



Scottish Government
Riaghaltas na h-Alba
gov.scot

Scottish COVID-19 Mental Health Tracker Study: Wave 5 Report



HEALTH AND SOCIAL CARE



Scottish COVID-19 Mental Health Tracker Study: Wave 5 Final Report

Dr Karen Wetherall, Post-doctoral researcher

Dr Seonaid Cleare, Post-doctoral researcher

Dr Joey Ward, Post-doctoral researcher

Professor Katie Robb, Reader in Behavioural Science and Health

Professor Rory O'Connor (Principal Investigator), Professor of Health Psychology
University of Glasgow

February 2022

Contents

Executive summary	3
1. Background	7
1.1 Study overview and aims	7
1.2 Sampling and methodology	9
2. Overall Sample mental health outcomes	13
3. Subgroup mental health outcomes	15
3.1 Mental health of young women	15
3.2 Mental health of young men	18
3.3 Mental health of young adults	20
3.4 Mental health of women	25
4. Conclusions	31
Recommendations	33
References	36
Annex	40
Annex 1. Scottish pandemic restriction phases.	40
Annex 2. Wave 1 SCOVID Tracker study quotas and sample breakdown.	40
Annex 3. Demographic and subgroup breakdown at each wave	42
Annex 4. Descriptive data with weights on and weights off	46
Annex 5: Mental health and wellbeing of each subgroup	47

Executive summary

This is the final report of the Scottish COVID-19 (SCOVID) Mental Health Tracker Study, covering findings for a range of mental health outcomes across all the five waves of the Study. This report presents cross-sectional findings for the overall sample, as well as specific groups which appear to have been most at-risk for poor mental health outcomes¹.

The Wave 5 findings are based on questionnaire data collected between 1st June to 9th July 2021. This period coincided with the easing of lockdown restrictions across the UK. Specifically, at the end of April and across May 2021, shops and sports facilities opened, restrictions in household mixing were removed, and hospitality restrictions eased. Additionally, the COVID-19 vaccination programme was underway across Scotland. Therefore, Wave 5 represents a period of returning to normality and a reduction of pandemic restrictions.

This final report concentrates on a smaller selection of mental health and wellbeing outcome measures compared with previous SCOVID reports, as they represent important outcomes and indicators of mental health in the population, namely: suicidal thoughts, depressive symptoms, anxiety symptoms, and mental wellbeing.

Wave 5 cross-sectional findings show:

- 10.6% of respondents reported suicidal thoughts within the week prior to completing the Wave 5 survey,
- 21.7% reported moderate to severe depressive symptoms,
- 18.2% reported moderate to severe anxiety symptoms, and
- The average mental wellbeing score was 22.08 (out of a possible score of 35).

Compared with the previous waves, data from Wave 5 suggest that there was some improvement in mental health for the whole sample. For example, at Wave 5, a smaller proportion of the sample reported depressive symptoms than at previous waves, the overall sample reported higher mental wellbeing scores, and suicidal thoughts were about the same as at Wave 1. In contrast, anxiety symptoms were higher than the previous three waves, suggesting there was still an impact upon people's mental health.

Looking across the waves, there was a trend for people to report poorer mental health at times of higher restrictions (i.e., Wave 1: Spring 2020, Wave 3: Autumn 2020, and Wave 4: Winter 2021) and better mental health at times of fewer restrictions (i.e., Wave 2: Summer 2020 and Wave 5: Summer 2021). This suggests that people's

¹ Due to loss to follow-up of during the SCOVID study, it was no longer possible to conduct robust longitudinal analysis. Additional booster samples were recruited at Wave 3 and Wave 5. Therefore, the figures presented in this report are cross-sectional, and changes over time are not tested statistically.

mental health and wellbeing were impacted by the COVID-19 restrictions and lockdowns, although it appears that as restrictions eased these mental health outcomes tended to improve.

This report also provides insight into factors that may be associated with a higher risk for poor mental health. A number of characteristics were chosen based upon previous wave report findings that showed a correlation with poorer mental health: i.e., pre-existing mental health conditions, pre-existing physical health conditions, unpaid carer responsibilities, caring for young dependents, and vaccine hesitancy. On average, and across this range of factors, particular age and sex groups tended to report worse mental health outcomes across the waves of the SCOVID study than their age and sex counterparts, as well as the sample average. These groups were:

- Young women
- Young men
- Young adults
- Women

Due to small numbers of subgroup samples, it was not possible to robustly investigate further intersectional analyses, to see, for example, if young women with a pre-existing mental health condition were at even more elevated risk of poor mental health.

Despite this, findings from the report suggest that further intersectional conclusions can be drawn. For example, respondents who have a pre-existing mental health condition or physical health condition are more likely to report worse mental health than those who do not, and young women are also more likely to report poorer mental health than other age and sex groups. As such, a young woman who has a mental or physical health condition is likely to be at a greater increased risk for poorer mental health, than if the young woman did not have a pre-existing condition.

Evidence from the final report of the SCOVID study suggests that there is an inequality in how the pandemic has impacted people across Scotland. We advise that the vulnerable subgroups highlighted, namely young adults and women with a mental health condition, a physical health condition, unpaid caring responsibilities, or vaccine hesitancy, be prioritised when implementing mental health policy and research to mitigate the impact of the COVID-19 pandemic upon the mental health of the Scottish population. More specific recommendations are located at the end of the report.

Key findings for at-risk groups

Young women

- Compared with their age and sex counterparts, young women reported the worst mental health over the pandemic; across most waves they reported the

highest rates of suicidal thoughts, depressive symptoms, and anxiety symptoms, and the lowest mental wellbeing.

- The SCOVID data suggest that young women appeared to be at highest risk of poor mental health when COVID-19 mitigation restrictions on movement and socialising were in place. Indeed, at Wave 5, young women reported the lowest rates of suicidal thoughts, depressive symptoms, and highest mental wellbeing than at any other stage of the pandemic.
- Looking at Wave 5 specifically:
 - 14.8% of young women reported suicidal thoughts,
 - 34.9% reported depressive symptoms, and
 - 36.8% reported anxiety symptoms.
 - The average mental wellbeing score for young women was 19.80 (out of a possible score of 35), lower than the average of 22.08.
- At Wave 5, compared with young men, young women were more likely to be in the lower SEG and have a pre-existing mental health condition, factors that make them more at risk for poor mental health.

Young men

- Compared with their (male) age counterparts, young men reported the worst mental health over the pandemic; across most waves they reported the highest rates of suicidal thoughts, depressive symptoms, and anxiety symptoms, and the lowest mental wellbeing.
- The SCOVID data suggests that young men appeared to be at highest risk of poor mental health when COVID-19 mitigation restrictions on movement and socialising were reduced, specifically at Wave 2 (Summer 2020) and Wave 5 (Summer 2021). This is in contrast to other groups.
- Looking at Wave 5 specifically:
 - 12.1% of young men reported suicidal thoughts,
 - 38.2% reported depressive symptoms, and
 - 24.1% reported anxiety symptoms.
 - The average mental wellbeing score for young men was 20.14 (out of a possible score of 35), lower than the average of 22.08.
- At Wave 5, compared with young women, young men were more likely to be a key worker, a factor that make them more at risk for poor mental health.

Young Adults

- At almost all waves, young adults (18-29 years) reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing than those in the older age groups.
- Overall, young adults tended to report higher rates of depressive symptoms, anxiety symptoms and lower wellbeing when restrictions were in place, and lower rates of suicidal thoughts, depressive symptoms, and highest wellbeing scores when restrictions were easing (e.g., at Wave 5).

- Trend data for these mental health outcomes across the waves, suggest that for young adults, mental health appeared to improve over the pandemic, though overall their mental health remained poorer than older adults.
- Looking at Wave 5 specifically,
 - 13.4% of young adults reported suicidal thoughts,
 - 36.6% reported depressive symptoms, and
 - 30.4% reported anxiety symptoms.
 - The average mental wellbeing score for young adults was 19.97 (out of a possible score of 35), lower than the average of 22.08.
- At Wave 5, compared with the older age groups, young adults were more likely to be a key worker, and more likely to have a mental health condition compared with 60+ year olds, these factors place them at higher risk of poor mental health.
- At almost all waves, young adults with a pre-existing mental health condition, a physical health condition, or unpaid caring responsibilities reported worse mental health, compared with those who had any of these conditions in the older age groups.

Women

- At most waves, women reported higher rates of depressive symptoms, anxiety symptoms, and lower mental wellbeing than men. Women tended to report similar rates of suicidal thoughts to men, and at Waves 2 and 5 men reported higher rates.
- Overall, women tended to report higher rates of depressive symptoms, anxiety symptoms and suicidal thoughts when restrictions were in place (e.g., at Wave 4 during a national lockdown).
- Looking at Wave 5 specifically,
 - 9.3% of women reported having suicidal thoughts,
 - 22.5% reported depressive symptoms, and
 - 19.6% reported symptoms.
 - The average mental wellbeing score for women was 21.85 (out of a possible score of 35), lower than the average of 22.08.
- Compared with men, women were more likely to be in the lower SEG, have had a change to working status during the pandemic, have caring responsibilities, and have a physical health condition; these factors place them at higher risk of poor mental health.
- Compared with men with a pre-existing mental health condition or a physical health condition, women in these groups consistently reported higher rates of depressive symptoms and anxiety symptoms across the waves.
- At most waves, women with unpaid caring responsibilities or young dependents (under 5 years) reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than men who had unpaid caring responsibilities or young dependents.

1. Background

1.1 Study overview and aims

The Scottish COVID-19 (SCOVID) Mental Health Tracker Study helps us to understand the impacts of the coronavirus pandemic on people's mental health and wellbeing in Scotland², particularly the differential impacts on sub-groups of the population. The study surveyed adults (18 and over) in Scotland at five points in time (waves) over a roughly year-long period, starting in May 2020. This report presents findings from Wave 5, the final wave of the study, which took place in June and July 2021.

This final report presents data from each wave of the study, and the report findings will aid with the tracking of mental health outcomes in the population through the different levels of restrictions.

At each wave of the study, respondents were asked to complete questions about various aspects of mental health and wellbeing. The final report presents findings about suicidal thoughts, depressive symptoms, anxiety symptoms and mental wellbeing, while the previous SCOVID reports³ included findings concerning additional aspects of mental health and wellbeing. A narrower focus on the most common aspects of mental health and wellbeing was adopted for this report to allow more detailed examination of intersectional subgroups (e.g., young women, young men, young adults and women with mental or physical health problems).

Figure 1.1 below provides an overview of key events/policy decisions for Scotland in relation to the waves of the SCOVID mental health tracker study. For details of the route map out of lockdown phases see: [Coronavirus \(COVID-19\): Scotland's route map - gov.scot \(www.gov.scot\)](https://www.gov.scot/Topics/health/COVID-19/lockdown). SCOVID Waves in relation to Scotland restrictions were as follows:

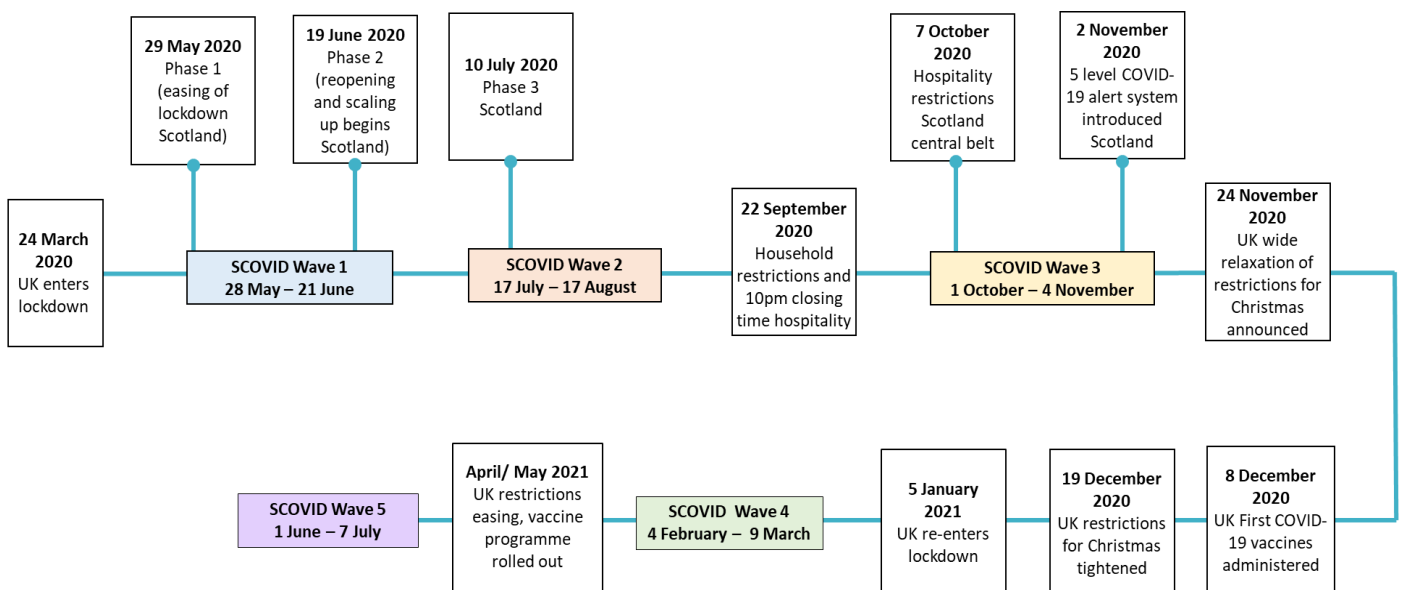
- Wave 1:
 - Spring 2020 (28th May to 21st June 2020).
 - Coincided with the Phase 1 easing of lockdown measures in Scotland.
- Wave 2:
 - Summer 2020 (17th July to 17th August 2020).
 - Coincided with the Scottish Government's introduction of Phase 3 of the easing out of lockdown. Phase 3 included an increase in the number of households that could meet indoors and outdoors, and the opening of indoor hospitality.
- Wave 3:
 - Autumn 2020 (1st October 2020 to 4th November 2020).
 - Coincided with the increasing of COVID-19 restrictions in Scotland. Specifically, on 1st October people could no longer meet inside people's homes unless they were part of a bubble, and on 7th October restrictions on hospitality were announced.
- Wave 4:

² For literature on the mental health and wellbeing impacts of the COVID-19 and SARS pandemics see the background section of the [Scottish COVID-19 Mental Health Tracker Study: Wave 3 Report](#).

³ Wave 1 to Wave 4 SCOVID study reports are located: [Scottish COVID-19 \(SCOVID\) Mental Health Tracker Study - gov.scot \(www.gov.scot\)](#)

- Winter 2021 (4th February to 9th March 2021).
- Coincided with a UK-wide lockdown that had been announced on 4th January 2021. At this point lockdown restrictions included a strict stay at home message, with all non-essential retail and services closing, including hospitality, and stringent restrictions on meeting friends and family indoors and outdoors.
- Wave 5:
 - Summer 2021 (1 June 2021 to 9 July 2021).
 - Coincided with the easing of lockdown restrictions across the UK. Specifically, as of 26th April 2021 shops and sports facilities opened, and some hospitality restrictions eased, and further easing was seen throughout May and June. Additionally, the COVID-19 vaccination programme was underway across Scotland. Therefore, Wave 5 represents a period of returning to normality and a decreasing of uncertainty. Wave 5 is the final wave of the SCOVID study.

Figure 1.1. Timeline of the COVID-19 Mental Health Tracker Study in Scotland⁴



Key research aims for Wave 5 of the SCOVID study:

1. To track cross-sectional changes in people’s mental health and wellbeing in Scotland during the COVID-19 pandemic and changing of government restrictions. Specifically, changes in mental health and wellbeing from the initial easing of restrictions in Spring 2020 (Wave 1), and further easing in Summer 2020 (Wave 2), to the increasing of restrictions in Autumn 2020 (Wave 3), to the introduction of a UK-wide lockdown in Winter 2021 (Wave 4), to the easing of lockdown restrictions in Summer 2021 (Wave 5).

⁴ See Annex 1 for further information on Scottish pandemic restriction phases.

2. To investigate the mental health and wellbeing of subgroups found to report poorer mental health and wellbeing in Waves 1 to 5; specifically, young women and men, and young adults and women. Additional findings are reported for those with a pre-existing mental health condition, a pre-existing physical health condition, caring responsibilities, young dependents, or vaccine hesitancy. The aim was to identify whether these subgroups were at higher risk of poor mental health and wellbeing.

1.2 Sampling and methodology

At Wave 1, 2594 members of an existing online UK panel (Panelbase.net) participated in the first SCOVID MH tracker online survey. Recruitment quotas were set for specified population sub-groups (see Tables A-C in Annex 2 for details). All the Wave 1 participants were invited to take part in the subsequent waves, and, due to attrition, additional recruitment was conducted at Wave 3 and Wave 5⁵.

The loss to follow-up over the study reduced the size of the sample of those who have completed every wave. As a result, it was not possible to conduct a robust longitudinal analysis, and so cross-sectional trends across the waves are reported instead. Therefore, the changes over the waves included within this report do not represent statistical differences. The cross-sectional samples were slightly different across the five waves of the study (including the recruiting of booster samples at Wave 3 and Wave 5): Wave 1 (n=2594), Wave 2 (n= 1703), Wave 3 (n=1625), Wave 4 (n=1288), and Wave 5 (n=1213).

The Wave 1 to Wave 5 reports⁶ provide detail about each wave's cross-sectional sample, and Table D in Annex 3 provides an overview of the demographics and subgroups for each wave.

As several demographic groups were under- or over-represented in the samples at each wave, data were statistically weighted to reflect the Scottish population. This allowed for the shortfall or surplus in particular groups to be adjusted, so that the findings are more representative of the original quota sample. The weighting was based upon age, sex, and socioeconomic group (SEG) (see Annex 2, Tables A-C for details of the original quotas). A breakdown of the Wave 5 weighted sample can be found in Annex 3 (Table E1), as well as tables indicating how this reflects the Scottish population (Tables E2 and E3). The weighting methodology is identical to that employed in the previous waves for consistency. The weighted sample is used in all figures in this report, although non-weighted data is reported in the annex for comparability.

⁵ At Wave 3 a booster sample of 327 young adults were recruited, and these participants were invited to take part in subsequent waves. An additional booster sample of 130 young adults were recruited at Wave 5.

⁶ Wave 1 to Wave 4 SCOVID study reports are located: [Scottish COVID-19 \(SCOVID\) Mental Health Tracker Study - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/information/scovid-19-mental-health-tracker-study/)

Although weighting is widely used there is still a risk of bias, as the weights may inflate or suppress the data from subgroups in the sample. The extent of the bias is dependent on the representativeness of the data collected. As the unweighted samples and their representativeness varied across the waves, this potential bias is therefore a caveat that should be kept in mind when making comparisons across the waves.

Subgroup findings

To explore the impact upon certain subgroups of the COVID-19 pandemic and subsequent restrictions, an intersectional approach was taken to understand whether an individual's age and sex increased or decreased risk of poor mental health. Review of the data shows that the following subgroups that were deemed to be at high risk for poor mental health:

- Young women,
- Young men,
- Young adults, and
- Women

Additional intersectional findings are reported for young adults and women, specifically those with a pre-existing mental health condition, a pre-existing physical health condition, unpaid caring responsibilities, young dependents (under 5 years), or vaccine hesitancy. These at-risk subgroups were investigated as they had been identified as being more vulnerable to worse mental health at the start and throughout the pandemic, as reflected within previous Wave 1 to Wave 4 reports. Further intersectional reporting for young men or young women (e.g., young women with a mental health condition) was not possible due to small numbers in these subgroups.

For each subgroup at Wave 5, additional characteristics are reported, such as socio-economic group (SEG), change in working status, key worker status, caring responsibilities, young dependents, and mental and physical health conditions. While these factors were not specifically included in mental health outcome analyses, intersections between all of these characteristics potentially influence an individual's mental health and wellbeing.

Mental Health and Wellbeing Measures

This report focuses on four mental health and wellbeing indicators: suicidal thoughts, depressive symptoms, anxiety symptoms, and mental wellbeing.

To measure suicidal thoughts, respondents were asked: 'how often have you thought about taking your life in the last week?', and were provided with options that ranged from "Never", "One day", "Several days", "More than half the days", "Nearly every day", and "I would rather not answer". For the purposes of this report, respondents who experienced any suicidal thoughts in the week prior to the Wave 4 questionnaire (i.e., one day or more) were included in the suicidal thoughts findings.

Depressive symptoms were assessed through participants' responses to the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001), which assesses frequency of depressive symptoms over the previous two weeks. For the purposes of this report, scores above the cut-off for moderate to severe depression (score ≥ 10) are reported as this suggests that treatment (psychotherapy or medication) may be recommended.

Anxiety symptoms were assessed using the Generalised Anxiety Disorder (GAD-7; Spitzer et al., 2006) scale, which asks about frequency of anxiety symptoms in the last 2 weeks. For the purposes of this report, the clinical cut-off for moderate to severe anxiety (score ≥ 10) was reported, indicating anxiety symptoms that may require further treatment.

Respondents' mental wellbeing was measured using the Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS)⁷. This scale measures the frequency of various thoughts and feelings over the past two weeks, such as feelings of optimism, being useful, and thinking clearly. A SWEMWBS score is created for each individual by adding together their responses to each question. The scores range from 7 (indicating very low wellbeing) to 35 (indicating very high wellbeing), therefore a higher score suggests better mental wellbeing. Throughout this report average mean scores are reported for each of the subgroups.

Layout of report

In the final report, the mental health outcomes are reported first for the overall sample, then by the subgroups that are deemed to be most at risk: young women, young men, women, and young adults. For women and young adults, a summary of the intersectional findings (pre-existing mental and physical health condition, young dependents, unpaid carer, and vaccine hesitancy) is included. Further detail for these subgroups can be found in Annex 4 and 5.

Each section will include:

- An overview of the background and health of that subgroup at Wave 5,
- Their mental health outcomes at Wave 5,
- How their mental health compares to their subgroup counterparts, and
- An overview of trends in changes in their mental health over the waves.

Terminology

This report uses particular terms to describe the mental health outcomes reported by subgroups in the overall sample. The term 'rate' refers to the proportion of respondents within a subgroup who have reported a particular outcome; it does not describe the degree of a particular outcome. For example, an increased rate of men reporting moderate to severe depressive symptoms means that a higher proportion of men have reported these symptoms; it does not mean that men as a subgroup are experiencing more severe depressive symptoms. The term 'level' refers to the degree to which a particular mental health or wellbeing measure is being experienced. For

⁷ Short Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS) © NHS Health Scotland, University of Warwick and University of Edinburgh, 2008, all rights reserved. As suggested by the scale authors, the scores underwent a Rasch transformation.

example, stating that older adults reported higher levels of mental wellbeing than younger age groups means that the average mental wellbeing score for older adults was higher than the average score for younger groups.

2. Overall Sample mental health outcomes

This section presents the findings regarding depressive symptoms, anxiety symptoms, suicidal thoughts, and mental wellbeing for the whole sample at each wave.

Wave 5 findings

Wave 5 cross-sectional findings show:

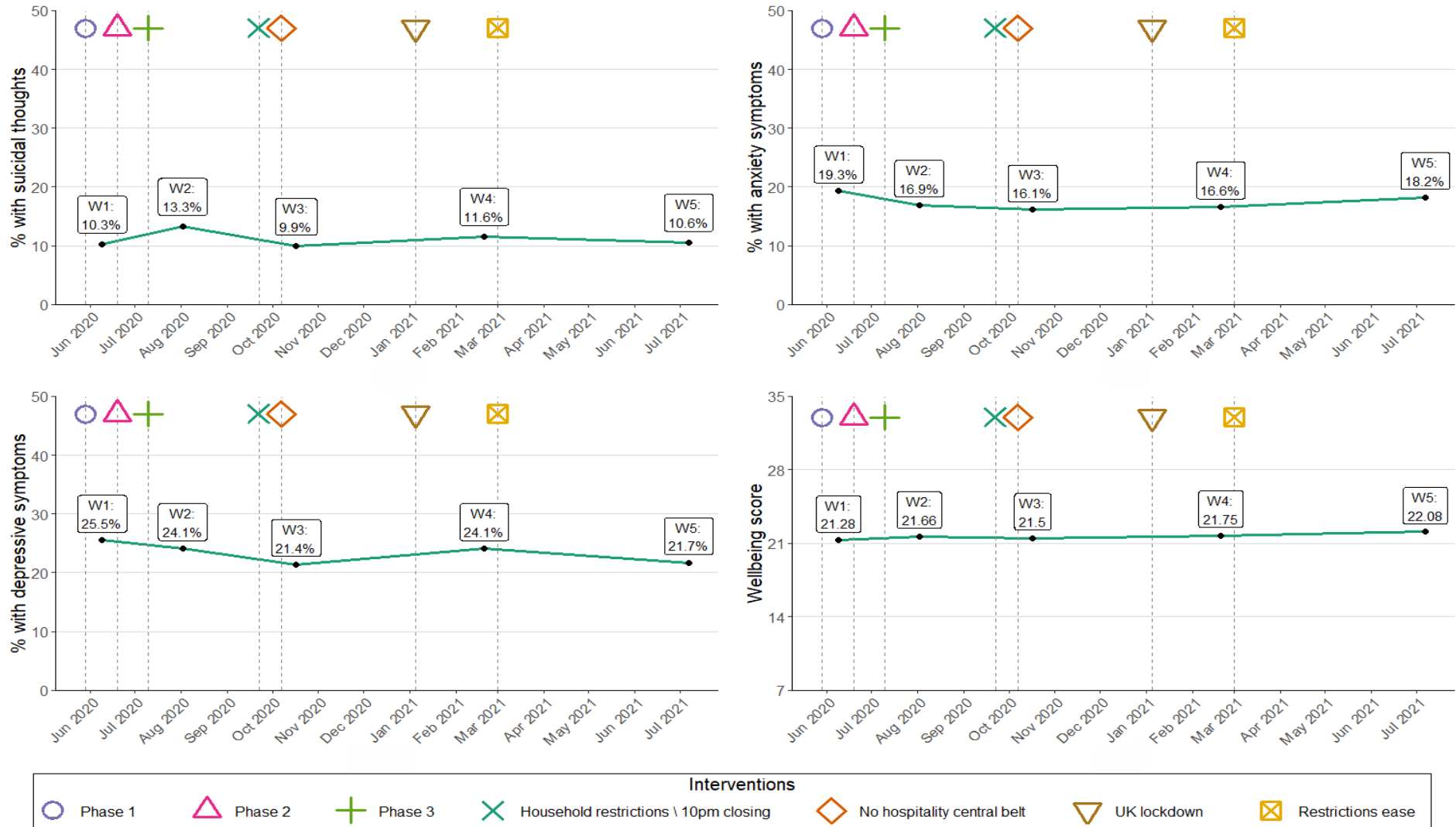
- 10.6% of respondents reported suicidal thoughts within the week prior to completing the Wave 5 survey,
- 21.7% reported moderate to severe depressive symptoms,
- 18.2% reported moderate to severe anxiety symptoms, and
- The average mental wellbeing score was 22.08 (out of a possible score of 35).

Trends across the SCOVID study

Figure 2.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) across the SCOVID study. Looking at these trends across the waves in consideration of changes in pandemic restrictions indicates that the highest rates of depressive and anxiety symptoms were reported at Wave 1 (Spring 2020), a time that coincided with Phase 1 of easing of lockdown in Scotland, but when restrictions were still in place.

Findings from Wave 5 (Summer 2021) suggest that there was some improvement in mental health for the whole sample, and this coincided with a time when a lockdown had ended, and the vaccine programme was underway. For example, rates of depressive symptoms were lower than at most previous waves, mental wellbeing was higher, and suicidal thoughts were about the same as at Wave 1. In contrast, rates of anxiety symptoms were higher than the previous three waves, suggesting there was still an impact upon people's mental health. The lowest rates of depressive symptoms and suicidal thoughts were found at Wave 3 (Autumn 2020), which coincided with the gradual increasing of restrictions.

Figure 2.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for the overall sample, with key Scotland Route map interventions



3. Subgroup mental health outcomes

This section presents the mental health findings for intersectional subgroups across the waves of the SCOVID Mental Health Tracker Study. Additional findings from these subgroups are included in Annex 5.

The main subgroups reported are: young women, young men, young adults, and women. These subgroups consistently reported the poorest mental health in previous waves of the study compared with their subgroup counterparts. Within these subgroup sections, the mental health and wellbeing of young adults and women who also have a pre-existing mental health condition, a pre-existing physical health condition, caring responsibilities, young dependents (under 5 years), or vaccine hesitancy is also reported. Unfortunately, sample sizes were too small to report the mental health and wellbeing of these groups for young women and young men.

As in the previous section, this section reports findings relating to depressive symptoms, anxiety symptoms, suicidal thoughts, and mental wellbeing.

3.1 Mental health of young women

The SCOVID study appears to be consistent with wider research that shows that young women may be at a particularly high risk of mental health problems during the COVID-19 pandemic (Sadler et al., 2018). For example, the Adult Psychiatric Morbidity Survey (APMS, 2014) in England found that mental health symptoms were more common in young women (16-24 years; 26.0%) than young men (9.1%). Further, evidence from the Office of National Statistics (ONS) suggests that during the COVID-19 pandemic, 43% of women aged 16-29 years experienced depressive symptoms, compared with 26% of men of the same age (Williams et., 2021).

