



Working Paper No. 20-15

How did the early stages of the COVID-19 pandemic affect teacher wellbeing?

Rebecca Allen
Teacher Tapp

John Jerrim
University College London

Sam Sims
University College London

The COVID-19 pandemic has radically disrupted schooling, placing additional demands on teachers. This paper uses unique longitudinal survey data to track changes in teacher wellbeing as the virus hit the UK. It documents sharp spikes in teachers' anxiety as schools were locked down and as announcements around reopening were made. Teachers in fee-paying schools displayed higher levels of anxiety during the summer term when schools were closed, most likely because they delivered more 'live' online lessons than state school teachers. Head teachers experienced particularly large increases in anxiety and reported that they were more likely to leave the profession as a result of the experience.

VERSION: September 2020

Suggested citation: Allen, R., Jerrim, J., & Sims, S. (2020). *How did the early stages of the COVID-19 pandemic affect teacher wellbeing?* (CEPEO Working Paper No. 20-15). Centre for Education Policy and Equalising Opportunities, UCL, <https://EconPapers.repec.org/RePEc:ucl:cepeow:20-15>.

Disclaimer

Any opinions expressed here are those of the author(s) and not those of the UCL Institute of Education. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

CEPEO Working Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

Highlights

- We investigate teacher mental wellbeing using unique, longitudinal teacher survey data collected throughout the 2019/20 academic year in England.
- The proportion of teachers experiencing very high work-related anxiety spiked in the week before lockdown and again in the week that school re-opening was announced in June. Female teachers reported higher work-related anxiety than male teachers.
- Private school teachers' anxiety was lower than that among state school teachers prior to lockdown. During lockdown, however, this pattern was reversed, most likely because private schools provided more 'live' online lessons.
- Head teachers showed particularly pronounced increases in anxiety. When asked on June 24th, 21% said the experience made them more likely to leave the profession, while only 2% said it made them less likely to leave the profession.
- Some components of teacher wellbeing (feeling useful, feeling optimistic) declined during lockdown; while other components (having energy to spare, thinking clearly) showed an improvement.

Why does this matter?

Teachers' mental health is important in its own right. A healthy profession is also more sustainable, and better placed to help pupils catch up on learning lost during lockdown.

How did the early stages of the COVID-19 pandemic affect teacher wellbeing?

Rebecca Allen (Teacher Tapp)

John Jerrim (UCL Institute of Social Research)

Sam Sims (CEPEO)

The COVID-19 pandemic has radically disrupted schooling, placing additional demands on teachers. This paper uses unique longitudinal survey data to track changes in teacher wellbeing as the virus hit the UK. It documents sharp spikes in teachers' anxiety as schools were locked down and as announcements around reopening were made. Teachers in fee-paying schools displayed higher levels of anxiety during the summer term when schools were closed, most likely because they delivered more 'live' online lessons than state school teachers. Head teachers experienced particularly large increases in anxiety and reported that they were more likely to leave the profession as a result of the experience.

Acknowledgments:

The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare, and Justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics and the Ada Lovelace Institute. The Foundation has funded this project, but the views

expressed are those of the authors and not necessarily the Foundation. Visit www.nuffieldfoundation.org

Introduction

The COVID-19 pandemic came out of the blue at the start of 2020, with wide ranging effects on many peoples working lives. This, of course, includes teachers, with many having to quickly develop online materials and teach their pupils remotely. The period during lockdown from mid-March to the end of May 2020 was also a period of great uncertainty for schools and teachers. While some were continuing their regular routine in order to educate the children of key workers, others were left wondering when exactly they would return to physically teaching in the classroom, and whether it would be safe to do so. All of this was occurring while loved ones were getting sick, teachers' own children were home from school and many forms of social or recreational relief were prohibited.

A great deal of research has already been conducted into wellbeing during the COVID-19 pandemic (e.g. Fancourt et al., 2020; Pierce et al., 2020), illustrating how it has impacted upon the mental health and wellbeing of various groups. Yet there has been little consideration given specifically to how this unusual period has affected teachers. Each occupational group would have experienced its own particular set of challenges, especially in the early stages of the pandemic as the UK went into lockdown. In this short report, we present some of the first available evidence on this issue, drawing upon unique data collected via the Teacher Tapp survey app. This allows us to provide new evidence on how work-related anxiety changed over the course of the 2019/20 academic year (both before and during the lockdown), the extent to which lockdown affected teachers' psychological wellbeing, and whether this varied across demographic groups, most notably by gender and household structure. In doing so, this report provides new insight into how teacher wellbeing was impacted by one of the most unusual periods the teaching profession is ever likely to face.

Data

The data used in this report are drawn from the Teacher Tapp survey app. Participants are a self-selecting group of teachers (including primary, secondary and school leaders) who are sent three short questions each day at 3:30pm. Throughout the 2019/2020 academic year, we repeatedly asked the following question about teachers' work-related anxiety, adapting a question from the Annual Population Survey:

On a scale where 0 is “not at all anxious” and 10 is “completely anxious”, overall, how anxious did you feel about work today?

To avoid possible day-of-week effects, teachers always responded to this question on a Tuesday afternoon. (When testing this question for day-of-week effects, we found that work-related anxiety of teachers peaked Monday afternoon and then gradually fell through to Saturday afternoon, before rising again)¹. Around 8,000 teachers in England responded to these questions across the various time points. Consistent with the results presented in forthcoming research (Jerrim, Allen, & Sims, under review), responses to this question illustrate how work-related anxiety among teachers falls during school holidays, with around 13% of teachers typically reporting very high work-related anxiety (defined as a score of 8 and above on the 10-point scale) during term time and just 5% during the holiday week. Using this data, it is possible to track work-related anxiety among teachers as the country went into lockdown, and as it came out again.

In addition, the Teacher Tapp panel were also asked a number of other questions about their wellbeing, including subjective views on the impact COVID-19 has had on their psychological health, as well as questions from other standardised survey instruments (e.g. from the Warwick-Edinburgh Mental Wellbeing Scale). We also report on responses to these questions in the results sections below.

How did teachers’ work-related anxiety change after the pandemic hit?

