

# Mental health during lockdown: evidence from four generations

Initial findings from the *COVID-19 Survey in  
Five National Longitudinal Studies*

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CENTRE FOR  
LONGITUDINAL  
STUDIES



Economic  
and Social  
Research Council

## Access the survey data

The COVID-19 survey data analysed in this briefing have been de-identified and are available for researchers. To download the data (SN: 8658), visit the UK Data Service website ([ukdataservice.ac.uk](https://ukdataservice.ac.uk)).

## Find out more

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# Contents

<b>About the survey</b> .....	1
<b>Introduction</b> .....	3
<b>Measures</b> .....	6
<b>Results</b> .....	7
Mental health outcomes by sex .....	7
Mental health by education .....	11
Change in psychological distress from just before to during the lockdown: a case study of 62-year-olds changes among mothers vs fathers .....	14
<b>Conclusions</b> .....	16

# About the survey

This briefing is based on data from a web survey of over 18,000 people, collected between 2 and 31 May 2020. The survey was completed by participants of five nationally representative cohort studies, who have been providing information about their lives since childhood. The analyses presented in this briefing relate to participants from four out of five of the studies included in the survey. These were:

- [Millennium Cohort Study](#) (MCS), born in 2000-2002, part of 'Generation Z'. They have been followed since birth and are now aged 19;
- [Next Steps](#), who were born in 1989-1990, so-called 'Millennials'. They have been followed since adolescence and are now aged 30;
- [1970 British Cohort Study](#) (BCS70) who were born in 1970, part of 'Generation X'. They have been followed since birth and are now age 50;
- [National Child Development Study](#) (NCDS) who were born in 1958, into the later part of the 'baby boomers' generation. They have been followed since birth and are now age 62;
- [National Study of Health and Development Study](#) (NSHD) who were born in 1946, at the start of the 'baby boomers' generation. They have been followed since birth and are now age 74.

The analyses presented in this briefing relate to participants from four out of five of the studies included in the survey: MCS, Next Steps, BCS70 and NCDS.

The survey was designed to help researchers understand the economic, health and social consequences of the coronavirus outbreak, to give a unique insight into how people's experiences during the pandemic vary depending on their earlier lives, and to be able to track the impact into the future.

As part of the survey, response weights were created, and all the results in this briefing have been weighted, so that the results are representative as possible of the full cohort of that age (for further information on weights, see the [survey User Guide](#)).

A number of further research briefings, using the data from the first wave of the COVID-19 survey, are under preparation, and can be found [on the CLS website](#).

## Introduction

In this briefing paper we report on the mental health of four different generations of people in Britain in May 2020, amid the national lockdown in response to the COVID-19 pandemic. We compare overall levels of psychological distress including: symptoms of depression and anxiety, loneliness and low life satisfaction by age, sex, and education. We further analyse whether there have been changes in mental health between observations taken several years prior to the lockdown, and during the lockdown.

There have been widespread concerns about negative mental health impacts of the COVID-19 pandemic for a number of important reasons, including sudden loss of employment and financial difficulties, major disruptions to education, illness and severe loss of social contact. However, there are reasons one might expect to see benefits to mental health, including for instance more time with family, reductions in stressful commutes and more time to engage in exercise and other healthy behaviours. Evidence from studies that have data from participants prior to the pandemic indicates potential increases in mental health difficulties, especially in younger generations.<sup>1</sup> However, it is important to note that these increases are observed at a time where year on year increases are generally observed for mental health difficulties<sup>2</sup> and research comparing generations has consistently found that mental ill-health is greater in more recently born generations compared to prior generations at the same ages.<sup>3 4</sup> It is challenging to evidence the impact of the pandemic on mental health due to the universal nature of exposure to the pandemic. However, in the few studies that have attempted to account for such natural trends, it

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<sup>1</sup> Pierce M, Hope H, Ford T, et al. Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *The Lancet Psychiatry* doi: 10.1016/S2215-0366(20)30308-4

<sup>2</sup> Pitchforth J, Fahy K, Ford T, et al. Mental health and well-being trends among children and young people in the UK, 1995–2014: analysis of repeated cross-sectional national health surveys. *Psychological medicine* 2019;49(8):1275-85.

