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# Young People's Mental Health during the COVID-19 Pandemic

Initial findings from a secondary school  
survey study in South West England.

August 2020

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# Overview

## Background

In March 2020, the UK was placed in lockdown in an effort to help slow the spread of Coronavirus (COVID-19). The lockdown has disrupted the lives and daily routines of everyone; however, the impact is likely to have had a particular impact on young people with the closure of schools and disruption to social relationships.

This project aimed to understand the impacts of COVID-19 and the resultant lockdown on adolescent mental health and wellbeing, social connections, and social media activity.

## Recruitment and Sample

Students were participants of an ongoing NIHR School for Public Health Research survey study exploring social media use and adolescent mental health and wellbeing. They had already completed a baseline survey pre-pandemic in October 2019. Participants were contacted by their schools in April/May 2020 during lockdown and invited to complete a similar survey online. Demographics of the sample and comparison with non-responders who had completed the original survey are detailed in Appendix 1. The lockdown sample had lower proportions of Black, Asian and Minority Ethnic (BAME) students, students receiving free school meals and students with a long-term illness or disability, lower levels of T1 anxiety and slightly higher T1 school connectedness compared to non-responders. A total of 1,047 Year 9 students (aged 13-14 years) in 17 schools completed this lockdown survey. Where we have made comparisons between timepoints, we have used all matched data available for the outcomes of interest for students that completed both the pre-pandemic survey and the survey during lockdown (ranging from 721-770 participants).

The study was approved by the University of Bristol Medical School Ethics Committee (Ref: 84883).

## Key Findings

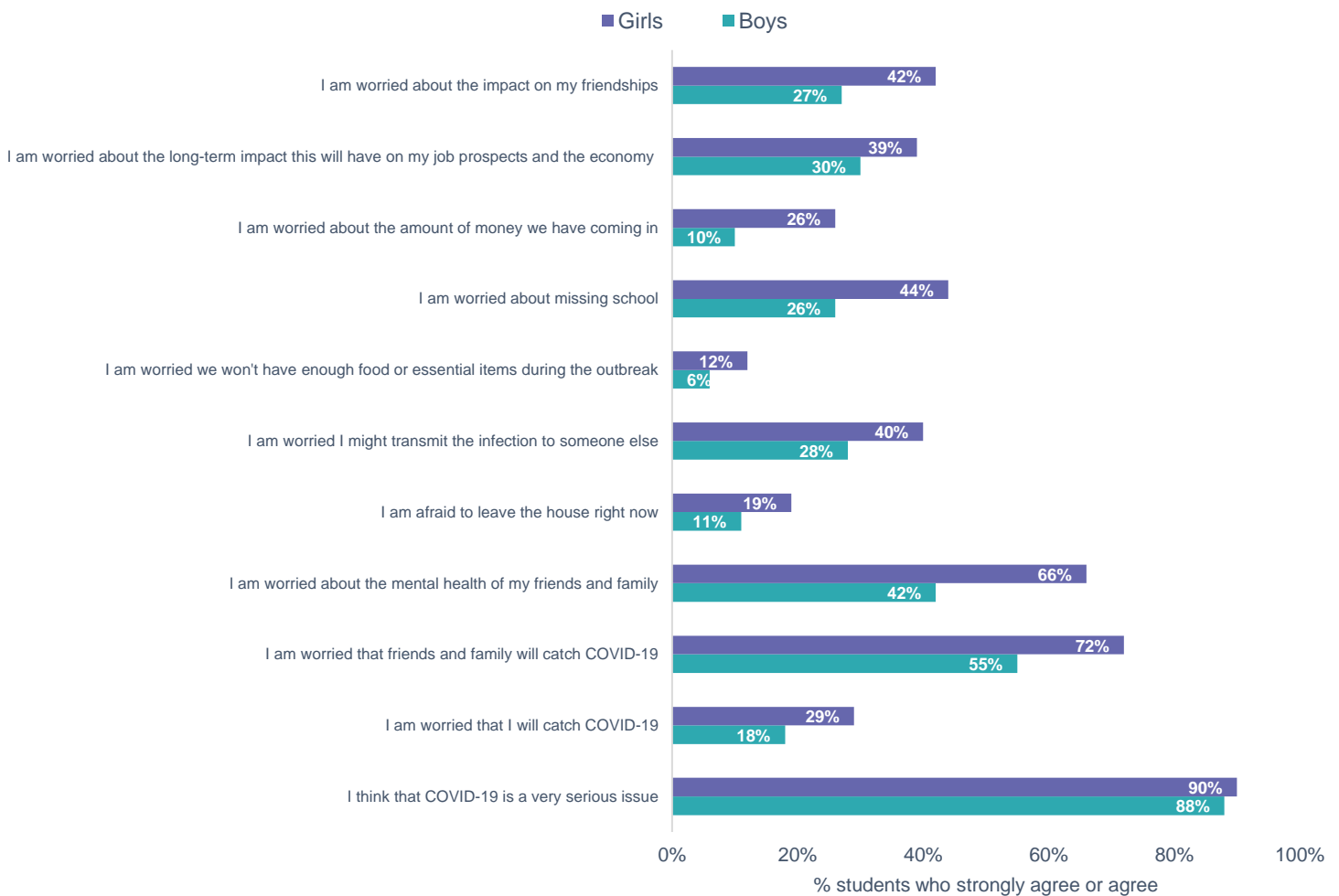
- Top 3 COVID-19-related concerns for young people
  - Worried that their friends/family will catch COVID-19
  - Worried about the mental health of their friends and family
  - Worried about missing school
- Compared to pre-pandemic, there was an overall decrease in risk of anxiety, and an increase in wellbeing but no large change in risk of depression.
- Students' school connectedness increased overall. There were no overall changes in peer connectedness or family connectedness.
- The largest improvements in mental health and wellbeing were for students who had poor mental health and wellbeing before lockdown.
- Students with low school, peer and family connectedness pre-pandemic, saw bigger improvements in mental health and wellbeing during lockdown, compared to those with medium or high connectedness.
- LGBTQ+ students and those with a health problem or disability had higher anxiety and depression scores, and lower levels of wellbeing pre-pandemic. Although anxiety reduced and wellbeing increased for the whole sample during lockdown, there was not much change for these more vulnerable groups.

# Findings

## COVID-19 Worry

COVID-19 worry was measured using the Pandemic Anxiety Scale (PAS)<sup>1</sup>. Ninety percent of girls and 88% of boys agreed that COVID-19 was a serious issue. The top two concerns for both boys and girls were i) worry about their friends and family catching COVID-19 (72% girls, 55% boys) and ii) worry about the mental health of their friends and families (66% girls, 42% boys). The third highest concern for girls was worrying about missing school (44%) whilst for boys it was concern over the long-term impact on their job prospects and the economy (30%). Girls’ level of worry was higher across all 11 items.

COVID-19 Worry

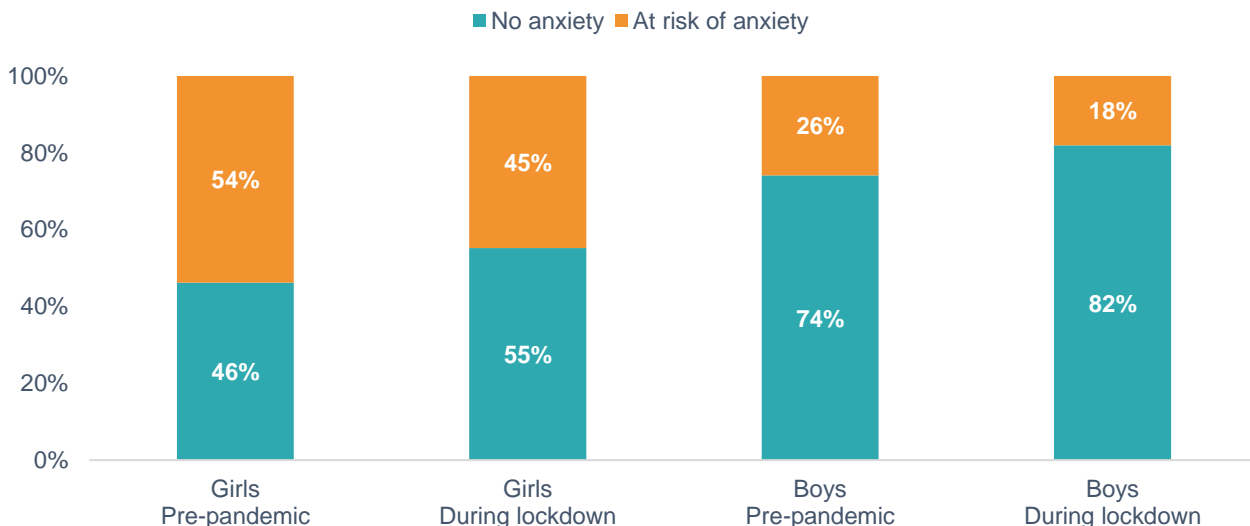


<sup>1</sup> McElroy, E., Waite, P., Creswell, C., Moltrecht, B., Shevlin, M., & Patalay, P. (2020). Demographic and health factors associated with pandemic anxiety during the COVID-19 outbreak. *British Journal of Health Psychology*.