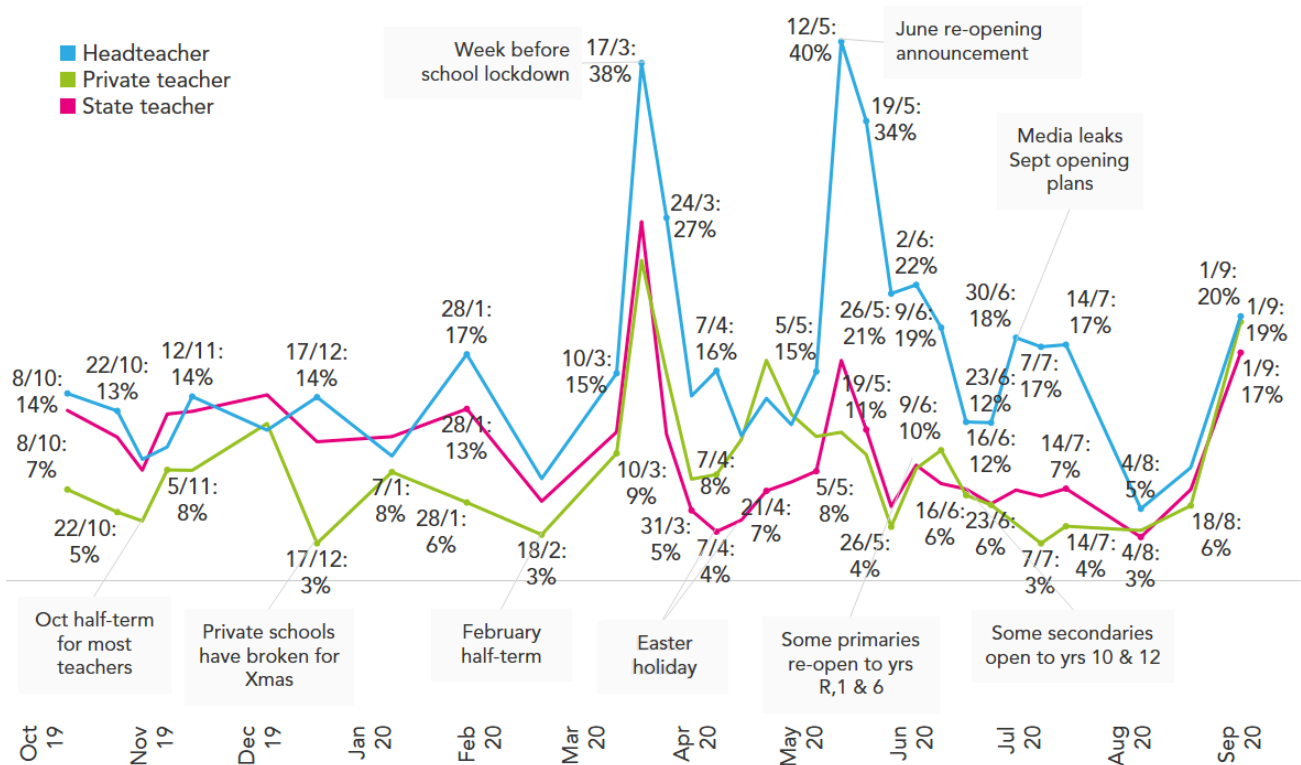
Figure 1 illustrates the proportion of teachers reporting very high work-related anxiety (a score of eight or more on the ten-point scale) throughout the 2019/20 academic year. Results are presented separately for state school teachers, independent (private) teachers and head teachers. For all three groups, the immediate impact of the pandemic when lockdown was announced was stark. From the start of the academic year in September 2019 through to the start of March 2020, there was little clear variation in teachers’ responses. However, as Figure 1 shows, the week before schools were asked to close, anxiety levels peaked as teachers tried to cope with high staff absence rates, emergency closures, worry about infection and uncertainty about the future. The jump in work-related anxiety levels for head teachers was particularly sharp:

¹ This may explain why our sample reported fairly high anxiety levels relative to the Annual Population Survey (e.g. during term-time 36% of teachers report an anxiety value of 6 out of 10, versus just 20% in the population), although there are also minor differences in the precise question asked.

whereas just 15 percent had very high levels of work-related anxiety when the question was asked on 10 March, this had soared to 38 percent on 17 March.

Figure 1. The work-related anxiety of teachers throughout the 2019/2020 academic year

Proportion reporting very high work-related anxiety on a Tuesday (i.e. score of 8 or above on a 10-point scale)



Interestingly, this initial spike in work-related anxiety among teachers in March was actually quite short-lived. By 24 March, the work-related anxiety of state school teachers had returned to its pre-COVID level and, throughout April, was actually slightly below it.

Figure 1 also illustrates clearly how in mid-June there was a ‘second wave’ of work-related anxiety which particularly affected head teachers. This coincided with the time when the government announced that some primary schools would be reopening to Reception, Year 1 and Year 6 pupils. For instance, the percentage of head teachers with very high levels of work-related anxiety shot up from 15 percent on 5 May to 40 percent one week later. Although a similar uptick can be observed around these dates for state school teachers, it is much smaller and not notably above pre-pandemic levels.