<sup>3</sup> Ploubidis GB, Sullivan A, Brown M, et al. Psychological distress in mid-life: evidence from the 1958 and 1970 British birth cohorts. *Psychological Medicine* 2016;47(2):291-303. doi: 10.1017/S0033291716002464 [published Online First: 10/13]

<sup>4</sup> Patalay P, Gage SH. Changes in millennial adolescent mental health and health-related behaviours over 10 years: a population cohort comparison study. *International journal of epidemiology* 2019;48(5):1650–64. doi: 10.1093/ije/dyz006

is found that young adults and women have experienced the largest increase in mental health problems during the COVID-19 pandemic.<sup>1 5</sup>

Our own findings contribute to this literature, by presenting evidence both on the level of mental health difficulties experienced by different generations during the lockdown, and how they have changed since they were previously measured some years before. Together this growing literature on mental health during the pandemic can usefully inform efforts to help target and support individuals struggling with their mental health.

This briefing is based on data on four generations of people, who were born in [1958 \(age 62\)](#), [1970 \(age 50\)](#), [1989-90 \(age 30\)](#), and [2000-02 \(age 19\)](#), all taking part in nationally representative longitudinal studies that have been following them since their childhoods. During May 2020, participants from these studies were asked to complete a harmonised web survey about their experiences since the coronavirus outbreak, including their mental health and wellbeing.

Key findings:

- There are important generational differences in the prevalence of poorer mental health. It is markedly higher in those age 19, followed by those aged 30 and then those aged 50 and 62 years.
- Females report poorer mental health than males during lockdown, as well as when they were previously interviewed in the years before the pandemic.
- A higher proportion of those aged 30 report psychological distress during lockdown than when previously reported some years before, and the increase is more pronounced among females.
- Overall levels of psychological distress are higher among those without a degree or equivalent qualification compared to those with a degree or higher qualification. However, there is little difference in reports of psychological distress during lockdown than in the years before by education level.

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<sup>5</sup> Banks, J, and Xu, X. The mental health effects of the first two months of lockdown and social distancing during the Covid-19 pandemic in the UK, IFS Working Paper W20/16

- In a subsample aged 62, who reported on their psychological distress in the months immediately prior to the lockdown restrictions and then again during lockdown in May 2020, more people reported lower levels of life satisfaction during than before lockdown. Interestingly, fewer reported symptoms of psychological distress during lockdown than before.



## Measures

**Mental health:** Mental health is assessed using a set of common measures across the four cohorts in May 2020: PHQ-2 for depressive symptoms (range 0-6; score  $\geq 3$  indicates high symptoms); GAD-2 for anxiety symptoms (range 0-6; score  $\geq 3$  indicates high symptoms); UCLA Loneliness 3 item scale for loneliness (range 3-9; score  $\geq 6$  indicates high loneliness); and the ONS life satisfaction question for life satisfaction (range 0-10; score  $\leq 4$  indicates low life satisfaction). In addition, we include cohort specific psychological distress measures to ensure continuity and examine before-during changes (1958, 1970: Malaise Inventory, Next Steps: GHQ-12).