## Anxiety

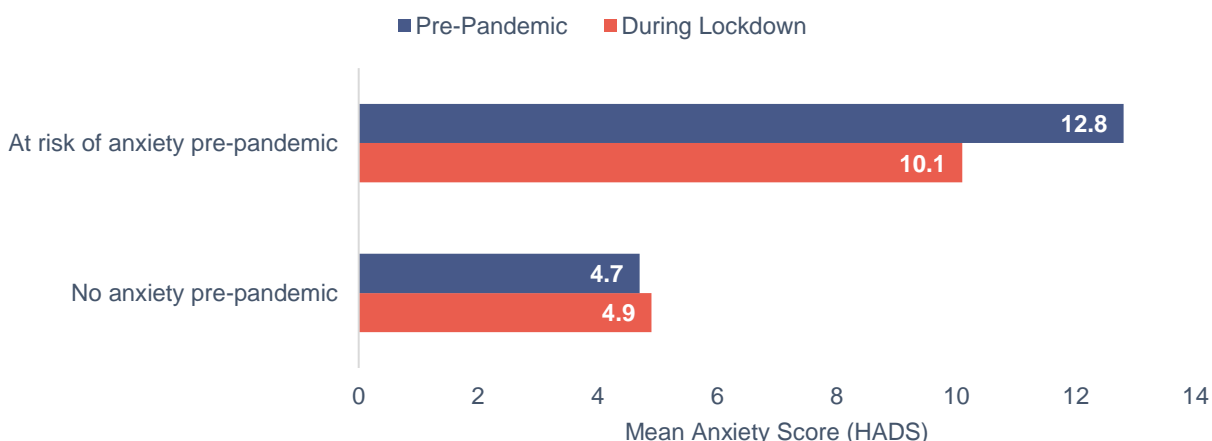
Anxiety was measured using the Hospital Anxiety and Depression Scale (HADS) in which scores of 9 or above (out of a possible 21) indicate moderate risk of anxiety<sup>2</sup>. Compared to the pre-pandemic survey, there was an overall decrease in the proportion of students at risk of anxiety during lockdown, with girls’ falling from 54% to 45% and boys from 26% to 18%.

**Change in Percentage of Students at Risk of Anxiety**



Students who were at risk of anxiety pre-pandemic showed a reduction in anxiety scores whereas those with no anxiety pre-pandemic (HADS score of 0-8) showed very little change.

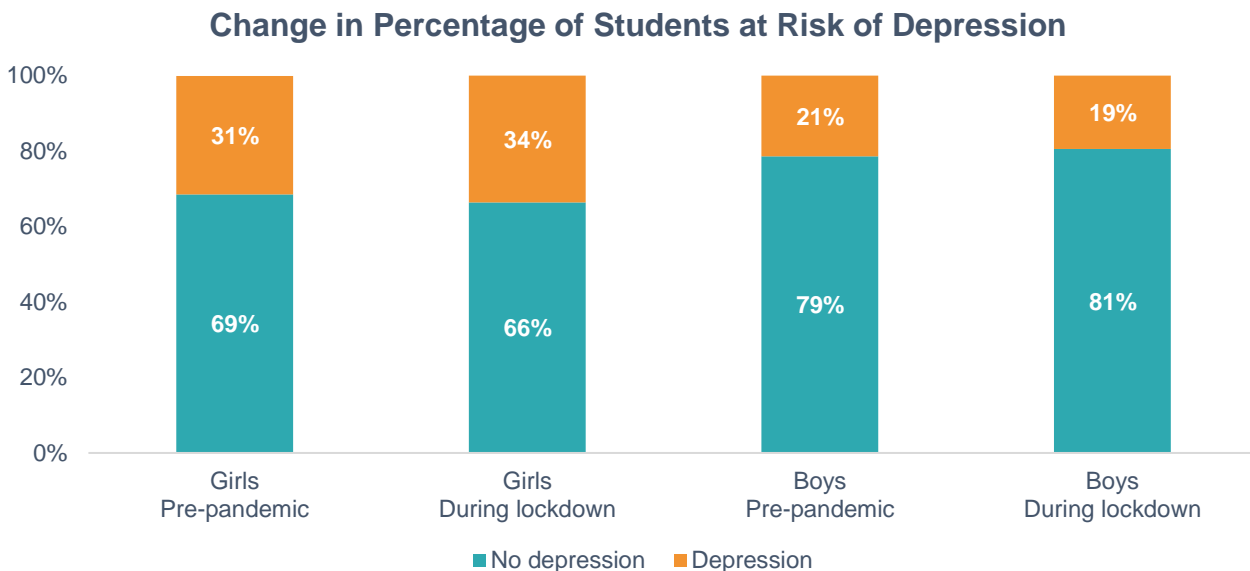
**Change in Anxiety Scores**



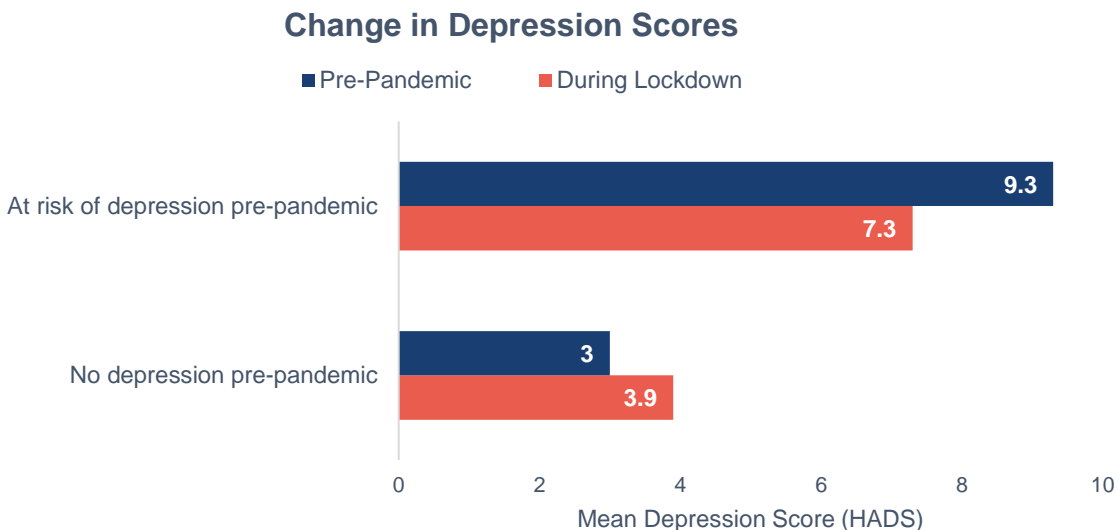
<sup>2</sup> White, D., Leach, C., Sims, R., Atkinson, M., & Cottrell, D. (1999). Validation of the Hospital Anxiety and Depression Scale for use with adolescents. *The British Journal of Psychiatry*, 175(5), 452-454.

## Depression

Depression was also measured using the Hospital Anxiety and Depression Scale (HADS). Scores of 7 or above (out of a possible 21) indicate moderate risk of depression<sup>3</sup>. There was a small increase in girls at risk of depression from 31% pre-pandemic to 34% during lockdown, but a small decrease in boys at risk of depression from 21% pre-pandemic to 19% during lockdown.