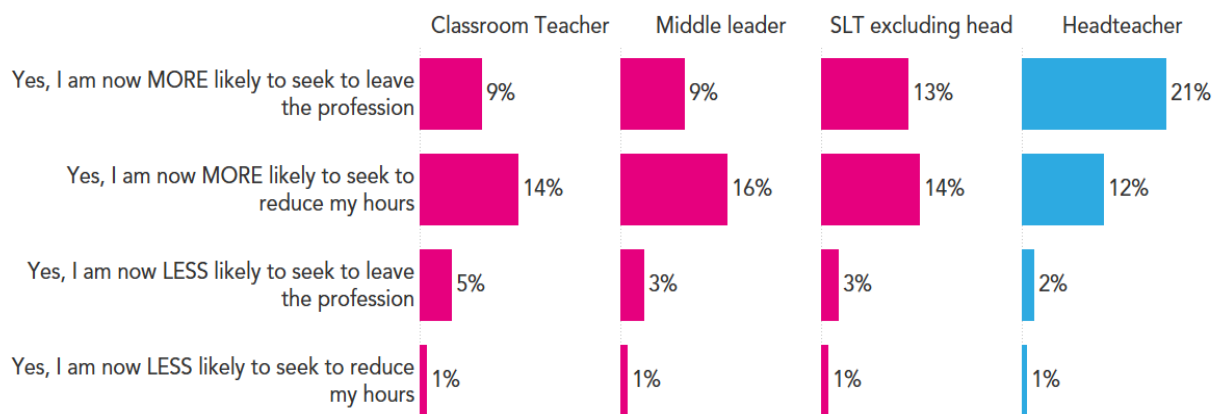
Finally, what happened as the new (2020/2021) academic year began? While state and private school teachers had enjoyed a period between June and August where fewer were feeling very high levels of work-related stress, this shot up above the trend in September. Specifically, pre-pandemic, around seven percent of private school teachers and 13 percent of state school teachers had very high levels of work-related anxiety. During June to August, the corresponding figures were around three percent (private schools) and six percent (state schools) respectively. At the beginning of September, however, a big increase occurred (see the right-hand side of Figure 1). Now 17 percent of private school teachers (a percentage well above the pre-COVID trend level) and 19 percent of state teachers were highly anxious about work.

One of the features of Figure 1 that stands out is how head teachers had a very different experience of work throughout lockdown than teachers, with much higher, and more sharply increasing, anxiety levels. This was likely due to having to manage a number of novel complex administrative and pastoral tasks. Their duty of care towards their staff and students, especially the vulnerable ones, likely became hard to manage. It is also noticeable how their anxiety often rose in response to rumours rather than policy changes: for example, it rose on 21 July in response to the media leaking the plans for September re-openings, which were then announced towards the end of the week.

This extended period of stress for head teachers, which has extended throughout school holidays, may have long-term consequences for retention. This is illustrated in Figure 2, where results are presented for a question asked to the Teacher Tapp participants about their plans to reduce hours or leave the profession in the future (asked on 24 June 2020). At this point, one in five head teachers felt that the experience has made it more likely that they would seek to leave the profession, compared to around one in ten of middle leaders and class teachers. Since changing professions is particularly difficult during an economic downturn, this may mean that head teachers who are closer to retirement might choose to leave their jobs earlier than previously planned.

Figure 2. The impact of the COVID-19 pandemic on teachers' and head teachers' future work plans

Has the experience of COVID-19 and lockdown made it more or less likely that you will seek to reduce hours or leave the profession altogether in the next few years?



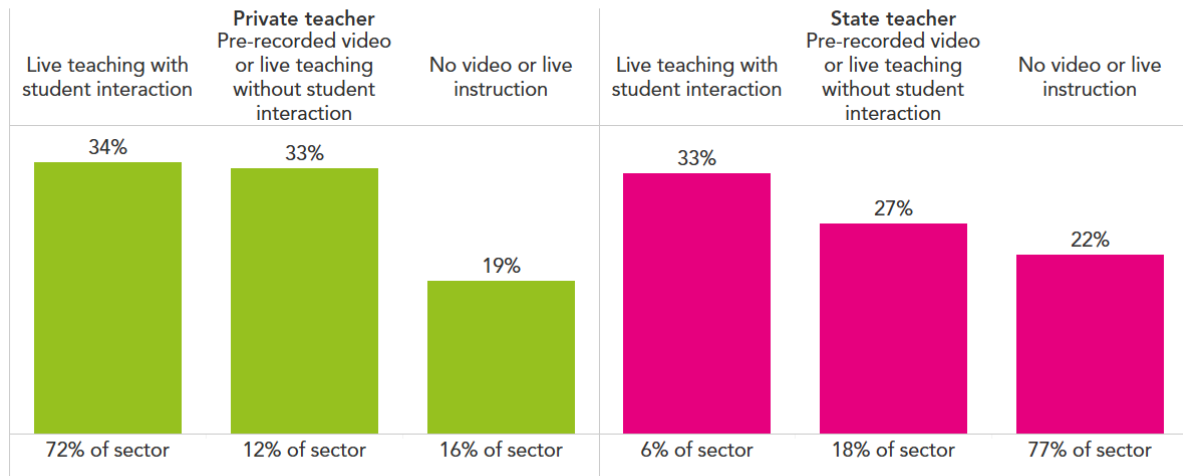
Question answered by 6,933 teachers on 24/06/2020 (responses weighted to reflect national teacher and school demographics)

Another key feature of Figure 1 worthy of further consideration is the difference between private and state school teachers. In pre-COVID times, private school teachers tended to report lower work-related anxiety than those in the state sector. This, however, reversed during lockdown. One potential explanation for this finding is offered in Figure 3, which documents the percentage of teachers with high levels of work-related anxiety by the type of teaching they delivered (question asked 5 May 2020).

From this graph, two key features stand out. First, providing live teaching with student interaction was generally the most stressful activity, followed by pre-recorded videos. Second, such activities were much more likely to be delivered by private school teachers than their state school peers. For instance, Figure 3 suggests that almost three-quarters of private school teachers delivered live, interactive teaching during lockdown, compared to around one in twenty state school teachers. This may explain differences in anxiety levels between private and state teachers: one-third of teachers who were delivering 'live' instruction reported relatively high anxiety levels that day. One important caveat, however, is that these levels of anxiety are actually quite similar to the levels reported by teachers earlier in the year before lockdown.

Figure 3. The percentage of private and state school teachers reporting high levels of work-related anxiety during the lockdown, by teaching activity

Proportion reporting relatively high work-related anxiety (i.e. score of 6 or above) on 5th May, split by school funding and teaching activities delivered that day



Questions on anxiety and work activities answered by 6,565 on 05/05/2020. Sample excludes headteachers.

Figure notes: Figures along the horizontal axis refers to the percentage of teachers delivering that form of instruction (e.g. 72% of private school teachers delivered live teaching with student interaction. Figures above the bars refer to the percent of teachers with high-levels of work-related anxiety (e.g. 34% of private school teachers who delivered live teaching had high levels of work-related anxiety).