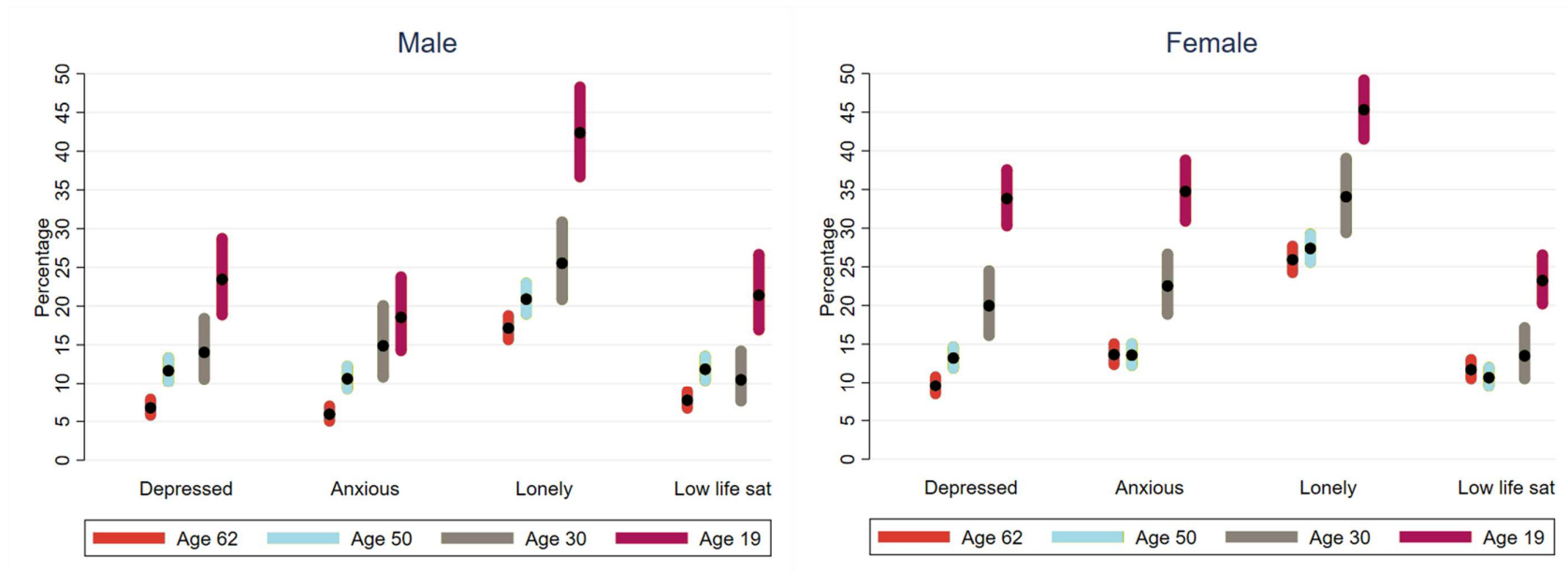
**Education:** We capture highest educational qualification level for those aged 30, 50 and 62 (for those aged 19 we do not report by education as many have not yet completed their formal education). We categorise education across cohorts to: 'Degree or higher qualifications or equivalent' which includes HNC, HND, degree and post-graduate degrees; and 'Below degree level qualifications' which includes no qualifications, GCSE, A-Levels or equivalent.

**Timing of prior psychological distress measures:** The prior measures were taken at age 25 for those now aged 30 (five years prior), age 46 for those now aged 50, four years prior) and age 50 for those now aged 62 (12 years prior). Prior psychological distress measures for the 19-year-olds surveyed were captured at age 17 but are not yet included in the analysis as these data are not yet available for research.

# Results

## Mental health outcomes by sex

**Figure 1: Prevalence of depressive symptoms, anxiety symptoms, loneliness and low life satisfaction in May 2020 in the four cohorts**