Background and health of young women at Wave 5:

- 42.6% of young women (18-29 years) were in the lower SEG,
- 35.7% stated that their working status had changed during the COVID-19 pandemic (i.e., furloughed, lost job),
- 27.2% were key workers,
- 18.0% of young women had a pre-existing mental health disorder,
- 12.9% reported that they had unpaid caring responsibilities,
- 10.7% had dependents under 5 years old,
- 6.6% had a pre-existing physical health disorder.

Compared with young men, young women were more likely to be in the lower SEG and have a pre-existing mental health condition, factors that may make them more at risk for poor mental health.

Wave 5 Findings:

- 14.8% reported suicidal thoughts,
- 34.9% reported depressive symptoms, and
- 36.8% reported anxiety symptoms.

- The average mental wellbeing score for young women was 19.80 (out of a possible score of 35), lower than the average of 22.08

Trends across the SCOVID study

Age and sex counterpart comparison

Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young women (18-29 years) appear to be at risk for worse mental health outcomes than their age (30-59 year old women, 60+ year old women) and sex (young men) counterparts. Young women consistently reported the worst mental health over the pandemic; across most waves they reported the highest rates of suicidal thoughts, depressive symptoms, and anxiety symptoms, and the lowest mental wellbeing compared with young men. Wave 2 is the notable exception, whereby young men appeared to have worse mental health overall, although this finding should be treated with caution as there may be some inflation due to the young men subgroup being under-represented in the data at Wave 2.

Mental health and pandemic restrictions

The SCOVID data suggest that young women appeared to be at highest risk of poor mental health when COVID-19 mitigation restrictions on movement and socialising were in place.

Figure 3.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young women across the SCOVID study in context of changes in pandemic restrictions. This figure shows that poor mental health was most clear at Wave 1 (Spring 2020), Wave 3 (Autumn 2020), and Wave 4 (Winter 2021). It is reassuring to note that mental health outcomes appeared to improve when restrictions were reduced at Wave 2 (Summer 2020) and Wave 5 (Summer 2021). Indeed, at Wave 5, young women reported the lowest rates of suicidal thoughts, depressive symptoms, and highest mental wellbeing than at any other stage of the pandemic.

Similar trends were found within a comparable period for the UK COVID-19 Mental Health & Wellbeing study (Wetherall et al., under review). Data from Wave 4 to Wave 7 (reflecting SCOVID Wave 1 to Wave 4) suggests that overall young women reported higher rates of depressive and anxiety symptoms than young men across the waves, although they reported similar rates of suicidal thoughts. For young women, rates of depressive symptoms and anxiety symptoms were at their lowest at Wave 5, during a time of loosened restrictions, and by Wave 7, when a lockdown was in place, rates of suicidal thoughts and depressive symptoms were at their highest. Therefore, consistent with the SCOVID study, the mental health of young women appeared to be negatively impacted by COVID-19 restrictions.

Figure 3.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for young women and young men (18-29 years), with key Scotland Route map interventions.



3.2 Mental health of young men

Wider research on the mental health of young men shows that although women consistently report higher rates of common mental health disorders than men (APMS, 2016), there is some evidence that men's mental health has been worsening in recent years. For example, the Scottish Health Survey (SHeS) (2019) found that the proportion of men reporting symptoms of depression and anxiety has increased in the 2018/2019 survey compared with the levels reported at 2010/2011 survey, and prevalence decreased with age, with the highest rate recorded among younger people aged 16-24 years.

Background and health of the young men subgroup at Wave 5,

- 38.3% were key workers,
- 35.8% were in the lower SEG,
- 36.1% stated that their working status had changed during the COVID-19 pandemic (i.e., furloughed, lost job),
- 15.7% of young men had a pre-existing mental health disorder,
- 15.7% of young men reported that they had caring responsibilities,
- 8.0% had a dependent aged 5 years or younger.

Compared with young women, young men in the SCOVID sample were more likely to be a key worker, a factor that may place them at higher risk of poor mental health.

Wave 5 Findings:

- 12.1% reported suicidal thoughts,
- 38.2% reported depressive symptoms, and
- 24.1% reported anxiety symptoms.
- The average mental wellbeing score was 20.14 (out of a possible score of 35), lower than the sample average of 22.08.

Trends across the SCOVID study

Age and sex counterpart comparison

Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young men (18-29 years) consistently reported higher rates of suicidal thoughts, depressive symptoms, and anxiety symptoms, and lower mental wellbeing, than men aged 30-59 year olds and 60+ year olds. Only at Wave 5 did 30-59 year old men report a higher rate of suicidal thoughts (16.1%) than young men (12.1%). Overall, young men reported better mental health outcomes across the waves than young women. The main exception was at Wave 2, where young men reported higher rates of suicidal thoughts (34.4%), depressive symptoms (47.5%), and anxiety symptoms (34.1%) than young women, although this finding should be treated with caution as there may be some inflation due to the young men subgroup being under-represented in the data.

Mental health and pandemic restrictions

The SCOVID data suggests that young men appeared to be at highest risk of poor mental health when COVID-19 mitigation restrictions on movement and socialising were reduced, specifically at Wave 2 (Summer 2020) and Wave 5 (Summer 2021). This is a pattern in contrast to that for young women.

Figure 3.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young men across the SCOVID study in context of changes in pandemic restrictions. This figure shows that, for example, when restrictions were relaxed between Wave 1 (Spring 2020) and Wave 2 (Summer 2020), young men's mental health appeared to worsen rather than improve, with higher proportions of young men reporting suicidal thoughts, anxiety symptoms, and depressive symptoms at Wave 2, compared with Wave 1. Furthermore, from Wave 2 to Wave 3 (Autumn 2020) and Wave 4 (Winter 2021), periods which coincided with the increasing of restrictions (Wave 3) and a national lockdown (Wave 4), mental health for young men appeared to improve, or return to rates more similar to Wave 1. We cannot state why young men appeared to experience the opposite pattern to young women regarding restrictions and mental health outcomes, although there are some notable caveats due to loss to follow-up for this group. One interpretation could be that for young men there may be a lag between restrictions being in place and their negative impact upon mental health, so that it is taking longer for young men to feel the consequences of the restrictions upon their mental health, and also the benefits of restrictions being lifted.

Looking at trends within a comparable period for the UK COVID-19 Mental Health & Wellbeing study (Wetherall et al., under review), data from Wave 4 to Wave 7 (reflecting SCOVID Wave 1 to Wave 4) suggests that although young men reported overall better mental health than young women, they consistently reported worse mental health than men aged 30-59 years and men aged 60+ years. For young men in the UK study, rates of suicidal thoughts, depressive symptoms, and anxiety symptoms were relatively stable from Wave 4 to Wave 5. At Wave 6 suicidal thoughts and anxiety symptoms were at their lowest, which coincided with a time when restrictions were beginning to increase, similar to the trends found in the SCOVID data. In contrast to the SCOVID findings, young men's suicidal thoughts, depressive symptoms and anxiety symptoms were highest at Wave 7 (e.g., 20.2% of young men reported suicidal thoughts at Wave 7), when there was a national lockdown in place. Therefore, although there is some consistency with the SCOVID study, in the UK study the mental health of young men appeared to be negatively impacted by the COVID-19 lockdown, while in the SCOVID study young men appeared to have better mental health during periods of restrictions.

3.3 Mental health of young adults

Wider research suggests that young adults may be at higher risk of poor mental health and wellbeing, before and during the pandemic, which corroborates the findings of the SCOVID study. Before the pandemic, the mental health of the UK's children and young adults was already deteriorating, with an increase in anxiety, depression, and self-harm from 2000 to 2014 (Pitchforth et al., 2016). Data published from the UK COVID-MH survey (O'Connor et al., 2021), found that young adults (18-29 years) reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower wellbeing, across each wave, compared with the older age groups (30-59 years and 60 years). Additionally, a study looking at all the recent research investigating suicidal thoughts during the pandemic found that younger age was a risk factor for suicidal thinking (Dube et al., 2021).

Background and health of young adults at Wave 5,

- 39.2% were in the lower SEG,
- 35.9% reported that their working status had changed (e.g., furloughed, lost job),
- 32.8% were key workers,
- 16.8% had a pre-existing mental health condition,
- 14.3% reported having unpaid caring responsibilities,
- 9.3% had dependents under 5 years,
- 6.0% had a physical health condition.

Compared with the older age groups (30-59 years and 60 years), young adults were more likely to be a key worker, and more likely to have a mental health condition compared with 60+ year olds; these factors may place them at higher risk of poor mental health.

Wave 5 Findings:

- 13.4% reported suicidal thoughts,
- 36.6% reported depressive symptoms,
- 30.4% reported anxiety symptoms, and
- The average mental wellbeing score for young adults was 19.97 (out of a possible score of 35), lower than the average of 22.08.

Trends across the SCOVID study

Age and sex counterpart comparison

At the majority of waves, young adults reported higher suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing than 30-59 year olds and 60+ year olds.

In addition, a clear relationship between age and poor mental health emerged across the waves; reporting poor mental health was less likely as the age group bracket increased. For example, the youngest age group (18-29) reported the poorest mental

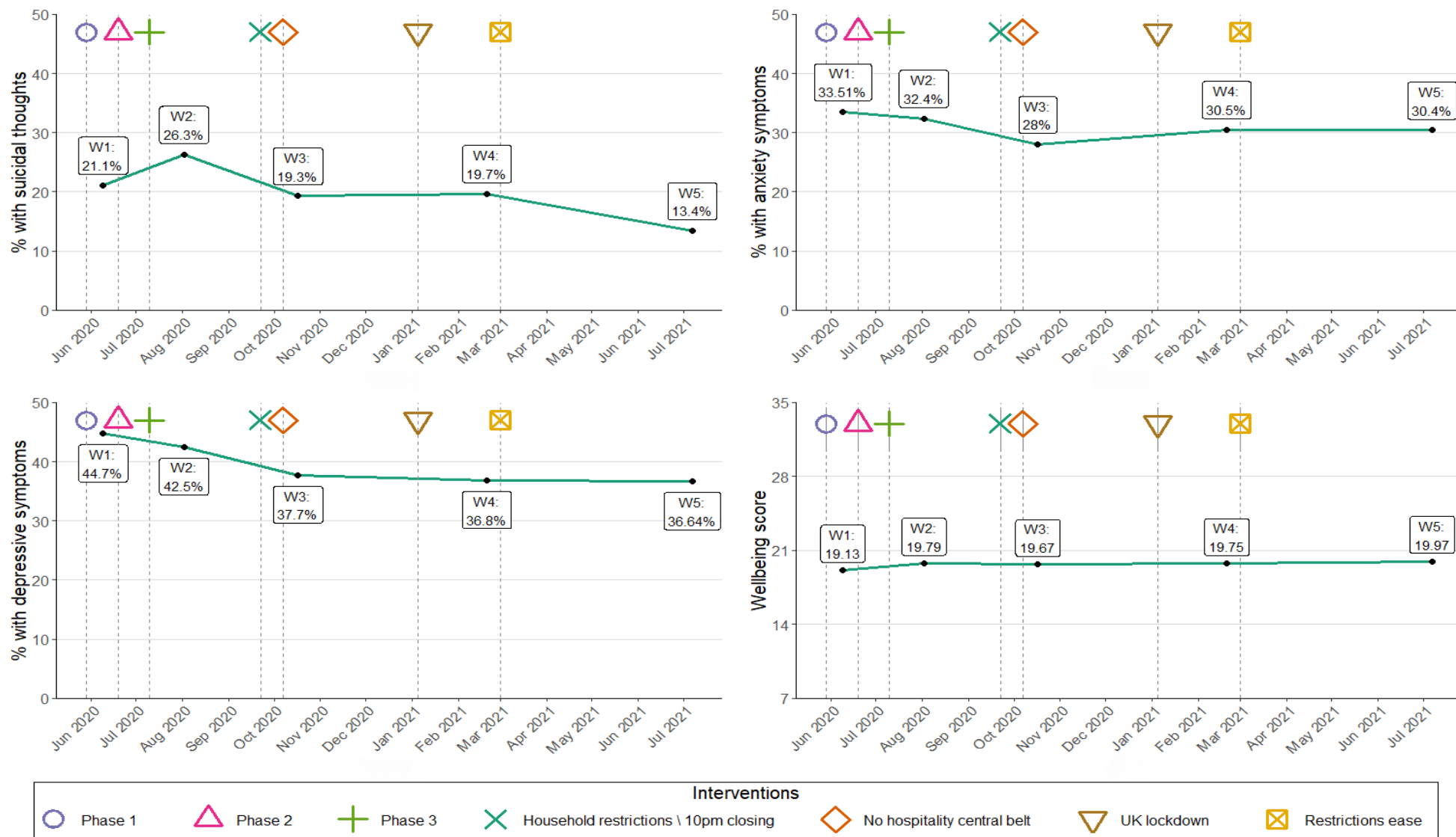
health and wellbeing outcomes, followed by those aged between 30 and 59, with people aged 60+ reporting the best outcomes (see Table F in Annex 4).

Mental health and pandemic restrictions

The SCOVID data suggests that young adults reported overall better mental health and wellbeing when restrictions were eased.

Figure 3.2 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young adults across the SCOVID study in context of changes in pandemic restrictions. Looking at these trends across the waves, young adults reported the highest rates of depressive symptoms and anxiety symptoms, and the lowest mental wellbeing at Wave 1 (Spring 2020), a time when restrictions were still in place, although Phase 1 of the easing of lockdown had begun in Scotland. The highest rates of suicidal thoughts were reported at Wave 2 (Summer 2020), which coincided with Phase 3 of easing out of lockdown. The lowest rates of suicidal thoughts, depressive symptoms, and highest wellbeing scores were reported at Wave 5 (Summer 2021), which coincided with a period of easing of restrictions.

Figure 3.2 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for young adults (18-29 years), with key Scotland Route map interventions



Intersectional findings

Trends across the waves of the SCOVID study suggest that young adults (18-29 years) with particular background and health factors are at increased risk for worse mental health and wellbeing, including:

- a pre-existing mental health condition,
- a pre-existing physical health condition,
- unpaid caring responsibilities, or
- vaccine hesitancy⁸.

Additional findings from these subgroups are included in in Annex 4 and 5.

Young adults with a pre-existing mental health condition

- Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young adults (18-29 years) with a pre-existing mental health condition are at higher risk of poorer mental health than young adults with no pre-existing mental health condition. For example, at Wave 5, 28.8% of young adults with no pre-existing mental health condition reported depressive symptoms, compared with 74.7% of young adults with a mental health condition (see Annex 4 Table F).
- At most waves, young adults with a pre-existing mental health condition reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms and lower mental wellbeing than the other age groups (30-59 years and aged 60+ years) who also had a pre-existing mental health condition.
- Looking at trends over the waves in context of changes in pandemic restrictions, findings suggest that although young adults with a pre-existing mental health condition reported overall better mental health and wellbeing when restrictions were eased, symptoms of anxiety appeared to remain high.
- Although we do not know whether rates of poor mental health for young adults represent an increase from pre-pandemic levels, a recent Young Minds survey conducted with young people with mental health needs in the UK found that 80% of respondents felt that the COVID-19 pandemic had made their mental health worse (Young Minds, 2020).

Young adults with a pre-existing physical health condition

- Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young adults with a pre-existing physical health condition are at higher risk of mental health problems than young adults with no pre-existing physical health condition. For example, at Wave 5 33.2% of young adults with no pre-existing physical health condition reported depressive symptoms, compared with 85.3% of young adults with a health condition (see Annex 4 Table F).
- At all waves, young adults with a physical health condition reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower

⁸ Note that there isn't data on vaccine hesitancy for all five waves

mental wellbeing, than their age group counterparts (30-59 years, 60+ years) who also had a pre-existing physical health condition.

- Looking at trends over the waves in context of changes in pandemic restrictions, findings suggest that young adults with a pre-existing physical health condition reported poorer mental health when restrictions were eased in Scotland.

Young adults with unpaid caring responsibilities

- Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young adults with caring responsibilities (young carers) are at higher risk for mental health problems than young adults with no caring responsibilities. For example, at Wave 5 32.3% of young carers reported depressive symptoms, compared with 61.5% of young adults with unpaid caring responsibilities (see Annex 4 Table F).
- At all waves, young carers reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than their age group counterparts (30-59 years, 60+ years) who also had unpaid caring responsibilities.
- Looking at trends over the waves in context of changes in pandemic restrictions, findings suggest the mental health of young carers was worst during periods of lockdown and higher restrictions, and better during periods of eased restrictions.

Young adults who reported vaccine hesitancy

- Vaccine hesitancy (i.e., a delay in choosing to get vaccinated or refusing to get vaccinated) was measured at Wave 4 and Wave 5 of the SCOVID study. At Wave 5 of the SCOVID study, 12.3% of young adults reported vaccine hesitancy, compared with 8.8% of 30-59 year olds, and 1.7% of 60+ year olds.
- Findings from Wave 4 and Wave 5 of the SCOVID study suggest that young adults with vaccine hesitancy tended to be at higher risk of mental health problems than young adults with no vaccine hesitancy. For example, at Wave 5 11.8% of young adults with no vaccine hesitancy reported suicidal thoughts, compared with 25.4% of young adults with vaccine hesitancy (see Annex 4, Table F).
- Additionally, young adults with vaccine hesitancy tended to report higher rates of depressive symptoms and anxiety symptoms, than their age group counterparts (30-59 years, 60+ years) who also had vaccine hesitancy.

3.4 Mental health of women

Findings show that, pre-pandemic, women are more likely than men to report and be diagnosed with a mental health condition. For example, the Adult Psychiatric Morbidity Survey (APMS, 2016) reported that one in five women (20.7%) had a common mental disorder (e.g., depression, anxiety) compared with one in eight men (13.2%). Similarly, in the Scottish Health Survey (SHeS, 2019), 19% of women reported having psychiatric symptoms, compared with 15% of men. Therefore, women were potentially more vulnerable to poor mental health and wellbeing during the pandemic.

Findings published from the UK COVID-MH survey (O'Connor et al., 2021) found that women reported higher rates of depressive symptoms and anxiety symptoms, and lower wellbeing, across each wave compared with men. These findings related to the mental health of women are corroborated by the SCOVID study.

Background and health of women at Wave 5:

- 61.7% reported that their working status had changed (i.e., furloughed, lost job)
- 38.8% were in the lower SEG
- 22.8% were key workers
- 22.3% had a physical health condition 19.2% reported having unpaid caring responsibilities
- 14.3% had a pre-existing mental health condition
- 8.3% had dependents under 5 years

Compared with men, women were more likely to be in the lower SEG, have had a change to working status, have caring responsibilities, and have a physical health condition; these factors may place them at higher risk of poor mental health.

Wave 5 Findings:

- 9.3% of women reported suicidal thoughts,
- 22.5% reported depressive symptoms,
- 19.6% reported anxiety symptoms, and
- The average mental wellbeing score for women was 21.85 (out of a possible score of 35), lower than the average of 22.08.

Trends across the SCOVID study

Age and sex counterpart comparison

Across Waves 1 to 5 of the SCOVID study, overall women reported worse mental health outcomes compared with men. At most waves, women reported higher depressive symptoms, anxiety symptoms, and lower mental wellbeing than men. The main exception was rates of suicidal thoughts, with men reporting higher suicidal thoughts overall, for example, at Wave 2, 16.3% of men reported suicidal thoughts compared with 10.5% of women.

Mental health and pandemic restrictions

The SCOVID data suggest that women reported the highest rates of depressive symptoms, anxiety symptoms, and lowest levels of mental wellbeing, at Wave 1 (Spring 2020), a time when restrictions were still in place, although Phase 1 of the easing of lockdown had begun in Scotland.

Figure 3.3 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for women across the SCOVID study in context of changes in pandemic restrictions. This figure shows that the highest rates of suicidal thoughts, and high rates of depressive symptoms, were reported at Wave 4 (Winter 2021), during a national lockdown. By Wave 5 (Summer 2021), suicidal thoughts and depressive symptoms were at their lowest, and mental wellbeing was at its highest, which coincided with a period of easing of restrictions. This suggests that women reported overall worse mental health and wellbeing when restrictions were in place.

Figure 3.3 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for women, with key Scotland Route map interventions



Intersectional findings for women

Trends across the waves of the SCOVID study suggest that women with particular background and health factors are at increased risk for worse mental health and wellbeing, including:

- a pre-existing mental health condition,
- a pre-existing physical health condition,
- unpaid caring responsibilities,
- young dependents, or
- vaccine hesitancy⁹.

Women with a pre-existing mental health condition

- Wave 1 to Wave 5 of the SCOVID study suggests that the mental health of women with a pre-existing mental health condition was consistently much worse than for women without a pre-existing mental health condition. For example, at Wave 5, 15.6% of women with no pre-existing mental health condition reported depressive symptoms, compared with 63.8% of women with a mental health condition, and this trend is seen for each outcome across the waves (see Annex 4 Table F).
- Compared with men with a pre-existing mental health condition, women in this group consistently reported higher rates of depressive symptoms and anxiety symptoms across the waves, although rates of suicidal thoughts and levels of mental wellbeing appeared to fluctuate more.
- Looking at trends over the waves in context of changes in pandemic restrictions, women with a pre-existing mental health condition appeared to report lower rates of suicidal thoughts, depressive symptoms and anxiety symptoms at Wave 5 (June - July 2021), when restrictions had been eased, compared with when restrictions were in place (e.g., Wave 4).

Women with a pre-existing physical health condition

- Looking across the study waves, mental health outcomes for women with a pre-existing physical health condition were consistently worse than for women without a pre-existing physical health condition. For example, at Wave 5, 18.8% of women with no pre-existing health condition reported depressive symptoms, compared with 35.4% of women with a pre-existing health condition, and this trend is seen for each outcome across the waves (see Annex 4 Table F).
- Compared with men with a pre-existing physical health condition, women in with a health condition tended to report higher rates of depressive symptoms and anxiety symptoms across the waves, although overall men reported higher rates of suicidal thoughts and lower levels of mental wellbeing.
- Looking at trends over the waves in context of changes in pandemic restrictions, findings suggest that mental health and wellbeing for women with a

⁹ Note that there isn't data on vaccine hesitancy for all five waves

pre-existing physical health condition was generally worse at times when restrictions were easing. Although we cannot state why the pattern for those with a physical health problem is different from most other groups, it has been suggested that the moves made to make life more accessible from home, for example increased use of video-conferencing technology, may have increased flexibility for those who have chronic illness or are disabled (Barnardo's, 2021).

Women with unpaid caring responsibilities

- In the UK, women were more likely to take on caring roles than men before the pandemic (Carers UK), and emerging research worldwide suggests that the crisis and its subsequent shutdown response have resulted in an increase in this burden (Power, 2020).
- Findings from Wave 1 to Wave 5 of the SCOVID study suggest that women with unpaid caring responsibilities are at higher risk of mental health problems than women with no unpaid caring responsibilities. For example, at Wave 5, 19.9% of women with no caring responsibilities reported depressive symptoms, compared with 33.3% of women with caring responsibilities (see Annex 4 Table F).
- At most waves women with caring responsibilities reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than men who also had caring responsibilities. The main exception was at Wave 5, when men with caring responsibilities reported higher suicidal thoughts, depressive symptoms, and anxiety symptoms.
- Looking at trends across the waves in context of changes in pandemic restrictions, it appears the mental health of women carers was worst during periods of lockdown and higher restrictions, and better during a period of eased restrictions.

Women with young dependents (under 5 years)

- Findings from Wave 1 to Wave 5 of the SCOVID study suggest that women with young dependents tended to be at higher risk of mental health problems than women with no young dependents. For example, at Wave 5, 21.9% of women with no young dependents reported depressive symptoms, compared with 28.3% of women with young dependents (see Annex 4, Table F).
- At most waves, women with young dependents reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than men who also had young dependents.
- Looking at trends across the waves in context of changes in pandemic restrictions, it appears the mental health of women with young dependents was worst during periods of lockdown and higher restrictions, and better during a period of eased restrictions.

Women who reported vaccine hesitancy

- Vaccine hesitancy (i.e., a delay in choosing to get vaccinated or refusing to get vaccinated) was measured at Wave 4 and Wave 5 of the SCOVID study. At

Wave 5 of the SCOVID study, 7.1% of women reported vaccine hesitancy, compared with 7.6% of men.

- Findings from Wave 4 and Wave 5 of the SCOVID study suggest that women with vaccine hesitancy tended to be at higher risk of mental health problems than women with no vaccine hesitancy. For example, at Wave 5, 18.3% of women with no vaccine hesitancy reported anxiety symptoms, compared with 37.0% of women with vaccine hesitancy (see Annex 4, Table F).
- Additionally, women with vaccine hesitancy tended to report higher rates of anxiety symptoms and lower mental wellbeing than men who also had vaccine hesitancy.
- Looking at trends at Wave 4 and Wave 5 in context of changes in pandemic restrictions, it appears the mental health of women who were vaccine hesitant overall was poorer when restrictions were in place.

4. Conclusions

Tracking the mental health and wellbeing of the Scottish population during the COVID-19 pandemic has been important to understand the wider implications of the pandemic and lockdown, beyond those who have been directly impacted by the virus. This report outlines the cross-sectional trends across Wave 1 to Wave 5 of the Scottish COVID-19 Tracker Study, especially looking at the mental health findings for certain at-risk subgroups. To allow for a more focussed report, four mental health outcome measures were reported: suicidal thoughts, depressive symptoms, anxiety symptoms and mental wellbeing. It is also important to note that as data collection for Wave 1 began in May 2020, after COVID-19 pandemic restrictions had already been put into place, this report is unable to identify how mental health and wellbeing has changed from before the pandemic. Additionally, due to loss to follow-up across the waves of the study, we were unable to conduct a robust longitudinal analysis of changes in rates of mental health outcomes over the waves.

Across the subgroups investigated in this report, particular age and sex groups tended to report worse mental outcomes across the waves of the SCOVID study than their age and sex counterparts:

- Young women
- Young men
- Young adults
- Women

Particular intersectional factors also appeared to increase the risk of poor mental health within the overall sample (see Annex 5), and within some of subgroups listed above:

- a pre-existing mental health condition,
- a pre-existing physical health condition,
- unpaid caring responsibilities,
- young dependents,
- and vaccine hesitancy.

Pandemic restrictions and mental health

Looking across the waves, overall there was a trend for the overall sample, and young women, young adults, and women, to report poorer mental health at times of higher restrictions (i.e., Wave 1: Spring 2020, Wave 3: Autumn 2020 and Wave 4: Winter 2021) and better mental health at times of fewer restrictions (i.e., Wave 2: summer 2020 and Wave 5: Summer 2021). This suggests that people's mental health and wellbeing were impacted by the COVID-19 restrictions and lockdowns, although it

appears that as restrictions eased these mental health outcomes tended to improve. This is consistent with findings from the UK COVID-MH study, that found for the whole sample there was an increase in depressive symptoms, defeat, entrapment, and loneliness during the lockdown in February 2021, coinciding with SCOVID Wave 4 (Wetherall et al., under review). Additionally, the UK Household Longitudinal Study (UKHLS) indicated that easing lockdown measures rapidly improved mental health, particularly in those from lower socio-economic backgrounds (Serrano-Alarcon et al., 2021).

In contrast, there were some subgroups that reported the converse, for example young men and those with a pre-existing physical health condition appeared to report better rates of mental health and wellbeing when restrictions were in place, and worse rates when restrictions were lifted. We cannot state why some subgroups appeared to experience the opposite pattern, an interpretation could be that for some there may be a lag between restrictions being in place and their negative impact upon mental health, so that it is taking longer for them to feel the consequences of the restrictions. Alternatively, those with physical health conditions may already be restricted in their day-to-day movement, and the changes made to increase connection remotely during lockdowns may have benefited this group.

Overall, evidence from Wave 5, when restrictions had been eased in the Summer 2021, suggests that there has been an overall improvement in mental health and wellbeing, although this is not consistent across all subgroups reported in this study. Across the waves, young adults and women that had a pre-existing mental health condition, a pre-existing physical health condition, unpaid caring responsibilities, or vaccine hesitancy appeared to be at higher risk of poor mental health. In addition, and women with dependents under 5 years also appeared to be at risk for poor mental health. In particular, we propose that those who fall into multiple vulnerable groups may be at elevated risk for poor mental health.

SCOVID findings in context of other research

As noted, the SCOVID study does not have pre-pandemic figures, and therefore we cannot state whether mental health outcome trends have changed from pre-pandemic levels. However, a recent systematic review of studies with pre-pandemic longitudinal data, primarily from Europe and North America, suggests an overall worsening of mental health during the pandemic, including an increase in depressive and mood disorder symptoms, and this was more pronounced at the start of the pandemic (March/April 2020) and gradually decreased as over time (Robinson et al., 2021). This review also found that particular subgroups appeared to report more of an increase in symptoms, including those with a pre-existing physical health condition, in contrast they did not find notable differences by gender or those with a pre-existing mental health condition. A further review looking at suicidal thoughts and behaviour in research conducted during the pandemic (mainly in Western countries) suggests that event markers of suicidal outcomes have increased from pre-pandemic levels, with younger people and women reporting higher rates of suicidal thoughts (Dube et al.,

2021). Thus far there has been no evidence of an increase in suicide rates in the UK or globally (Pirkis et al., 2021).