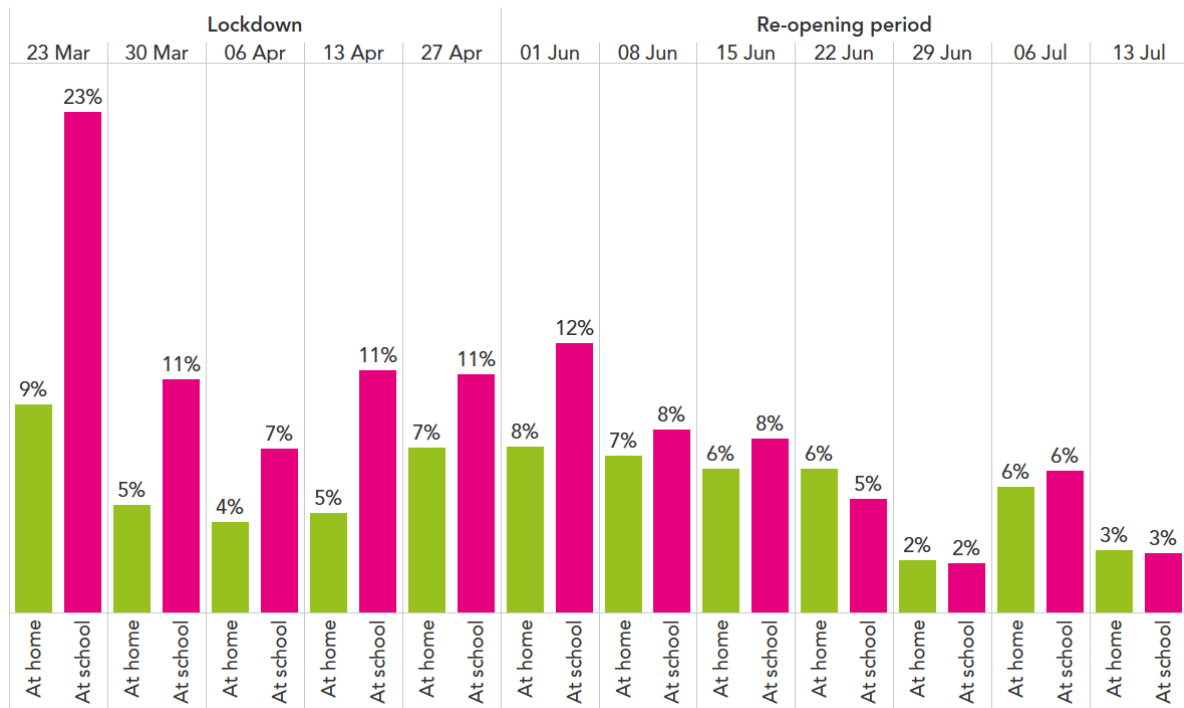
Finally, to what extent were the high work-related anxiety levels observed at certain points during lockdown associated with some teachers still having to physically be in school? (Recall that schools remained open to the children of key workers throughout, and thus were operating with a skeleton staff). As the Teacher Tapp panel were asked a question about *where* they were working (i.e. whether they had to still be in school or could work from home) we can provide some evidence about how this was associated with their anxiety levels. These results are presented in Figure 4, documenting the percentage of teachers with very high work-related anxiety levels by location of work throughout lockdown.

At the very start of lockdown, teachers who went into school to look after key workers' and vulnerable children reported much higher anxiety levels than those at home (23 versus nine percent on 23 March). While this pattern of higher anxiety for those working in schools persisted, the differences gradually became less pronounced. By the end of June, when most

teachers had regularly spent time in school again, there were no differences in anxiety levels reported between those who were, and were not, in school.

Figure 4. The percentage of teachers with very high levels of work-related anxiety during the pandemic, by location of their work

Proportion reporting very high work-related anxiety on a Tuesday (i.e. score of 8 or above on a 10-point scale), by whether the teacher was in school that Tuesday



How did lockdown affect teachers' psychological wellbeing?

The previous section of this report focused specifically upon work-related anxiety before and during the COVID-19 pandemic. Of course, work-related anxiety is just one narrow aspect of mental wellbeing. In this section, we turn to whether lockdown was damaging for teachers' psychological wellbeing overall, drawing upon broader measures of mental health.

To begin, we will use responses teachers provided to the Warwick-Edinburgh Mental Wellbeing Scale (Tennant et al., 2007). This consists of 14 questions, all starting with the phrase "In the last two weeks I've..." and includes some statements closely related with our single work—anxiety score, e.g. "Over the last two weeks I've been feeling relaxed" and "Over the last two weeks I've been feeling confident". These questions were originally asked to the Teacher Tapp panel in October 2019 (during term time), when the average score on the scale