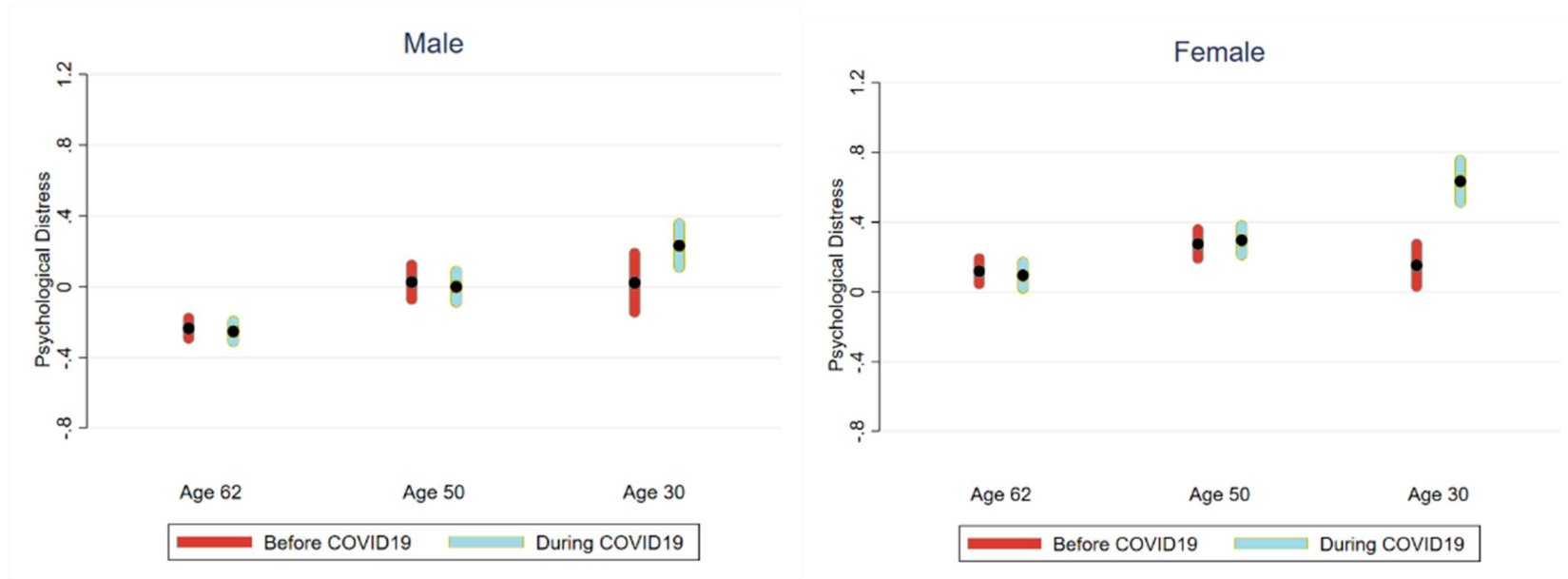
Note: Proportions based on weighted survey responses; the bars (whiskers) reflect 95% confidence intervals using the Agresti-Coull method.

As shown in Figure 1, for men and women there is a higher proportion of those aged 19 and 30 compared to those aged 50 and 62 reporting depressive symptoms, anxiety symptoms and loneliness. The pattern differs for low life satisfaction where 19-year-olds were most likely to report low scores, and 62-year-olds were the least likely; however a fairly similar proportion of those aged 50 compared to those aged 30 have low life satisfaction. Across all cohorts, females generally report poorer mental health outcomes than males.

Among 19-year-olds, 23% of males and 34% of females had high levels of depressive symptoms, and 19% of males and 35% of females had high levels of anxiety. At age 30, 14% of males and 20% of females had high depressive symptoms, and 15% of men and 23% of women reported high levels of anxiety symptoms. At age 62, there were, in comparison, 7% of males and 10% of females with high depressive and 6% of males and 14% of females with high anxiety symptoms.

There were also clear generational trends in higher levels of loneliness with 42% of male and 45% of female 19-year-olds reporting high loneliness during this time compared to 26% of males and 34% of females at age 30 and 21% of males and 27% of females at age 50.