Additionally, evidence from the UCL COVID-19 Social Study, based in the UK, investigated trajectories of depression and anxiety symptoms between March and July 2020, and found that young people and women experienced high anxiety at the start of lockdown, which decreased over time, but that young people with lower incomes and pre-existing mental health conditions experienced higher and increasing levels of depressive and anxiety symptoms (Saunders et al., 2021). Further, the Co-Space Study in the UK found that rates of anxiety, stress, and depression of parent/carers increased from November 2020 to January/February 2021 (during lockdown), surpassing rates in the first lockdown, and parents/carers of younger children in particular felt they could not meet the needs of both their child and their work commitments (Shum et al., 2021). Additionally, 40% of young carers reported their mental health was worse during the pandemic (Carers Trust, 2021), with young carers in Scotland experiencing increased worries during COVID-19, both for the health of their families, and their economic security (Maclean and Hay, 2021). This breadth of research suggests that the findings from the SCOVID final report are supported in the wider literature that has been conducted during the COVID-19 pandemic.

Recommendations

The evidence from the SCOVID study, and other research conducted since spring 2020, suggests that there are inequalities in how the pandemic has affected people across the world, including in Scotland. It is important that the subgroups highlighted as vulnerable, namely young adults and women, and in particular young adults and women with a mental health condition, a physical health condition, and unpaid caring responsibilities¹⁰, be prioritised when implementing mental health policy and research to mitigate the longer-term impact of the COVID-19 pandemic upon the mental health of the Scottish population.

We propose a number of specific recommendations for public health and policy that are based upon findings from the current report, as well as previous reports in this series, and based on findings from broader research that has been conducted across the UK and worldwide (e.g., Sinyor et al., 2021; Gunnell et al., 2020; Mental Health Foundation, 2021). As well as the vulnerable groups highlighted in the current report, policy should target people from other vulnerable groups, such as those from disadvantaged backgrounds, those from ethnic minority groups, and Healthcare Workers. Specific recommendations include:

¹⁰ As findings on those with vaccine hesitancy were less clear, we do not have the evidence to suggest they are a vulnerable group.

- *Access to mental health care*: Ensuring there is timely access to evidence-based mental health treatment and support by adequate funding for NHS and community mental health services. This may include the roll-out of evidence-informed digital eMental health interventions, particularly those following a “blended” care approach such as computerised cognitive behavioural therapy (cCBT) and tele-counselling.
- *Alleviating financial hardship*: Implementing cross-government policies to lessen the negative impact of economic hardship and a potential increase in unemployment. In particular, consideration should be given to dealing with debt, unemployment programmes, home insecurity, and job insecurity/low pay, for example, policies to protect individuals from eviction and low wage poverty.
- *Trauma-informed support and care*: Supporting public sector services and providers to adopt trauma-informed approaches to help ensure the support, care, and attention is given to every individual affected by the pandemic. This includes the promotion and availability of trauma-informed guidance, values, and principles, that are provided as a framework for best-practice.
- *Policy to target young people*: Consider actions to minimise the long-term impact of the pandemic upon the futures of young people, including working with education to address disruption to schooling, support for mental health and creating opportunities to address harm to future career prospects.
- *Policy to target other at-risk subgroups*: Specific policy initiatives may be required to ensure that women, particularly those with unpaid caring responsibilities and young dependents, are supported. This may include ensuring the continued provision of community maternal mental health and early years supports, and support for unpaid carers should be made available. Policy initiatives aimed at the mental health and wellbeing of individuals with a physical health problem or disability, including addressing social isolation within these groups, should be prioritised.
- *Recognition of the importance of health and social care*: Providers of health and social care play an essential role in the mental health and wellbeing of people across Scotland. Protecting the mental health and wellbeing of these providers is essential in services provision as poor mental health may lead to burnout in services that are already at capacity resulting in challenges in staff retention and recruitment (Morse et al., 2021). Ensuring these services are secure, valued, appropriately trained and staffed is essential.
- *Public health messaging*: Public health messaging around the promotion of positive mental health strategies, including managing distress, healthy coping,

and emotional resilience, should be prioritised. Messaging should also promote social cohesion , emphasising the strength of relationships and sense of solidarity among members of a community, rather than focus on divisions.

- *Research into the mental health & wellbeing of the Scottish population:* As we recover from the pandemic, it is important to continue to monitor the mental health and wellbeing of the Scottish population, with particular vigilance regarding subgroups who continue to be or become newly affected by the pandemic in the medium to long-term.

References

Adult Psychiatric Morbidity Survey (APMS): Survey of Mental Health and Wellbeing, England, 2014 (2016).

Carers Trust (July 2020). MY FUTURE, MY FEELINGS, MY FAMILY: How Coronavirus is affecting young carers and young adult carers, and what they want you to do next <https://carers.org/downloads/what-we-do-section/my-future-my-feelings-my-family.pdf>

Carers UK. 10 facts about women and caring in the UK on International Women's Day. Accessed 20.10.2021. <https://www.carersuk.org/news-and-campaigns/features/10-facts-about-women-and-caring-in-the-uk-on-international-women-s-day>

Carers UK. (2015). State of Caring 2015. London: Carers UK. Retrieved from www.carersuk.org/for-professionals/policy/policy-library/state-of-caring-2015

Digital HS. Mental health and wellbeing in England: Adult psychiatric morbidity survey 2014. September 2016.

Dubé, J.P., Smith, M.M., Sherry, S.B., Hewitt, P.L., & Stewart, S.H. (2021). Suicide behaviors during the COVID-19 pandemic: A meta-analysis of 54 studies. *Psychiatry Res.* 301:113998. <https://doi.org/10.1016/j.psychres.2021.113998>.

Etheridge, B. & Spantig, L. (2020). The Gender Gap in Mental Well-Being During the Covid-19 Outbreak: Evidence from the UK. Inst for Social & Economic Research. [2020-08.pdf \(essex.ac.uk\)](https://www.essex.ac.uk/Research/2020-08.pdf)

Gondek, D., Bann, D., Patalay, P., Goodman, A., McElroy, E., Richards, M., & Ploubidis, G. (2021). Psychological distress from early adulthood to early old age: Evidence from the 1946, 1958 and 1970 British birth cohorts. *Psychological Medicine*, 1-10. <https://doi.org/10.1017/S003329172000327X>

Hrynick, T., Ripoll, S., and Schmidt-Sane, M. (2020) 'Rapid Review: Vaccine Hesitancy and Building Confidence in COVID-19 Vaccination', Briefing, Brighton: Social Science in Humanitarian Action (SSHAP). [Rapid Review: Vaccine Hesitancy and Building Confidence in COVID-19 Vaccination - Epidemic Response \(ids.ac.uk\)](https://www.ids.ac.uk/publications/rapid-review-vaccine-hesitancy-and-building-confidence-in-covid-19-vaccination-epidemic-response)

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine.* 16(9), 606-613. <https://doi.org/10.1046/j.1525-1497.2001.016009606>.

Lorenz, R.A., Norris, M.M., Norton, L.C., & Westrick, S.C. (2013). Factors associated with influenza vaccination decisions among patients with mental illness. *Int J Psychiatry Med.* 46:1-13. <https://doi.org/10.2190/PM.46.1.a>

Maclean, C., & Hay, N. (2021) Young, Caring and Struggling to Make Ends Meet: The Worsening Economic Circumstances of Scotland's Young Carers. <http://uwsoxfampartnership.org.uk/wp-content/uploads/2021/06/Young-caring-and-struggling-Report-2021-FINAL-A.pdf>

Mansfield, K. E., Mathur, R., Tazare, J., Henderson, A. D., Mulick, A. R., Carreira, H., ... & Langan, S. M. (2021). Indirect acute effects of the COVID-19 pandemic on physical and mental health in the UK: a population-based study. *The Lancet Digital Health*. 3(4), e217-e230. [https://doi.org/10.1016/S2589-7500\(21\)00017-0](https://doi.org/10.1016/S2589-7500(21)00017-0)

Morse, G., Salyers, M. P., Rollins, A. L., Monroe-DeVita, M., & Pfahler, C. (2012). Burnout in mental health services: a review of the problem and its remediation. *Administration and Policy in Mental Health*. 39(5), 341–352. <https://doi.org/10.1007/s10488-011-0352-1>

O'Connor, R.C., Wetherall, K., Cleare, S., McClelland, H., Melson, A.J., Niedzwiedz, C.L., O'Carroll, R.E., O'Connor, D.B., Platt, S., Scowcroft, E., Watson, B., Zortea, T., Ferguson, E., & Robb, K.A. (2020). Mental health and wellbeing during the COVID-19 pandemic: longitudinal analyses of adults in the UK COVID-19 Mental Health & Wellbeing study. *British Journal of Psychiatry*. 218(6), 326-333. <https://doi.org/10.1192/bjp.2020.212>

Office for National Statistics (ONS). Parenting in lockdown: Coronavirus and the effects on work-life balance. July 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/condition sanddiseases/articles/parentinginlockdowncoronavirusandtheeffectsonworklifebalance /2020-07-22>

Office for National Statistics (ONS). Coronavirus and vaccine hesitancy, Great Britain: 9 August 2021. Hesitancy towards a coronavirus (COVID-19) vaccine, based on the Opinions and Lifestyle Survey (OPN) covering the period 23 June to 18 July 2021. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthand wellbeing/bulletins/coronavirusandvaccinehesitancygreatbritain/9august2021>

Paul, E., Steptoe, A., & Fancourt, D. (2021). Attitudes towards vaccines and intention to vaccinate against COVID-19: Implications for public health communications. *The Lancet Regional Health – Europe*. 1, 100012. <https://doi.org/10.1016/j.lanep.2020.100012>

Pitchforth, J.M., Viner, R.M., & Hargreaves, D.S. (2016). Trends in mental health and wellbeing among children and young people in the UK: a repeated cross-sectional study, 2000-14. *Lancet Psychiatry*. 388:S93. [https://doi.org/10.1016/S0140-6736\(16\)32329-7](https://doi.org/10.1016/S0140-6736(16)32329-7)

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, <https://doi.org/10.1080/15487733.2020.1776561>

Rains, S., Johnson, L., , Barnett, P., Steare, T., Needle, J.J., Carr, S. ... & Simpson, A. (2021). Early impacts of the COVID-19 pandemic on mental health care and on people with mental health conditions: framework synthesis of international experiences and responses. *Soc Psychiatry Psychiatr Epidemiol*. 56, 13–24. <https://doi.org/10.1007/s00127-020-01924-7>

Robinson, E., Sutin, A.R., Daly, M., & Jones, A. (2022). A systematic review and meta-analysis of longitudinal cohort studies comparing mental health before versus during the COVID-19 pandemic in 2020. *J Affect Disord.* 296:567-576. <https://doi.org/10.1016/j.jad.2021.09.098>

Sadler, K., Vizard, T., Ford, T., Goodman, A., Goodman, R., & McManus, S. (2018). The mental health of children and young people in England 2017: trends and characteristics. Health and Social Care Information Centre.

SAGE. (Strategic Advisory Group of Experts on immunisation). Report of the SAGE Working group on vaccine hesitancy.

https://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf

Saunders, R., Buckman, J., Fonagy, P., & Fancourt, D. (2021). Understanding different trajectories of mental health across the general population during the COVID-19 pandemic. . 1-9. <https://doi.org/10.1017/S0033291721000957>

Sayed, A., Kundu, S., Al Banna, M.H., Christopher, E., Hasan, M.T., Begum, M.R., Chowdhury, S., & Khan, M.S.I. (2020). Mental Health Outcomes of Adults with Comorbidity and Chronic Diseases during the COVID-19 Pandemic: A Matched Case-Control Study. *Psychiatr Danub.* 32(3-4):491-498. <https://doi.org/10.24869/psyd.2020.491>

Scottish Public Health Observatory (ScotPHO). Suicide: Key Points.

<https://www.scotpho.org.uk/health-wellbeing-and-disease/suicide/key-points/>

Shum, A., Skripkauskaitė, S., Pearcey, S., Raw, J., Waite, P., & Creswell, C. (2021). Changes in parents' mental health symptoms and stressors from April to December 2020 (Report 07). Co-SPACE study. <https://cospaceoxford.org/findings/changes-in-parents-mental-health-symptoms-and-stressors-jan-2021/>

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092-1097. <https://doi.org/10.1001/archinte.166.10.1092>

The Royal College of Obstetricians and Gynaecologists (RCOG). Maternity Colleges express concern over vaccine hesitancy in pregnant women: Vaccination provides the best protection against COVID-19 in pregnancy, say experts. 10 June 2021.

<https://www.rcog.org.uk/en/news/maternity-colleges-express-concern-over-vaccine-hesitancy-in-pregnant-women/>

Theis, N., Campbell, N., De Leeuw, J., Owen, M., & Schenke, K. C. (2021). The effects of COVID-19 restrictions on physical activity and mental health of children and young adults with physical and/or intellectual disabilities. *Disability and Health Journal.* 14(3), 101064. <https://doi.org/10.1016/j.dhjo.2021.101064>

Toubasi, A.A., AbuAnzeh, R.B., Tawileh, H.B.A., Aldebei, R.H., & Alryalat, S.A.S. (2021). A meta-analysis: The mortality and severity of COVID-19 among patients with mental disorders. *Psychiatry Res.* 299:113856. <https://doi.org/10.1016/j.psychres.2021.113856>.

Torjesen I. (2021). Covid-19: Middle aged women face greater risk of debilitating long term symptoms *BMJ*.372 :n829 <https://doi.org/10.1136/bmj.n829>

Williams, T., Davis, J., Figueira, C., Vizard, T. (2021) Coronavirus and depression in adults, Great Britain: January to March 2021. Office of National Statistics. [Coronavirus and depression in adults, Great Britain - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/coronavirus-and-depression-in-adults-great-britain)

Willner, P., Rose, J., Stenfert Kroese, B., Murphy, G.H., Langdon, P.E., Clifford, C., Hutchings, H., Watkins, A., Hiles, S., & Cooper, V. (2020).Effect of the COVID-19 pandemic on the mental health of carers of people with intellectual disabilities. *J Appl Res Intellect Disabil*. 33: 1523– 1533. <https://doi.org/10.1111/jar.12811>

Wetherall, K., Cleare, S., McClelland, H., Melson, A.J., Niedzwiedz, C.L., O'Carroll, R.E., O'Connor, D.B., Platt, S., Scowcroft, E., Watson, B., Zortea, T., Ferguson, E., Robb, K.A. & O'Connor, R.C. (under review) Mental health and well-being during the COVID-19 pandemic II: longitudinal analyses of four further waves of the UK COVID-19 Mental Health & Wellbeing study.

Young Minds (2020). Coronavirus: Impact on young people with mental health needs. <https://www.youngminds.org.uk/media/04apxfrt/youngminds-coronavirus-report-summer-2020.pdf>

Young Minds. Parent survey reveals widespread concerns about mental health impact of COVID-19 on young people's mental health. <https://www.youngminds.org.uk/media/0htnffp2/youngminds-survey-with-parents-and-carers.pdf>

Annex

Annex 1. Scottish pandemic restriction phases.

In the first lockdown, the Scottish government announced a route map out of lockdown that included 3 phases:

In Phase 1 two households (max 8 people) were allowed to meet in outdoor spaces with physical distancing, public outdoor spaces could be used recreationally, people were allowed to travel short distances for outdoor leisure and exercise but should remain in your local area, and food outlets, were able to provide take-away.

In Phase 2 three households could meet outside, some non-essential retail could open, places of worship could re-open for individual prayer, professional sport could resume, and some indoor (non-office) workplaces (factories etc) could resume.

In Phase 3, a household could meet up to 4 other households (max 15 people) at a time outdoors, and 2 households indoors. Organised outdoor physical activity resumed for children and young people, attractions (such as museums, libraries, cinemas) could open with physical distancing, and hairdressers, childcare providers and indoor hospitality could reopen.

Annex 2. Wave 1 SCOVID Tracker study quotas and sample breakdown.

Table A. Sample in each age by sex quota

Age	Target	Achieved
18 to 24 male	200	176
18 to 24 female	200	221
25 to 34 male	200	186
25 to 34 female	200	226
35 to 54 male	374	373
35 to 54 female	395	399
55 to 69 male	264	305
55 to 69 female	280	290
70+ male	168	235
70+ female	219	193
Total	2,500	2604

Table B. Sample in each tenure quota

Tenure	Target	Achieved
Owned Outright or Mortgaged	1553	1651
Social Rent	585	525
Private Rent	362	428

Table C. Sample in each highest qualification quota

Highest Qualification	Target	Achieved
No Qualifications	388	144
Level 1 Standards or 2 Highers	877	900
Level 3 HNC/D or Level 4 Degree/prof or other	1235	1560

Annex 3. Demographic and subgroup breakdown at each wave

Table D. Unweighted demographic and subgroup figures (%) Wave 1 to Wave 5

Group	Wave 1 n= 2604, n (%)	Wave 2 n=1703, n (%)	Wave 3 n=1625, n (%)	Wave 4 n=1288, n (%)	Wave 5 n=1213, n (%)
Age group					
18-29	586 (22.5%)	177 (10.4%)	327 (20.1%)	181 (14.1%)	172 (14.2%)
30-59	1206 (46.3%)	872 (51.2%)	751 (46.2%)	598 (46.4%)	570 (47.0%)
60+	812 (31.2%)	654 (38.4%)	547 (33.7%)	509 (39.5%)	471 (38.8%)
Sex ^a					
Women	1329 (51.2%)	861 (50.6%)	831 (51.2%)	616 (52.1%)	592 (48.8%)
Men	1265 (48.8%)	840 (49.4%)	791 (48.8%)	670 (47.9%)	620 (51.2%)
Ethnicity ^b					
White	2483 (95.4%)	1654 (97.1%)	1573 (96.9%)	1260 (97.9%)	1177 (97.1%)
Ethnic minority	121 (4.6%)	49 (2.9%)	51 (3.1%)	27 (2.1%)	35 (1.2%)
Socioeconomic grouping (SEG)^c					
Higher	1673 (64.2%)	1131 (66.4%)	1084 (66.7%)	868 (67.4%)	819 (67.5%)
Lower	931 (35.8%)	572 (33.6%)	541 (33.3%)	420 (32.6%)	394 (32.5%)
Pre-existing mental health condition ^d					
No MH	2281 (87.6%)	1506 (88.4%)	1424 (87.6%)	1146 (89.0%)	1071 (88.3%)
Yes MH	323 (12.4%)	197 (11.6%)	201 (12.4%)	142 (11.0%)	142 (4.7%)
Pre-existing physical health condition ^e					
No PH	2088 (80.2%)	1329 (78.0%)	1309 (80.6%)	994 (77.2%)	963 (79.4%)
Yes PH	516 (19.8%)	374 (22.0%)	316 (19.4%)	294 (22.8%)	250 (20.6%)
Unpaid carer ^f					
No	2140 (82.7%)	1412 (82.9%)	1317 (81.6%)	1045 (81.1%)	1000 (82.4%)
Yes	448 (17.3%)	280 (16.4%)	297 (18.4%)	243 (18.9%)	213 (17.6%)
Key worker					
No	2084 (80.0%)	1394 (81.9%)	1259 (77.5%)	1004 (78.0%)	955 (78.7%)
Yes	520 (20.0%)	309 (18.1%)	366 (22.5%)	775 (22.0%)	258 (21.3%)
Change of working status ^g					

No	1324 (50.8%)	952 (55.9%)	893 (57.0%)	775 (60.2%)	469 (38.7%)
Yes	1280 (49.2%)	751 (44.1%)	674 (43.0%)	513 (39.8%)	744 (61.3%)
Dependents under 5 years					
No	2377 (91.3%)	1589 (93.3%)	1485 (91.4%)	1206 (93.6%)	1130 (93.2%)
Yes	227 (8.7%)	114 (6.7%)	140 (8.6%)	82 (6.4%)	83 (6.8%)
Vaccine hesitancy ^h					
No	-	-	-	1161 (90.1%)	1141 (94.1%)
Yes	-	-	-	127 (9.9%)	72 (5.9%)

Note: All data are unweighted. ^a Sex assigned at birth, ^b Ethnic minority includes any black, Asian or other minority ethnic group, intersectional analysis was not possible due to small samples ^c SEG categories A, B, C1= higher SEG; categories C2, D, E= lower SEG, ^d No MH = no pre-existing long-standing (>12 months) mental health condition; Yes MH = pre-existing long-standing (>12 months) mental health condition, ^e No PH = no pre-existing long-standing (>12 months) physical health condition; Yes PH = pre-existing long-standing (>12 months) physical health condition, ^f Any unpaid caring responsibilities, ^g includes working from home, furloughed, reduction in paid employment, ^h No vaccine hesitancy includes those who have received the vaccine or intend to do so, only asked at Wave 4 and Wave 5.

Table E1: Wave 5 demographic and subgroup weighted figures

Group	Wave 5 weighted n=2500, n (%)
Age group	
18-29	546 (21.8%)
30-59	1185 (47.4%)
60+	769 (30.7%)
Sex ^a	
Women	1294 (51.8%)
Men	1205 (48.2%)
Ethnicity ^b	
White	2411 (96.5%)
Ethnic minority	88 (3.5%)
Socioeconomic grouping (SEG) ^c	
Higher	1598 (63.9%)
Lower	902 (36.1%)
Pre-existing mental health condition ^d	

No MH	2157 (86.3%)
Yes MH	343 (13.7%)
Pre-existing physical health condition ^e	
No PH	2002 (80.1%)
Yes PH	498 (19.9%)
Unpaid carer ^f	
No	2061 (82.4%)
Yes	439 (17.6%)
Key worker	
No	1911 (76.4%)
Yes	589 (23.6%)
Change of working status ^g	
No	1025 (41.0%)
Yes	1475 (59.0%)
Dependents under 5 years	
No	2310 (92.4%)
Yes	190 (7.6%)
Vaccine hesitancy ^h	
No	2316 (92.6%)
Yes	184 (7.4%)

Note: All data are weighted. ^a Sex assigned at birth, ^b Ethnic minority includes any black, Asian or other minority ethnic group, intersectional analysis was not possible due to small samples ^c SEG categories A, B, C1= higher SEG; categories C2, D, E= lower SEG, ^d No MH = no pre-existing long-standing (>12 months) mental health condition; Yes MH = pre-existing long-standing (>12 months) mental health condition, ^e No PH = no pre-existing long-standing (>12 months) physical health condition; Yes PH = pre-existing long-standing (>12 months) physical health condition, ^f Any unpaid caring responsibilities, ^g includes working from home, furloughed, reduction in paid employment, ^h No vaccine hesitancy includes those who have received the vaccine or intend to do so, only asked at Wave 4 and Wave 5.

Table E2: Wave 5 sample weighting compared with NRS Scottish Population 2019 data covering people aged 18+¹¹

Characteristic	Weighted* (n=2500) %	Unweighted (n=1213) %	NRS data
Sex^a			
Men	48.2%	51.2%	48.2%
Women	51.8%	48.8%	51.8%
Age			
18-29 years	21.8%	14.2%	19.1%
30-59 years	47.4%	47.0%	49.5%
60+ years	30.7%	38.8%	31.3%

Note:*data are weighted to more accurately reflect the Scottish population

Table E3: Wave 5 sample weighting compared with NRS Scottish Population 2011 data covering people aged 16 to 64 living in households in Scotland¹²

Socioeconomic group (SEG)	Weighted* (n=2500) %	Unweighted (n=1213) %	ONS data
High	63.9%	67.5%	50%
Low	36.1%	32.5%	50%

Note: *data are weighted to more accurately reflect the Scottish population, SEG measure categories AB-C1-C2-DE. Higher SEG (i.e., top-half): AB = Higher & intermediate managerial, administrative, professional occupations, C1 = Supervisory, clerical & junior managerial, administrative, professional occupations. Lower SEG (i.e., bottom-half): C2 = Skilled manual occupations, DE = Semi-skilled & unskilled manual occupations, unemployed and lowest grade occupations (ONS, 2001).

¹¹ Data available: [Mid-Year Population Estimates | National Records of Scotland \(nrscotland.gov.uk\)](https://www.nrscotland.gov.uk/mypopulation)

¹² Data available: [Census 2011: Release 3I | National Records of Scotland \(nrscotland.gov.uk\)](https://www.nrscotland.gov.uk/census)

Annex 4. Descriptive data with weights on and weights off

Please see supplementary excel file for descriptive data of each mental health outcome with weights on (Table F) and weights off (Table G).

Annex 5: Mental health and wellbeing of each subgroup

Summary of subgroup findings

- Pre-existing mental health condition
 - Across Waves 1 to 5 of the SCOVID study, people with a pre-existing mental health condition consistently reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no pre-existing mental health condition.
 - At Wave 5, 27.8% of respondents with a pre-existing mental health condition reported suicidal thoughts, 59.6% reported depressive symptoms, and 54.4% reported anxiety symptoms. The average mental wellbeing score for those with a pre-existing mental health condition was 16.92, lower than the average of 22.08.
- Pre-existing physical health condition
 - Across Waves 1 to 5 of the SCOVID study, people with a pre-existing a physical health condition consistently reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no pre-existing physical health condition.
 - At Wave 5, 12.6% of respondents with a pre-existing physical health condition reported suicidal thoughts, 36.4% reported depressive symptoms, and 27.7% reported anxiety symptoms. The average mental wellbeing score for those with a physical health condition was 20.83, lower than the average of 22.08.
- Unpaid caring responsibilities
 - Across Waves 1 to 5 of the SCOVID study, people who had unpaid caring responsibilities reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no caring responsibilities.
 - At Wave 5, 17.1% of those with unpaid caring responsibilities reported suicidal thoughts, 33.9% reported depressive symptoms, and 25.5% reported anxiety symptoms. The average mental wellbeing score for those with unpaid caring responsibilities was 20.60, lower than the average of 22.08.
- Dependents under 5 years
 - Across Waves 1 to 5 of the SCOVID study, people who had dependents under 5 years tended to report higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no dependents under 5 years.
 - At Wave 5, 11.9% of those with young dependents (under 5 years) reported suicidal thoughts, 27.4% reported depressive symptoms, and 18.8% reported anxiety symptoms. The average mental wellbeing score for those with young dependents was 22.19, similar to the average of 22.08.
- Vaccine hesitancy

- Vaccine hesitancy is described as behavioural delay in acceptance or refusal of vaccines despite availability of vaccine services (SAGE, 2014). Questions about vaccine hesitancy were asked at Wave 4 and Wave 5, therefore trends are limited to these waves.
- At both waves, people who had hesitancy in taking the COVID-19 vaccine reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people who had taken, or planned to take, the vaccine.
- At Wave 5, 30.7% of those with vaccine hesitancy reported suicidal thoughts, 33.2% reported depressive symptoms, and 30.4% reported anxiety symptoms. The average mental wellbeing score for those with vaccine hesitancy was 19.54, lower than the average of 22.08.
- At Wave 5, those with vaccine hesitancy were more likely to have unpaid caring responsibilities, have dependents under 5, and a mental health condition; these factors place them at higher risk of poor mental health.
- Young adults were more likely to report vaccine hesitancy (12.3% of young adults, compared with 8.8% of 30-59 year olds, and 1.7% of 60+ year olds).
- Young adults with vaccine hesitancy tended to report higher rates of depressive symptoms and anxiety symptoms than vaccine hesitant 30-59 years and 60+ year olds. The exception is at Wave 5, where 60+ year olds reported higher rates of both depressive and anxiety symptoms.
- The mental health of men and women with vaccine hesitancy differed, and both reported worse mental health than men and women with no vaccine hesitancy. Women tended to report higher rates of anxiety symptoms and lower mental wellbeing than men, and men with vaccine hesitancy reported higher rates of suicidal thoughts and depressive symptoms compared with women who also had vaccine hesitancy.

A1. Mental health of people with a pre-existing mental health condition

People with a pre-existing mental health condition may be particularly vulnerable to poor mental health and wellbeing during the COVID-19 pandemic, as the pandemic may exacerbate existing issues. Worldwide evidence from the early stages of the pandemic suggests that people with a mental health condition may experience a worsening in symptoms and an impact of loneliness and social isolation on their wellbeing (Rains et al., 2021). Further, people with a pre-existing mental health condition may be more adversely affected by the pandemic than the general population, with evidence from a meta-analysis of studies from around the world demonstrating an increased risk of severe or fatal COVID-19 among patients with a pre-existing mental disorder and of lack of access to services and resources (Toubasi et al., 2021).

Across Waves 1 to 5 of the SCOVID study, people with a pre-existing mental health condition consistently reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no pre-existing mental health condition.

Looking at Wave 5 data for those with a pre-existing mental health condition:

- 27.8% of reported suicidal thoughts,
- 59.6% reported moderate to severe depressive symptoms, and
- 54.4% reported moderate to severe anxiety symptoms.

Findings from the UK COVID-MH Study (Wetherall et al. under review) suggest that respondents who reported having a pre-existing mental health condition had consistently higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, defeat, entrapment and loneliness compared with those with no pre-existing mental health condition, and similarly wellbeing scores were lower for this group.

Overall trends in the SCOVID study suggest that young adults and women with a pre-existing mental health condition may be at increased risk of poorer mental health than their age and sex counterparts.

A1.1 Young adults with a pre-existing mental health condition

Findings from the SCOVID study suggest young adults are at a higher risk for mental health problems and lower mental wellbeing during the COVID-19 pandemic compared with other age groups (30-59 years, 60+ years). In a Young Minds survey conducted with young people with mental health needs in the UK (June 2020), 80% of respondents felt that the COVID-19 pandemic had made their mental health worse (Young Minds, 2020).