Students at risk of depression pre-pandemic showed a reduction in depression scores in comparison to students with no depression pre-pandemic (HADS score of 0-6) who showed a small increase in depression scores.

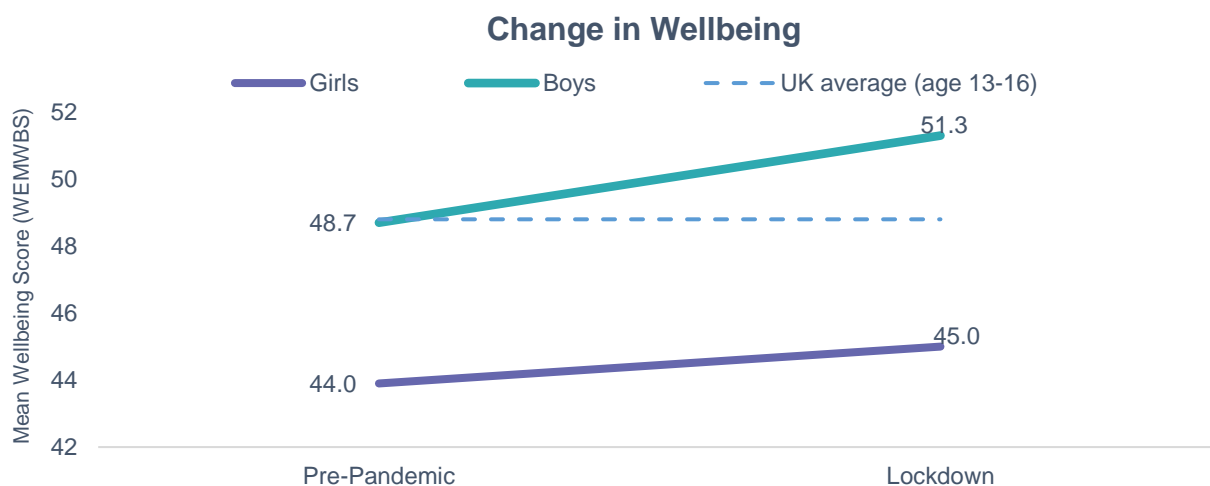


<sup>3</sup> Ibid, 3

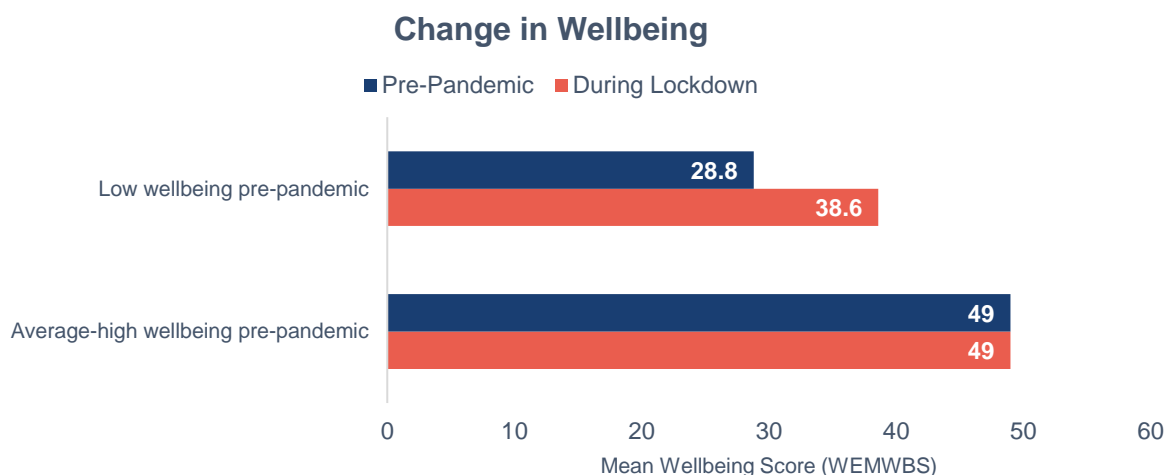
## Wellbeing

Wellbeing was measured using the Warwick-Edinburgh Wellbeing Scale (WEMWBS); scores range from 14 to 70, where higher scores indicate better wellbeing. The UK average score on this questionnaire for 13-16 year olds is 48.8.<sup>4</sup>

There was a small increase in wellbeing during lockdown for both boys and girls in comparison to before the pandemic. However a 3-8 point change is considered a meaningful change on the WEMWBS<sup>5</sup> which was not observed for either boys or girls.



Students with low wellbeing pre-pandemic<sup>6</sup> (15.9%) showed a meaningful (10 point) increase in wellbeing in comparison to students with average-high wellbeing scores pre-pandemic (81.1%) who showed no change.



<sup>4</sup> Clarke, A., Friede, T., Putz, R., Ashdown, J., Martin, S., Blake, A., ... & Stewart-Brown, S. (2011). Warwick-Edinburgh Mental Well-being Scale (WEMWBS): validated for teenage school students in England and Scotland. A mixed methods assessment. *BMC public health*, 11(1), 487.

<sup>5</sup> 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), 156.

<sup>6</sup> For the purposes of this study, low wellbeing was defined as scores 1 standard deviation below the mean. Mean score (46.02) – 1 SD (10.68) = 35.34. Low wellbeing = scores less than 35.34.

These overall improvements to mental health and wellbeing, particularly for those with the poorest mental health and wellbeing pre-pandemic, suggest the period of lockdown when they did not attend school may have protected these Year 9 students from some of the usual drivers of poor mental health.

It is important to note that not all young people saw improvements in their mental health and wellbeing. There were a variety of experiences across the sample, with some participants experiencing increased anxiety and depression and decreased wellbeing.

## Social Connectedness

Three types of social connectedness were measured including school (6 items), peer (7 items) and family connectedness (11 items)<sup>7</sup>. School connectedness measured student relationships with teachers and sense of school community. Peer connectedness measured relationships with peers at school, happiness with number of close friends, and support from friends. Family connectedness measured family cohesion, family identity, and family mutual activities.

## School Connectedness

School connectedness scores were higher during lockdown compared to pre-pandemic across all six questionnaire items for both boys and girls. Girls' average school connectedness score increased from 3.0 pre-pandemic to 3.3 during lockdown and boys average school connectedness score increased from 3.2 pre-pandemic to 3.5 during lockdown. This unexpected finding may indicate that schools and their staff managed to create positive connections with students during lockdown through new online ways of communicating.