**Figure 2: Psychological distress prior to and during lockdown for males and females**

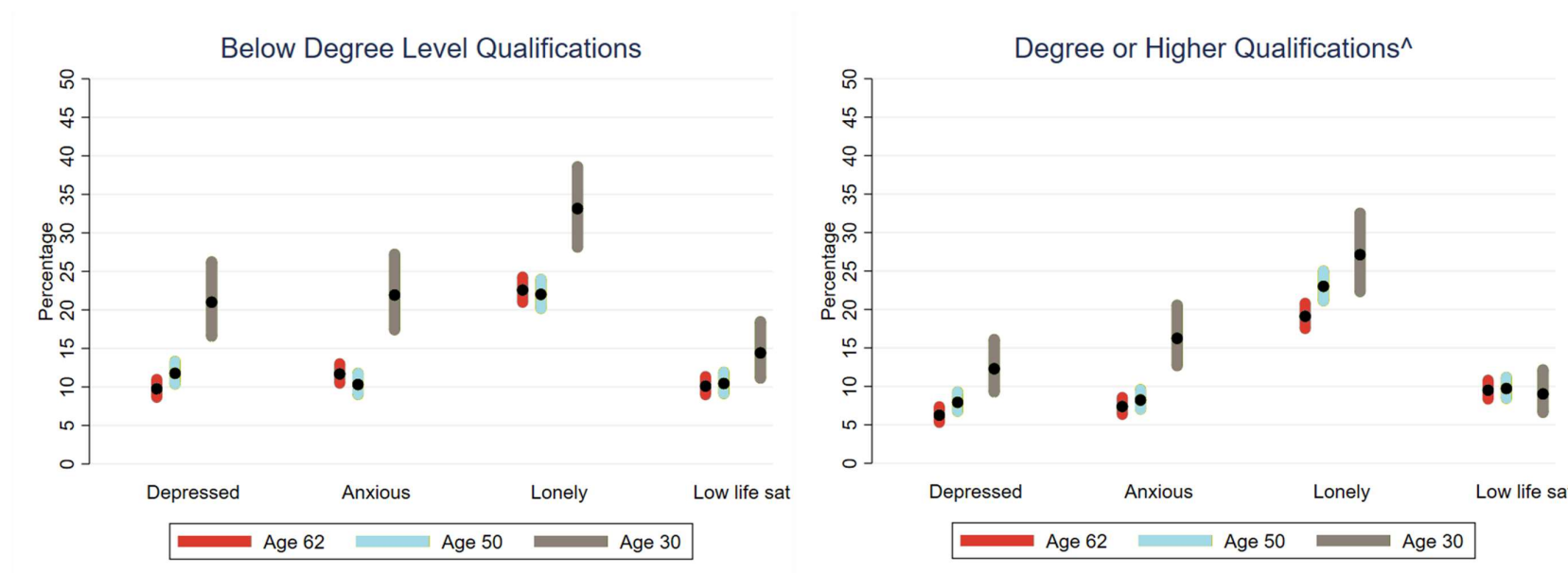


Note: The chart shows measures of psychological distress in each cohort, measured before and during the lockdown. The 'before COVID-19' measures were captured at 12, four and five years prior for age 62, age 50 and age 30 respectively. The age 62 and 50 cohorts both used the Malaise Inventory before and during the lockdown, and in Next Steps the GHQ-12 was used. To facilitate before-during comparisons on a common metric the mental health measures were first re-scaled (the Malaise Inventory total score was rescaled to the GHQ12 metric with linear stretching), and then were pooled, and standardised (Z-scores).

We compare levels of psychological distress during lockdown to reports from the same people, at varying times prior to the lockdown, depending on when these were last measured within each of the four studies. For 62-year olds, the prior measure was captured 12 years earlier (at age 50), for 50-year-olds, the measure was taken four years prior (at age 46), for 30-year-olds, the measure was taken five years earlier (at age 25). The changes captured therefore reflect natural changes to mental health over the life course as well as changes caused by the lockdown. Overall, we observed no significant differences before compared to during the lockdown for the cohorts aged 62 and 50 years. However, for those aged 30 we observe higher levels of psychological distress among females during the COVID-19 lockdown compared to when previously measured at age 25 (Figure 2).

