Coronavirus and the social impacts of ‘long COVID’ on people’s lives in Great Britain: 7 April to 13 June 2021

Indicators from the Opinions and Lifestyle Survey covering the period 7 April to 13 June 2021 to understand the impact of the coronavirus (COVID-19) pandemic on people by their self-reported COVID-19 status.

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1. Main points

- Over the period 7 April to 13 June 2021, 6.2% of adults said they may have experienced long COVID since the start of the pandemic; this includes 3.6% who said they had experienced long COVID, and 2.6% who said they were unsure if they had experienced long COVID; a further 10.1% reported they had at some point had a positive test for or believed they’d had coronavirus (COVID-19) but had not experienced long COVID.

- Almost 6 in 10 (57%) of those who may have experienced long COVID reported this had negatively affected their general well-being; around 4 in 10 (39%) reported it had negatively affected their ability to exercise and 3 in 10 (30%) reported it had negatively affected their work.

- Of those who may have experienced long COVID, personal well-being levels across all four personal well-being indicators were lower compared with those who reported they'd not had COVID-19 (in any form); anxiety (4.6 for long COVID, 3.8 for not had COVID-19), life satisfaction (6.4 for long COVID, 7.1 for not had COVID-19), feeling that the things done in life were worthwhile (6.9 for long COVID, 7.4 for not had COVID-19) and happiness (6.5 for long COVID, 7.1 for not had COVID-19).

- Of those who may have experienced long COVID, 3 in 10 (30%) reported experiencing moderate to severe depressive symptoms in the last 2 weeks compared with 16% of those who had not had COVID-19; a quarter (25%) were likely to have some form of anxiety compared with 15% of those who had not had COVID.

- Nearly 1 in 2 (44%) of working adults who may have experienced long COVID reported that their work had been affected by the coronavirus pandemic, compared with around 1 in 3 (36%) among working adults who had not had COVID-19.

- Of those who may have experienced long COVID, almost a quarter (22%) reported their household finances had been affected by the pandemic compared with 13% of those who had not had COVID-19.

The estimates presented in this release are based on self-reported instances of "long COVID" experienced by respondents at any point since the start of the coronavirus (COVID-19) pandemic. We recommend referring to the COVID-19 Infection Survey for estimates of COVID-19 positivity or estimates of the current prevalence of ongoing symptoms following COVID-19 infection in the UK.

Statistician's comment

"Although no single definition of long COVID exists it is likely it affects people in different ways and research is already showing the potential impacts on physical health. Today's research highlights the potential for people's mental health, well-being or work to be impacted by long COVID.

We've found more people who may have had long COVID report negative impacts, however more work is needed to disentangle the effects of long COVID from a variety of factors such as age, sex or disability.”

Tim Vizard, Principal Research Officer, Office for National Statistics.

2. Self-reported “long COVID”
Definitions

The estimates presented in this release relate to self-reported “long COVID” as experienced by individuals, rather than clinically diagnosed ongoing symptomatic coronavirus (COVID-19) or post-COVID-19 syndrome. There is no universally agreed definition of long COVID, but it covers a broad range of symptoms such as fatigue, muscle pain and difficulty concentrating.

Throughout this release:

- “long COVID” refers to adults who self-reported on the Opinions and Lifestyle Survey (OPN) that they had had a positive test or believed they have had COVID-19 and also responded “yes” or “not sure” to the question “Have you experienced “long COVID”?"

- “Short COVID” refers to adults who self-reported that they had had a positive test or believed they have had COVID-19 but responded “no” or “prefer not to say” to the question “Have you experienced “long COVID”?"

- “Not had COVID” refers to adults who self-reported that they had never had a positive test for COVID-19 and that they did not believe they had ever had COVID-19.

More detailed information on these definitions and the questions asked on the OPN survey is available in the Glossary.

Prevalence of long COVID

Data collected from the OPN between 7 April and 13 June found that 6.2% of the adult population (aged 16 years and over) in Great Britain may have experienced long COVID at some point in the pandemic. This 6.2% includes 3.6% who answered “yes” to if they had experienced long COVID and 2.6% who said they have experienced COVID-19 however answered “not sure” to whether they experienced long COVID. A further 10.1% reported they had at some point had a positive test for COVID-19 or believed they had COVID-19 but that they had not experienced long COVID (or preferred not to say).