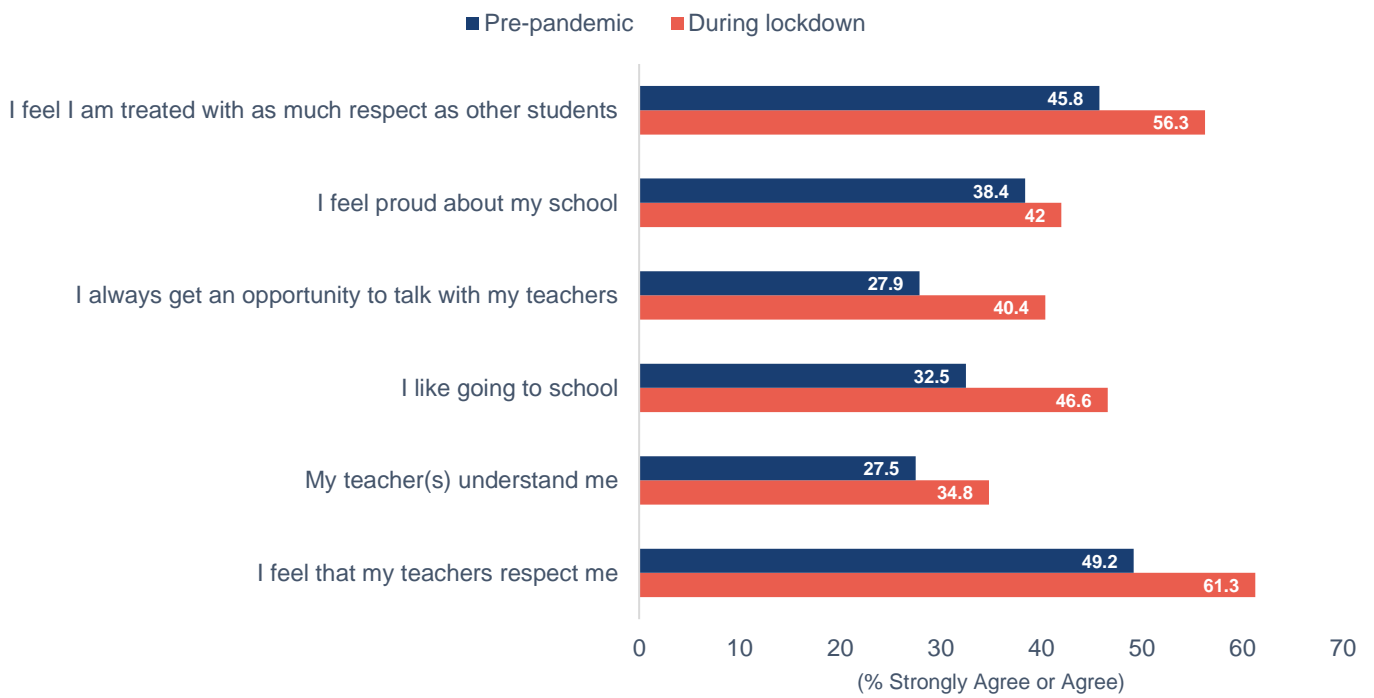
Items eliciting the most positive response for girls were feeling that teachers respected them (61%), feeling as respected as other students (57%) and liking going to school (47%). Boys gave a more positive response on all 6 items in comparison to girls. The most positive items for boys were feeling that teachers respected them (69%), feeling as respected as other students (63%), feeling understood by teachers (55%) and liking going to school (54%).

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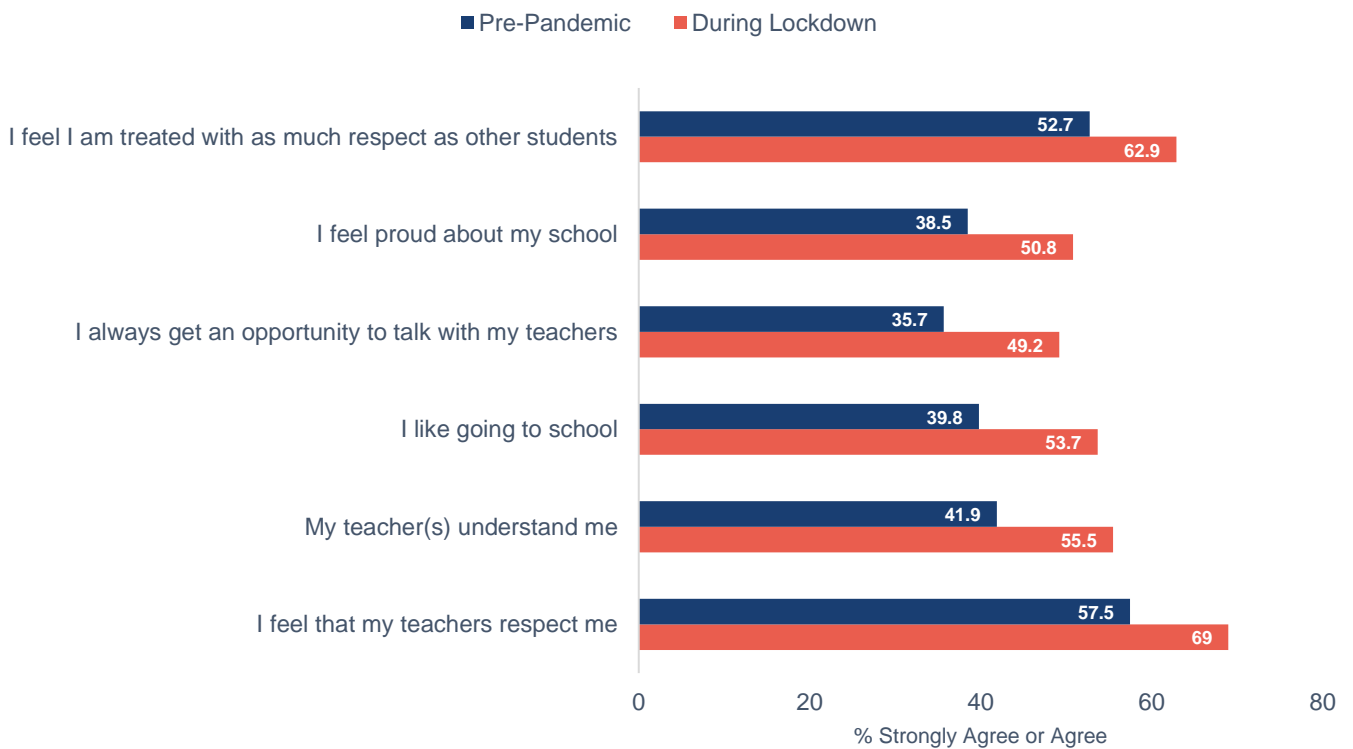
<sup>7</sup> Jose, P. E., Ryan, N., & Pryor, J. (2012). Does social connectedness promote a greater sense of well-being in adolescence over time?. *Journal of research on adolescence*, 22(2), 235-251.



### Change in Girls' School Connectedness



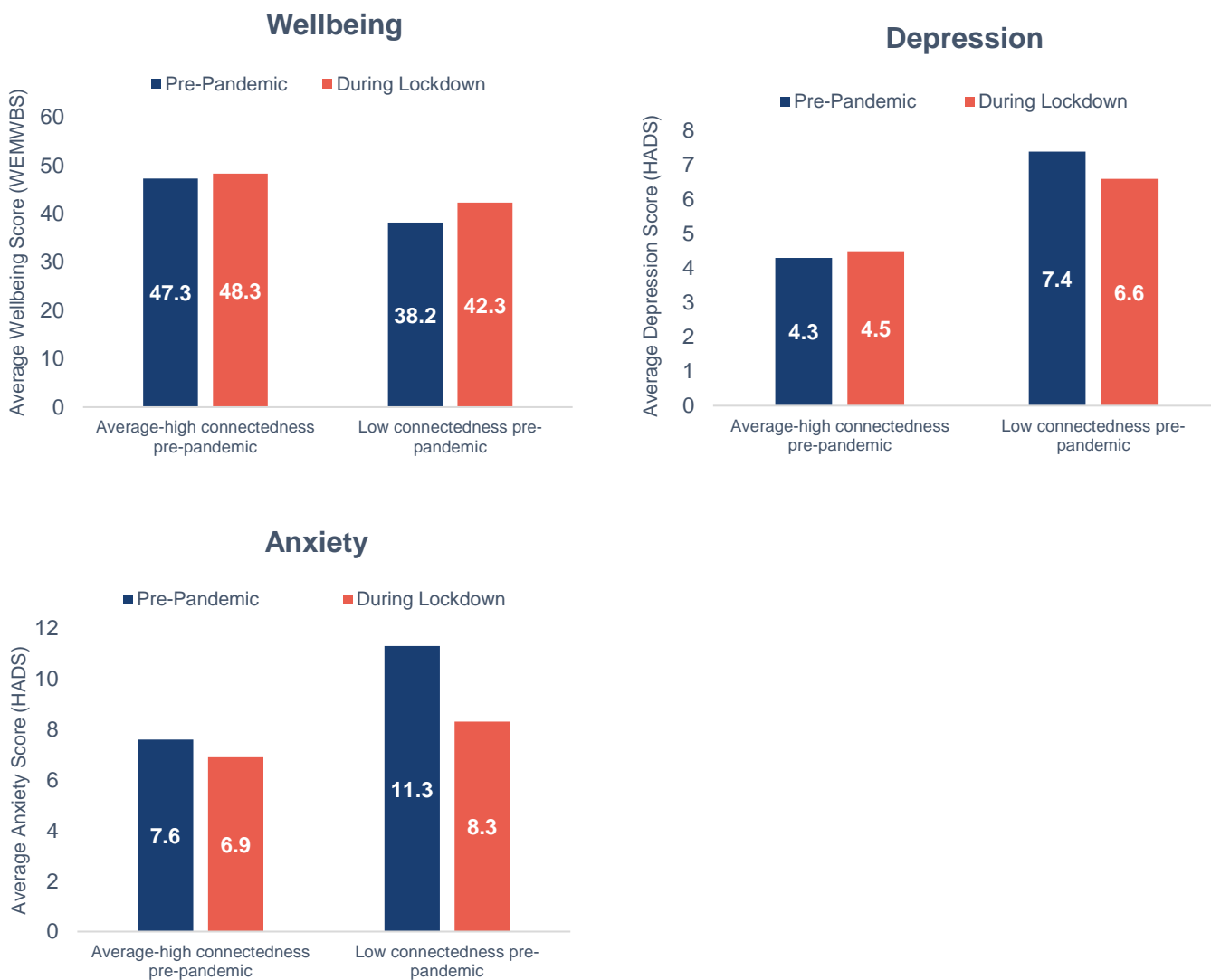
### Change in Boys' School Connectedness



## Mental Health and School Connectedness

To explore the relationship between school connectedness and mental health, we compared outcomes for students with low school connectedness<sup>8</sup> pre-pandemic (17%) to the rest of the sample (average-high connectedness) (83%).