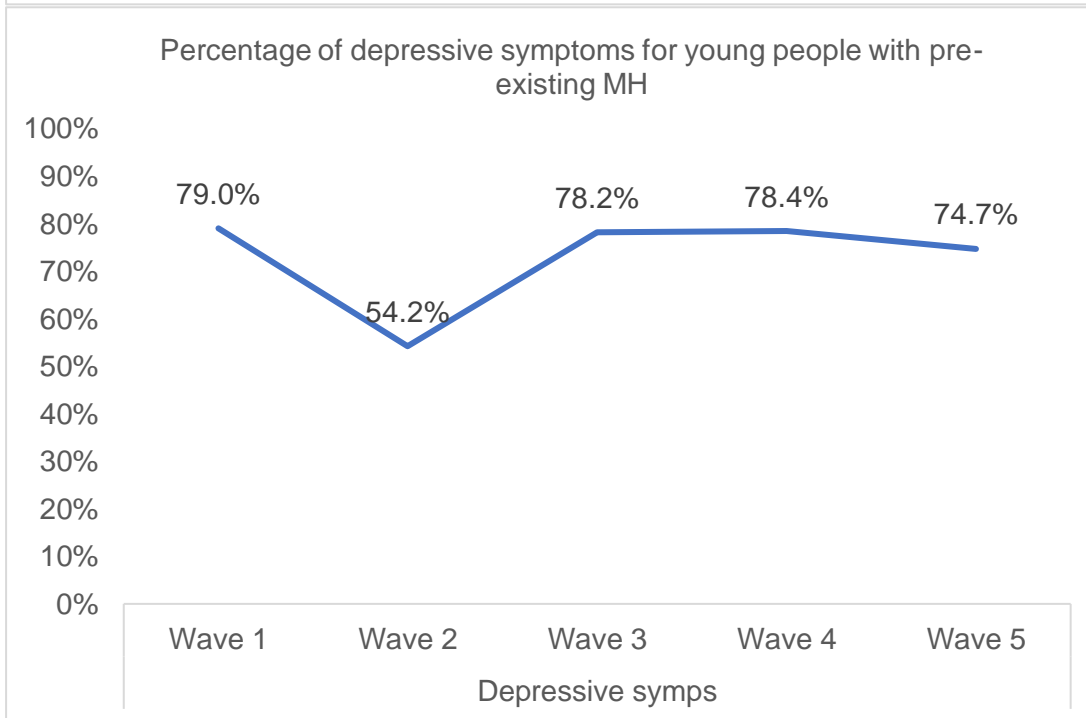
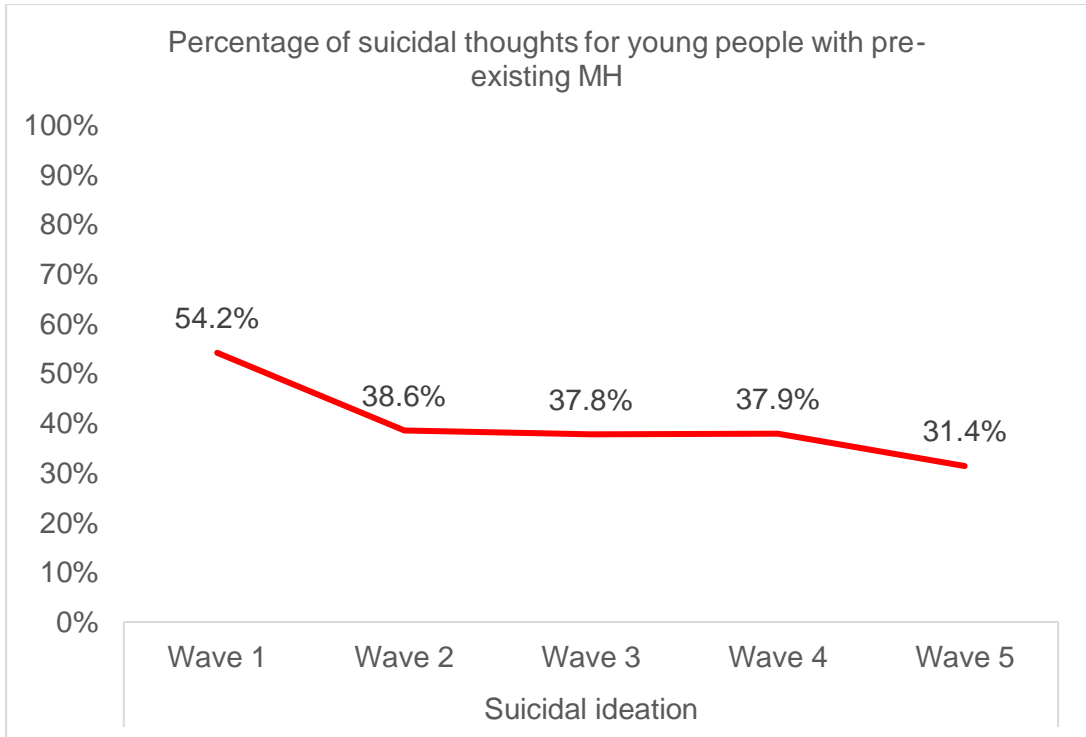
Looking at the background and health of young adults with a pre-existing mental health condition, 52.2% were in the lower SEG, 25.0% reported that their working status had changed (i.e., furloughed, lost job), and 26.1% were key workers. 12.0% had dependents under 5 years and 31.5% reported having unpaid caring responsibilities. 29.3% also had a pre-existing physical health condition. Compared with young adults with no mental health condition, young adults with a mental health condition were more likely to be in the lower SEG, to have unpaid caring responsibilities, have young dependents (under 5 years), and have a physical health condition; these factors may place them at higher risk of poor mental health.

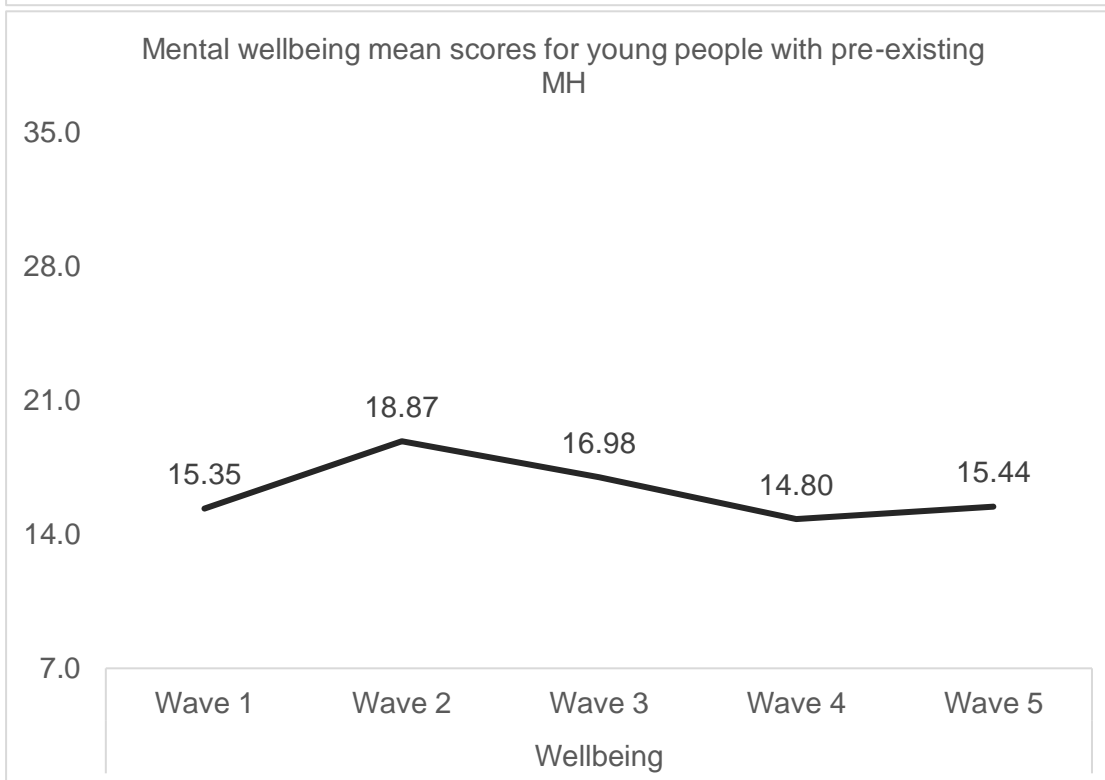
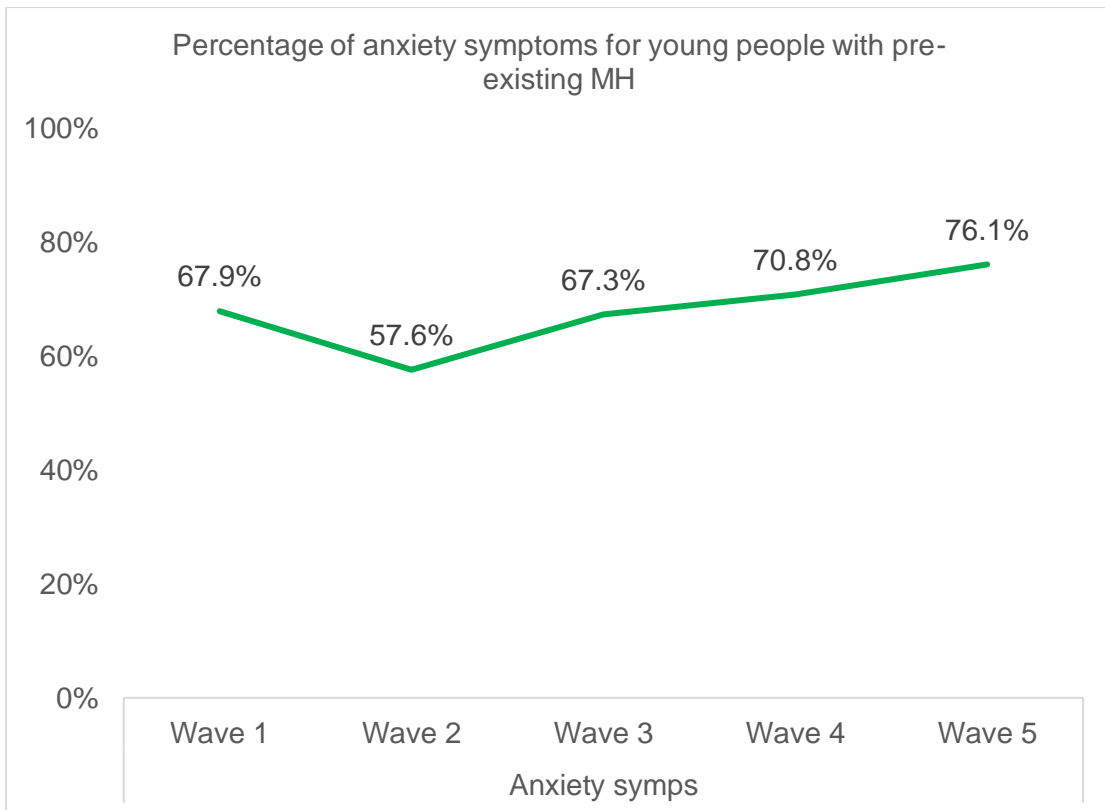
Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young adults (18-29 years) with pre-existing mental health conditions are at higher risk of poorer mental health than young adults with no pre-existing mental health condition. Additionally, at most waves, young adults with a pre-existing mental health condition reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms

and lower mental wellbeing than the other age groups (30-59 years and aged 60+ years) who also had a pre-existing mental health condition.

Figure A1.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young adults with a pre-existing mental health condition across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, young adults with a mental health condition reported the highest rates of suicidal thoughts and depressive symptoms, and lowest levels of mental wellbeing, at Wave 1 (May – June 2020), which was closer to the start of pandemic and coincided with Phase 1 of the easing of lockdown restrictions in Scotland. By Wave 2 (July – August 2020), at which point restrictions had eased during the summer, rates of suicidal thoughts, depressive symptoms and anxiety symptoms were at their lowest, and mental wellbeing was at its highest. By Wave 5 (June – July 2021), suicidal thoughts, depressive symptoms and mental wellbeing appeared to improve, which coincided with a period of easing of restrictions. In contrast, anxiety symptoms were at their highest at Wave 5. This suggests that although young adults with a pre-existing mental health condition reported overall better mental health and wellbeing when restrictions were eased, symptoms of anxiety appeared to remain high. As a booster sample was added at Wave 5, this finding should be interpreted with caution.

Figure A1.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for young adults (18-29 years) with a pre-existing mental health (MH) condition





A1.2 Women with a pre-existing mental health condition

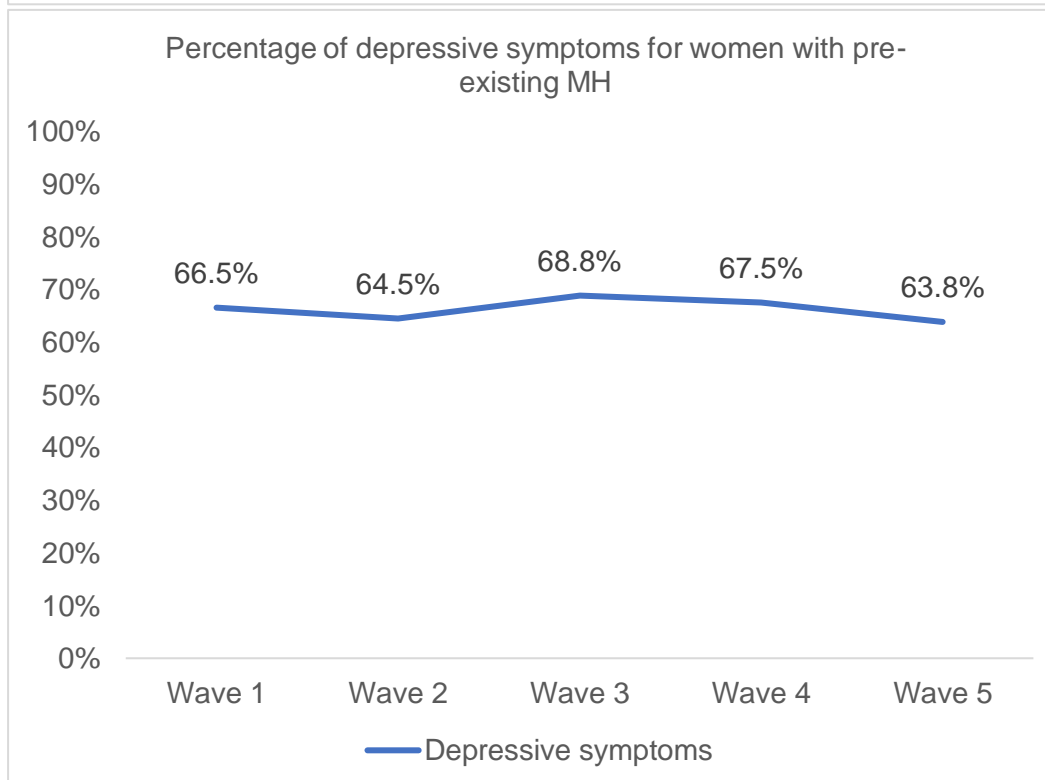
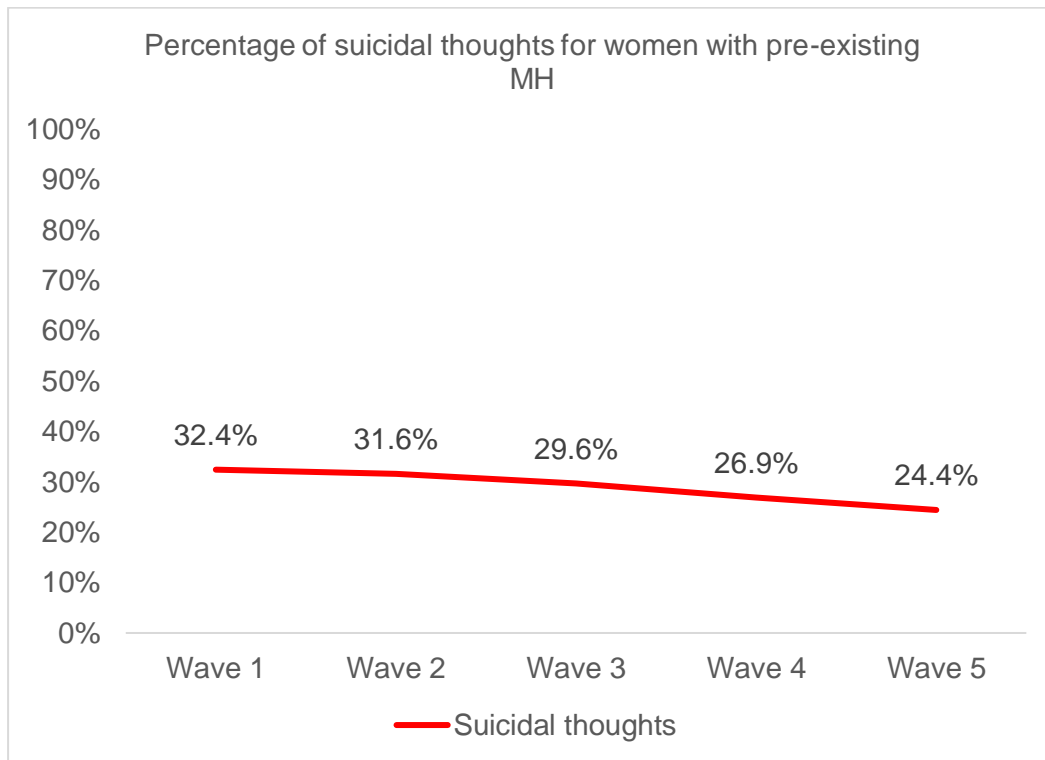
Data shows that women are more likely than men to report and be diagnosed with a mental health condition. For example, the Adult Psychiatric Morbidity Survey (APMS, 2016) reported that one in five women (20.7%) had a common mental disorder (e.g., depression, anxiety) compared with one in eight men (13.2%). Similarly, in the Scottish Health Survey (SHeS, 2019), 19% of women reported having psychiatric symptoms, compared with 15% of men. Therefore, women were more likely to have a pre-existing mental health condition at the start of the COVID-19 pandemic, and this may add to their vulnerability.

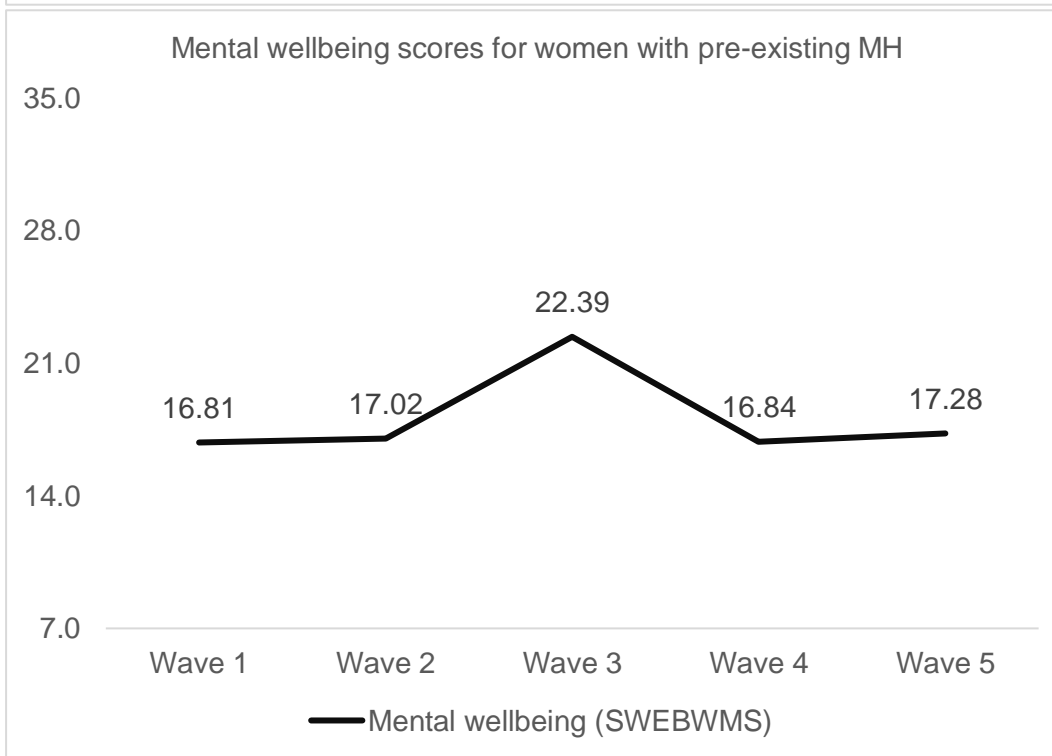
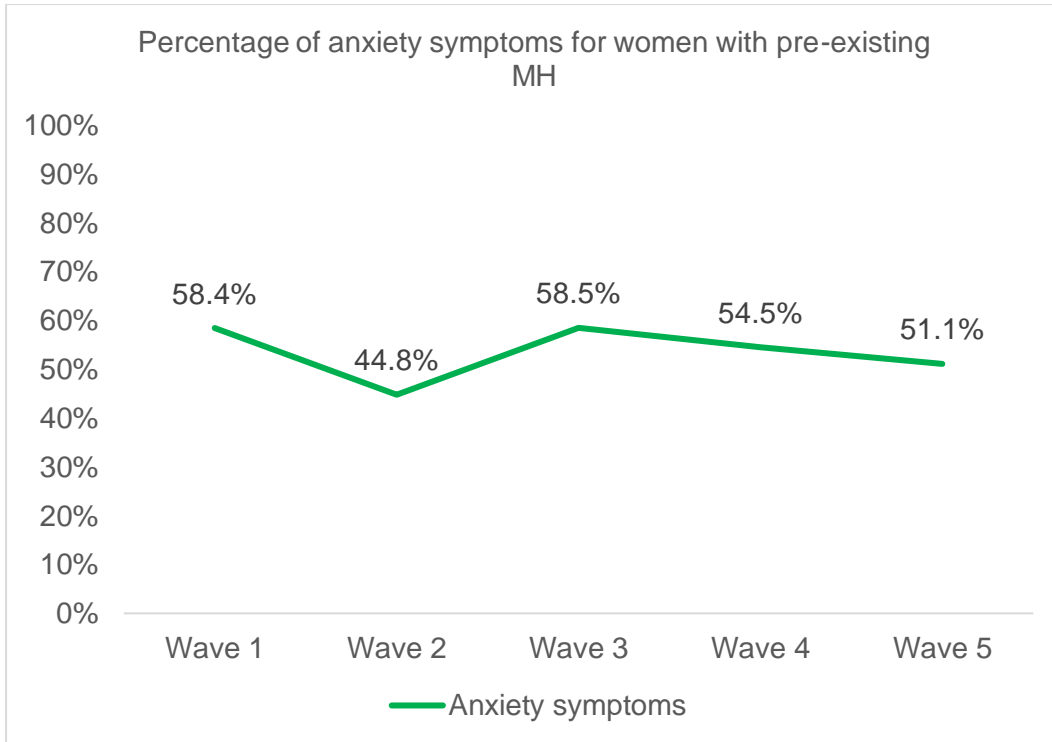
A Wave 5 of the SCOVID study, 53.8% women with a pre-existing mental health condition were in the lower SEG, 63.7% reported their working status had changed (e.g., furloughed, lost job), and 31.8% were key workers. 10.1% had dependents aged under 5 years, and 38.2% had caring responsibilities. 51.9% also had a physical health condition. Compared with women with no mental health condition, women with a mental health condition were more likely to be in the lower SEG, have caring responsibilities, have young dependents and have a physical health condition; these factors may make this group at higher risk of poorer mental health.

Wave 1 to Wave 5 of the SCOVID study suggests that mental health for women with a pre-existing mental health condition was consistently much worse than for women without a pre-existing mental health condition. For example, at Wave 5, 15.6% of women with no pre-existing mental health condition reported depressive symptoms, compared with 63.8% of women with a mental health condition, and this trend is seen for each outcome across the waves (see Annex 4 Table F). Compared with men with a pre-existing mental health condition, women in this group consistently reported higher rates of depressive symptoms and anxiety symptoms across the waves, although rates of suicidal thoughts and levels of mental wellbeing appeared to fluctuate more.

Figure A1.2 displays mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for women with a pre-existing mental health condition across the SCOVID study. Overall, there were no standout trends for women with a pre-existing mental health condition in the mental health outcomes in relation to the COVID-19 restrictions in place. Women did appear to report lower rates of suicidal thoughts, depressive symptoms and anxiety symptoms at Wave 5 (June - July 2021), when restrictions had been eased. The lowest anxiety symptoms were reported at Wave 2 (July – August 2020), which also coincided with the easing of restrictions. In contrast, the highest levels of wellbeing were reported at Wave 3 (October 2020), which coincided with the increasing of restrictions across Scotland.

Figure A1.2 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for women with a pre-existing mental health (MH) condition





A1.3 Men with a pre-existing mental health condition

Although women consistently report higher rates of common mental health disorders than men (APMS, 2016), there is some evidence that men's mental health has been worsening in recent years. For example, the SHeS (2019) found that the proportion of men reporting symptoms of depression and anxiety has increased over surveys, with 9% of men reporting anxiety symptoms in 2016, increasing to 13% in 2019, and 7% reporting depressive symptoms in 2011, rising to 12% in 2019. Further, the monitoring of men's mental health is made more pertinent by the fact that men are approximately three times more likely to die by suicide than women (ScotPHO, 2020).

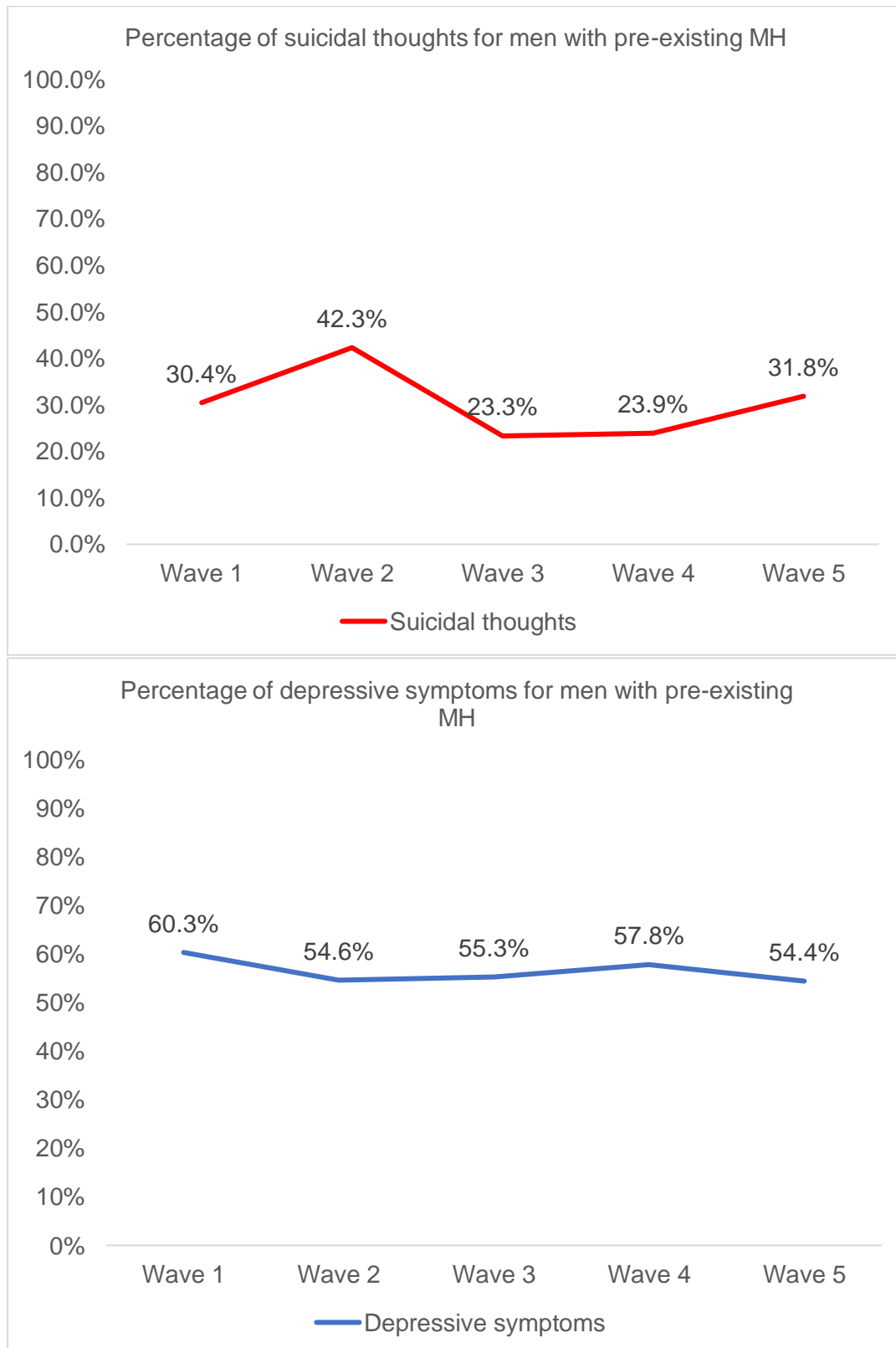
Looking at background factors at Wave 5 of the SCOVID study, 58.9% of men with a pre-existing mental health condition were in the lower SEG, 54.4% reported their working status had changed (e.g., furloughed, lost job), and 26.6% were key workers. 5.1% had dependents aged under 5 years, and 33.5% had caring responsibilities. 51.9% also had a physical health condition. Compared with men with no mental health condition, women with a mental health condition were more likely to be in the lower SEG, have caring responsibilities, and have a physical health condition; these factors may make this group at higher risk of poorer mental health.