Estimates of the level of prevalence of long COVID in this release differ from the latest Coronavirus Infection Survey (CIS), which found 1.5% of people aged 2 years and over in the UK were experiencing self-reported long COVID in June 2021. A recent real time assessment of COVID transmission (REACT) study also estimated the prevalence of persistent symptoms of COVID-19 among adults in England to be 5.75% (based on analysis of data collected between September 2020 to February 2021). Differences between estimates in these studies could be because of the different time periods, survey design and sample coverage of these studies.

Figure 1 shows the proportions of adults reporting they may have experienced long COVID within different groups of the population:
- women (6.6%) appeared to be more likely than men (5.8%) to report they may have experienced long COVID
- those aged between 30 and 49 years (8.0%) were the most likely to report they may have experienced long COVID of any age group
- disabled adults (8.0%) were more likely to report they may have experienced long COVID than non-disabled adults (5.4%)
- in the most deprived areas of England, 8.4% of adults reported they may have experienced long COVID compared with 5.2% in the least deprived areas
Figure 1: Reporting experiencing long COVID was higher among those living in the most deprived areas of England

Adults, Great Britain, 7 April to 13 June 2021

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. The proportion of each group who have not had COVID-19 has been excluded from this chart, these values can be found in the associated reference tables.

2. Base population for percentage: All adults.

3. Deprivation refers to those living in England as measured by the Index of Multiple Deprivation.

4. Totals when combining categories may not sum due to rounding.

These findings reflect the trends found from the Coronavirus Infection Survey (CIS), which also found that long COVID prevalence was greatest in people aged 35 to 69 years, females, people living in the most deprived areas, those working in health or social care, and those with another activity-limiting health condition or disability.
It is not possible to infer cause-and-effect relationships from the results presented in this release. The reported associations between impacts on different aspects of life and long COVID may be the result of other factors (for example, age, sex, disability status or deprivation level) which may also differ by COVID-19 status.

3. Impact on life of long COVID

Almost 6 in 10 (57%) of adults who reported they may have experienced long COVID reported this had negatively affected their general well-being.

Ability to exercise (39%) and work (30% or 38% among working adults only) were the next two most common ways such adults reported long COVID was negatively affecting their life (Figure 2).

If we consider only those who answered "yes" to experiencing long COVID rather than those who may have experienced long COVID (those who said "yes" or "not sure"), the proportion reporting these reasons increased. Over 7 in 10 (72%) of adults who said "yes" to experiencing "long COVID", said that this had negatively affected their general well-being and around half (48%) their ability to exercise. Of all adults who said "yes" to experiencing long COVID, 4 in 10 (40%) said it had negatively affected their work, this rose to 5 in 10 (50%) when considering working adults only.
Figure 2: Adults reporting having long COVID most frequently reported this impacted their general well-being, ability to exercise or their work

Of adults who self-reported long COVID, Great Britain, 7 April to 13 June 2021

Figure 2: Adults reporting having long COVID most frequently reported this impacted their general well-being, ability to exercise or their work

Of adults who self-reported long COVID, Great Britain, 7 April to 13 June 2021

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Question: "Has having ‘long COVID’ negatively affected any of the following aspects of your life?"

2. Respondents were able to select more than one option.

3. Base population for percentage: All adults who have experienced ‘long COVID’.

Throughout the rest of this release the category "long COVID" includes those who may have had long COVID at some point. This is based on those who had a positive test for COVID-19 or believed they have had COVID-19 and responded either "yes" or "not sure" to the question "Have you experienced "long COVID"?".

All adults in the Opinions and Lifestyle Survey (OPN) were asked about the ways in which the coronavirus (COVID-19) pandemic was affecting their lives in general.

Adults who reported that they may have experienced long COVID were more likely than those who had not had COVID-19 to report that their lives were being affected by the coronavirus pandemic because:
• their well-being had been affected (61% among those who may have had long COVID compared with 41% among those who had not had COVID-19)

• their health had been affected (34% compared with 11%)

• their access to healthcare and treatment for non-COVID related illness had been affected (29% compared with 22%)

• their work had been affected (36% compared with 24%, this rose to 44% and 36% respectively if considering working adults only)

• their household finances had been affected (22% compared with 13%) (Figure 3)
Figure 3: Well-being was the most common way the pandemic had affected adults with long COVID

Adults, Great Britain, 7 April to 13 June 2021

- My well-being is being affected
- Lack of freedom and independence
- Personal travel plans are being affected
- Life events are being affected
- I am unable to make plans
- My work is being affected
- My health is being affected
- Access to healthcare and treatment for non-coronavirus (COVID-19) reasons
- My relationships are being affected
- My exercise routine is being affected
- My household finances are being affected
- Schools colleges or universities are being affected

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:
1. Question: "In which ways is the Coronavirus (COVID-19) pandemic affecting your life?"
2. Respondents were able to select more than one option.
4. More response options are available in the associated reference tables.