Students with low school connectedness pre-pandemic showed a greater increase in wellbeing scores and a greater reduction in anxiety in comparison to those with average-high school connectedness. This group also showed a small reduction in depression scores.



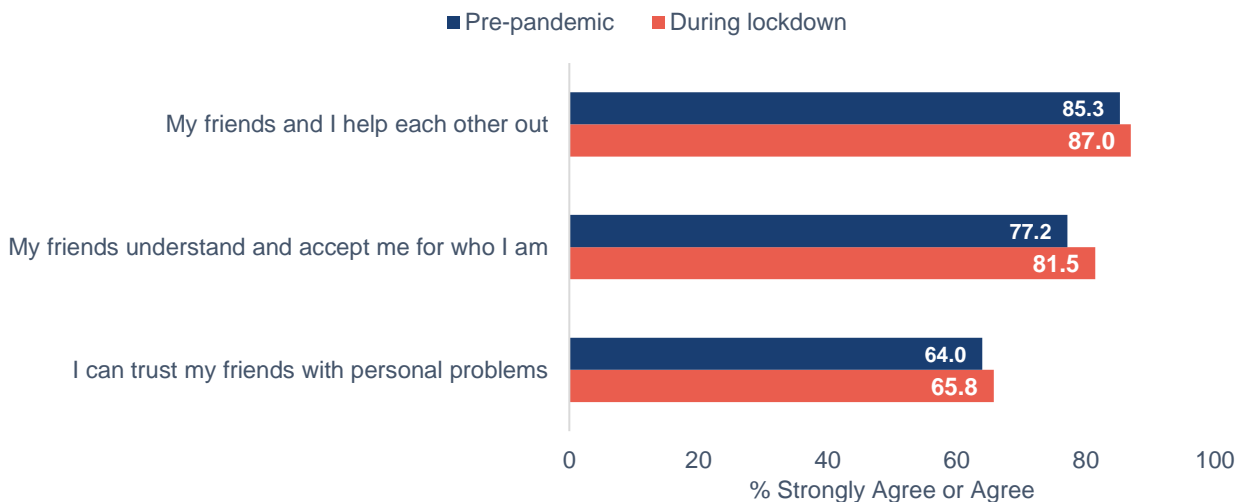
These results suggest that for students who had low school connectedness pre-pandemic, not having to go to school resulted in improved mental health and wellbeing.

<sup>8</sup> For the purposes of this study, low school connectedness was defined as scores 1 standard deviation below the mean. Mean score (3.1) – 1 SD (0.86) = 2.24 Low school connectedness = scores less than 2.24.

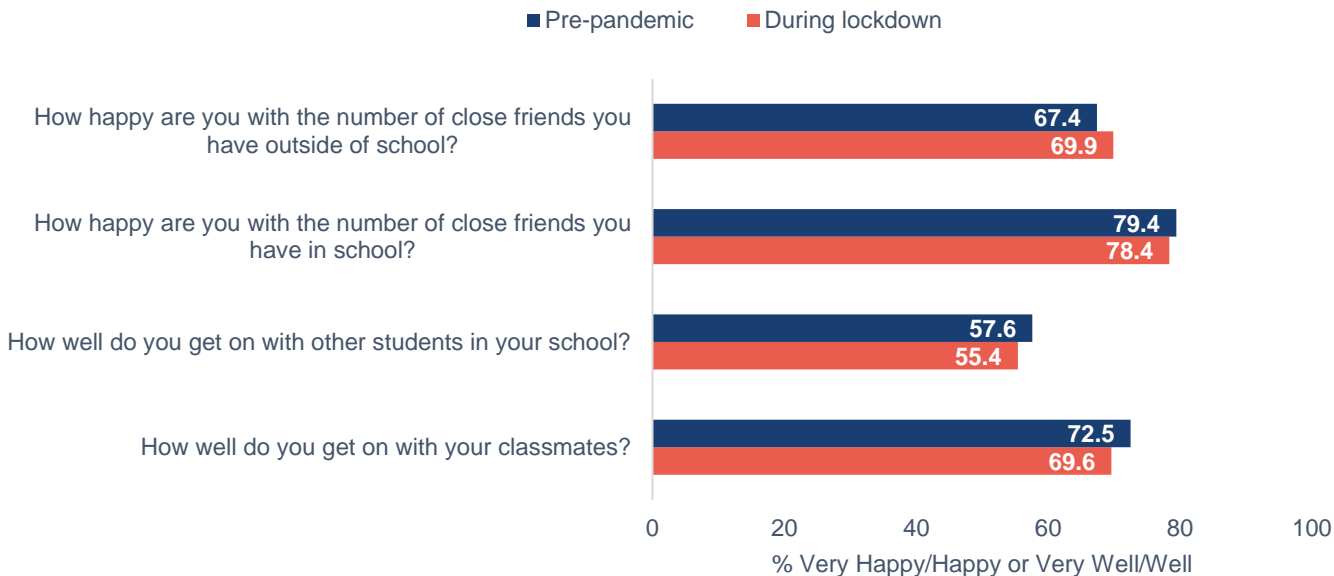
## Peer Connectedness

We did not see large changes in peer connectedness between pre-pandemic and lockdown overall, which perhaps reflects the beneficial use of social media to sustain friendships while unable to meet in person.