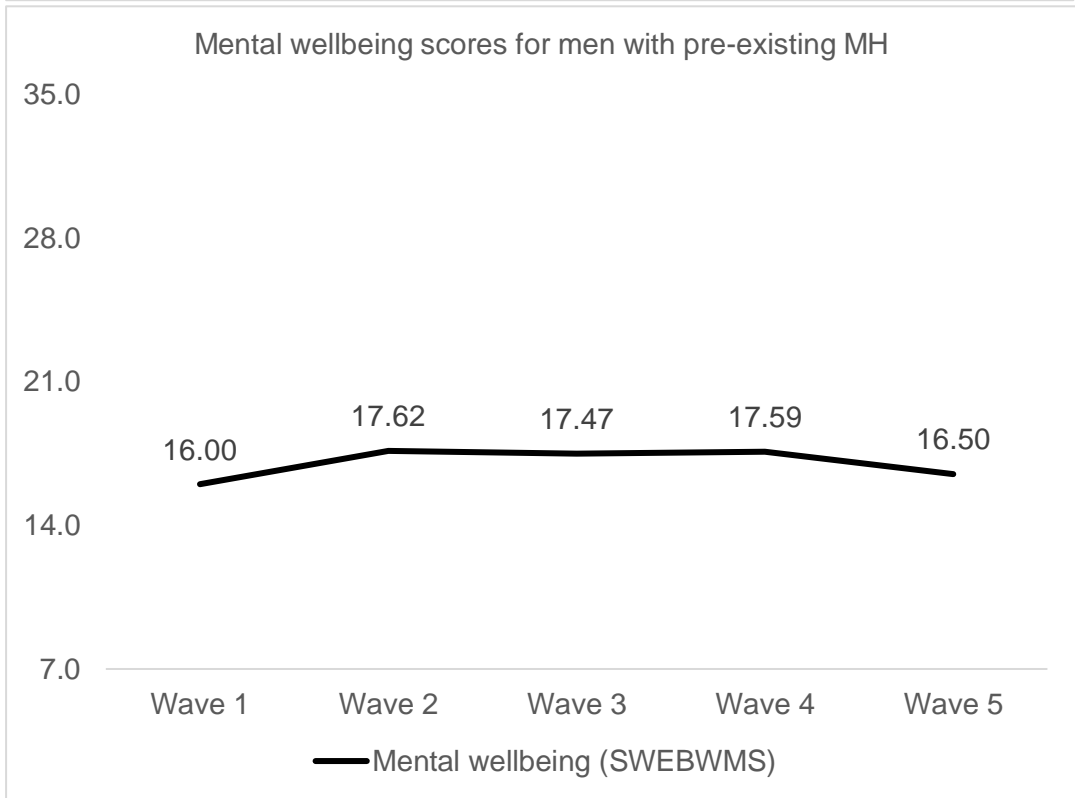
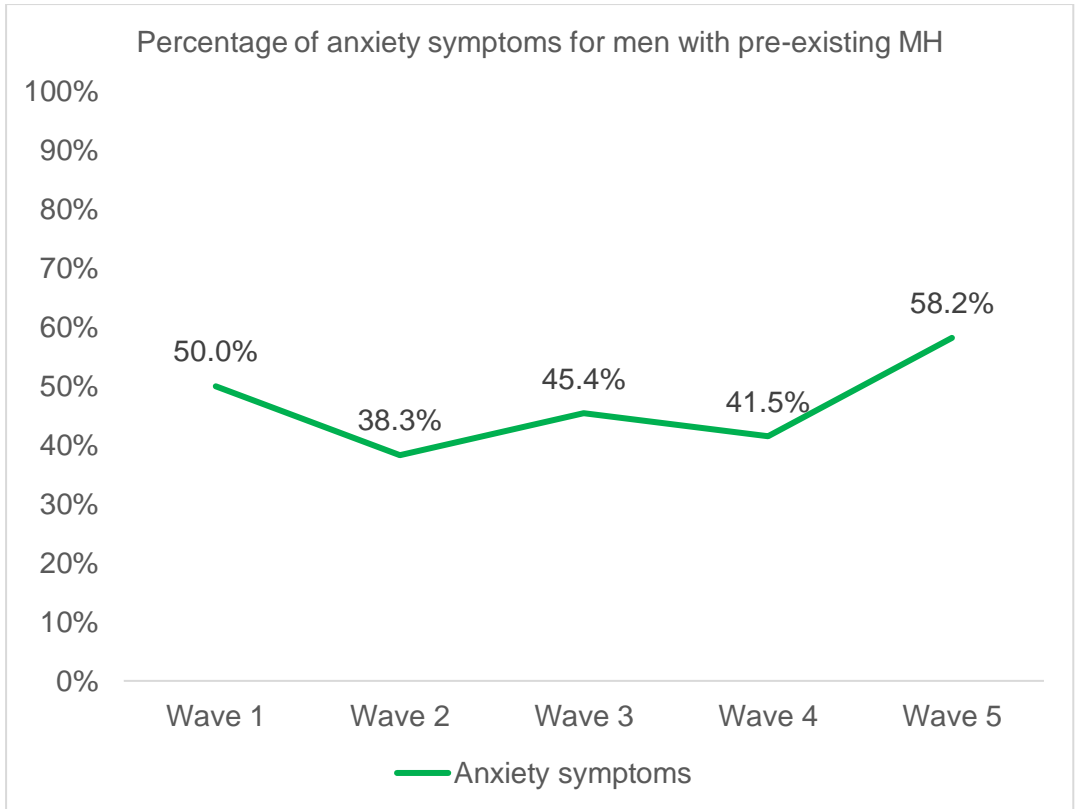
Wave 1 to Wave 5 of the SCOVID study suggests that mental health for men with a pre-existing mental health condition was consistently much worse than for men without a pre-existing mental health condition. For example, at Wave 5, 9.4% of men with no pre-existing mental health condition reported suicidal thoughts, compared with 31.8% of men with a pre-existing mental health condition, and this trend is seen for each outcome across the waves (see Annex 4, Table F). Although women with a pre-existing mental health condition appeared to consistently report higher rates of depressive symptoms and anxiety symptoms across the waves, rates of suicidal thoughts and levels of mental wellbeing fluctuated more. For example, at Wave 2, 42.3% of men with a pre-existing mental health condition reported suicidal thoughts, compared with 31.6% of women in this group, and this trend is found at Wave 5 as well.

Figure A1.3 displays mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for men with a pre-existing mental health condition across the SCOVID study. Similar to women with a pre-existing mental health condition, there were no standout trends in the data in relation to the restrictions in place at each wave. Looking at suicidal thoughts, the highest rates were reported at Wave 2 (July – August 2020) and Wave 5 (June - July 2021), which both coincided with a period of eased restrictions in Scotland. For this group, the highest rate of anxiety symptoms was reported at Wave 5, where levels of wellbeing were also lower than at previous waves. In contrast, the highest rates of depressive symptoms were reported at Wave 1 (May – June 2020) and Wave 4 (February 2021), which were periods of higher restrictions. Therefore, there is some evidence that men with a pre-existing mental health condition reported worse mental wellbeing at times of loosened restrictions, although this is not consistent. As a booster sample was added at Wave 5, these findings should be interpreted with

caution as this is a sample is made up of different participants than at the previous waves.

Figure A1.3 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for men with a pre-existing mental health (MH) condition





A2. Mental health of people with a pre-existing physical health condition

People with a pre-existing physical health condition may be vulnerable to poor mental health and wellbeing during the COVID-19 pandemic, as the pandemic may exacerbate existing health and mental health issues in a population that may be more susceptible to the effects of the COVID-19 virus. Looking at levels of access to health services in the UK, evidence suggests that primary care contacts for almost all conditions dropped considerably after the introduction of population-wide restrictions, and by July 2020 they had not returned to pre-lockdown levels (Mansfield et al., 2021). Further, an international study found the prevalence of anxiety symptoms, depressive symptoms, and stress to be higher in individuals with certain pre-existing chronic health conditions, such as asthma, diabetes, and cardiovascular disease (Sayeed et al., 2020). Therefore, individuals with a pre-existing physical health condition appear to be at high risk for poor mental health and wellbeing.

Across Waves 1 to 5 of the SCOVID study, people with a pre-existing a physical health condition consistently reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no pre-existing physical health condition.

Wave 5 data for those with a pre-existing mental health condition indicates that:

- 12.6% reported suicidal thoughts,
- 36.4% reported moderate to severe depressive symptoms, and
- 27.7% reported moderate to severe anxiety symptoms.

Overall trends suggest specific subgroups may be at higher risk of poorer mental health:

- young adults with pre-existing physical health condition
- women with pre-existing physical health condition
- men with a pre-existing health condition

A2.1 Young adults with a pre-existing physical health condition

As noted in previous sections, young adults appear to be at higher risk of poor mental health and wellbeing during the pandemic, and this may be exacerbated by pre-existing mental and physical health conditions. For example, in a UK study two thirds of young people with a physical or intellectual disability reported a reduction in their physical activity, and the majority said this had an impact on their mental health (Theis et al., 2021).

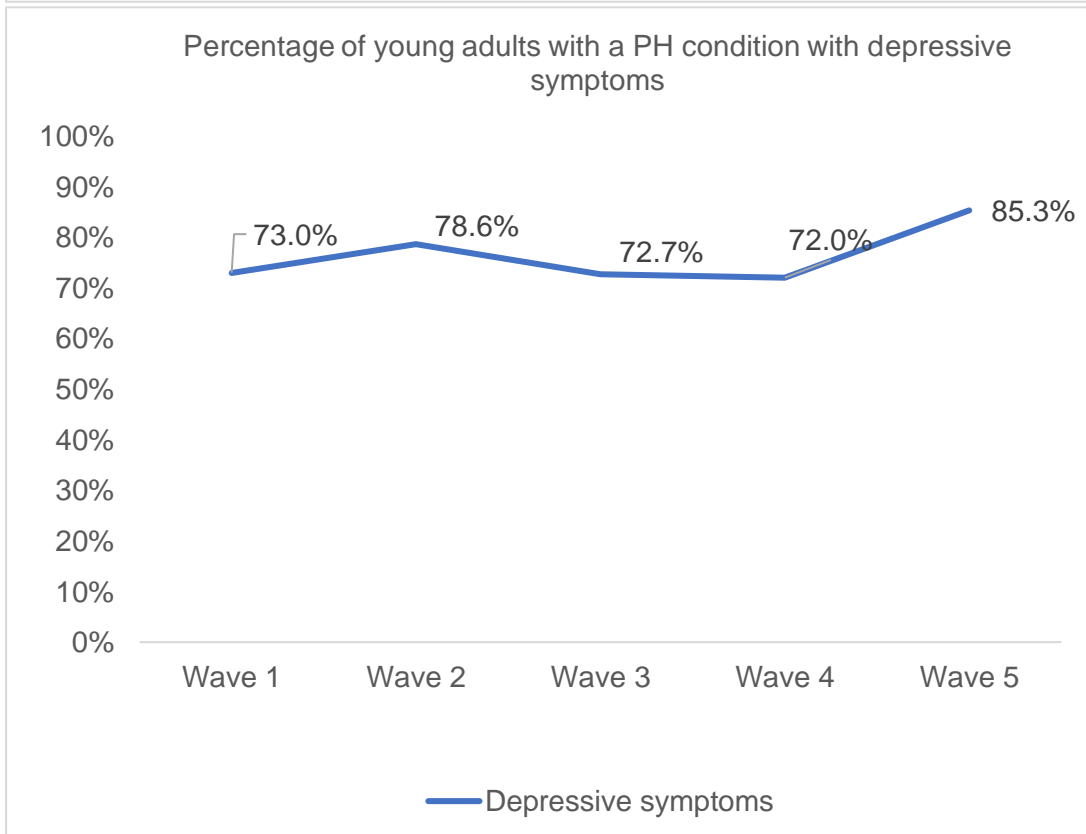
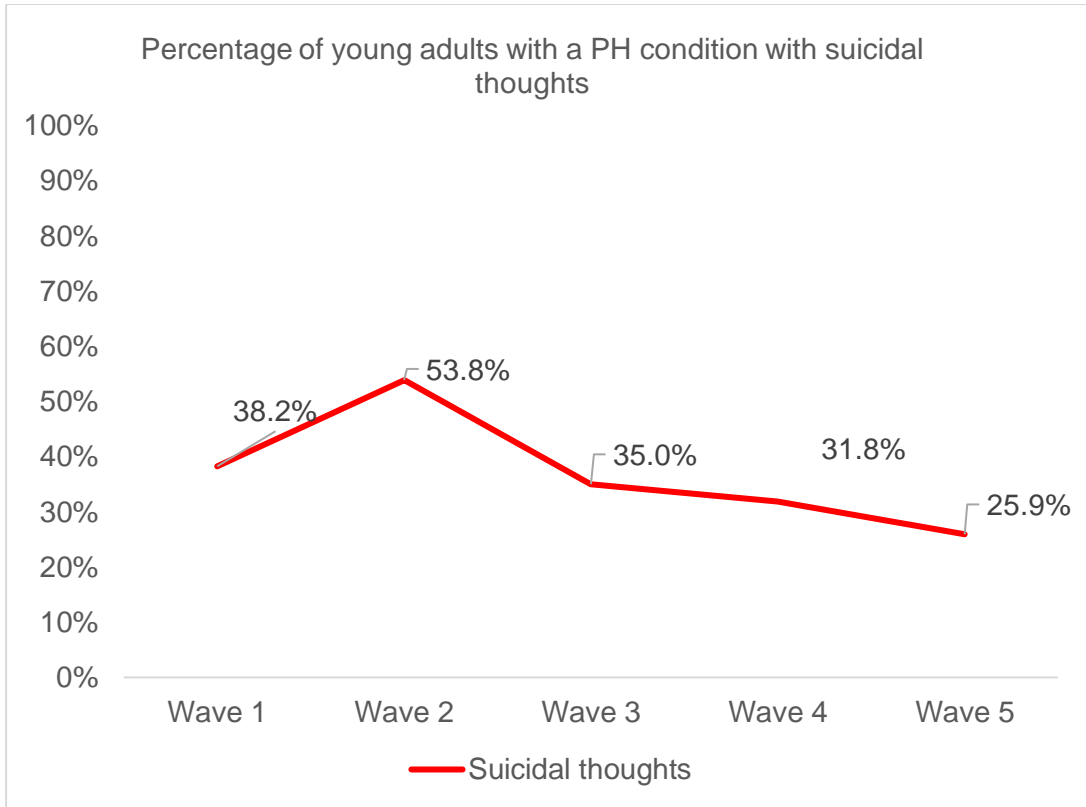
Looking at the background and health of young adults with a pre-existing physical health condition, 39.4% were in the lower SEG, 12.1% reported that their working status had changed (i.e., furloughed, lost job), and 6.1% were key workers. None had dependents under 5 years and 39.4% reported having unpaid caring responsibilities. 79.4% also had a pre-existing mental health condition. Compared with young adults with no physical health condition, young adults with a physical health condition were

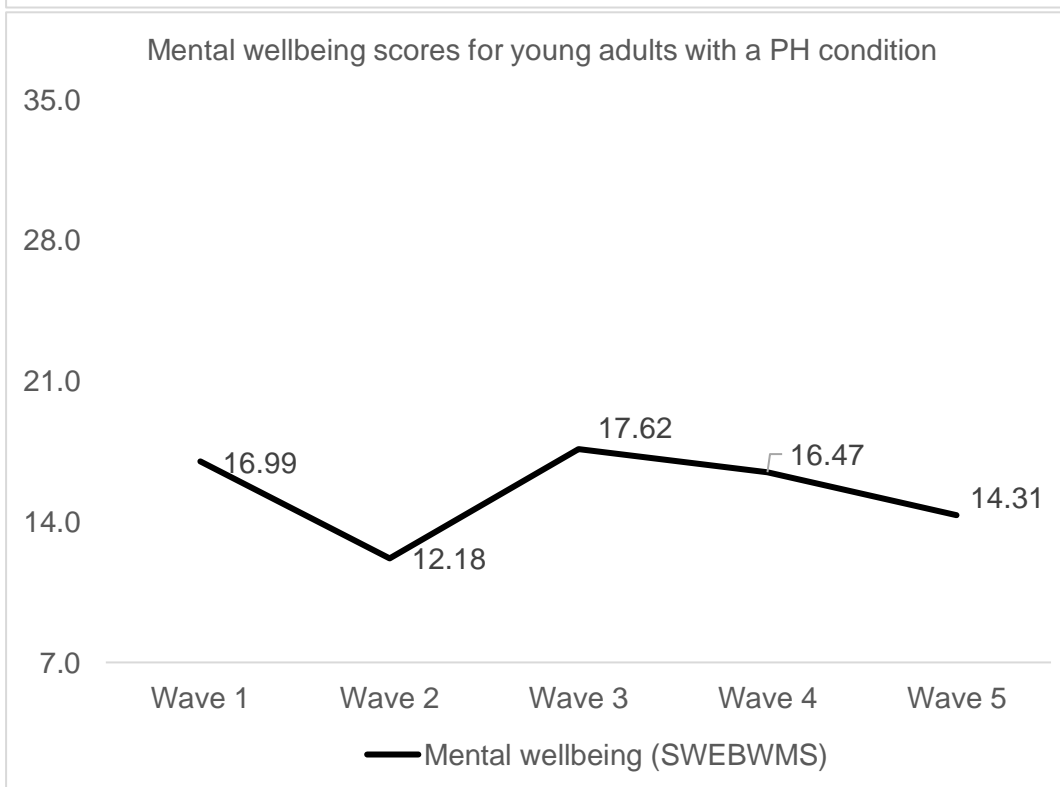
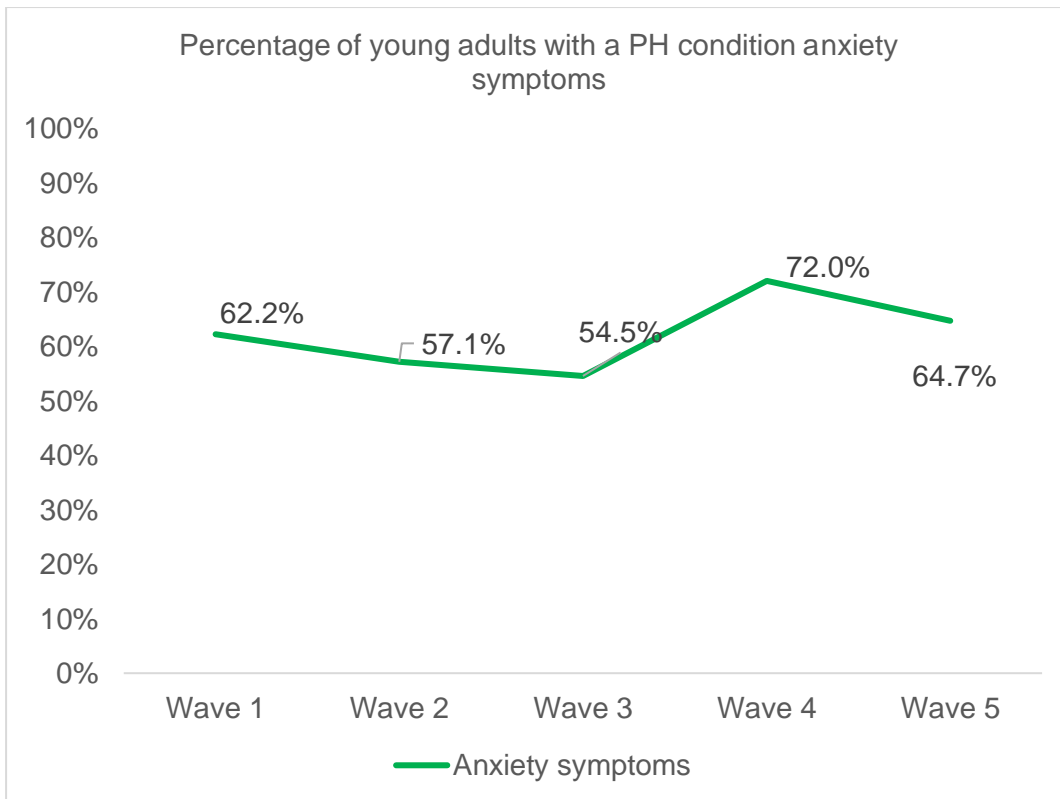
more likely to report a change in their working status and have unpaid caring responsibilities; these factors may make them at higher risk of poor mental health.

Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young people with pre-existing physical health conditions are at higher risk of mental health problems than young adults with no pre-existing physical health condition. For example, at Wave 5 33.2% of young adults with no pre-existing physical health condition reported depressive symptoms, compared with 85.3% of young adults with a health condition. Additionally, at all waves, young adults with a physical health condition reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than their age group counterparts (30-59 years, 60+ years) who also had a pre-existing physical health condition.

Figure A2.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young adults with a pre-existing physical health condition across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, young adults with a pre-existing physical health condition reported the highest rates of suicidal thoughts and lowest levels of mental wellbeing at Wave 2 (July – August 2020), a time that coincided with the reduction of restrictions in Scotland. Additionally, the highest rates of depressive symptoms were found at Wave 5 (June - July 2021), when restrictions had also been eased. This suggests that this group reported poorer mental health when restrictions were eased in Scotland. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves.

Figure A2.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for young adults with a pre-existing physical health (PH) condition





A2.2 Women with a pre-existing physical health condition

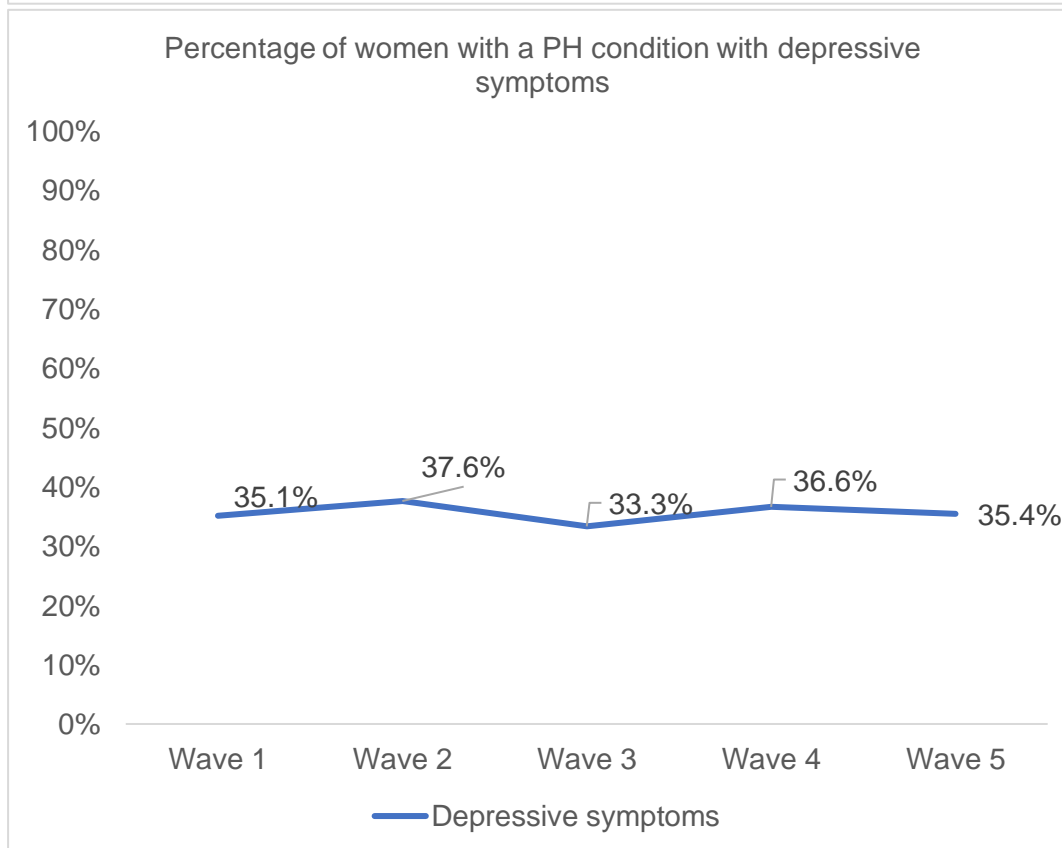
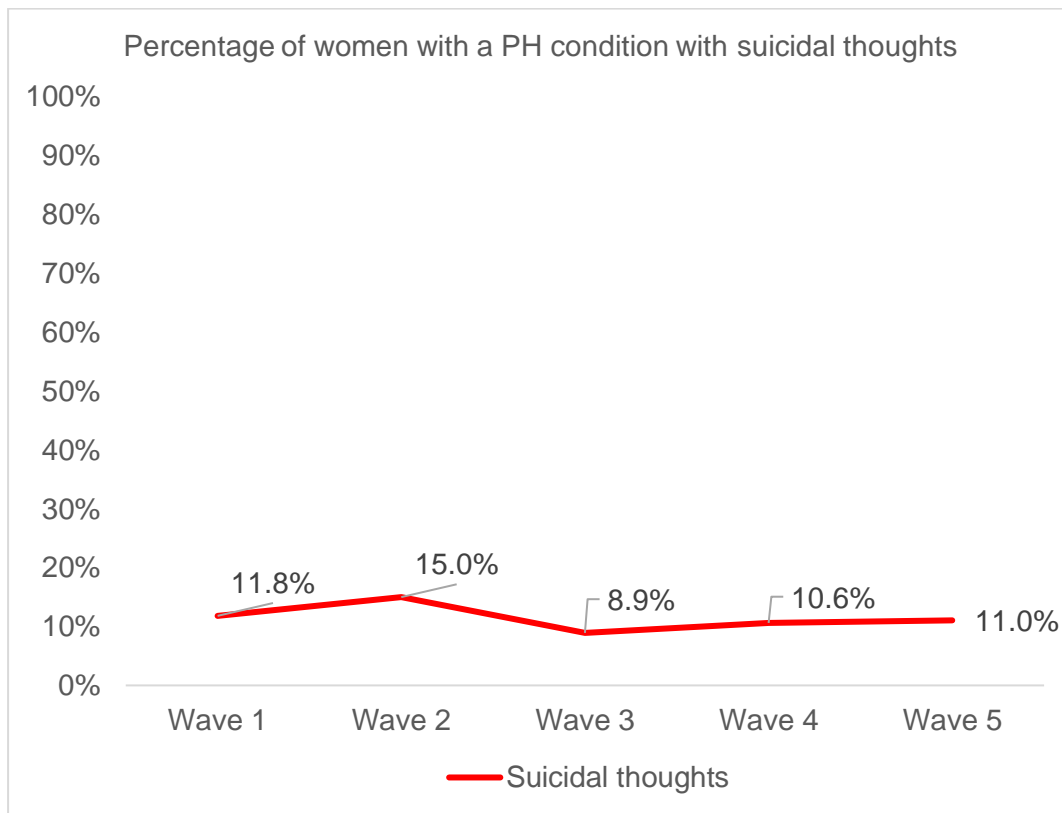
Women appear to be at higher risk for poor mental health during the COVID-19 pandemic, and there is evidence in the UK of a disproportionate effect on women's mental wellbeing than men (Etheridge & Spantig, 2020). Further, when it comes to the impact of COVID-19 upon health, there is evidence that women may be at higher risk for longer term symptoms due to the increased rates of inflammatory conditions in women compared men (Torjesen, 2021).