## Mental health, by education level

**Figure 3: Prevalence of depressed, anxious, lonely and low life satisfaction in May 2020 across three cohorts by education levels**

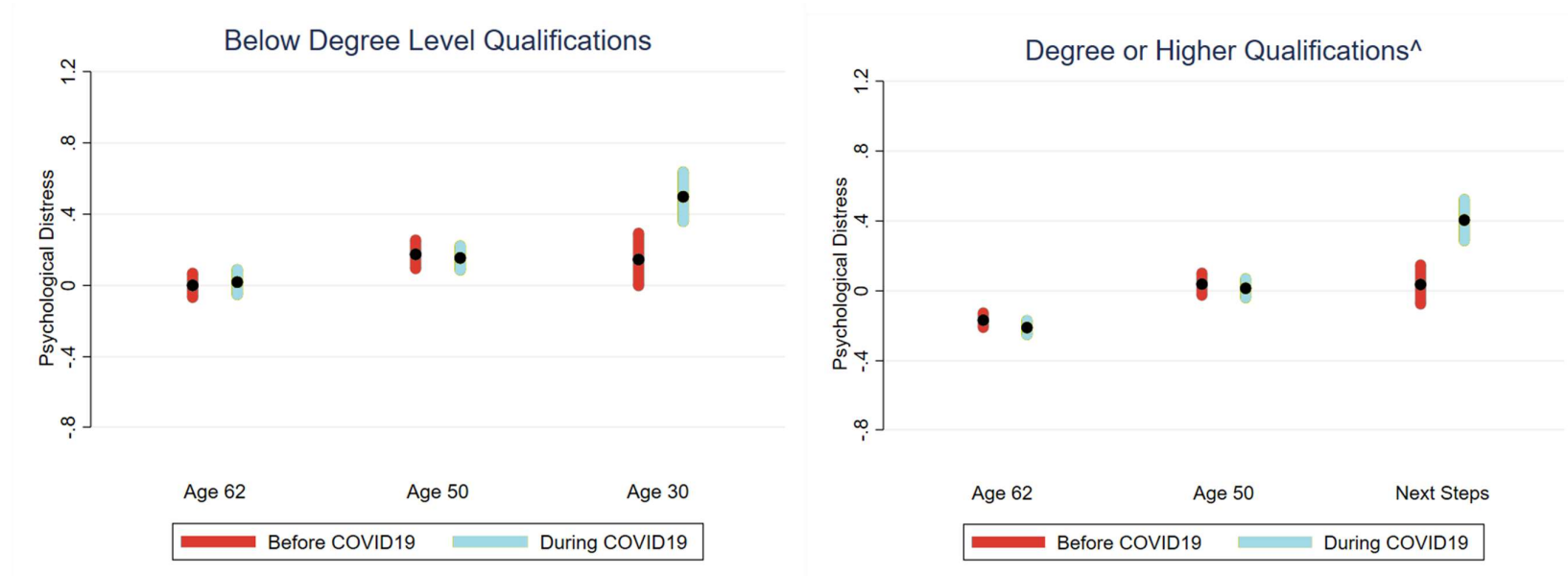


^ 'Degree or higher qualifications or equivalent' includes HNC, HND, degree and post-graduate degrees; and 'Below degree level qualifications' includes no qualifications, GCSE, A-Levels or equivalent.

Proportions based on weighted survey responses; the bars (whiskers) reflect 95% confidence intervals using the Agresti-Coull method.

As seen in Figure 3, at ages 30, 50 and 62 years a larger proportion of those with lower levels of educational qualifications report depressive symptoms, anxiety symptoms and loneliness, compared to those with high educational levels. For instance 21% of those with below degree qualifications and 12% of those with degree or higher qualifications report high levels of depressive symptoms at age 30 years and this is 10% and 6% in the cohort aged 62 years.

**Figure 4: Changes in psychological distress from before to during lockdown (May 2020) by education levels**



For an explanation of the measures shown on this chart, please see note to Figure 2. ^ 'Degree or higher qualifications or equivalent' includes HNC, HND, degree and post-graduate degrees; and 'Below degree Level qualifications' includes no qualifications, GCSE, A-Levels or equivalent.