### Change in Peer Connectedness



### Change in Peer Connectedness Ctd

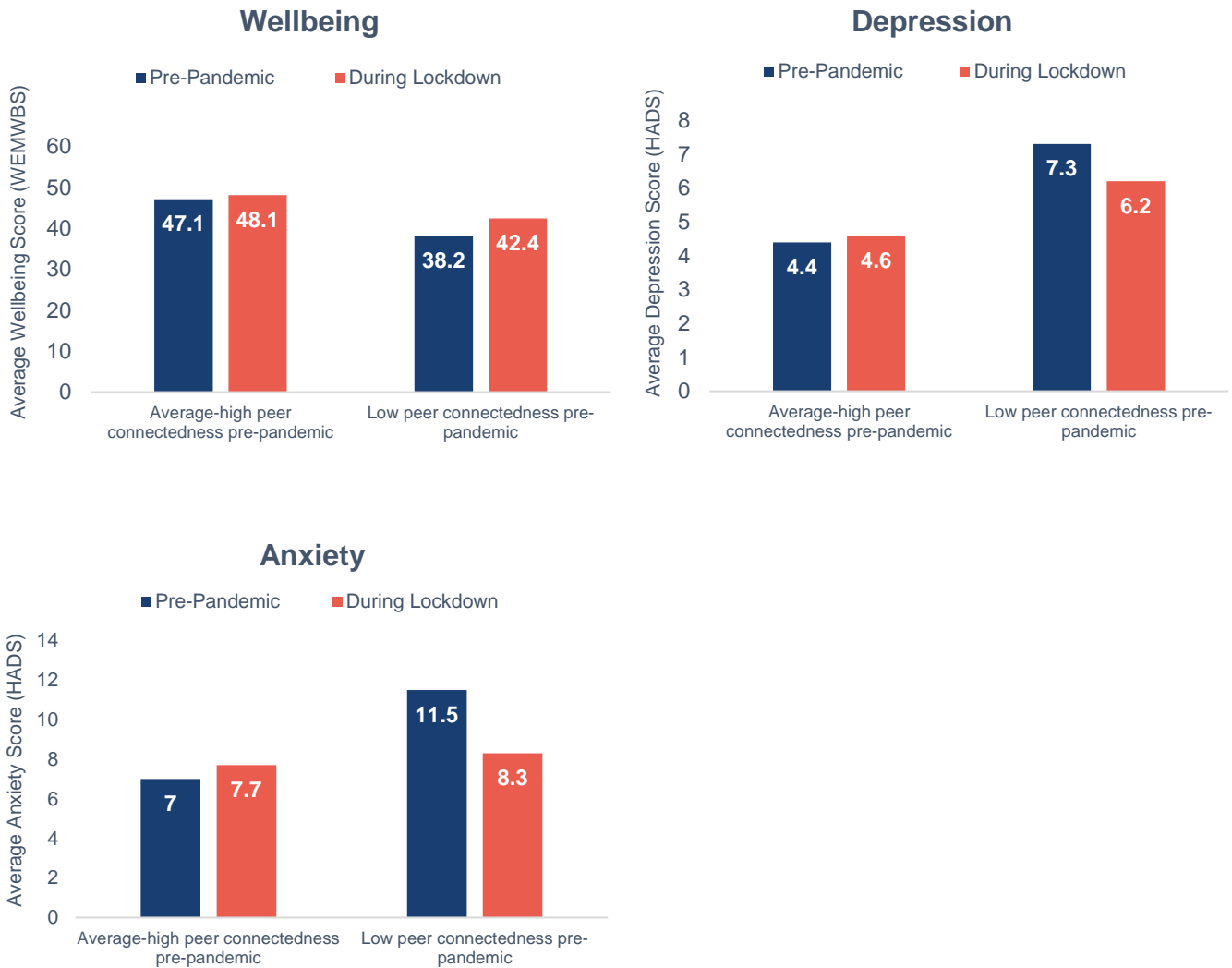


A small increase was seen in boys’ average peer connectedness score from 3.9 pre-pandemic to 4.0 during lockdown whereas no change was observed for girls with their average peer connectedness score remaining at 3.9 across both time points.

## Mental Health and Peer Connectedness

To explore the relationship between peer connectedness and mental health, we compared students with low peer connectedness<sup>9</sup> pre-pandemic (13%) to the rest of the sample (87%).

Students with low peer connectedness pre-pandemic showed a greater increase in wellbeing scores and a greater reduction in anxiety scores in comparison to those with average-high peer connectedness pre-pandemic. This group also showed a small decrease in depression.

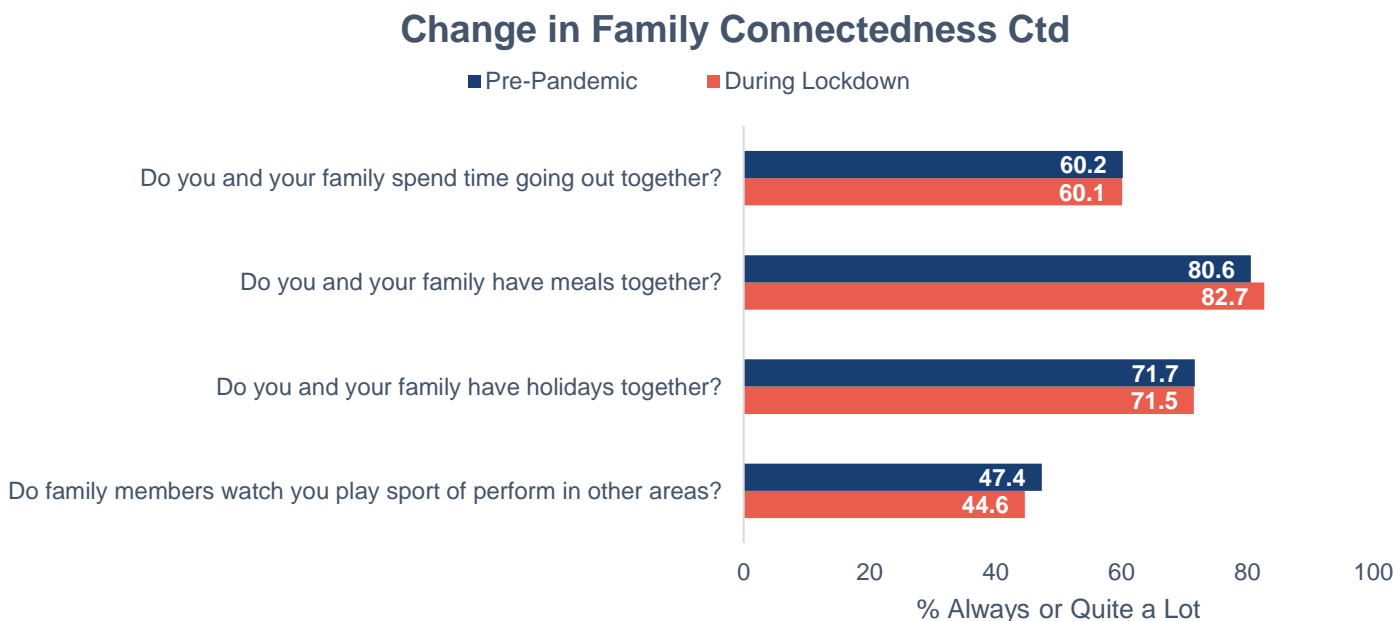
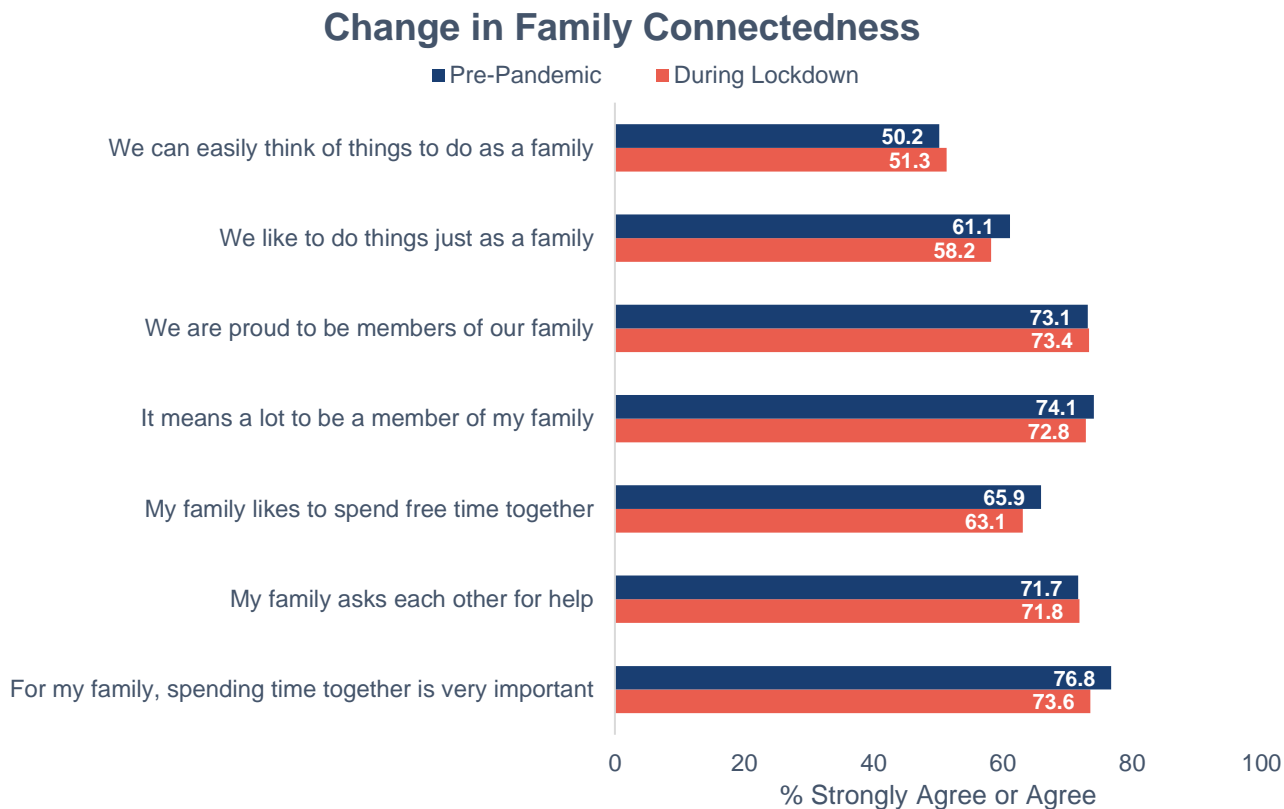


These results suggest that for those young people who did not feel well connected to peers pre-pandemic, not seeing them face to face during lockdown improved their mental health and wellbeing.