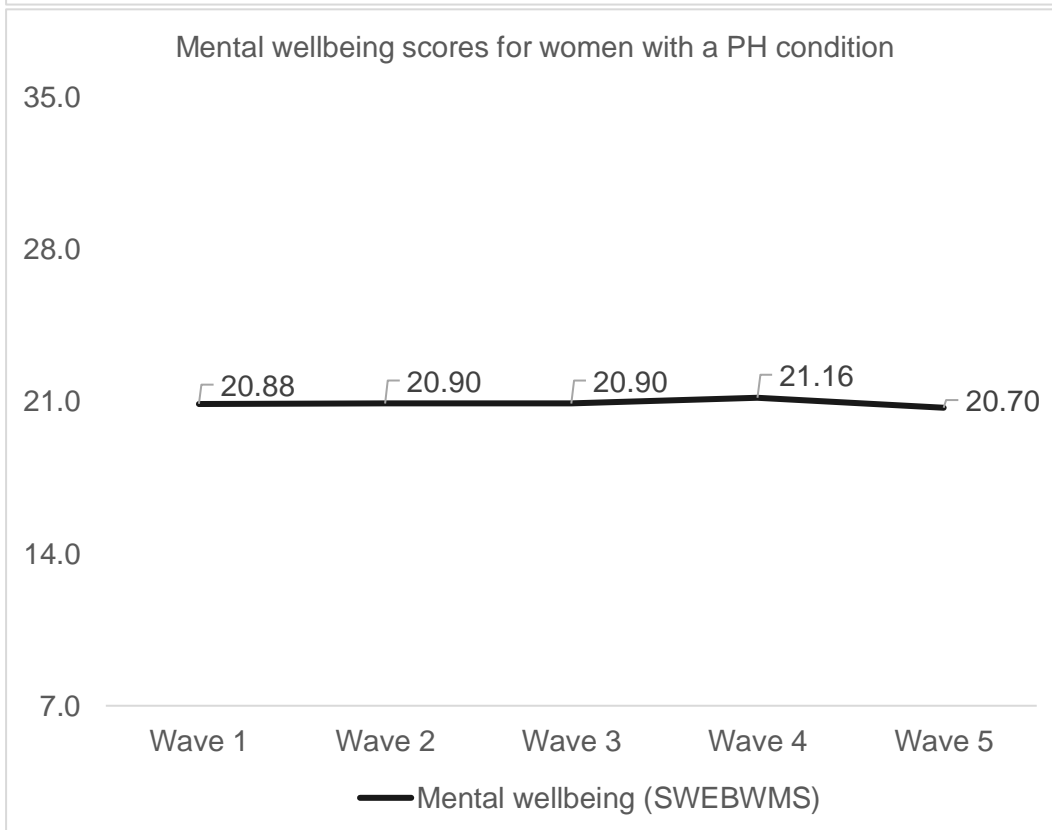
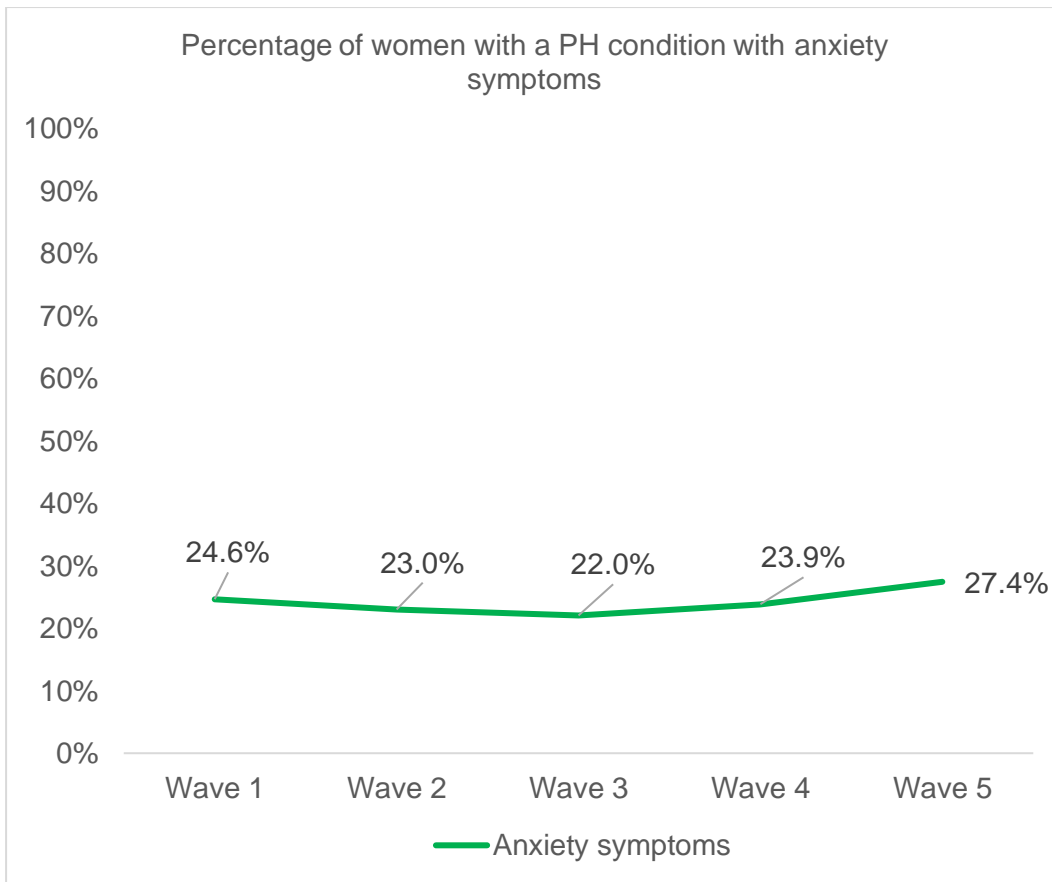
Looking at the background and health of women with a pre-existing physical health condition, 44.4% were in the lower SEG, 75.3% reported that their working status had changed (i.e., furloughed, lost job), and 10.8% were key workers. 2.8% had dependents under 5 years and 23.6% reported having unpaid caring responsibilities. 35.1% also had a pre-existing mental health condition. Compared with women with no physical health condition, those with a health condition were more likely to be in the lower SEG, report a change to working status, have caring responsibilities, and have a mental health condition, factors which may make them more vulnerable to poorer mental health.

Looking across the study waves, mental health outcomes for women with a pre-existing physical health condition were consistently worse than for women without a pre-existing physical health condition. For example, at Wave 5, 18.8% of women with no pre-existing health condition reported depressive symptoms, compared with 35.4% of women with a pre-existing health condition, and this trend is seen for each outcome across the waves (see Annex 4 Table F). Compared with men with a pre-existing physical health condition, women in this group tended to report higher rates of depressive symptoms and anxiety symptoms across the waves, although overall men reported higher rates of suicidal thoughts and lower levels of mental wellbeing.

Figure A2.2 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for women with a pre-existing physical health condition across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, women with a pre-existing physical health condition reported the highest rates of suicidal thoughts and depressive symptoms at Wave 2 (July – August 2020), a time that coincided with the easing of restrictions in Scotland. The highest rates of anxiety symptoms and lowest mental wellbeing was found at Wave 5 (June - July 2021), when restrictions had also been eased. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves. Additionally, the lowest rates of suicidal thoughts, depressive symptoms and anxiety symptoms were reported at Wave 3 (October 2020), when restrictions were being gradually increased.

Figure A2.2 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for women with a pre-existing physical health (PH) condition





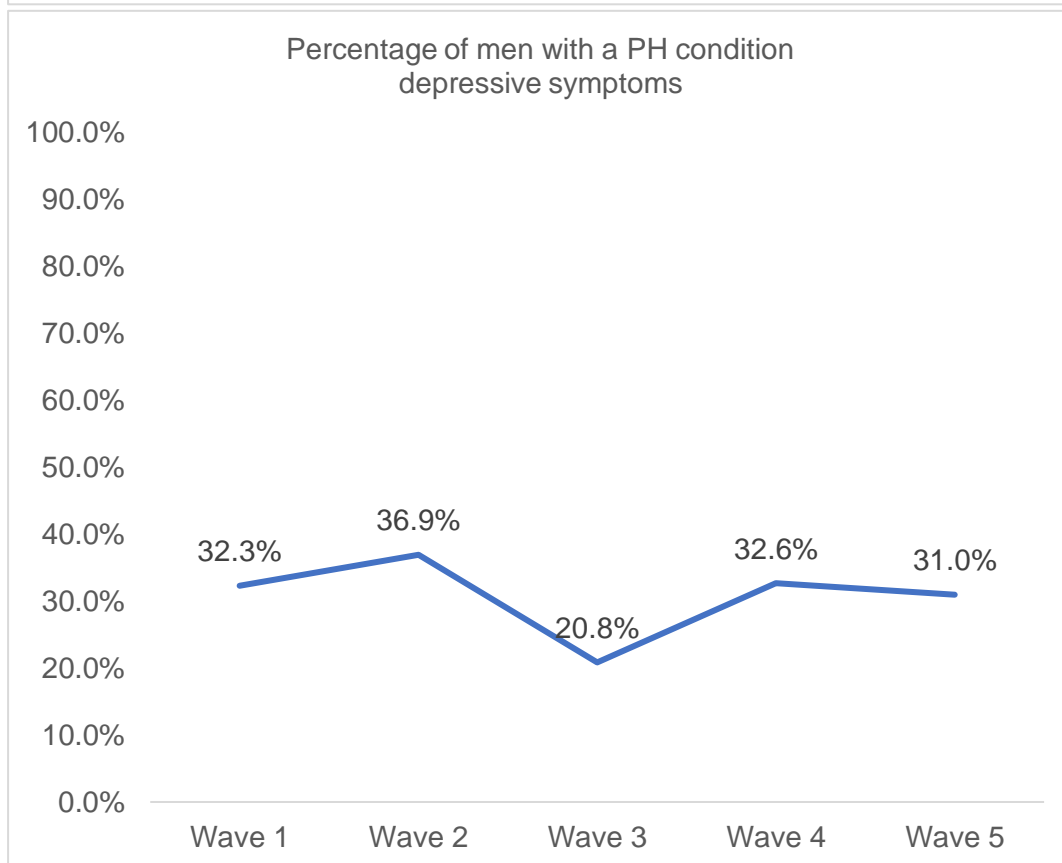
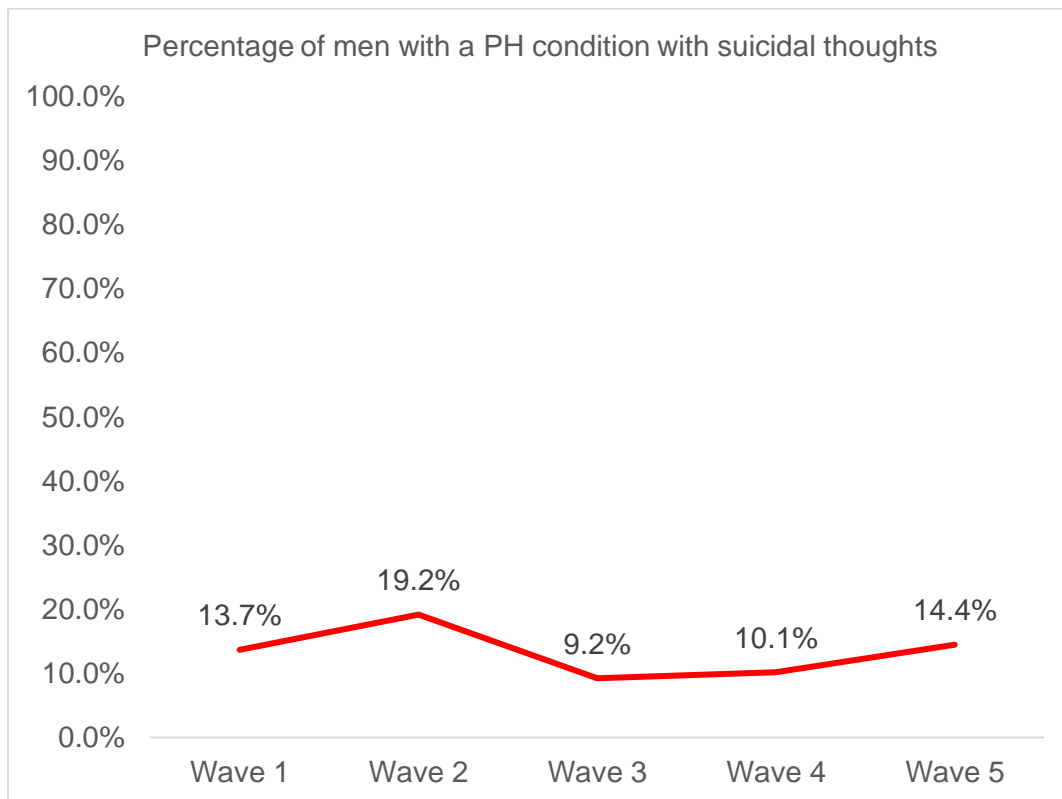
A2.3 Men with a pre-existing physical health condition

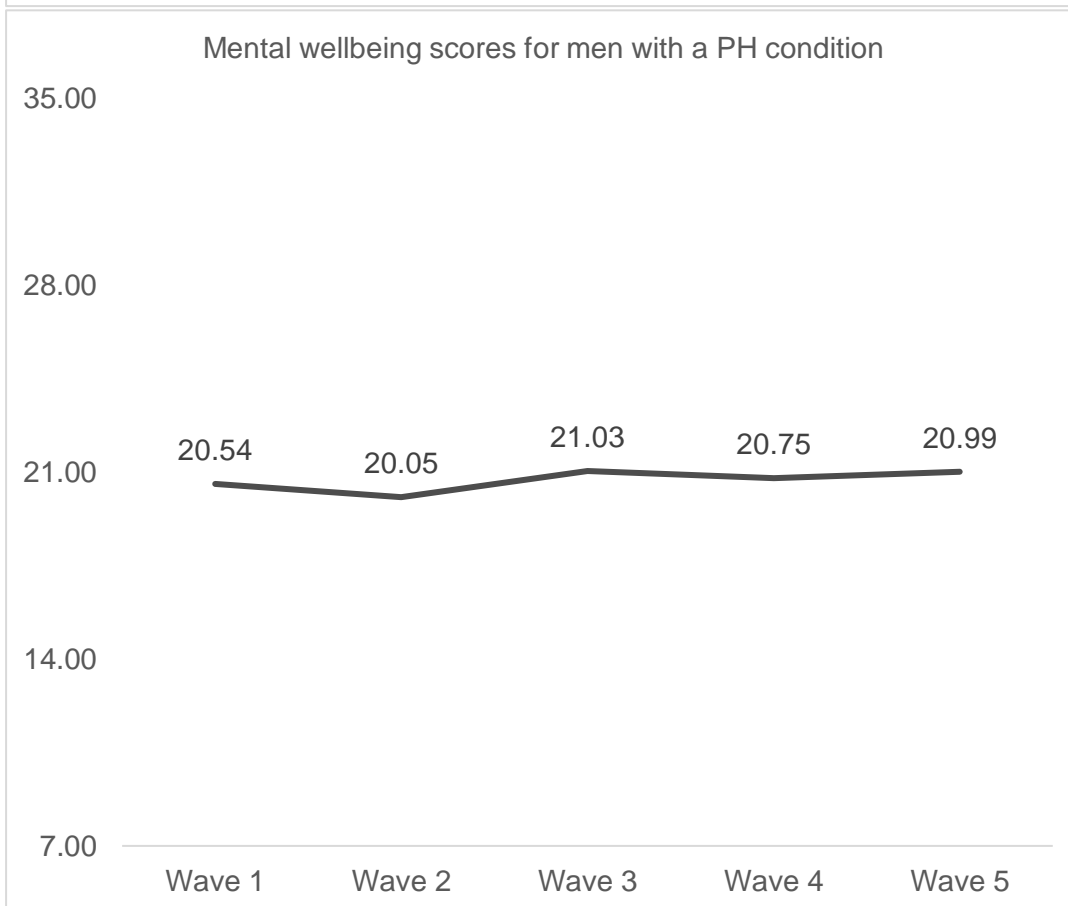
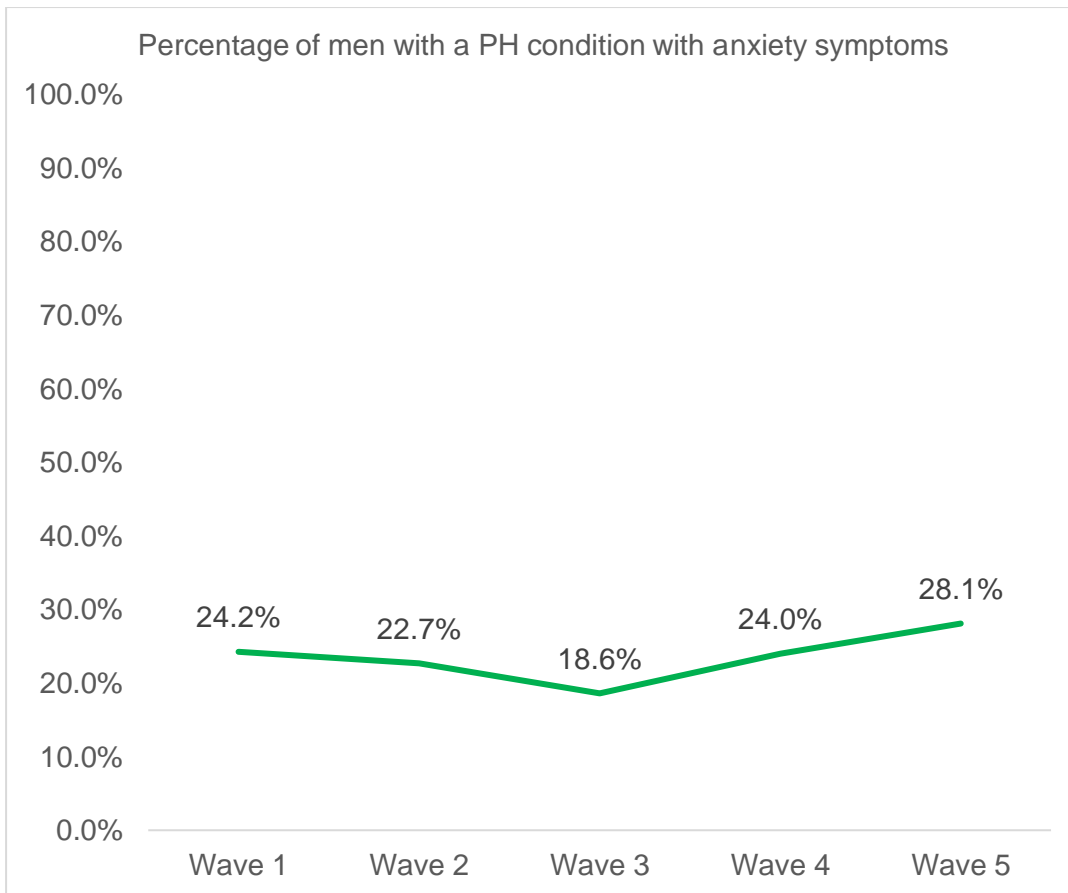
Looking at the background and health of men with a pre-existing physical health condition, 45.7% were in the lower SEG, 75.2% reported that their working status had changed (i.e., furloughed, lost job), and 13.8% were key workers. 1.0% had dependents under 5 years at home and 23.8% reported having additional caring responsibilities. 39.2% also had a pre-existing mental health condition. Compared with men with no physical health condition, those with a health condition were more likely to be in the lower SEG, report a change to working status, have caring responsibilities, and have a mental health condition, factors which may make them more vulnerable to poorer mental health.

Looking across the study waves, mental health outcomes for men with a pre-existing physical health condition was consistently worse than for men without a pre-existing physical health condition. For example, at Wave 5, 14.3% of men with no pre-existing health condition reported anxiety symptoms, compared with 28.1% of men with a pre-existing health condition, and this trend is seen for each outcome across the waves (see Annex 4 Table F). Compared with women with a pre-existing physical health condition, men in this group tended to reported higher rates of suicidal thoughts and lower levels of mental wellbeing across the waves, although women reported higher rates of depressive and anxiety symptoms.

Figure A2.3 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for men with a pre-existing physical health condition across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, men with a pre-existing physical health condition reported the highest rates of suicidal thoughts, depressive symptoms and lowest mental wellbeing at Wave 2 (July – August 2020), a time that coincided with the reduction of restrictions in Scotland. The highest rates of anxiety symptoms were found at Wave 5 (June - July 2021), when restrictions had also been eased. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves. Similar to women with a physical health condition, the lowest rates of suicidal thoughts, depressive symptoms, and anxiety symptoms where at Wave 3 (October 2020), when restrictions were being increased in Scotland.

Figure A2.3 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for men with a pre-existing physical health (PH) condition





A3. Mental health of people with unpaid caring responsibilities

Pre-pandemic evidence suggests that carers report poorer mental health than non-carers, including high levels of stress, anxiety and depression (Carers UK, 2015). Research conducted in the UK during the COVID-19 pandemic suggested that carers of those with intellectual disabilities had significantly greater levels of anxiety, depression, and feelings of defeat and entrapment, with evidence that differences higher than pre-pandemic levels (Willner et al., 2020).

Across Waves 1 to 5 of the SCOVID study, people who had unpaid caring responsibilities reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no caring responsibilities.

Wave 5 data for those with unpaid caring responsibilities indicates that:

- 17.1% reported suicidal thoughts,
- 33.9% reported moderate to severe depressive symptoms, and
- 25.5% reported moderate to severe anxiety symptoms.

Overall trends suggest specific subgroups may be at higher risk of poorer mental health:

- young adults with caring responsibilities
- women with caring responsibilities

A3.1 Young adults with unpaid caring responsibilities

As noted in previous sections, young adults appear to be at higher risk of poor mental health and wellbeing during the pandemic. In the UK, the Carers Trust conducted a survey into the impact of COVID-19 upon young adult carers. They found that 59% of young adult carers say their mental health is worse since the pandemic, 78% are more worried about the future, 74% are feeling more stressed (Carers Trust, 2020).

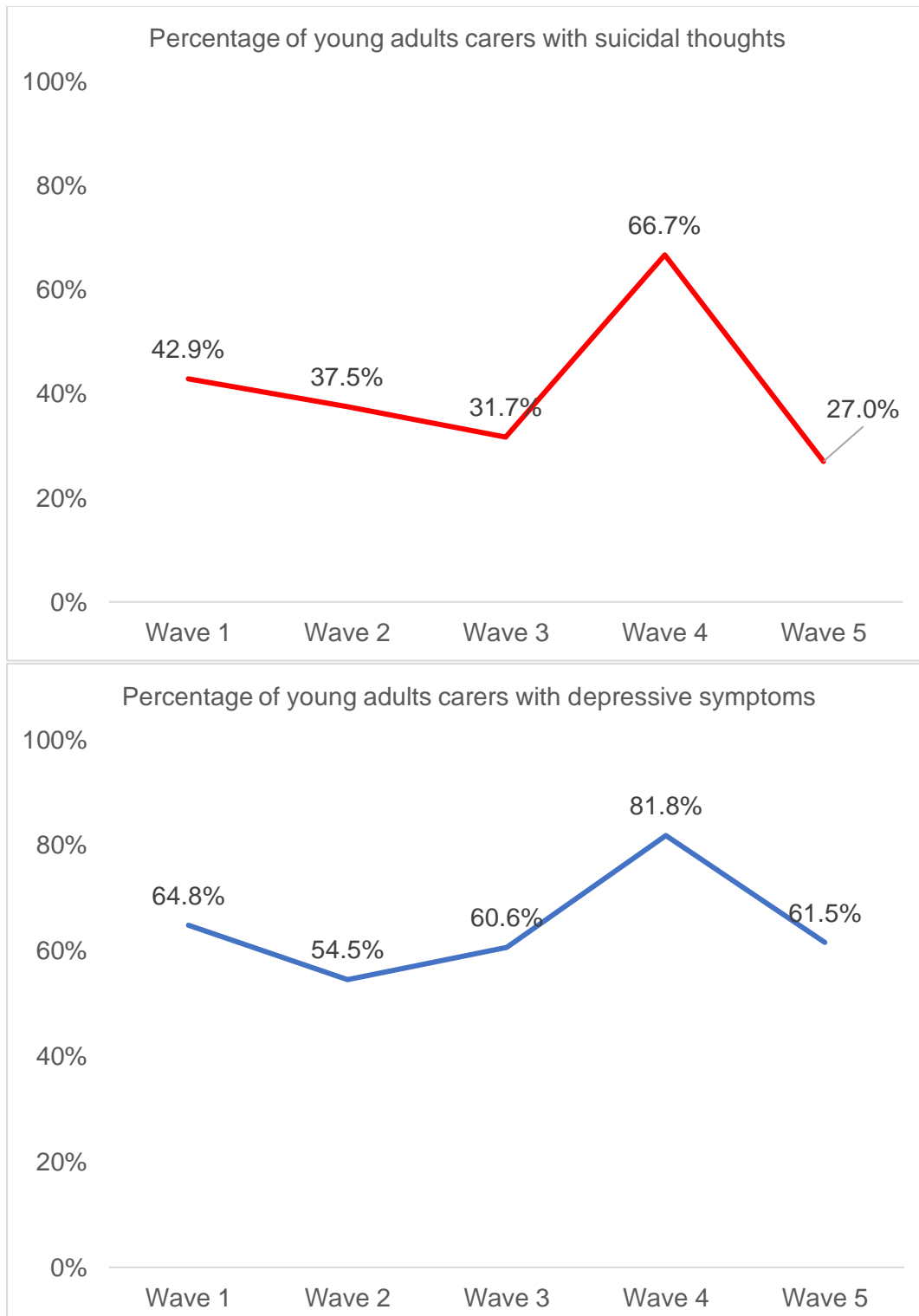
Looking at the background and health of young adults with unpaid caring responsibilities, 50.0% were in the lower SEG, 25.6% reported that their working status had changed (i.e., furloughed, lost job), and 46.2% were key workers. 9% had dependents under 5 years at home. 37.2% had a pre-existing mental health condition and 16.7% had a pre-existing physical health condition. Compared with young adults with no unpaid caring responsibilities, young carers were more likely to be in the lower SEG, report a change to working status, be a key worker, and have a mental health condition; these factors may make them more vulnerable to poorer mental health.

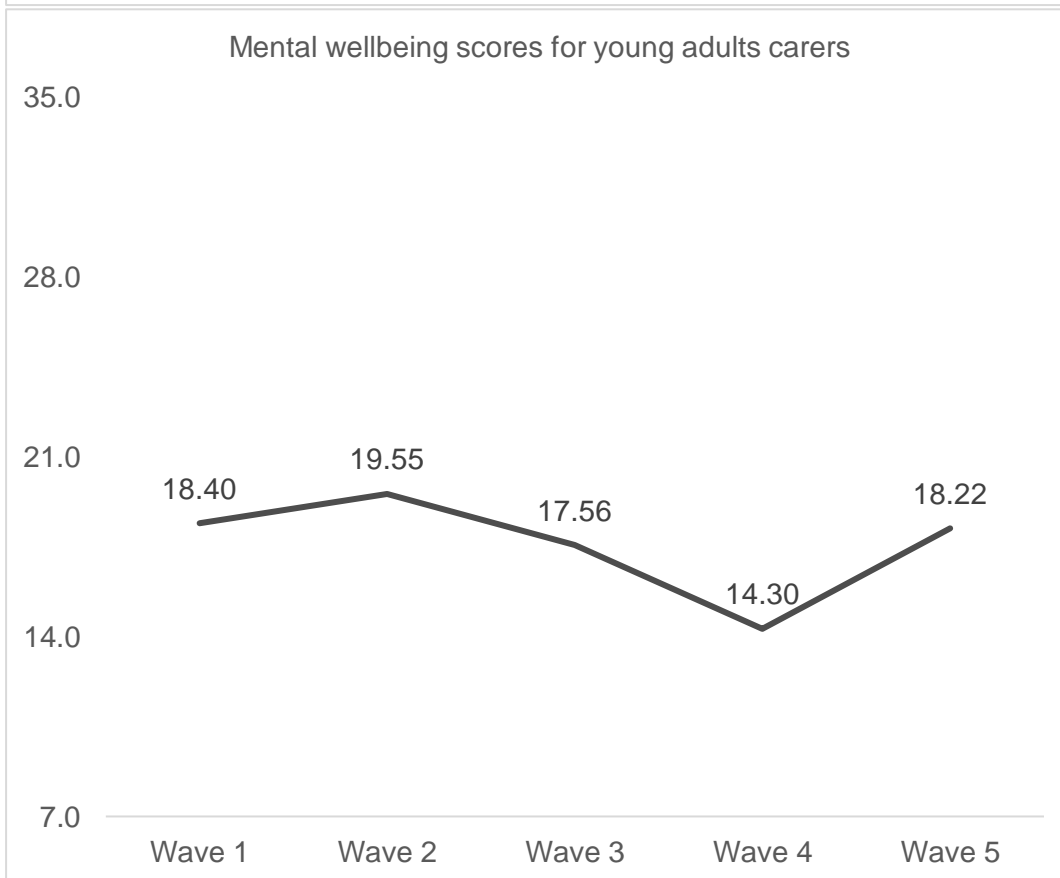
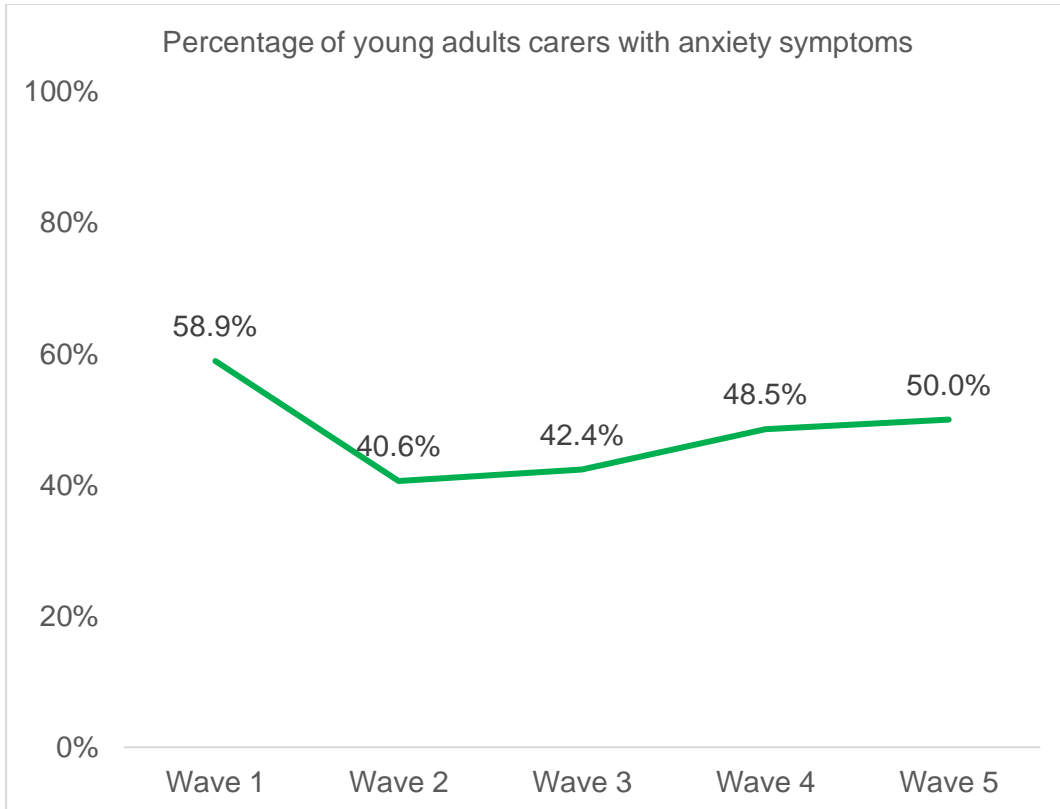
Findings from Wave 1 to Wave 5 of the SCOVID study suggest that young people with caring responsibilities are at higher risk of mental health problems than young adults with no caring responsibilities. For example, at Wave 5 32.3% of young adults with no caring responsibilities reported depressive symptoms, compared with 61.5%

of young adults with caring responsibilities (see Annex 4 Table F). Additionally, at all waves, young adults with caring responsibilities reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than their age group counterparts (30-59 years, 60+ years) who also had caring responsibilities.