Comparing psychological distress measures prior to lockdown with during lockdown by education (Figure 4), a higher proportion of those aged 30 report psychological distress during lockdown, and this applies both to those with degree-level and above, and those with below degree level qualifications. We observe no differences in overall levels of psychological distress before and during COVID-19 lockdown among 62 and 50-year-olds for either education level.

Our findings also highlight inequalities in levels of mental ill-health by education level, with overall levels of mental ill-health greater among individuals with below degree level qualifications compared to those with a degree or higher qualification. However, we do not find evidence that these inequalities have widened: the analysis focussing on changes in mental health from before COVID-19 suggests similar patterns of changes based on education level. Further data collection within the same populations are underway which will be used to monitor this and other socio-economic inequalities. Further investigations of whether mental health inequalities based on other factors (e.g. prior health), are widening or not are also planned.



## Change in psychological distress from just before to during the lockdown: a case study of 62-year-olds

Fieldwork for the age 62 sweep of the 1958 cohort had started in January 2020, and was then paused within two months due to the COVID-19 pandemic. 937 participants completed the mental health assessment prior to this fieldwork pause (January-March 2020) and also took part in the first sweep of the COVID-19 data collection in May 2020. Though this is clearly just a subsample of the age 62 cohort members, it provides an opportunity to study how mental health and life satisfaction changed from just before to during the lockdown for this group of individuals.<sup>6</sup>

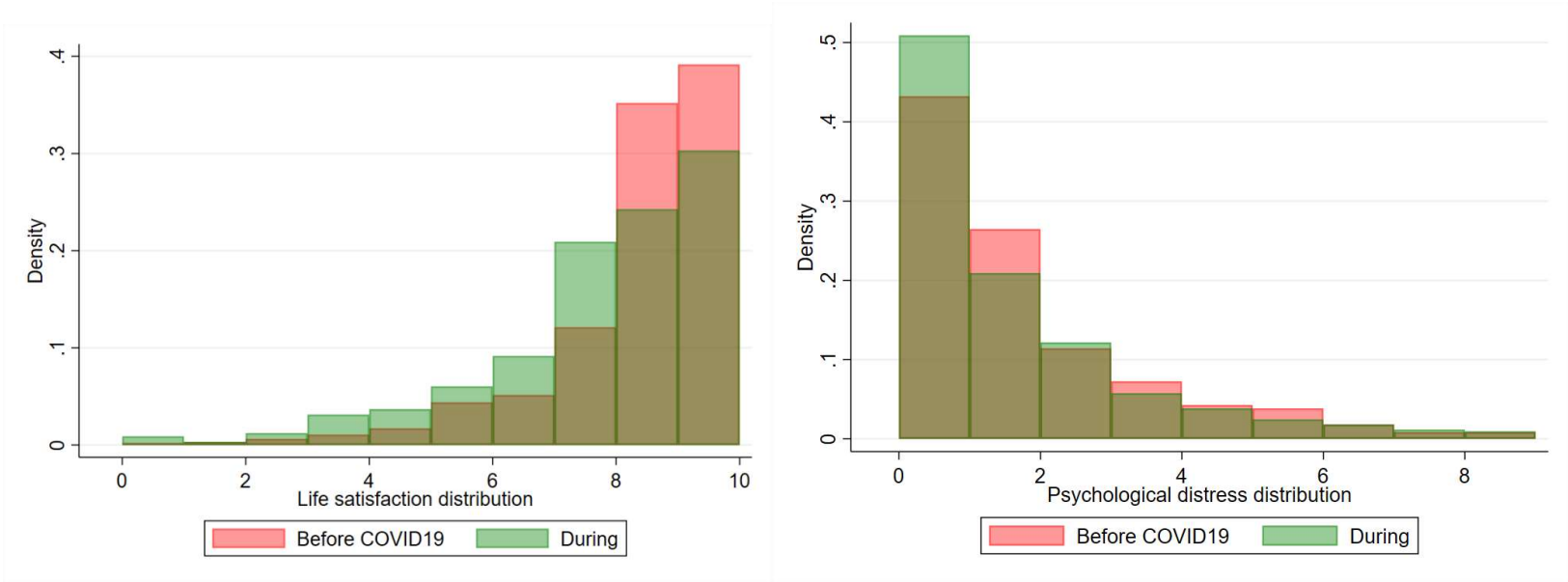
Figure 5 shows the proportion of study members reporting different levels of life satisfaction on a scale of 0-10, prior- to and during the lockdown. The area shaded red shows responses before the lockdown, and the area shaded green shows responses during the lockdown. The khaki coloured area represents the overlap between the pre- and during responses. As can be seen from the before-during plots of the distributions in Figure 5, life satisfaction among these cohort members decreased, with more cohort members reporting low and medium (scores 2-8), compared to high (scores 9-10) for life satisfaction in May 2020 compared to January-March 2020. The mean life satisfaction in this subsample (on a score of 0-10) was 7.85 before (95% CI 7.67 -8.03) and 7.36 (7.13-7.59) during the lockdown.