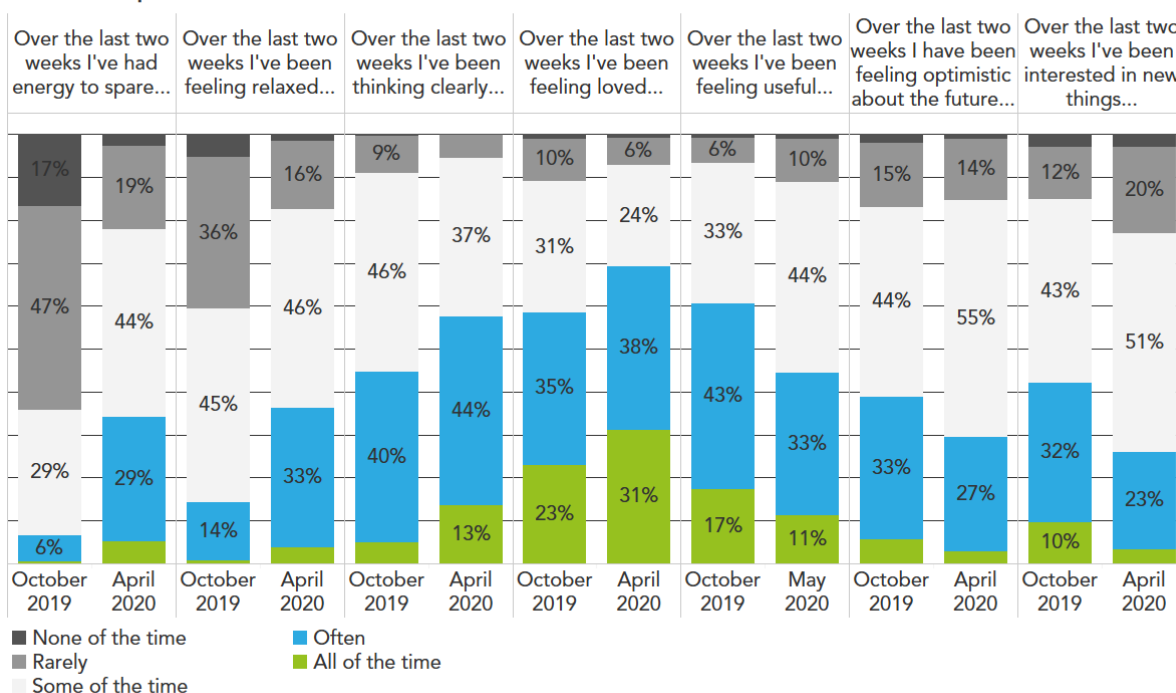
was 47, which is actually slightly lower than the average of 51 for the population (Warwick Medical School, 2020). The same questions were then asked to the same teachers during the height of lockdown, in the term time part of April 2020. This enables us to investigate how teacher mental wellbeing changed.

Interestingly, the overall scale score between the two occasions did not alter; the average score was 47 in October 2019 (pre-pandemic) compared to a very slight increase in wellbeing up to 48 in April 2020 (height of lockdown).

This, however, masks some very prominent changes in several of the 14 sub-questions that form the scale. Specifically, Figure 5 illustrates the six questions where the biggest swings were observed, suggesting that the lockdown may have impacted different aspects of teachers' wellbeing in different ways. Teachers were, for instance, more likely to say they felt loved often or all of the time in April 2020 (69 percent) than in October 2019 (58 percent). A similar improvement can be observed for whether teachers felt they had energy to spare (seven percent versus 34 percent), were feeling relaxed (15 versus 37 percent) and had been thinking clearly (45 versus 57 percent). Balancing this out in the other direction, however, was the fact that teachers were less likely to say they were feeling useful in April 2020 than in October 2019 (decline from 60 percent to 44 percent), optimistic about the future (39 percent to 30 percent), or interested in new things (42 percent to 27 percent).

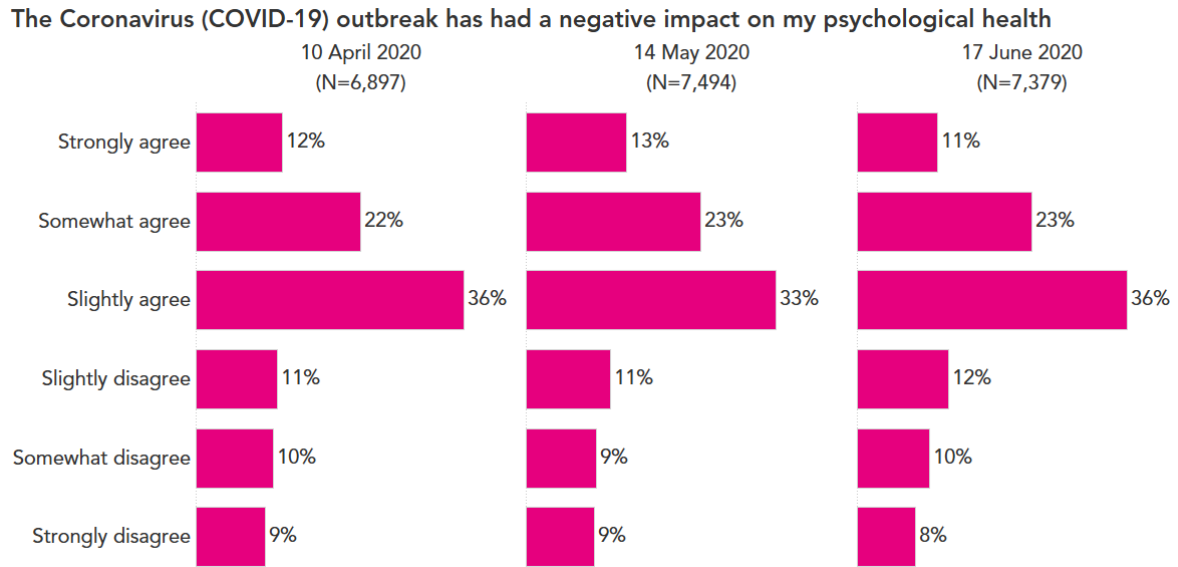
Figure 5. Questions on the Warwick-Edinburgh Mental Wellbeing Scale with the biggest changes during lockdown

The six elements of the Warwick-Edinburgh Mental Wellbeing Scale with large reported changes in teacher responses



One inference one can draw from the above seems to be that, although the huge change in the day-to-day activities may have changed specific aspects of teachers' mental wellbeing, it may not have caused it to materially deteriorate overall. However, the Teacher Tapp panel were also asked at three points during lockdown (10 April, 14 May and 17 June) about whether they felt that the COVID-19 outbreak harmed their psychological health. Answers to this more direct, subjective question about lockdown experiences were rather different, as illustrated by Figure 6. On each of the three occasions, over two-thirds of the teachers who participated agreed that the impact had been negative, which is at odds with the changes in the Warwick-Edinburgh scale (see Figure 5 above) and their fall in work-related anxiety (see Figure 1).