Figure A3.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young adults with caring responsibilities across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, young adults with caring responsibilities reported the highest rates of suicidal thoughts, depressive symptoms, and lowest levels of mental wellbeing at Wave 4 (February 2021), a time that coincided with a national lockdown. Additionally, the highest rates of anxiety symptoms were found at Wave 1 (May - June 2020), when restrictions were beginning to be eased from the first lockdown. The lowest rates of poor mental health were reported at Wave 2 (July 2020) and Wave 5 (June - July 2021), both periods with eased restrictions. Therefore, it appears the mental health of young carers was worst during periods of lockdown and higher restrictions, and better during periods of eased restrictions.

Figure A3.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for young adults with unpaid caring responsibilities





A3.2 Women with unpaid caring responsibilities

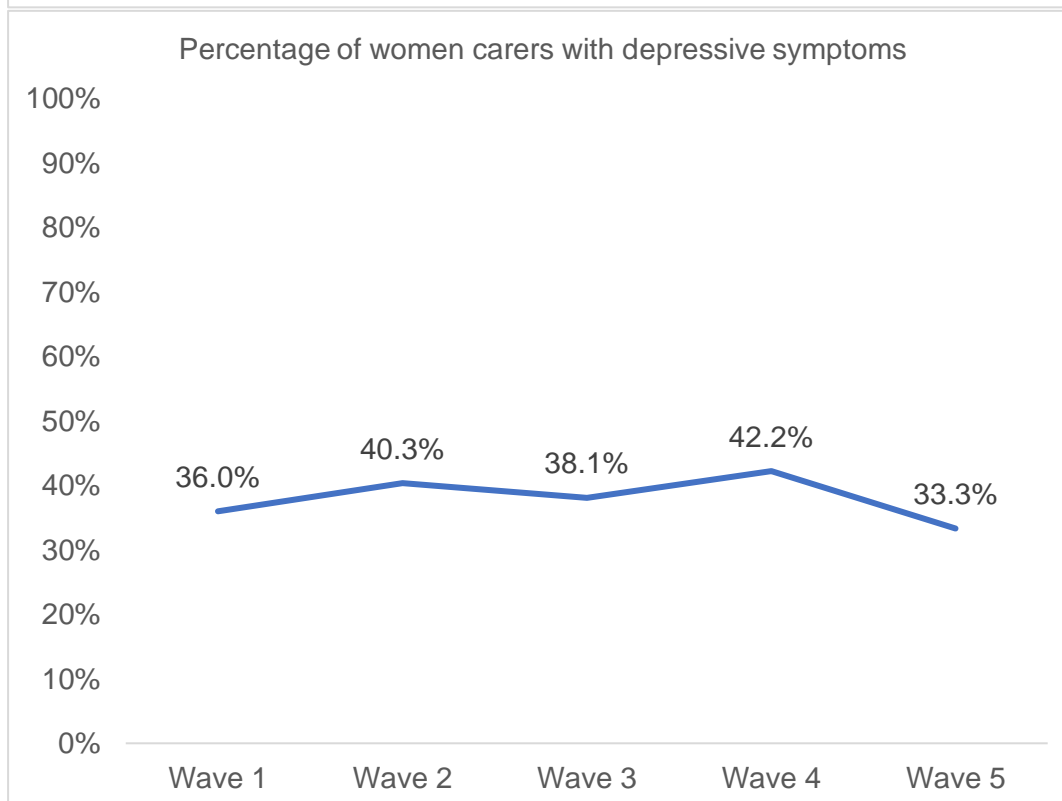
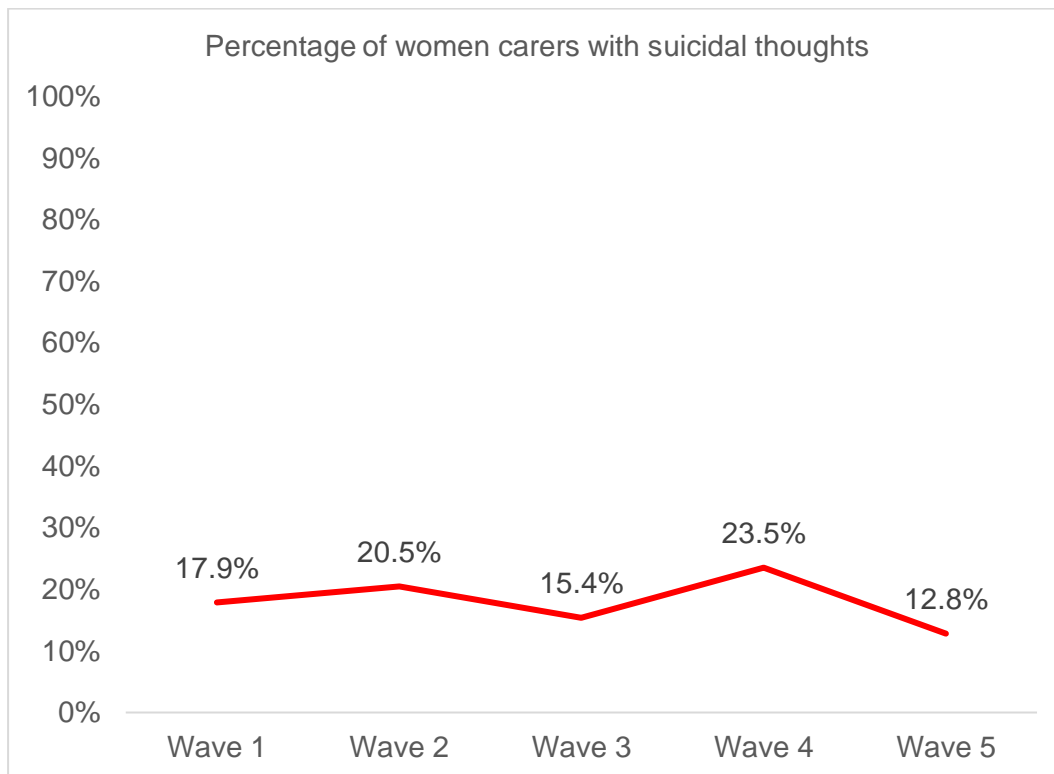
Overall, in the UK women were more likely to take on caring roles than men before the pandemic (Carers UK). Emerging research worldwide suggests that the crisis and its subsequent shutdown response have resulted in an increase in this burden (Power, 2020). Therefore, women carers may be at risk of worse mental health and wellbeing during the COVID-19 pandemic.

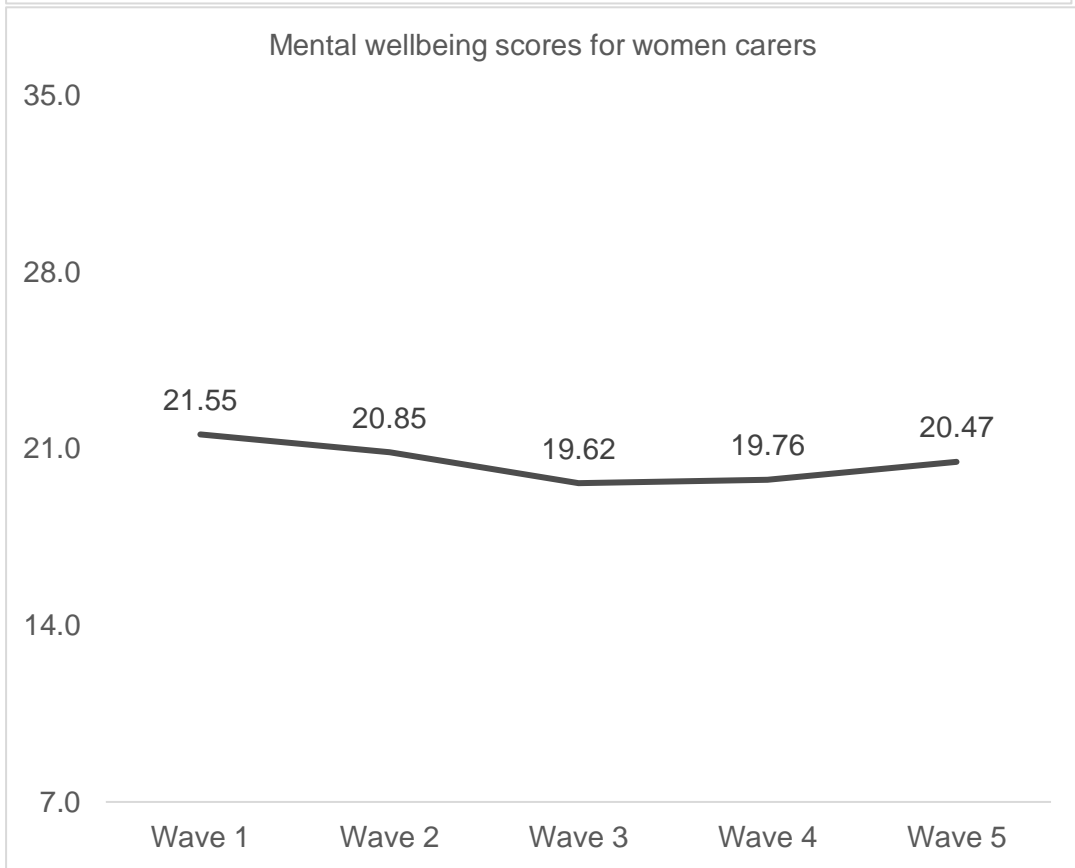
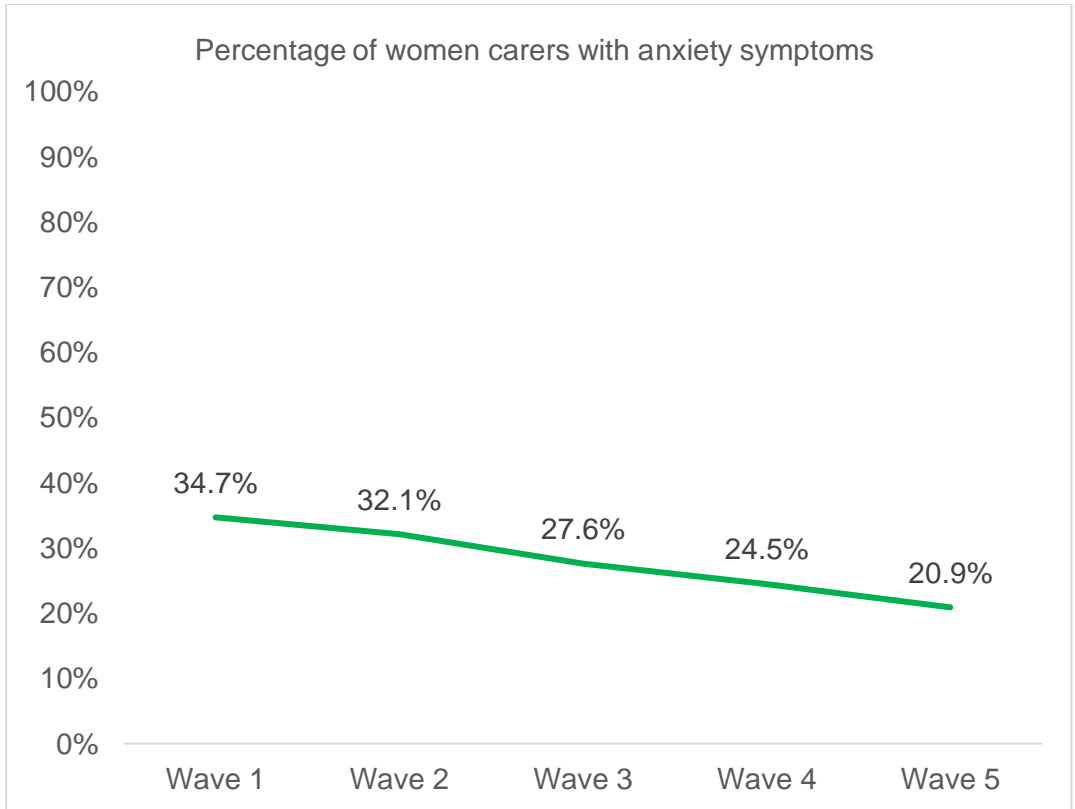
Looking at the background and health of women with unpaid caring responsibilities, 41.1% were in the lower SEG, 55.6% reported that their working status had changed (i.e., furloughed, lost job), and 28.8% were key workers. 7.9% had dependents under 5 years at home. 23.2% had a pre-existing mental health condition and 27.3% had a pre-existing physical health condition. Compared with women with no unpaid caring responsibilities, women carers were more likely to be a key worker, have a mental health condition, and have a physical health condition, factors which may make them more vulnerable to poorer mental health.

Findings from Wave 1 to Wave 5 of the SCOVID study suggest that women with unpaid caring responsibilities are at higher risk of mental health problems than women with no unpaid caring responsibilities. For example, at Wave 5, 19.9% of women with no caring responsibilities reported depressive symptoms, compared with 33.3% of women with caring responsibilities (see Annex 4 Table F). Additionally, at most waves women with caring responsibilities reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than men who also had caring responsibilities. The main exception was at Wave 5, when men with caring responsibilities reported higher suicidal thoughts, depressive symptoms, and anxiety symptoms.

Figure A3.2 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young adults with caring responsibilities across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, women with caring responsibilities reported the highest rates of suicidal thoughts and depressive symptoms at Wave 4 (February 2021), a time that coincided with a national lockdown. Additionally, the highest rates of anxiety symptoms were found at Wave 1 (May - June 2020), when restrictions were beginning to be eased from the first lockdown. The lowest rates of poor mental health tended to be reported at Wave 5 (June - July 2021), a period with eased restrictions. Therefore, it appears the mental health of women carers was worst during periods of lockdown and higher restrictions, and better during a period of eased restrictions. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample made up of different participants than at the previous waves.

Figure A3.2 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for women with unpaid caring responsibilities





A4. Mental health of people with dependents under 5 years old

A survey in the UK by Young Minds found that 66% of parents said that the COVID-19 pandemic had had a negative impact on their own mental health (Young Minds, 2020). Evidence from the Co-Space study in the UK found that parents who had younger children living in the home reported high levels of stress symptoms during the first lockdown and around a third were stressed by their children's behaviour at that time (Shum et al., 2021).

Across Waves 1 to 5 of the SCOVID study, people who had dependents under 5 years tended to report higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people with no dependents under 5 years.

Wave 5 data for those with young dependents (under 5 years) indicates that:

- 11.9% reported suicidal thoughts,
- 27.4% reported moderate to severe depressive symptoms, and
- 18.8% reported moderate to severe anxiety symptoms.

As the sample sizes for young adults with young dependents were small, it was not possible to explore trends for young adults over the waves. For the sex subgroups, trends suggest women with dependents under 5 years were at risk of poorer mental health.

A4.1 Women with dependents under 5 years

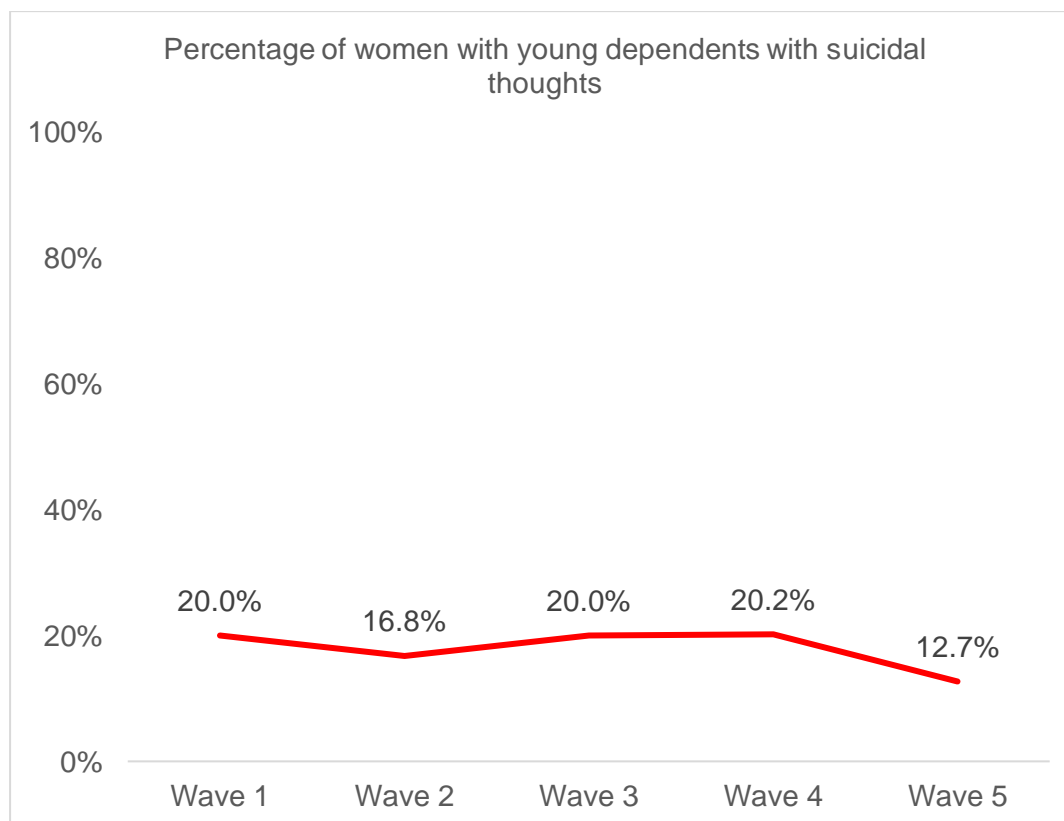
In the UK, evidence suggests that women carried out more daily childcare duties than men during lockdown, as women averaged more than three hours a day compared with two hours for men (ONS, 2020). Therefore, women with young dependents may be at risk of worse mental health and wellbeing during the COVID-19 pandemic.

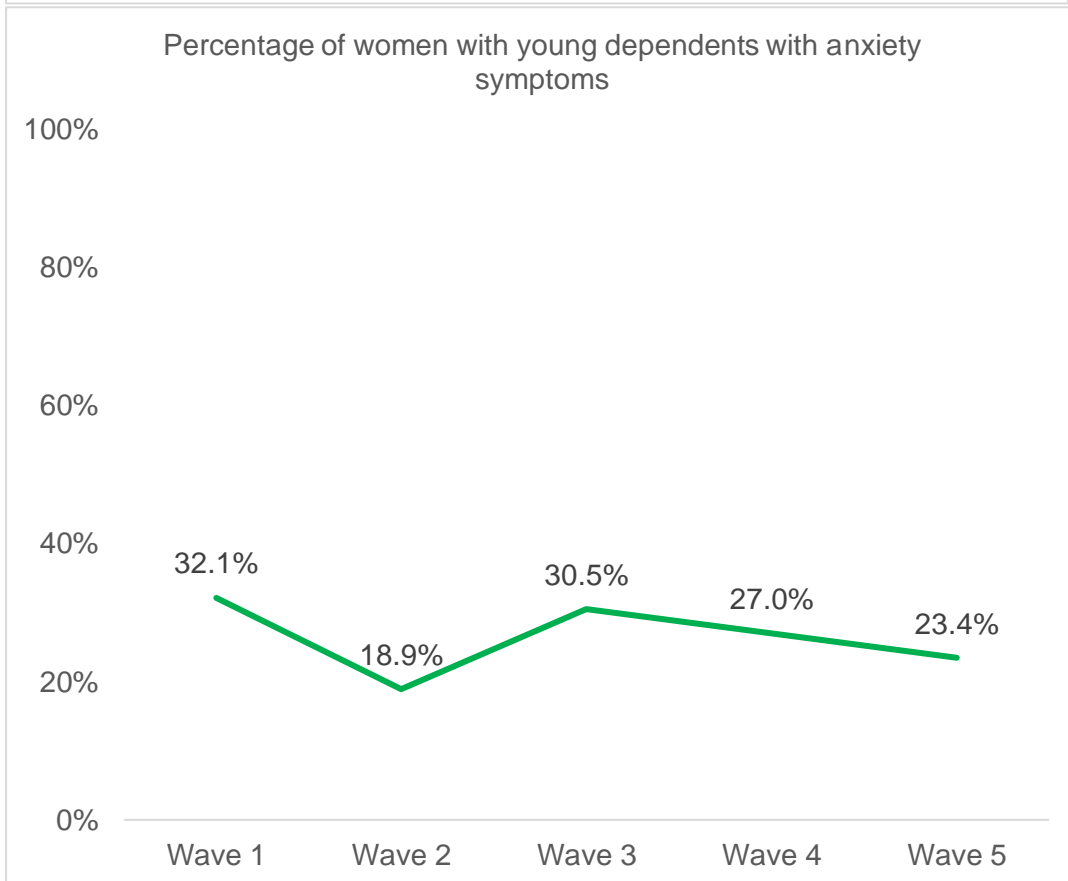
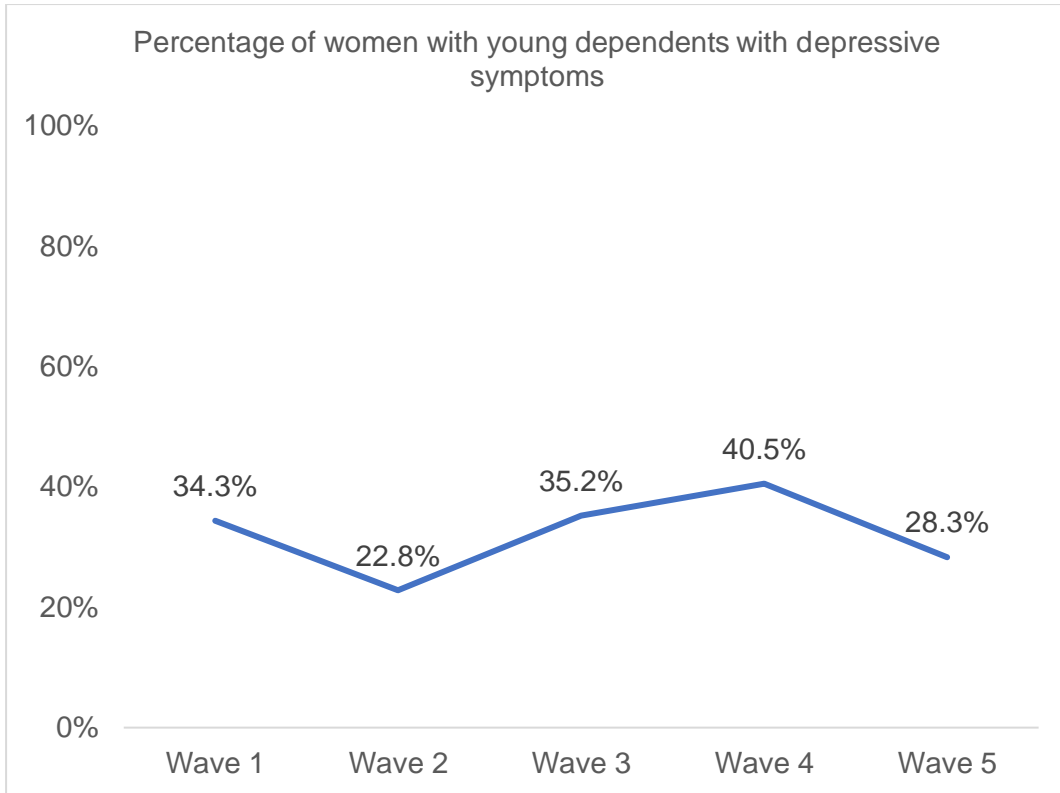
Looking at the background and health of women with young dependents, 42.5% were in the lower SEG, 62.3% reported that their working status had changed (i.e., furloughed, lost job), and 36.8% were key workers. 17.9% had unpaid caring responsibilities. 19.6% had a pre-existing mental health condition and 7.5% had a pre-existing physical health condition. Compared with women with no dependents under 5 years, women with young dependents were more likely to be in the lower SEG, be a key worker, and have a mental health condition; these factors may make them more vulnerable to poorer mental health.

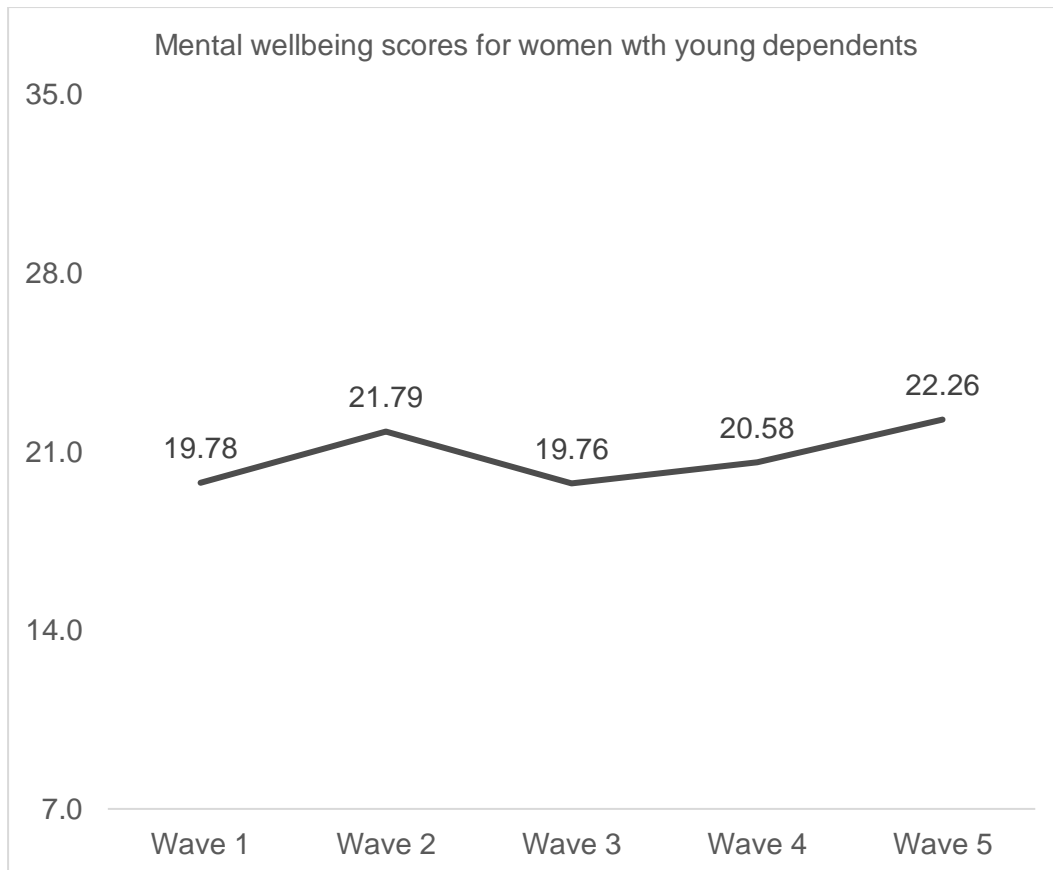
Findings from Wave 1 to Wave 5 of the SCOVID study suggest that women with young dependents tended to be at higher risk of mental health problems than women with no young dependents. For example, at Wave 5, 21.9% of women with no young dependents reported depressive symptoms, compared with 28.3% of women with young dependents (see Annex 4, Table F). Additionally, at most waves women with young dependents reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower mental wellbeing, than men who also had young dependents.

Figure A4.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for women with dependents under 5 years across the SCOVID study. Looking at these trends across the waves in context of changes in pandemic restrictions, women with young dependents reported the highest rates of suicidal thoughts and depressive symptoms at Wave 4 (February 2021), a time that coincided with a national lockdown. Additionally, the highest rates of anxiety symptoms were found at Wave 1 (May - June 2020), when restrictions were beginning to be eased from the first lockdown. The lowest rates of poor mental health tended to be reported at Wave 5 (June - July 2021), a period with eased restrictions. Therefore, it appears the mental health of women with young dependents was worst during periods of lockdown and higher restrictions, and better during a period of eased restrictions. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves.

Figure A4.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for women with young dependents (under 5 years)







A5. Mental health of people with vaccine hesitancy

Vaccine hesitancy is described as behavioural delay in acceptance or refusal of vaccines despite availability of vaccine services (SAGE, 2014). The development of effective vaccines against COVID-19 were heralded as a turning point in the pandemic, despite this the accelerated development and relative novelty of the COVID-19 vaccines have led to public uncertainty (Hrynick et al., 2020). There is some evidence that vaccine hesitancy may be higher in vulnerable groups, such as those with mental health problems (Lorenz et al., 2013).

Questions about vaccine uptake and hesitancy were asked at Wave 4 and Wave 5 of the SCOVID study. At both waves, people who had hesitancy in taking the COVID-19 vaccine reported higher rates of suicidal thoughts, depressive symptoms, anxiety symptoms, and lower levels of mental wellbeing, than people who had, or planned to take, the vaccine.