On the other hand, for psychological distress more people scored 0 (i.e. no symptoms) in May 2020 compared to January-March 2020, indicating a decrease in psychological distress symptoms being reported in this subsample. The mean psychological distress scores were 1.38 (95%CI 1.19 - 1.56) before, and during lockdown the mean score decreased to 1.20 (95%CI 1.04 - 1.37).

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<sup>6</sup> Results are based on the beta version of the data for this subsample.

**Figure 5: Life satisfaction and psychological distress, before (Jan-March 2020) and during (May 2020) lockdown, in a subsample of 62 year olds.**



## Conclusions

These initial findings demonstrate marked differences in mental health between generations. Our work confirms a clear picture which had already emerged before the pandemic, of greater distress faced by the younger generations aged 30 (born in 1989-90) and aged 19 (born 2000-02), compared to the older generations (born in 1970, and in 1958). Taken together, we also confirm that females report poorer mental health than males. This snapshot reflects both ongoing trends – the mental health crisis among young people, and young women in particular, has been an ongoing concern even before the pandemic – as well as changes that may be due to COVID-19.

Drawing on the longitudinal data collected within these studies, we have also compared psychological distress measures in the years before lockdown with measures during lockdown. We find a higher proportion of those aged 30 report psychological distress during lockdown than before, and this is mainly driven by worsening symptoms in females. It must be noted that overall, these changes are in line with expectations about the lifecourse trajectories of mental ill-health at this stage of life where psychological distress levels increase from late adolescence until mid-life.<sup>7</sup> Our findings are also consistent with other studies which have shown that young people and women have experienced the highest levels of mental health problems during the COVID-19 lockdown.<sup>1</sup>

Changes in psychological distress from before to during lockdown are similar in individuals with different educational qualifications, although overall levels of difficulties are higher in those without a degree or equivalent qualification. Although there have been concerns about widening socio-economic and other inequalities in mental ill-health due to the pandemic, at least in the dimension of prior educational attainment, these were not observed at the height of the lockdown in May 2020.

Lastly, in a subsample aged 62, who were assessed just prior to the lockdown restrictions in January- March 2020 and then again in May 2020, we find more

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<sup>7</sup> Jongsma H, Moulton V, Ploubidis G, et al. Psychological distress across adulthood: test-equating in three British birth cohorts. medRxiv 2020:2020.06.24.20138958. doi: 10.1101/2020.06.24.20138958

people reporting lower levels of wellbeing, measured by life satisfaction during than before lockdown. However, fewer report symptoms of psychological distress during lockdown. Future research should explore further these patterns.

Follow-up data collections will enable us to understand how the trajectories of mental health difficulties across different generations have evolved as lockdown has been lifted, and how the inequalities examined here continue to develop.