4. Well-being, loneliness and long COVID

Adults who reported that they may have experienced long COVID also reported poorer personal well-being levels across all four personal well-being indicators compared with those who reported that they have had short COVID or had never had coronavirus (COVID-19).
This difference was greatest when considering anxiety levels (4.6 for long COVID, 3.8 for had short COVID or not had COVID-19) but was also present for life satisfaction (6.4 for long COVID, 7.0 for had short COVID and 7.1 for not had COVID-19), feeling that the things done in life are worthwhile (6.9 for long COVID, 7.4 for had short COVID and not had COVID-19) and happiness (6.5 for long COVID, 7.0 for had short COVID and 7.1 for not had COVID-19) (Figure 4).

Those who reported that they may have experienced long COVID were also more likely to report being often or always lonely (10%) than those who reported they’d had short COVID (6%) or had not had COVID-19 (6%).

**Figure 4: All personal well-being levels were poorer among those who reported experiencing long COVID**

**Mean score, Great Britain, 7 April to 13 June 2021**

**Notes:**

1. Questions: “Overall, how satisfied are you with your life nowadays?”, “Overall, to what extent do you feel that the things you do in your life are worthwhile?”, “Overall, how happy did you feel yesterday?” and “Overall, how anxious did you feel yesterday?”

2. These questions are answered on a scale of 0 to 10, where 0 is “not at all” and 10 is “completely”.

3. Base population: all adults.

Download the data

Figure 5 shows the most frequent reasons cited for well-being concerns among those who indicated coronavirus had affected their well-being.

Those who reported they may have experienced long COVID more frequently reported a range of reasons why the coronavirus pandemic was affecting their well-being compared with those who had not had COVID-19. Of those who reported their well-being was affected, this included because:

- they were feeling stressed or anxious (65% for those who may have had long COVID and 59% for those who had not had COVID-19)
- felt their mental health was worse (40% and 31%)
- strain on their personal relationships (30% and 25%)
- no-one to talk about their worries (25% and 20%)
- felt like a burden to others (23% and 17%)
Figure 5: Adults who reported experiencing long COVID were more likely to report that the coronavirus pandemic was affecting their well-being by making them feel stressed or anxious

Of adults who’s well-being had been affected by the coronavirus pandemic, Great Britain, 7 April to 13 June 2021

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Question: “In the past seven days how has your well-being been affected?”

2. Respondents asked to select all that apply.

3. Base population for percentage: Adults who answered, "My well-being is being affected" for the question "In which ways is coronavirus affecting your life?"

4. More response options are available in the associated reference tables.
5. Mental health and long COVID

Three in ten adults (30%) with long COVID reported experiencing moderate to severe depressive symptoms in the last 2 weeks compared with 16% of those who have not had coronavirus (COVID-19) (for the definition of moderate to severe depression used please see the Glossary).

Of those who have experienced long COVID, a quarter (25%) were likely to have some form of anxiety compared with 15% of those without COVID-19. (For the definition of anxiety used see the Glossary).

We are not able to establish in this analysis whether experiencing long COVID itself increases the likelihood of either depression or anxiety or vice-versa. Earlier research using Opinions and Lifestyle Survey data showed that women, and disabled adults were more likely to present moderate to severe depressive symptoms after controlling for other factors.

6. Leaving the house and long COVID

The percentage of adults who had left their house in the past 7 days was similar regardless of coronavirus (COVID-19) status; 95% for those who had experienced long COVID and those who hadn't experienced COVID-19, 97% for those who had experienced short COVID.

Of those who had left home, the most frequently reported reason for doing so regardless regardless of COVID-19 status was to go shopping for food or medicine with around three in four (74%) of all adults who had left home reported doing this in the past seven days.

Of those who had left home, those who may have had long COVID were less likely to leave the house for exercise (49%) compared with those who had not had COVID-19 (53%).

Adults who may have had long COVID were more likely to report leaving home to travel to and from work (49%) than those who had not had COVID-19 (38%). When concentrating just on the working population, 62% of working adults who had experienced long COVID travelled to work compared with 58% of those who have not had COVID-19. This may be partially explained by long COVID being more prevalent among younger age groups who are more likely to work in industries that require them to be in a physical workplace. For example, data from the Labour Force Survey shows that 23% of 16- to 24-year-olds worked in "Wholesale and Retail" and a further 15% worked in "Accommodation and Food". Data from the Business Insight and Conditions Survey reported than only 26% and 8% of the respective workforces in these industries worked remotely instead of at their normal workplace in early April 2021.
Figure 6: The most common reason adults left their house was to go shopping for food or medicine, regardless of their COVID-19 status

Of adults who'd left home in the past 7 days, Great Britain, 7 April to 13 June 2021

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Question: "In the past seven days, for what reasons have you left your home?"

