2.4	11.8	12.2	-0.4
Ethnicity not known	1787	18%	N/A	N/A	N/A	N/A	N/A	N/A
No SEND	9052	89%	46.9	46.6	0.3	12.4	12	0.4
All SEND combined	1178	12%	45.4	45.7	-0.3	12.0	12.2	-0.2
Communication & Interaction	407	4%	45.2	45.3	-0.1	12.1	12.5	-0.4
Cognition & Learning	438	4%	46.0	45.6	0.4	11.9	12.3	-0.4
SEMH	228	2%	44.9	45.3	-0.4	11.9	11.3	0.6
Physical or Sensory	105	1%	45.4	48.4	-3.0	12.2	12.8	-0.6
In Receipt of FSM	2904	28%	46.1	46.1	0.0	11.9	11.7	0.2
Not in receipt of FSM	6732	66%	47.0	46.9	0.1	12.4	12.2	0.2
FSM not known	633	6%	N/A	N/A	N/A	N/A	N/A	N/A
Persistent Absenter	1025	10%	45.3	45.4	-0.1	11.7	12.3	-0.6
Below PA threshold	9205	90%	46.9	46.8	0.1	12.4	11.2	1.2

Inter-secondary school analysis and local norming

Average wellbeing and school connectedness scores for individual schools are presented in Chart 1 - ranging between **51.0** and **41.7**, showing a **-9.3** overall **statistically significant and meaningful difference** in wellbeing between schools. Wellbeing and school connectedness were strongly associated at school level (schools with higher wellbeing tended to have higher school connectedness). Comparing Department for Education school-level data we found a moderate association between schools reporting higher percentages of pupils on free school meals over the last 6 years with lower levels of average school wellbeing and average school connectedness. No other significant school level associations for wellbeing or school connectedness were found for school size, % SEND pupils, % of pupils where English is not first language, or index of multiple deprivation decile.

Chart 1. Bar chart of average wellbeing and school connectedness for all participating schools in 2024 with overall average line superimposed



2 schools reported a meaningfully higher level of wellbeing than other schools and 3 schools reported meaningfully lower wellbeing compared to most schools.

Fig 1 displays a common way to categorise data by + or -1 standard deviation from the overall mean (average) score. This enables us to create 'norms' from our data and define three categories of mental wellbeing "**Low**", "**Medium**" and "**High**". Using this method, 13% (1,376) pupils fell into the low wellbeing category, (14-36), 73% (7,436) the medium wellbeing category (37-56) and 14% (1,418) the high wellbeing category (57-70). (Note this is a relative comparison of wellbeing categories and should not be employed for any diagnostic purposes).

Fig 1. Overall categorical percentages for all 2024 schools

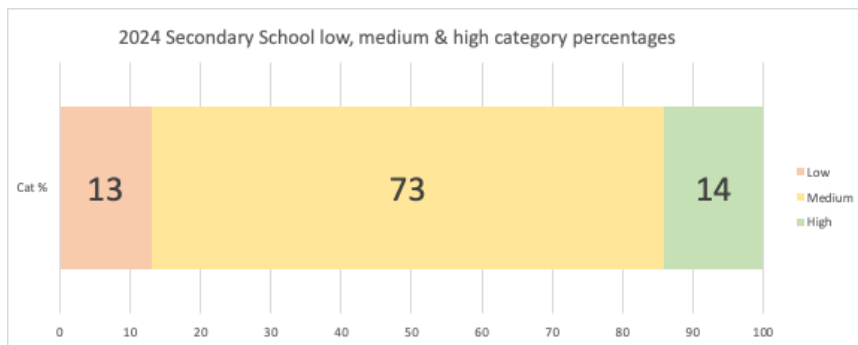
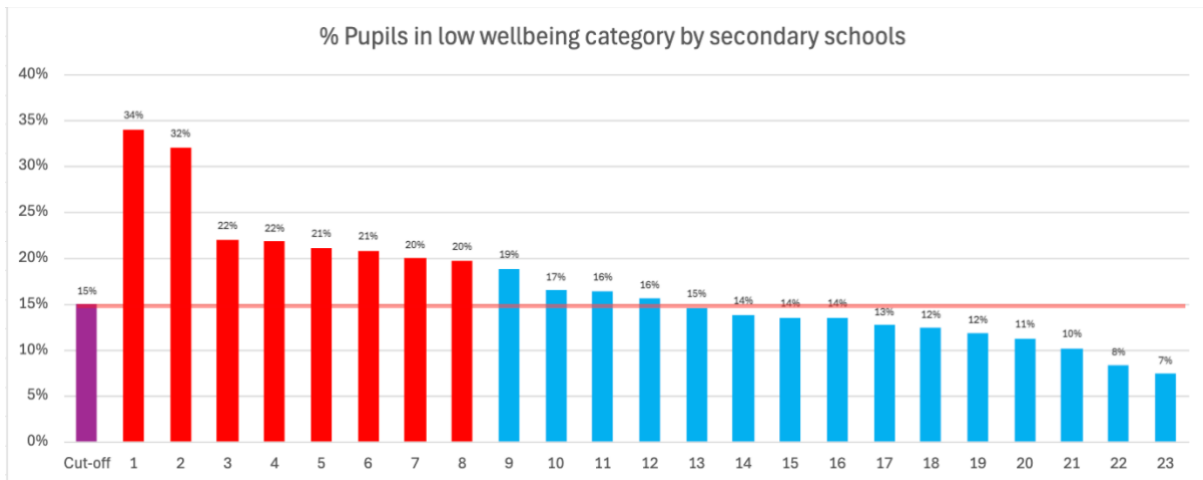