<sup>9</sup> For the purposes of this study, low peer connectedness was defined as scores 1 standard deviation below the mean. Mean score (3.9) – 1 SD (0.69) = 3.21 Low peer connectedness = scores less than 3.21.

## Family Connectedness

Overall there was no change to family connectedness for either boys or girls.

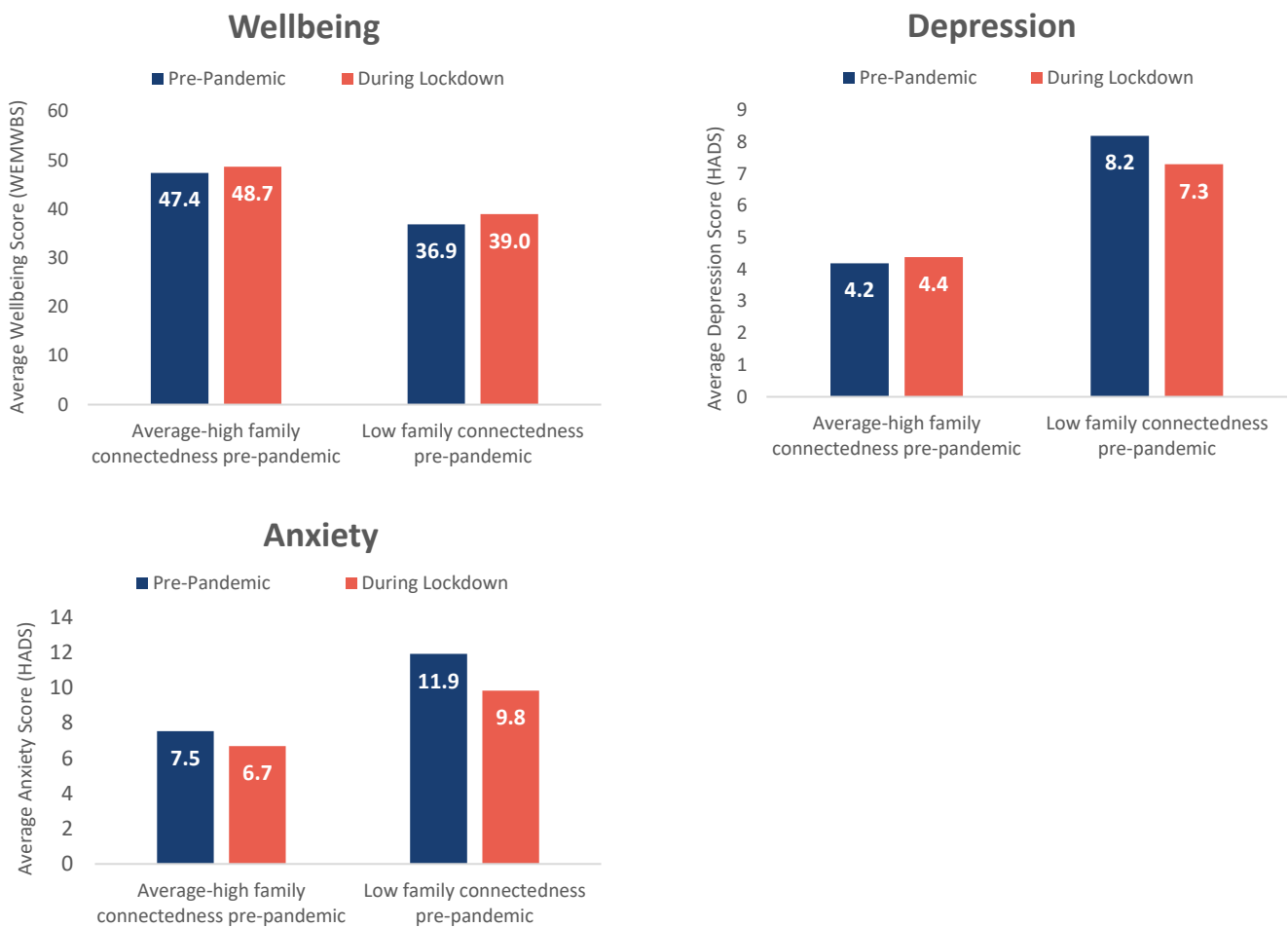


The average family connectedness score for both boys and girls was 3.8 pre-pandemic and during lockdown.

## Mental Health and Family Connectedness

To explore the relationship between family connectedness and mental health, we compared students with low family connectedness<sup>10</sup> pre-pandemic (16%) to the rest of the sample (84%).

Students with low family connectedness pre-pandemic showed a greater increase in wellbeing and a greater reduction in anxiety scores in comparison to those with average-high family connectedness pre-pandemic. Consistent with school and peer connectedness, students with low family connectedness pre-pandemic also showed a small reduction in depression scores.



These findings suggest that students who felt poorly connected to their families pre-pandemic may have had slightly improved mental health and wellbeing when spending more time with their family during lockdown.

<sup>10</sup> For the purposes of this study, low family connectedness was defined as scores 1 standard deviation below the mean. Mean score (3.8) – 1 SD (0.78) = 3.02 Low school connectedness = scores less than 3.02.

## Vulnerable groups during lockdown

As has been found in other studies, LGBTQ+ students and those reporting a health problem or disability had higher anxiety and depression scores, and lower levels of wellbeing pre-pandemic. Although anxiety reduced and wellbeing increased broadly across the sample, there was not much change in these outcomes for these more vulnerable individuals. This suggests the drivers of poor mental health and wellbeing for LGBTQ+ students and those with health problems or disabilities continued to be present when they were not attending school.

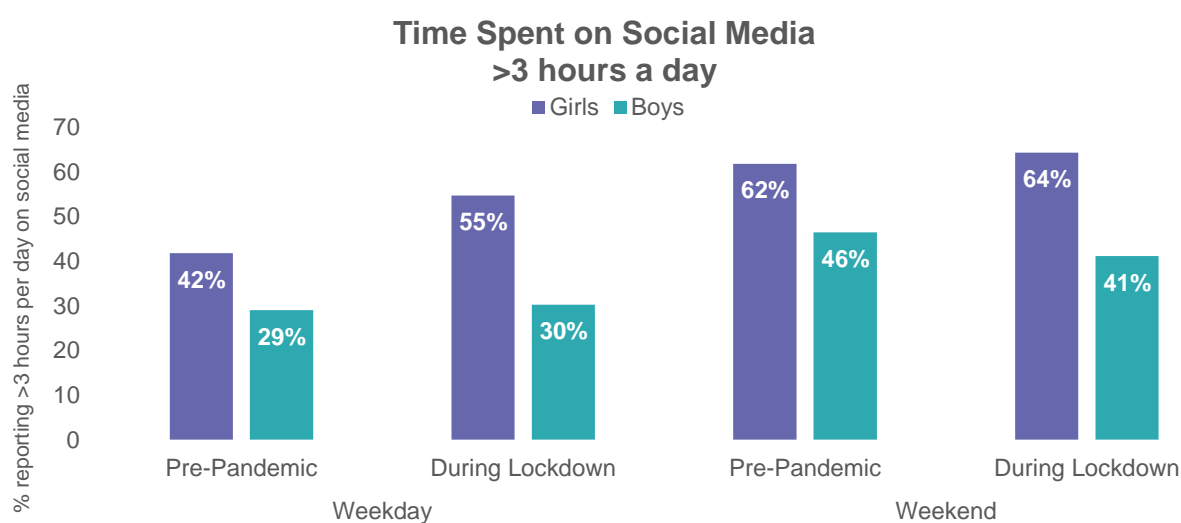
Students receiving free school meals reported higher levels of depression but not higher levels of anxiety or lower wellbeing pre-pandemic. Consistent with the changes seen in the whole sample, this group showed a reduction in anxiety and depression and an increase in wellbeing during lockdown. This group did not report higher COVID-19 worry during lockdown than students who did not receive free school meals.