2. Respondents were able to select more than one option.

3. Base population for percentage: Adults who answered “yes” to “In the past seven days, have you left your home for any reason?"

4. More response options are available in the associated reference tables.
7. Work and long COVID

Nearly half (44%) of working adults who may have experienced long COVID said that their work had been affected by the coronavirus (COVID-19) pandemic, compared with around 1 in 3 (36%) working adults who had not had COVID-19.

Figure 7 shows the most frequent reasons working adults cited for their work being affected by the pandemic. Of those who said their work had been affected by the pandemic, that hours worked had increased (24%), that they had been asked to work from home (19%) and that they were finding working from home difficult (17%) or that hours worked had decreased (17%) were the concerns most frequently cited regardless of a person's reported COVID-19 status.

Working adults who may have experienced long COVID and said their work was being affected by the pandemic were more likely to report that this was because they were worried about their health and safety at work (15%) than those who had not had COVID-19 (10%).
Figure 7: Increase in hours was the most common way work had been affected regardless of COVID-19 status

Of working adults who reported that their work was affected by the pandemic, Great Britain, 7 April to 13 June 2021

Figure 7: Increase in hours was the most common way work had been affected regardless of COVID-19 status

Of working adults who reported that their work was affected by the pandemic, Great Britain, 7 April to 13 June 2021

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Question: "In the past seven days, how has your work been affected?"

2. Respondents were able to select more than one option.

3. Base population for percentage: Working adults who had answered "My work is being affected" for the question "In which ways is coronavirus affecting your life?"

4. More response options are available in the associated reference tables.
8. Household finances and long COVID

Those who may have experienced long COVID (22%) were more likely to have had their household finances affected by the pandemic than those who have not had coronavirus (COVID-19) (13%).

The most frequently reported reason for finances being affected by the pandemic regardless of COVID-19 status was having reduced income (51% of all adults who reported their finances were affected).

Those who reported they may have experienced long COVID more frequently reported a range of reasons why the coronavirus pandemic was affecting their household finances compared with those who had not had COVID-19. Of those who reported their household finances had been affected, this included because they:

- were struggling to pay bills (26% for those with long COVID and 18% for those who had not had COVID-19)
- were struggling to pay housing costs (e.g. rent or mortgage) (15% and 7%)
- were struggling to pay school expenses (e.g. uniforms, supplies or equipment) (8% and 4%)
- had less money available to spend on food (23% and 17%) (Figure 8).
Figure 8: Reduced income was the most common way household finances had been affected regardless of COVID-19 status

Of adults who reported their finances were being affected by the coronavirus pandemic, Great Britain, 7 April to 13 June 2021

Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Question: "In the past seven days, how have your household finances been affected?"

2. Respondents were able to select more than one option.

3. Base population for percentage: Adults who answered, "My household finances are being affected" for the question "In which ways is coronavirus affecting your life?"

4. More response options are available in the associated reference tables.
9. Data

Coronavirus and the social impacts of ‘long COVID’ on people’s lives in Great Britain
Dataset | Released 21 July 2021
Estimates to understand the potential impact of long COVID on adults in Great Britain between April and June 2021, including estimates by age, sex, disability, and deprivation. Analysis based on the Opinions and Lifestyle Survey.

10. Glossary

Anxiety

The anxiety score used in the analysis in this report is derived using the first two items from the Generalised Anxiety Disorder (GAD-7) screener. This is an established measure that assesses the degree of an individual's anxiety over the previous two weeks.

Adults were asked the following two questions, with four response options ranging from zero (not at all) to three (nearly every day):

- Over the last two weeks, how often have you been bothered by feeling nervous, anxious or on edge?
- Over the last two weeks, how often have you been bothered by not being able to stop or control worrying?