Figure 6. Teachers' subjective views on how the COVID-19 pandemic had affected their psychological health during lockdown

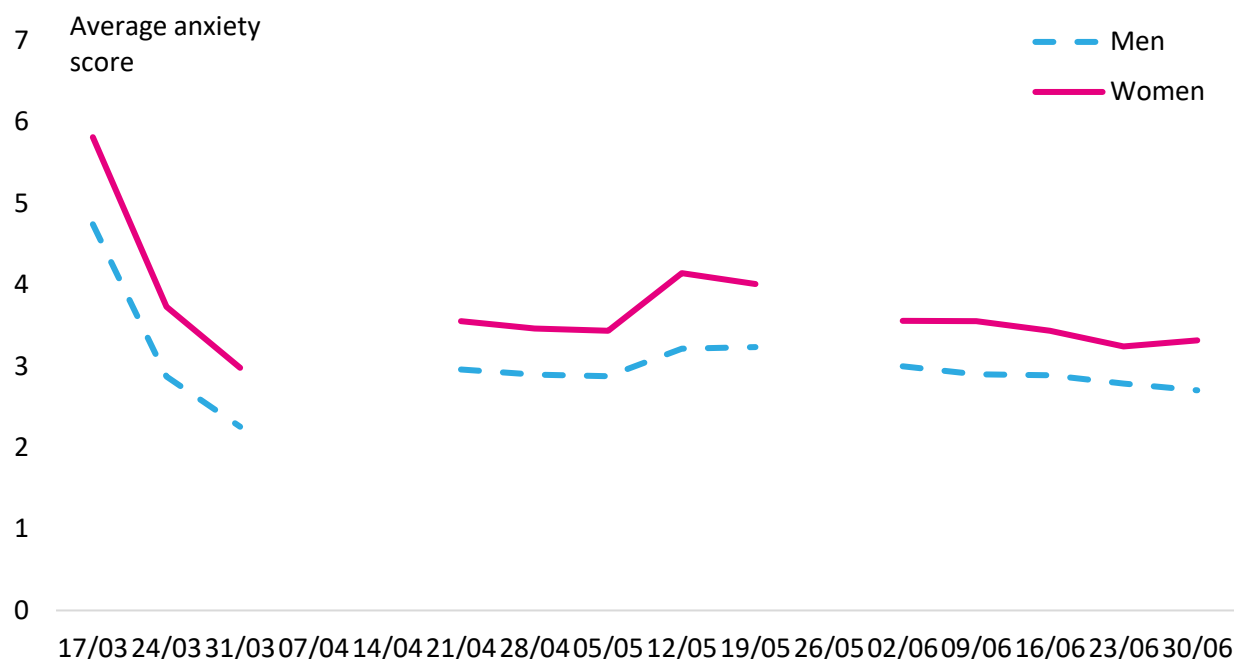


Were female teachers more anxious about work during lockdown than men?

There has been much debate about the different effect that the COVID-19 crisis has had upon men and women. It has been widely reported that women have borne the brunt of childcare and home schooling during lockdown (Power, 2020), with many families trying to manage work and family responsibilities at the same time (Oppenheim, 2020). It has hence been suggested that COVID-19 has the potential to be disastrous for gender equality (Savage, 2020). Moreover, the burden of juggling home and work life throughout this crisis has clear potential implications for work-related anxiety, with many families having the same amount of time to cope with more responsibilities. This section hence considers whether the pandemic differentially affected the work-related anxiety of male and female teachers.

In total, 3,034 teachers (858 male and 2,176 female) answered the work-related anxiety question the 12 times it was asked between mid-March and the end of June. Figure 7 illustrates how raw (unadjusted) gender gaps in work-related anxiety played out during the pandemic.

Figure 7. Gender differences in work-related anxiety during the COVID-19 pandemic (unconditional)



Notes: the breaks in the data represent Easter and half-term holidays, where teachers were less likely to be working.

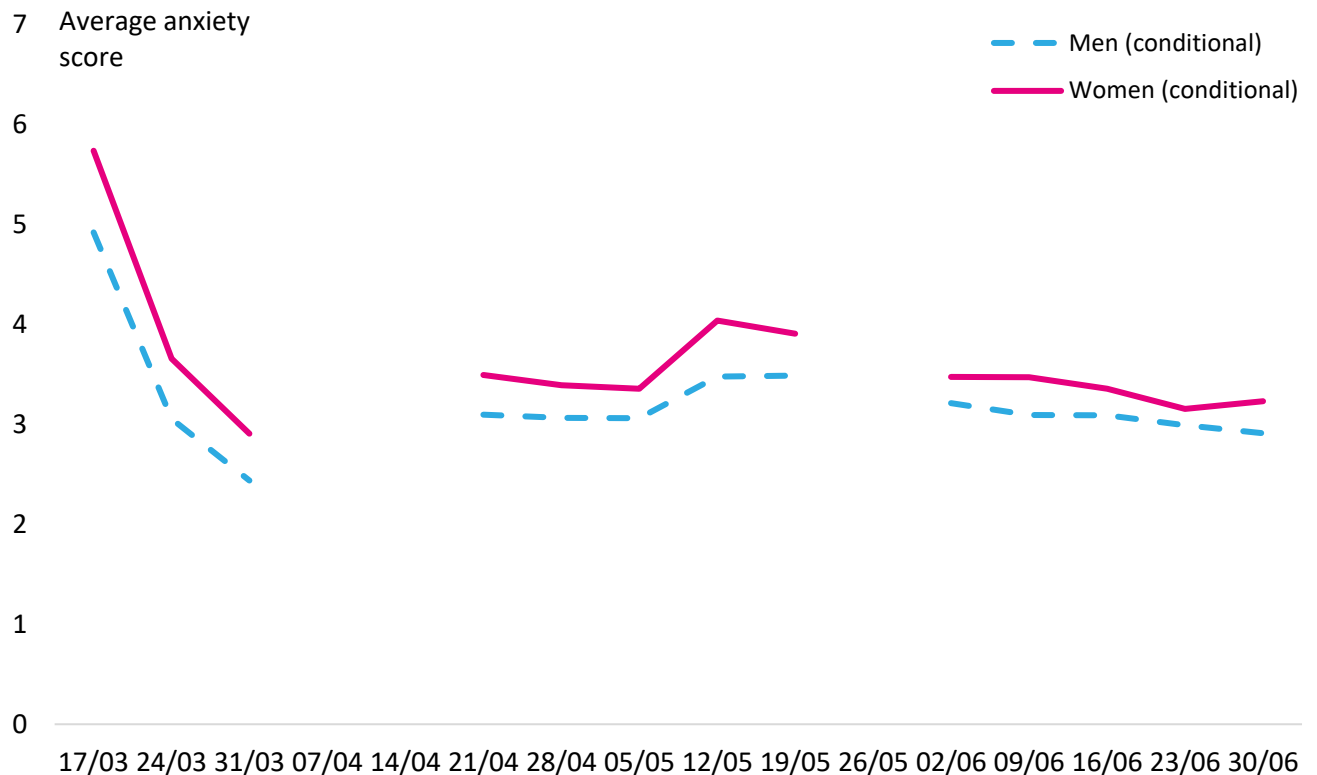
From Figure 7, there are two key points to note. First, for both men and women, work-related anxiety peaked just before lockdown was announced. The average anxiety score for men (women) was around five (six) out of ten on 17 March, but this fell by one whole point on the zero to ten scale by 24 March (the day after lockdown was announced). The trend in work-related anxiety has then been broadly flat thereafter. Second, the gender gap has been stable throughout the lockdown period. Women have consistently scored around 0.7 points higher on the work-related anxiety scale than men.