Students from BAME groups did not report poorer mental health or wellbeing at either time point compared to white students, and did not report higher COVID-19 worry during lockdown compared to white students. BAME students showed a reduction in anxiety during lockdown but showed no change in levels of depression or wellbeing.

## Social Media

### 3+ hours per day

High social media use (3 hours or more per day) on a typical weekday was reported by more girls during lockdown (55%) compared to pre-pandemic (42%). There was little change for boys (30% vs 29%). Both pre-pandemic and during lockdown, more students (both boys and girls) reported higher social media use on a weekend day than a weekday. There was less change in weekend use due to lockdown but some reduction in males (46% vs 41%).



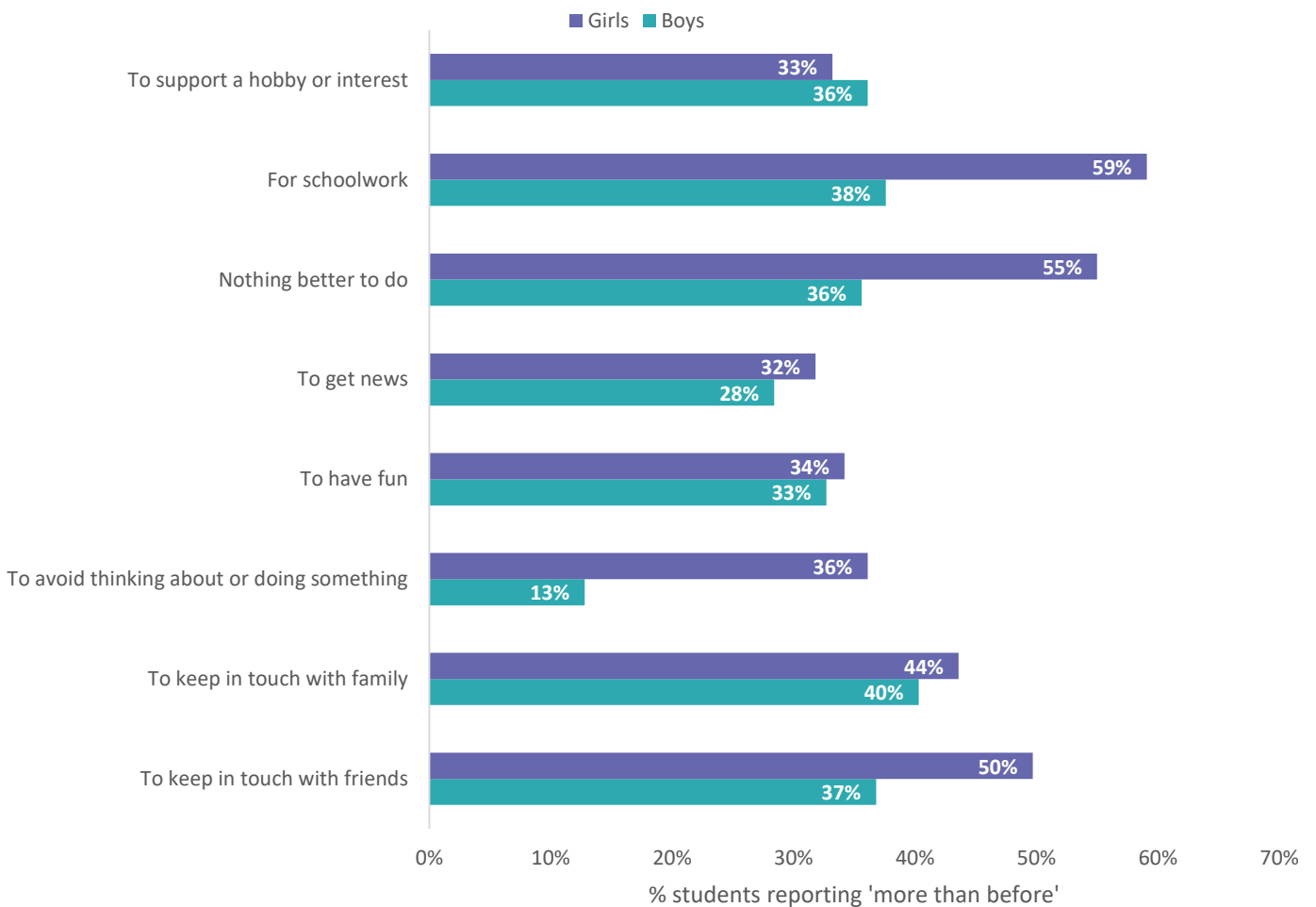
It should be noted that we did not include gaming in our definition of social media, which may be an area in which boys would have been more likely to report an increase.

### Social Media Activity

Students were asked if their reasons for using social media had changed during lockdown compared to a typical day pre-pandemic. At least 50% girls reported increases in using social media for school work, due to having nothing better to do and to keep in touch with friends. Fewer boys reported increases in different social media activities compared to before the pandemic.

The fact that many of our participants were able to stay in touch with friends and wider family via social media may help explain why we did not see an overall increase in poor mental health and wellbeing.

**% of Students Reporting Using Social Media 'More Than Before' the Pandemic**





## Report Summary

In our large survey of Year 9 students during lockdown we found a variety of mental health experiences, but overall we saw reductions in anxiety and rises in wellbeing. This may be due to the removal of stressors within the school environment, such as pressure of academic work, and challenging peer relationships including bullying. As schools fully re-open, it is important to consider ways to prevent a rise in anxiety back to pre-pandemic levels. It will be particularly important to focus on support for students who already felt less connected to school, and those who had high anxiety prior to lockdown. In addition, those students identifying as LGBTQ+ or who had a disability or health condition, who already had poorer mental health, did not enjoy the same improvements to their mental health during lockdown that were generally experienced. These groups will continue to require support from schools when they return.

It is possible that the impact of school closures on the mental health and wellbeing of other age groups, for example younger children who did not have access to social media, or those who experienced disruptions to transitions or to exams, may have been different. It is also important to note that students completed the second survey a number of weeks after lockdown officially began, and when some restrictions were beginning to ease, although schools remained closed to most young people.

## Appendix 1: Sample Demographics

**Table 1** Comparison of participating and non-participating schools in four local authorities in the South West of England (<https://www.compare-school-performance.service.gov.uk/>; data accessed 16<sup>th</sup> June 2020)

	Pre-pandemic participating schools (T1) (n=20)	Lockdown participating schools (T2) (n=17)	Non-participating schools in same geographical area (n=57)
Rural	10%	6%	18%
Urban	90%	94%	82%
Mixed gender	80%	88%	95%
Mean % eligible for free school meals	11.0%	11.2%	8.7%
Academy status	85%	82%	88%
No religious denomination	70%	71%	88%

**Table 2** Comparison of lockdown responders and non-responders, summary of self-reported demographic and mental health data

	Lockdown responders n =1,047	Lockdown non-responders n= 1,429
% Female	59.7	55.7
% BAME	16.0	23.2
% Limiting long-term illness and disability	6.6	13.7
% LGBTQ+	11.7	11.6
% Receiving free school meals	6.9	11.7
T1 % at risk of depression (HADS $\geq$ 7)	30.5	33.0
T1 % at risk of anxiety (HADS $\geq$ 9)	35.3	43.1
T1 School connectedness (mean, sd)	3.30, 0.80	2.89, 0.91
T1 Peer connectedness (mean, sd)	3.93, 0.67	3.89, 0.73
T1 Family connectedness (mean, sd)	3.79, 0.71	3.74, 0.85

**For more information, please contact [emily.widnall@bristol.ac.uk](mailto:emily.widnall@bristol.ac.uk)**

Produced by NIHR School for Public Health Research, August 2020

The information in this report is correct at the time of printing.

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