An anxiety score was then derived by summing all responses chosen, resulting in a score ranging from 0 to 6, which has been interpreted as follows:

- 0 to 2 - some form of anxiety unlikely
- 3 to 6 - some form of anxiety likely

Depressive symptoms

Respondents were asked the following questions from the eight-item Patient Health Questionnaire (PHQ-8):

a. Over the last two weeks, how often have you been bothered by having little interest or pleasure in doing things?

b. Over the last two weeks, how often have you been bothered by feeling down, depressed or hopeless?

c. Over the last two weeks, how often have you been bothered by having trouble falling or staying asleep, or sleeping too much?

d. Over the last two weeks, how often have you been bothered by feeling tired or having little energy?

e. Over the last two weeks, how often have you been bothered by having a poor appetite or overeating?
f. Over the last two weeks, how often have you been bothered by feeling negative about yourself or that you are a failure or have let yourself or your family down?

g. Over the last two weeks, how often have you been bothered by having trouble concentrating on things, such as reading the newspaper or watching television?

h. Over the last two weeks, how often have you been bothered by moving or speaking so slowly that other people could have noticed; or being so fidgety or restless that you have been moving around a lot more than usual?

These questions had four response options ranging from 0 (Not at all) to 3 (Nearly every day). A “depression score” was then derived by summing all responses chosen, resulting in a score ranging from 0 to 24. The higher the score, the greater the severity of depressive symptoms.

A person's PHQ-8 score sits in one of two categories (or thresholds):

- no or mild symptoms - refers to a depression (PHQ-8) score of between 0 and 9 (inclusive)
- moderate to severe symptoms - this refers to a depression (PHQ-8) score of between 10 and 24 (inclusive)

**Disability status**

To define disability in this publication, we refer to the [Government Statistical Service (GSS) harmonised "core" definition](https://www.gov.uk/government/publications/government-statistical-service-gss-harmonised-definition-of-disability): this identifies "disabled" as a person who has a physical or mental health condition or illness that has lasted or is expected to last 12 months or more that reduces their ability to carry-out day-to-day activities. The GSS harmonised questions are asked of the respondent in the survey, meaning that disability status is self-reported.

**Long COVID**

The estimates presented in this analysis relate to self-reported long COVID, as experienced by individuals at any time, rather than [clinically diagnosed](https://www.gov.uk/government/publications/government-statistical-service-gss-harmonised-definition-of-long-covid) ongoing symptomatic coronavirus (COVID-19) or post-COVID-19 syndrome. There is no universally agreed definition of long COVID, but it covers a broad range of symptoms such as fatigue, muscle pain and difficulty concentrating.

The Opinions and Lifestyle Survey (OPN) asks the following questions to adults living in private households in Great Britain aged 16 years and over who self-report that they have ever tested positive for coronavirus (SARS-COV-2) or think that they have had the coronavirus:

For some people, the coronavirus (COVID-19) can cause symptoms that last weeks or months after the infection has gone. This is sometimes called post-COVID-19 syndrome or "long COVID".

Have you experienced 'long COVID'?

- Yes
- No
- Not sure
- Prefer not to say
For this analysis we define a person as having had long COVID if they responded either “yes” or “not sure” to this question.

We define a person as having had short COVID if they have tested positive for COVID-19 or believe that they have had it but responded “no” or “prefer not to say” to the question. All other people are included within the ‘not had COVID’ group.

**Working adults**

On the OPN, a person is said to be a “working adult” if:

- they had a paid job, either as an employee or self-employed
- they did any casual work for payment
- they did any unpaid or voluntary work in the previous week

**11. Data sources and quality**

**Opinions and Lifestyle Survey**

This release contains data and indicators from a module being undertaken through the Office for National Statistics’ (ONS) Opinions and Lifestyle Survey (OPN) to understand the impact of the coronavirus (COVID-19) pandemic on British society.

**Sampling and weighting**

This analysis is based on pooled data, which comprise ten waves of data collection covering the following periods: 7 to 11 April, 14 to 18, April, 21 to 25 April, 28 April to 3 May, 5 to 9 May, 12 to 16 May, 19 to 23 May, 26 to 31 May, 2 to 6 June, 9 to 13 June 2021 and included 39,268 adults aged 16 years and over in Great Britain. Pooling ten waves of data together increases sample sizes, allowing us to explore the effect of long COVID for different groups of the population.

Survey weights were applied to make estimates representative of the population (based on May 2021 population estimates).

Further information on the survey design and quality can be found in the [Opinions and Lifestyle Survey QMI](https://www.gov.uk/government/publications/opinions-and-lifestyle-survey-qmi).

**Statistical significance**

This report presents a summary of results, with further data including confidence intervals for the estimates contained in the associated datasets. Where comparisons between estimates are presented, either a z-test when testing proportions, or a t-test when comparing means, using un-pooled estimators for variances have been used to assess statistical significance. For both tests a difference is statistically significant if the p-value is less than 5%. 
12. Related links

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