Of course, women may be more anxious about work than men during “normal” times. And the data we collected suggested that this is indeed the case. In the term before the pandemic, female teachers scored higher on the work-related anxiety scales than males (average anxiety scores of 4.07 versus 3.63). There are, of course, other differences as well, such as women being more likely to work in primary schools than men, which may also be linked to anxiety levels during the pandemic.

Figure 8 hence replots lockdown trends in work-related anxiety for male and female teachers, but now accounting for gender differences in the school phase in which they work, whether they work in a private or state school, their age and, critically, their pre-COVID-19 anxiety levels. It seems that these factors can explain some, though not all, of the gender gap in work-related anxiety during the pandemic. In other words, although the dashed and dotted trend lines

are closer together in this second chart than they were in the first, there is still a clear and consistent difference between men and women. This, in turn, implies that the lockdown caused by the COVID-19 crisis led to a slight increase in gender differences in work-related anxiety among teachers.

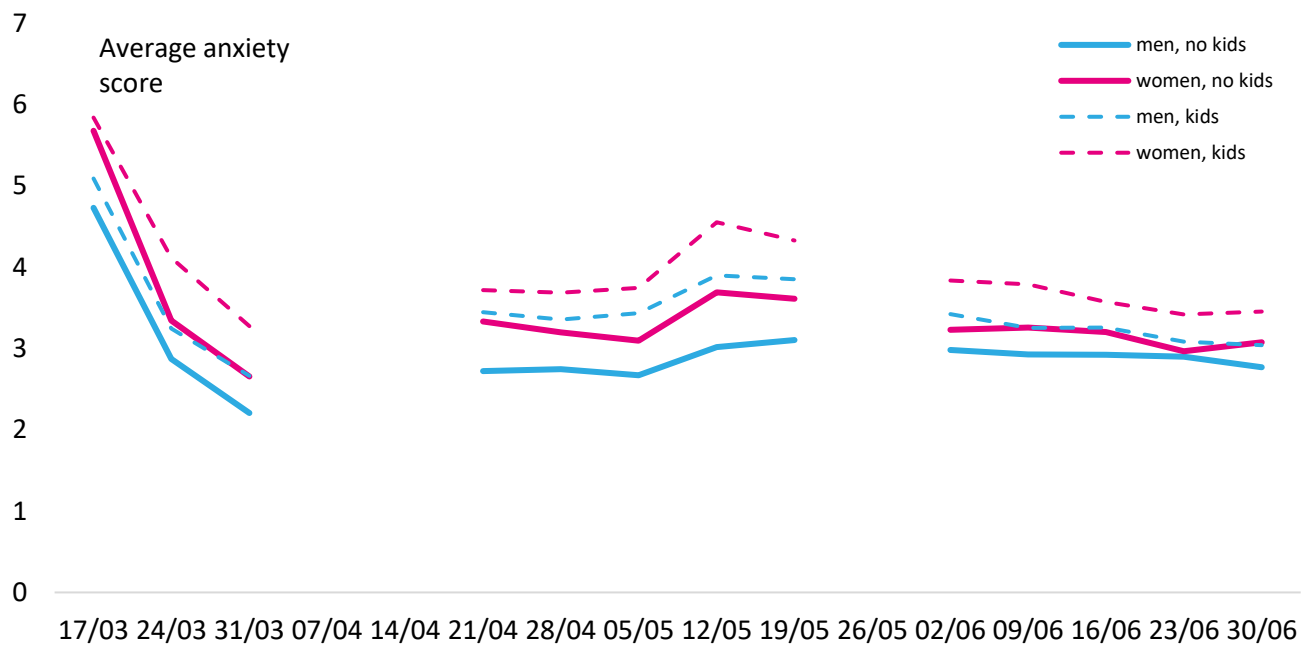
Figure 8. Gender differences in work-related anxiety during the COVID-19 pandemic (conditional)



Notes: Controlling for age, primary/secondary, state/private and pre-COVID-19 anxiety levels.

Of course, the association between gender and work-related anxiety during the pandemic may be affected by household composition, including whether teachers are living with children or not. Figure 9 hence considers gender differences in work-related anxiety during lockdown, depending on whether they lived in a household with children or not (again, accounting for pre-COVID anxiety levels).