Chart 2. Bar chart displaying the % of pupils in the lower wellbeing category per participating school in 2024 with 15% cut-off line superimposed.

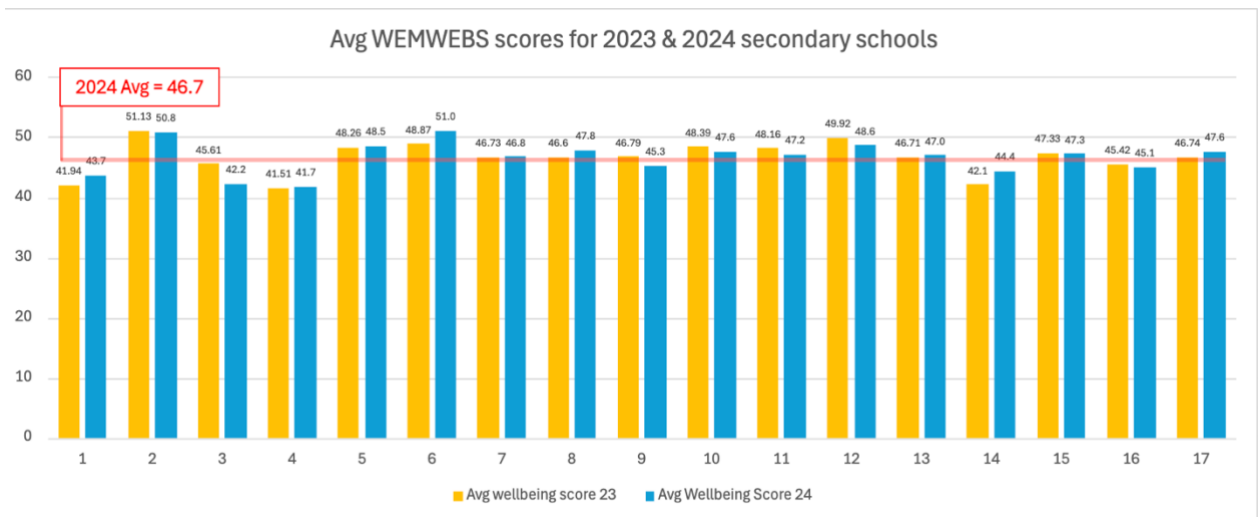


On average secondary schools had 14% of pupils falling within the lower wellbeing category. We found that 10 schools in our sample reported a higher % of pupils falling within the lower wellbeing category and 4 schools reported markedly higher (>5% more than average) percentages of pupils in this **lower wellbeing** category and these schools may benefit from a review of wellbeing practices and consideration of accessing targeted support from mental health support services.

2023 and 2024 school comparison

17 of this years participating secondary schools also took part in the 2023 census and wellbeing scores could therefore be compared with 2024 scores. Chart 3 shows that for these schools, most had improved average wellbeing compared to last year.

Chart 3. Bar chart of participating school's average wellbeing in 2023 and 2024 with 2024 overall average line superimposed



What this tells us

Gender

On average pupils categorised as female reported meaningful and significantly lower wellbeing than pupils categorised as male. This finding is replicated in our 2022 and 2023 data but also other recent measurements collected during Covid-19 for 13-16 year olds (Widnall et al., 2020) and supports previous international evidence around the gender gap in adolescent health (Campbell et al., 2021). In our primary school data this difference between genders has not been observed over the same time period. It points to secondary school as a key developmental phase in which wellbeing differences regarding gender start to emerge.