Figure 9. Differences in work-related anxiety by gender and children at home (conditional)



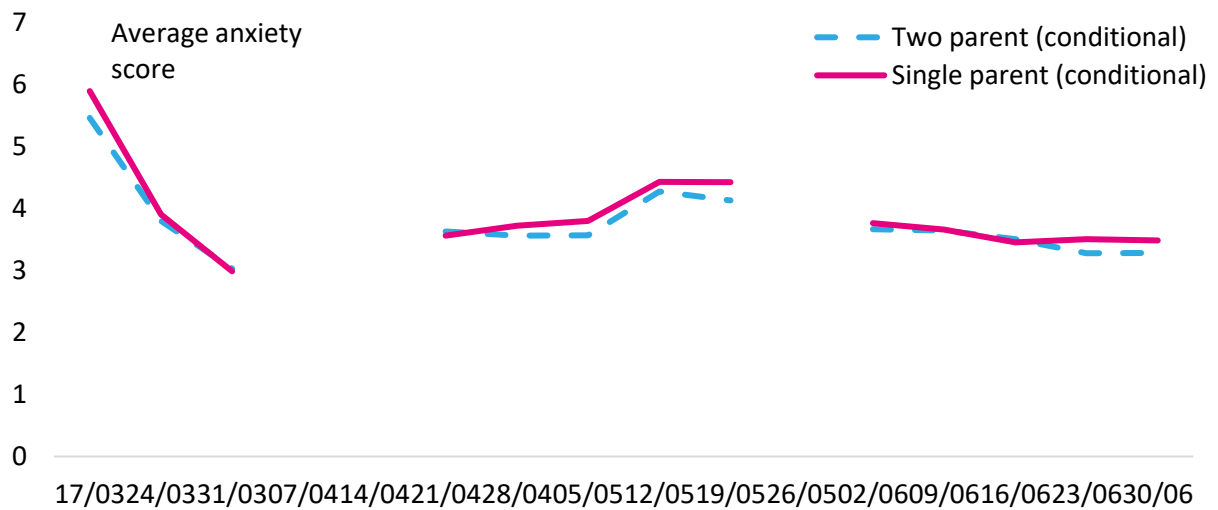
Notes: Controlling for age, primary/secondary, state/private and pre-COVID-19 anxiety levels.

It appears that those teachers with children at home felt more anxious about work throughout lockdown (over and above pre-COVID anxiety levels), particularly during the period between mid-April and mid-May. However, the gender gap in work-related anxiety is of similar magnitude between those with and without children at home. In other words, it was not just female teachers with children who felt more stressed about work than men; a clear gender gap can also be observed between men and women who are not parents.

Nevertheless, some significant differences between groups can be clearly seen in Figure 9. For instance, in April and May there was a difference of around 1.5 points on the zero to ten scale between men without children and women with children. It is also interesting to note that female teachers without children were roughly as anxious about work as men who had children at home (again, conditional upon pre-COVID anxiety levels).

Finally, Figure 10 considers whether there was a difference between single and two-parent households. Intuitively, one might expect that the burden of combining work and parenting during lockdown would be harder for single parents. However, there actually seemed to be little difference in work-related anxiety between teachers living in single and two-parent households. Throughout lockdown, single-parent teachers seemed to cope with the challenges of juggling their work with their home life just as well as those living with a partner to share the load.

Figure 10. Differences in work-related anxiety between single and two-parent families (conditional)



Notes: Controlling for age, primary/secondary, state/private and pre-COVID-19 anxiety levels.

Summary

The COVID-19 pandemic was unforeseen and has had a major impact upon all of our lives. For teachers, the lockdown and reopening of schools had the potential to have a major impact upon their working lives. Yet while work-related anxiety rose for head teachers and (to a lesser extent) private school teachers, lockdown was not generally associated with higher work-related anxiety in state school classroom teachers. On the one hand, the profession was plunged into unfamiliar working patterns which particularly affected head teachers. On the other hand, some of the day-to-day stress of managing students in classrooms was removed.

Of course, work-related anxiety is just one narrow aspect of mental wellbeing. Our results using broader measures were more mixed. We found that overall, levels of wellbeing among teachers, as measured by the Warwick-Edinburgh Mental Wellbeing Scale, did not change between October 2019 (pre-pandemic) and April 2020 (the height of lockdown). However, different aspects of wellbeing may have been impacted in different ways, with teachers having more energy and feeling more loved, but also being less likely to feel useful and optimistic about the future. Moreover, when asked directly about their pandemic experiences, teachers were more likely to agree than disagree that it had negatively impacted their mental health.

We have also presented some evidence of some groups being more impacted than others. In particular, lockdown seems to have increased work-related anxiety among female teachers slightly more than male teachers, with a bigger impact upon those with children in the

household (irrespective of gender). Little difference was observed, however, between single and two-parent families.

The pandemic is, of course, not yet over. And we do not really know what the future might bring in terms of local lockdowns and potential further waves. But we do know a lot more about COVID-19 and the impact it has on people. Although most of the focus has so far been on the physical health impacts, we are also developing a better understanding of the mental health implications as well.

References

- Fancourt, D., Bu, F., Wan Mak, H., & Steptoe, A. (2020). *COVID-19 Social Study*. Nuffield Foundation. Accessed 16/09/2020 from <https://mk0nuffieldfounpg9ee.kinstacdn.com/wp-content/uploads/2020/04/COVID-19-social-study-results-9-June-2020.pdf>
- Jerrim, J., Allen, B., & Sims, S. (under review). How does unhappiness and anxiety amongst teachers in England vary over the academic year?
- Oppenheim, M. (2020, May 14). Coronavirus: Women bearing burden of childcare and homeschooling in lockdown, study finds. *Independent*, Retrieved from: <https://www.independent.co.uk/news/uk/home-news/coronavirus-childcare-homeschooling-women-lockdown-gender-a9512866.html>
- Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., ... & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *The Lancet Psychiatry*. DOI: [https://doi.org/10.1016/S2215-0366\(20\)30308-4](https://doi.org/10.1016/S2215-0366(20)30308-4)
- Power, K. (2020). The COVID-19 pandemic has increased the care burden of women and families. *Sustainability: Science, Practice and Policy*, 16:1, 67-73.
- Savage, M. (2020, July 1). How Covid-19 is changing women's lives. *BBC*, Retrieved from: <https://www.bbc.com/worklife/article/20200630-how-covid-19-is-changing-womens-lives>
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., ... & Stewart-Brown, S. (2007). The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of life Outcomes*, 5(1), 63.
- Warwick Medical School. (2020). *Warwick-Edinburgh Mental Wellbeing Scale FAQs*. Retrieved from <https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/using/faq/>

 @cepeo_ucl

ucl.ac.uk/ioe/cepeo