Ethnicity

Pupils of white ethnicity on average reported slightly lower levels of wellbeing - approaching a meaningful difference in comparison to pupils reporting other ethnicities. This finding was replicated in our 2022, 2023 data and again has not been observed in our primary school sample. This supports findings from the most recent NHS Digital survey which show higher levels of mental health difficulties for 6-16 years old of White ethnicity compared to other ethnicities (Newlove-Delgado et al., 2021), however the broad age ranges used by NHS Digital and the differing mental health measures make comparisons here difficult. More analysis is required here into ethnicity at a more granular level as these findings are related to broad-category ethnicity. This may also be a feature of our sample and the local areas from which it was drawn.

Age

We found a very weak relationship between secondary pupil wellbeing and year group with wellbeing appearing to only slightly decrease older year groups - something we also found in our 2023 data suggesting that age has minimal or perhaps a more nuanced impact on wellbeing at secondary school than this broad analysis can detect.

School Connectedness

School connectedness had slightly increased overall compared to last year and we still found that wellbeing had a strong positive relationship with school connectedness, Although the causal nature of this relationship is unclear from our data our evidence over multiple surveys supports school connectedness as highly related to wellbeing (Waters & Cross, 2010). It is also interesting to consider what appears to be a moderate reduction in school connectedness between primary school and secondary schools, this seems a consistent finding and something we have now replicated in our over 4 years. This supports previous findings of (Lester et al., 2013) who found pupils transitioning to secondary school report reduced school connectedness as a response to the changeable school experience (secondary school experiences being generally less cohesive than at primary school i.e. familiar teachers and class mates). Lester et al. (2013) found that this reduced connectedness was associated with increased levels of depression and anxiety. School connectedness appears to be a key factor in improving the wellbeing of schools.

Comparisons across Schools

On an inter-school level it appeared that on average wellbeing for each school was broadly similar and at a moderate level. We could identify a small number of schools where wellbeing was meaningfully lower than the average for all schools. In addition, we found that only 4 schools reported 19% or more of their pupils scoring below 35 on the WEMWBS - considered a low score and suggesting a need for a strategic focus on support for these schools. We also found a relationship between the % of FSM in the last 6 years pupils in a school and wellbeing. Interestingly, this finding was not replicated for school level index of multiple deprivation decile, however this likely due to a school's index multiple deprivation decile, not fully representing the individual pupil deprivation status.

We found that most of the schools which had also taken part in 2023 reported slight improvements in average wellbeing for 2024. Alongside this however, it appeared there was relative consistency in

wellbeing reporting within schools from the previous year which suggests these modest improvements may be less a feature of individual pupil demographics and more related to general improvements to the environmental and contextual elements of pupils' lives. It is our opinion that this should be regarded as suggesting that schools can shape and influence wellbeing positively and that a wellbeing census can also help to identify schools in most need of support to help create these positive changes.

Summary

The 2024 wellbeing census has again built on findings from previous years highlighting a disparity in wellbeing between boys and girls at secondary school, alongside some potential emerging differences for ethnicity, and age when considering comparisons to school connectedness between primary and secondary schools. We continue to be able to evaluate pupils & schools wellbeing in a validated and standardised way that has good potential to inform strategic decision-making and help direct resources to schools in most need of support.

Recommendations

- Girls wellbeing at secondary school is a concern and should be an area of targeted focus for all schools
- Late primary school and early secondary school years are a key transitional time for considering the application of preventative educational wellbeing interventions integrated with schools curricula.
- Schools with higher percentages of FSM % pupil populations may benefit from increased support for wellbeing.
- More refined research is recommended to understand the relationship of ethnicity to wellbeing at a more granular level as current findings are related to aggregated ethnicity.

References

- Campbell, O. L., Bann, D., & Patalay, P. (2021). The gender gap in adolescent mental health: a cross-national investigation of 566,829 adolescents across 73 countries. *SSM-population health*, 13, 100742.
- Dfes. (2021). *Department for Education Schools Statistics*. <https://www.compare-school-performance.service.gov.uk>
- Dfes. (2022). *Department for Education Schools Statistics*. <https://www.find-school-performance-data.service.gov.uk>
- Lester, L., Waters, S., & Cross, D. (2013). The relationship between school connectedness and mental health during the transition to secondary school: A path analysis. *Journal of Psychologists and Counsellors in Schools*, 23(2), 157-171.
- Maheswaran, H., Weich, S., Powell, J., & Stewart-Brown, S. (2012). Evaluating the responsiveness of the Warwick Edinburgh Mental Well-Being Scale (WEMWBS): Group and individual level analysis. *Health and Quality of life Outcomes*, 10(1), 1-8.
- McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of school health*, 72(4), 138-146.
- Newlove-Delgado, T., Williams, T., Robertson, K., McManus, S., Sadler, K., Vizard, T., Cartwright, C., Mathews, F., Norman, S., & Marcheselli, F. (2021). Mental Health of Children and Young People in England 2021-wave 2 follow up to the 2017 survey.
- ONS. (2021). *Census 2021*. <https://www.ons.gov.uk/peoplepopulationandcommunity>
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., Tabor, J., Beuhring, T., Sieving, R. E., & Shew, M. (1997). Protecting adolescents from

- harm: findings from the National Longitudinal Study on Adolescent Health. *Jama*, 278(10), 823-832.
- Stewart-Brown, S., Tennant, A., Tennant, R., Platt, S., Parkinson, J., & Weich, S. (2009). Internal construct validity of the Warwick-Edinburgh mental well-being scale (WEMWBS): a Rasch analysis using data from the Scottish health education population survey. *Health and Quality of life Outcomes*, 7(1), 1-8.
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of life Outcomes*, 5(1), 1-13.
- Thapar, A., Stewart-Brown, S., & Harold, G. (2021). What has happened to children's wellbeing in the UK? *Lancet Psychiatry*, 8(1), 5-6.
- Waters, S., & Cross, D. (2010). Measuring students' connectedness to school, teachers, and family: Validation of three scales. *School Psychology Quarterly*, 25(3), 164.
- Widnall, E., Winstone, L., Mars, B., Haworth, C., & Kidger, J. (2020). Young people's mental health during the COVID-19 pandemic. *University of Bristol: Bristol, UK.*
- www.gov.uk. (2019). *English Indices of Deprivation 2019*. UK Government Retrieved from <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

Appendix i

Secondary Demographic (reported by schools)

Demographic data will be collected by school administrators/school champions from existing data available to schools.

Ethnicity (2011 Census)

Sex (2021 Census)

School Year

Percentage of Pupil Absence

SEND Type

Free School Meals

Secondary School Pupils (reported by pupils)

The schedule for the *Warwick-Edinburgh Mental Wellbeing Scales (WEMWEBS)* (Stewart-Brown et al., 2009) contain the following questions and an additional 3 questions on school connectedness (each coded by 1-5 Likert scale)

		Never	Not that much of the time	Some of the time	Quite a lot of the time	All of the time
Warwick-Edinburgh Mental Wellbeing Scale						
1	I've been feeling optimistic about the future					
2	I've been feeling useful	1	2	3	4	5
3	I've been feeling relaxed	1	2	3	4	5
4	I've feeling interested in other people	1	2	3	4	5
5	I've had energy too spare	1	2	3	4	5
6	I've been dealing with problems well	1	2	3	4	5
7	I've been thinking clearly	1	2	3	4	5
8	I've been feeling good about myself	1	2	3	4	5
9	I've been feeling good about myself	1	2	3	4	5
10	I've been feeling close to other people	1	2	3	4	5
11	I've been able to make up my own mind about things	1	2	3	4	5
12	I've been feeling loved	1	2	3	4	5
13	I've been interested in new things	1	2	3	4	5
14	I've been feeling cheerful	1	2	3	4	5

Secondary School Pupils (reported by pupils)

School Connectedness question are adapted from Waters and Cross (2010) and contain the following questions and an additional 3 questions on school connectedness (each coded by 1-5 Likert scale)

Additional questions of school connectedness (Adapted from Waters & Cross 2010)						
1 6	I feel proud to be a student at my school	1	2	3	4	5
1 7	I feel like I belong at my school	1	2	3	4	5
1 8	I enjoy coming to school	1	2	3	4	5
1 9	I have meaningful relationships with teachers from my school	1	2	3	4	5

Warwick-Edinburgh Mental Wellbeing Scales (WEMWEBS) (Stewart-Brown et al., 2009)

The WEMWEBS has been validated for use in general population and schools for the evaluation of projects, programmes and policies which aim to improve mental wellbeing. The 14-item scale WEMWEBS has 5 response categories, summed to provide a single score. The items are suitable for young people and are all worded positively, covering both feeling and functioning aspects of mental wellbeing and thereby making the concept more accessible. The scale has been widely used nationally and internationally for monitoring, evaluating projects and programmes and investigating the determinants of mental wellbeing. Further information on the measure can be found here:

<https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs>

School Connectedness is assessed by 4 questions measuring school connectedness, these questions adapted from Waters and Cross (2010) questions were adapted to be suitable for use with the population. School connectedness is an important belief that is associated with protecting pupils against a range of risk behaviours and poor academic achievement (McNeely et al., 2002).

Each survey is voluntary, pupils can digitally withdraw from the survey prior to beginning and submitting their answers. A debrief for pupils is presented to on withdrawal or completion of surveys (see appendix i). The survey realistically takes 5-10 minutes (accounting for younger ages).