Wave 5 data for those with vaccine hesitancy indicates that:

- 30.7% reported suicidal thoughts,
- 33.2% reported moderate to severe depressive symptoms, and
- 30.4% reported moderate to severe anxiety symptoms.

Overall trends suggest specific subgroups may be at higher risk of poorer mental health:

- young adults with vaccine hesitancy
- women with vaccine hesitancy

A5.1 Young adults with vaccine hesitancy

Research by the Office for National Statistics (ONS) in the UK suggest hesitancy towards the COVID-19 vaccine was highest in 16- to 29-year-olds, compared with those aged 30 to 49 years, and over 50s respectively (ONS, 2021). Reasons for hesitancy included distrust of the safety and content of the vaccine, distrust of government, concern about known and unknown side effects, and belief it was unnecessary for those at low risk of harm from the virus.

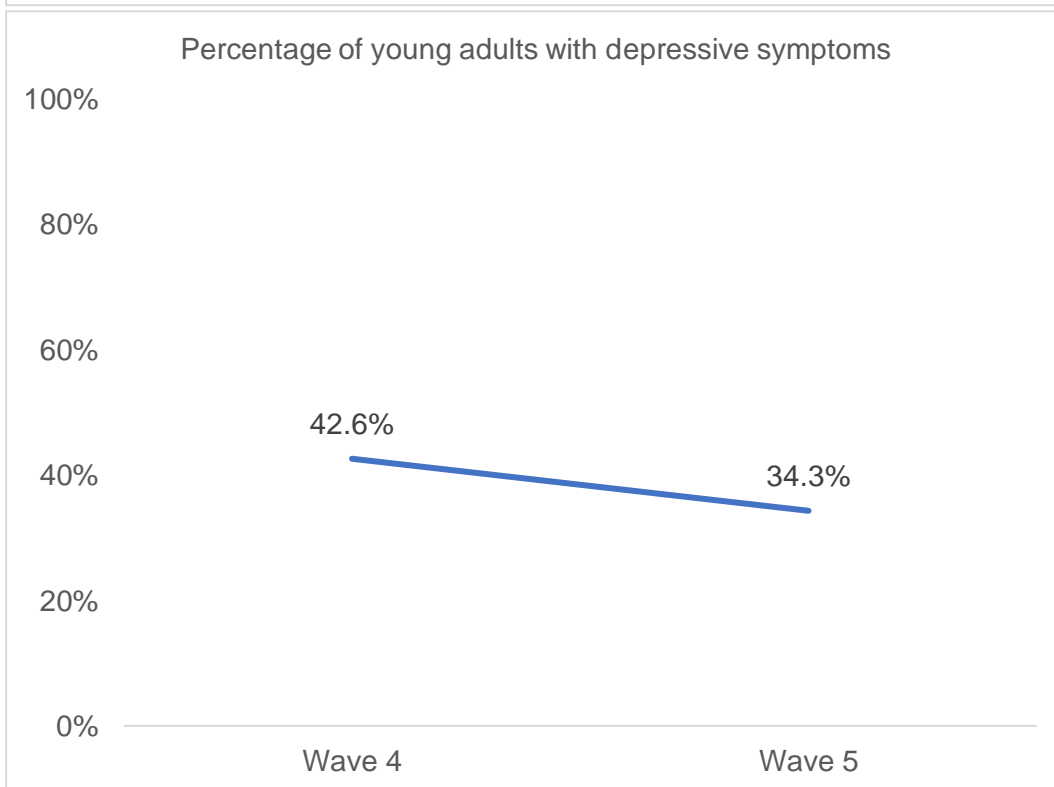
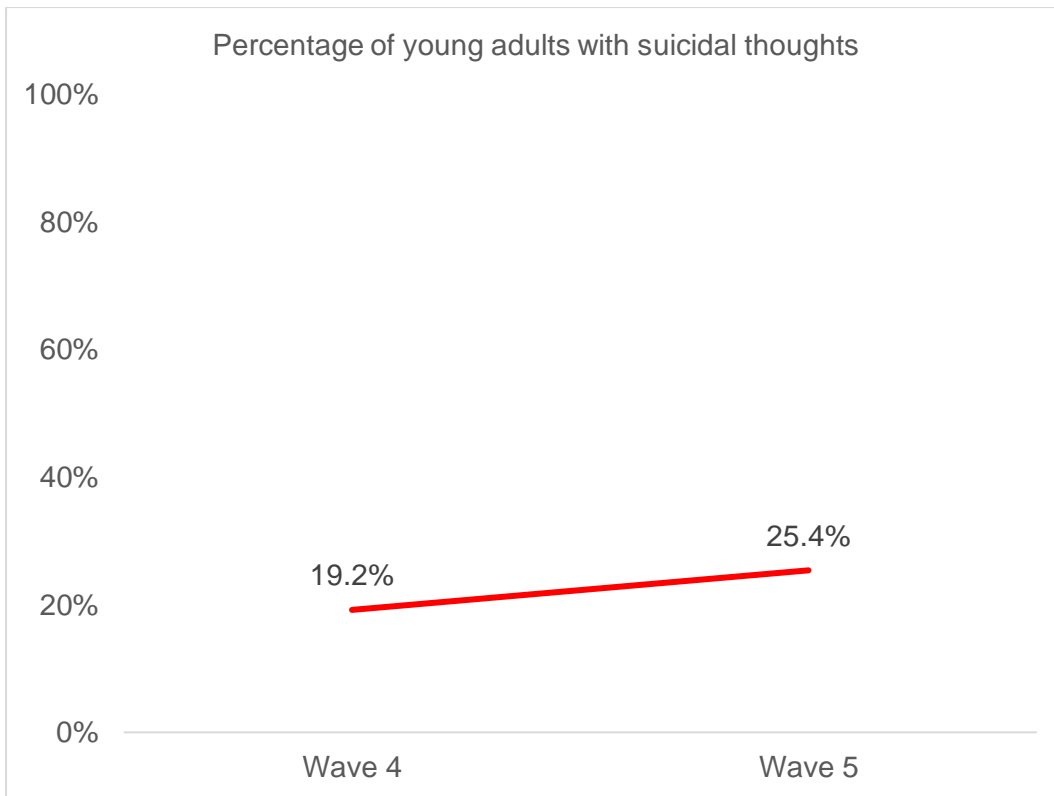
At Wave 5 of the SCOVID study, 12.3% of young adults reported vaccine hesitancy, compared with 8.8% of 30-59 year olds, and 1.7% of 60+ year olds.

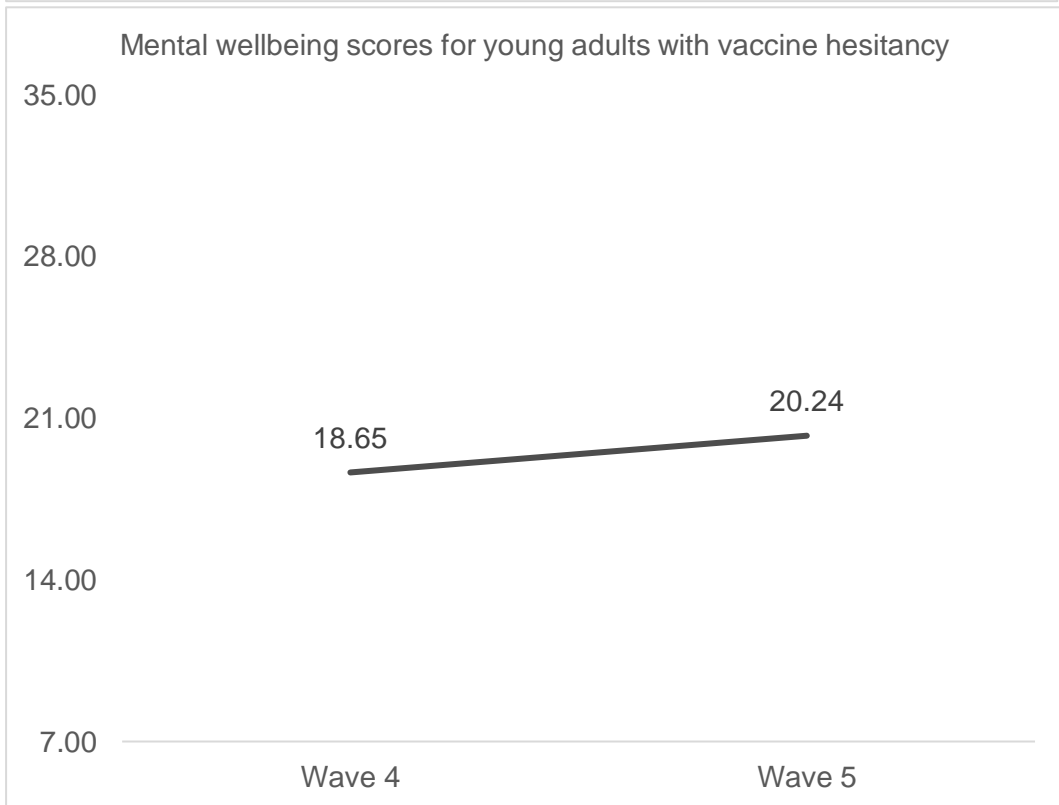
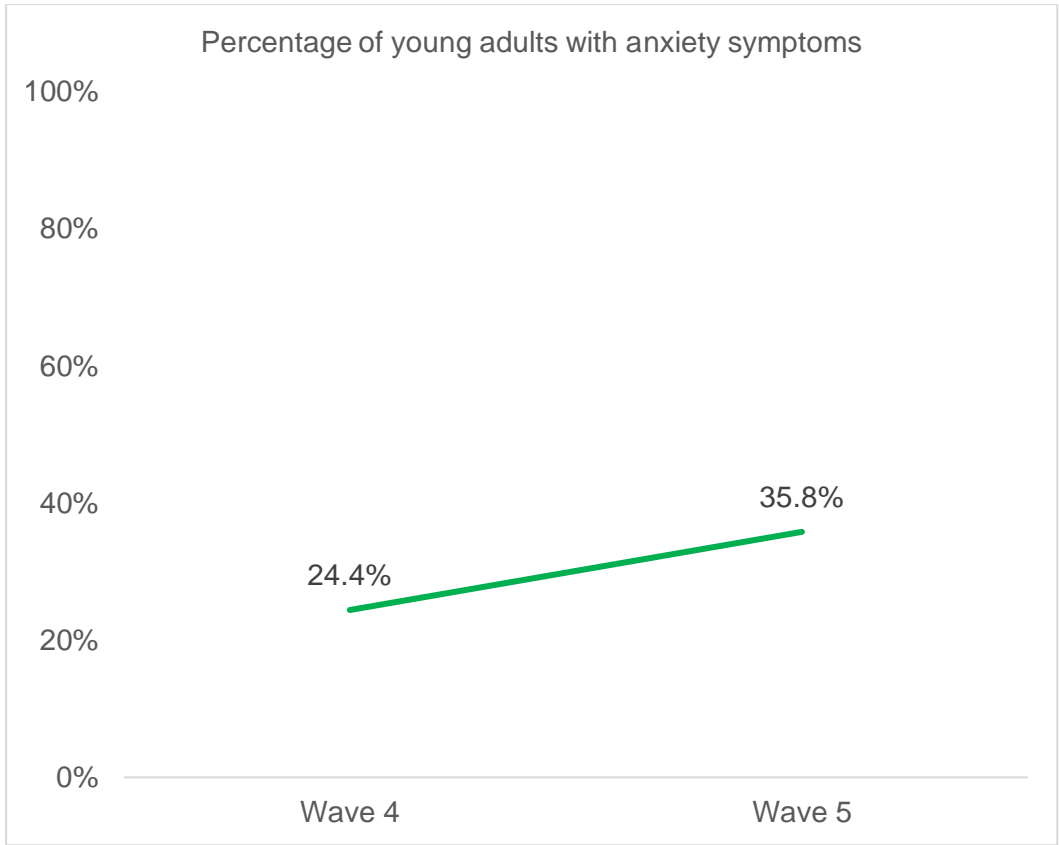
Looking at the background and health of young adults with vaccine hesitancy, at Wave 5 34.3% were in the lower SEG, 19.4% reported that their working status had changed (i.e., furloughed, lost job), and 47.8% were key workers. 21.2% had caring responsibilities and 19.7% had dependents under 5 years at home. 22.7% had a pre-existing mental health condition and 6.0% had a pre-existing physical health condition. Compared with young adults with no vaccine hesitancy, young adults with vaccine hesitancy were more likely to be a key worker, have caring responsibilities and have a mental health condition, factors which may make them more vulnerable to poorer mental health.

Findings from Wave 4 and Wave 5 of the SCOVID study suggest that young adults with vaccine hesitancy tended to be at higher risk of mental health problems than young adults with no vaccine hesitancy. For example, at Wave 5 11.8% of young adults with no vaccine hesitancy reported suicidal thoughts, compared with 25.4% of young adults with vaccine hesitancy (see Annex 4, Table F). Additionally, young adults with vaccine hesitancy tended to report higher rates of depressive symptoms and anxiety symptoms, than their age group counterparts (30-59 years, 60+ years) who also had vaccine hesitancy.

Figure A4.1 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for young adults with caring responsibilities at Wave 4 and Wave 5 of the SCOVID study. Looking at these trends in context of changes in pandemic restrictions, young adults with vaccine hesitancy reported the highest rates of depressive symptoms and lowest mental wellbeing at Wave 4 (February 2021), a time that coincided with a national lockdown. In contrast, the highest rates of anxiety symptoms and suicidal thoughts were found at Wave 5 (June – July 2021), when restrictions were eased. Therefore, it appears the mental health of young adults who were vaccine hesitant fluctuated from Wave 4 to Wave 5. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves.

Figure A4.1 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for young adults with vaccine hesitancy





A5.2 Women with vaccine hesitancy

Evidence from the UCL COVID-19 Social Study in the UK suggests that women evidenced slightly lower intentions to get the COVID-19 vaccination than men (Paul et al., 2021). Additionally, a survey of pregnant women in the UK found that 58% of those offered the vaccine had declined it, because they were worried that it would harm the baby and were waiting on more information about the safety of COVID-19 vaccines in pregnancy (Royal College of Obstetricians and Gynaecologists, 2021).

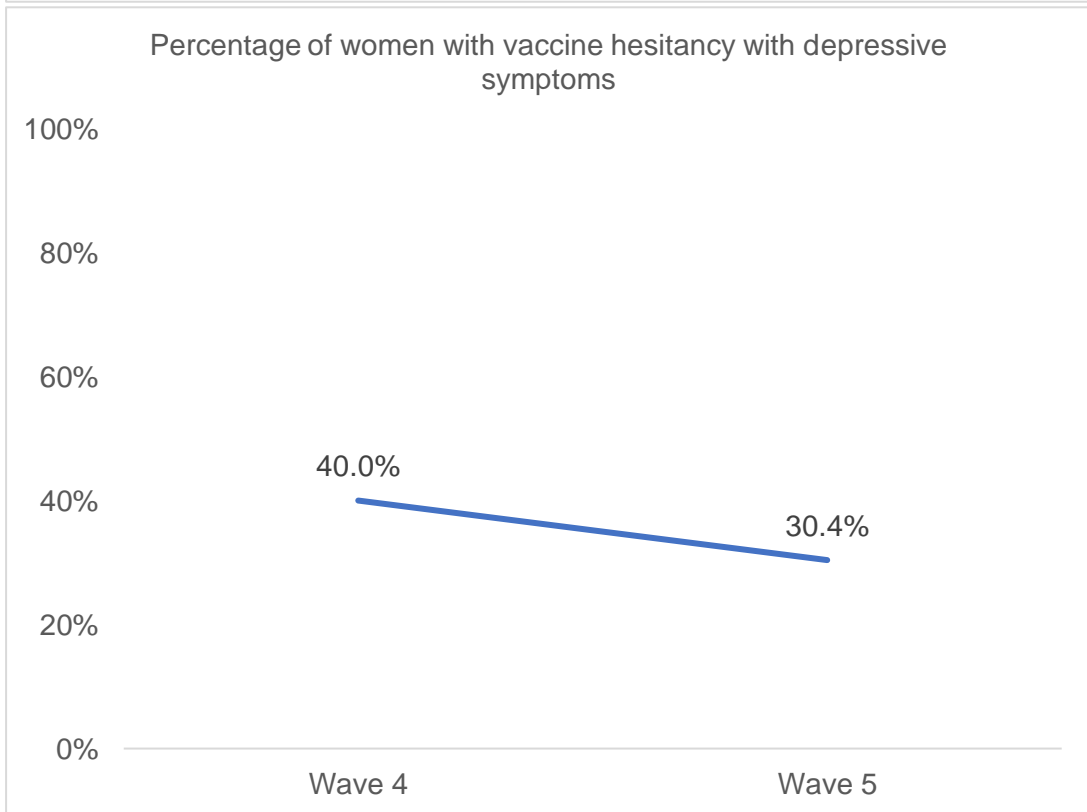
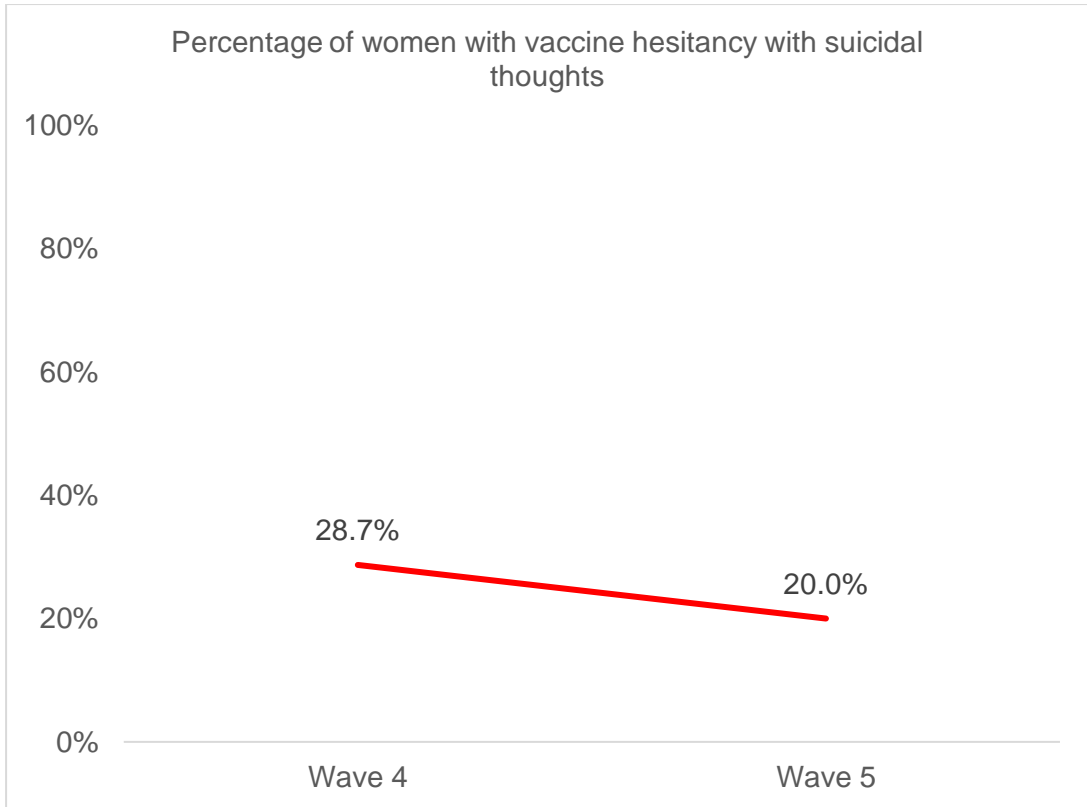
At Wave 5 of the SCOVID study, 7.1% of women reported vaccine hesitancy, and 7.6% of men.

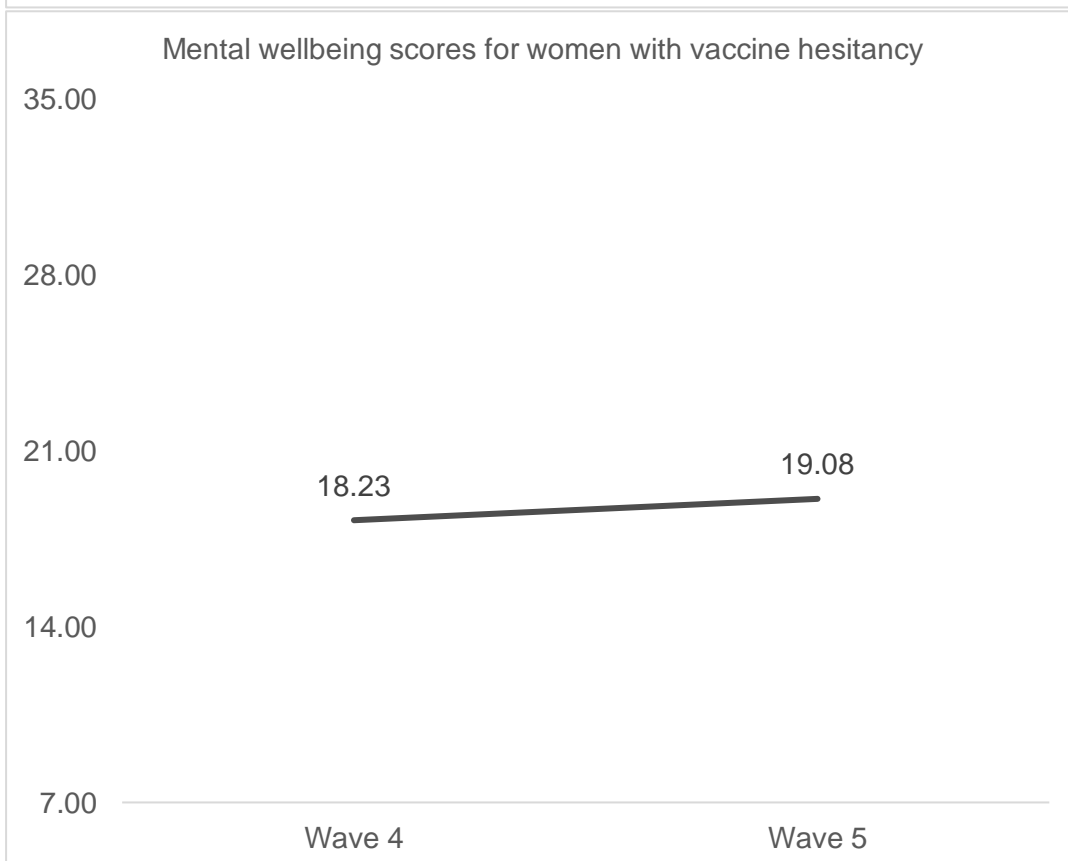
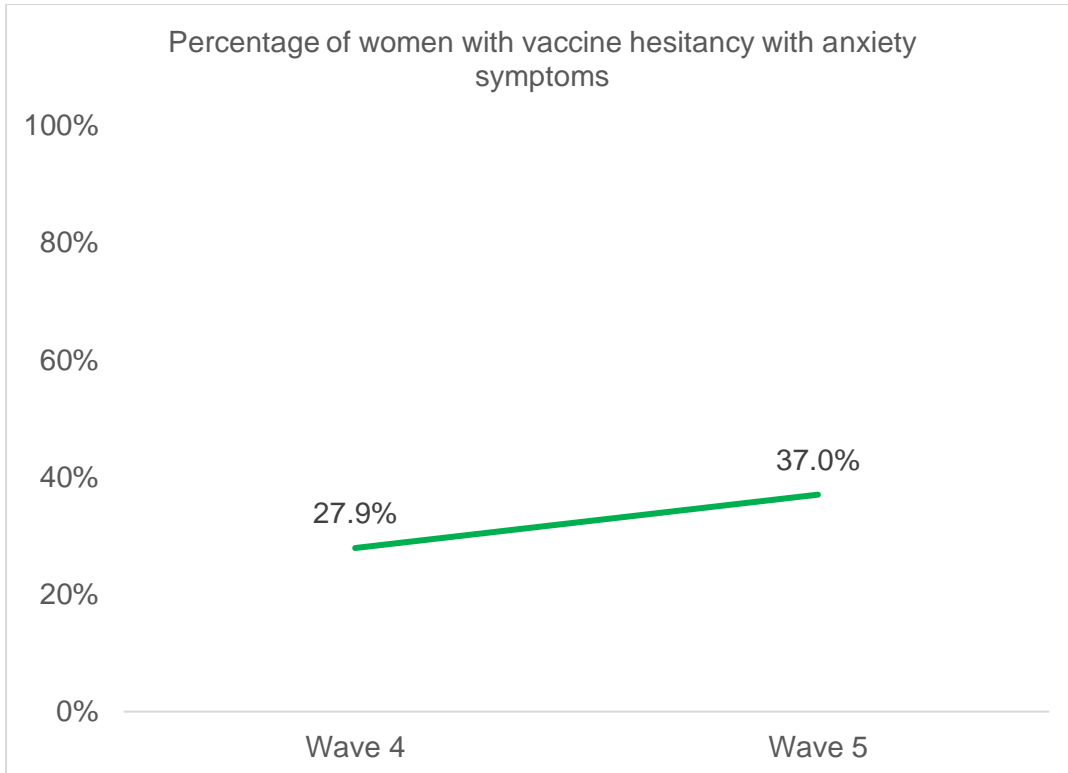
Looking at the background and health of women with vaccine hesitancy, at Wave 5 39.1% were in the lower SEG, 27.2% reported that their working status had changed (i.e., furloughed, lost job), and 23.9% were key workers. 29.3% had caring responsibilities and 26.9% had dependents under 5 years at home. 22.8% had a pre-existing mental health condition and 28.3% had a pre-existing physical health condition. Compared with women with no vaccine hesitancy, women with vaccine hesitancy were more likely to be having caring responsibilities, have young dependents and have a mental health condition, factors which may make them more vulnerable to poorer mental health.

Findings from Wave 4 and Wave 5 of the SCOVID study suggest that women with vaccine hesitancy tended to be at higher risk of mental health problems than women with no vaccine hesitancy. For example, at Wave 5, 18.3% of women with no vaccine hesitancy reported anxiety symptoms, compared with 37.0% of women with vaccine hesitancy (see Annex 4, Table F). Additionally, women with vaccine hesitancy tended to report higher rates of anxiety symptoms and lower mental wellbeing than men who also had vaccine hesitancy.

Figure A4.2 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for women with vaccine hesitancy at Wave 4 and Wave 5 of the SCOVID study. Looking at these trends in context of changes in pandemic restrictions, women with vaccine hesitancy reported the highest rates of suicidal thoughts, depressive symptoms and lowest mental wellbeing at Wave 4 (February 2021), a time that coincided with a national lockdown. In contrast, the highest rates of anxiety symptoms were found at Wave 5 (June - July 2021), when restrictions were eased. Therefore, it appears the mental health of women who were vaccine hesitant overall was poorer when restrictions were in place. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves.

Figure A4.2 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for women with vaccine hesitancy





A5.3 Men with vaccine hesitancy

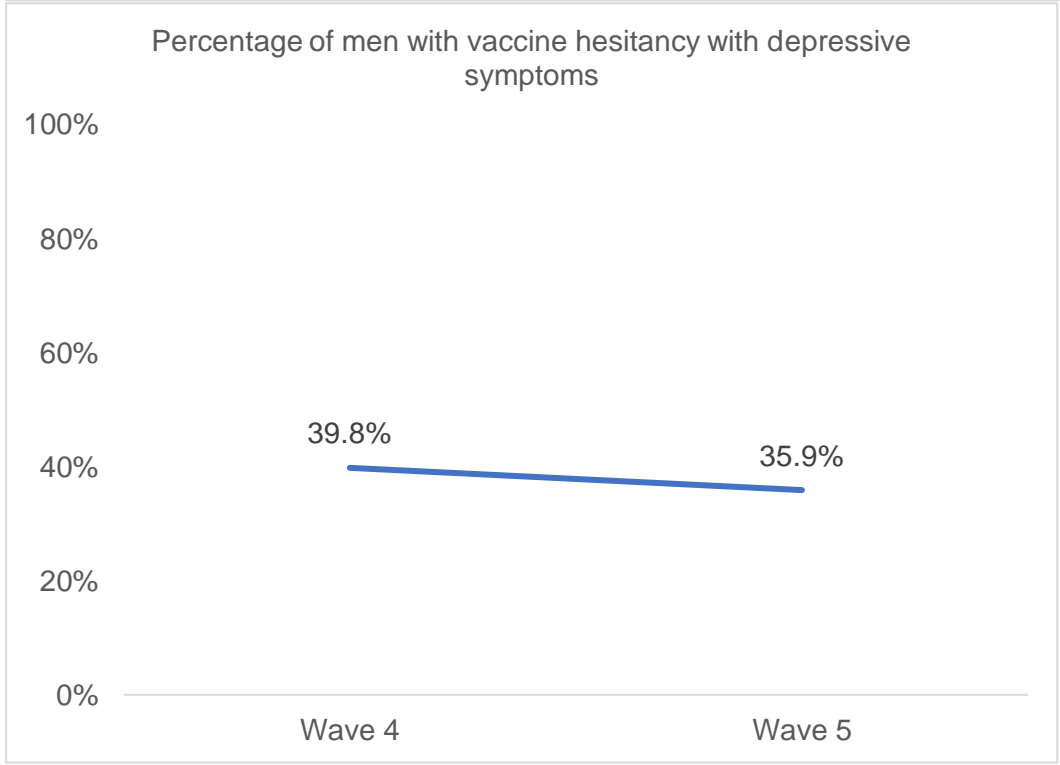
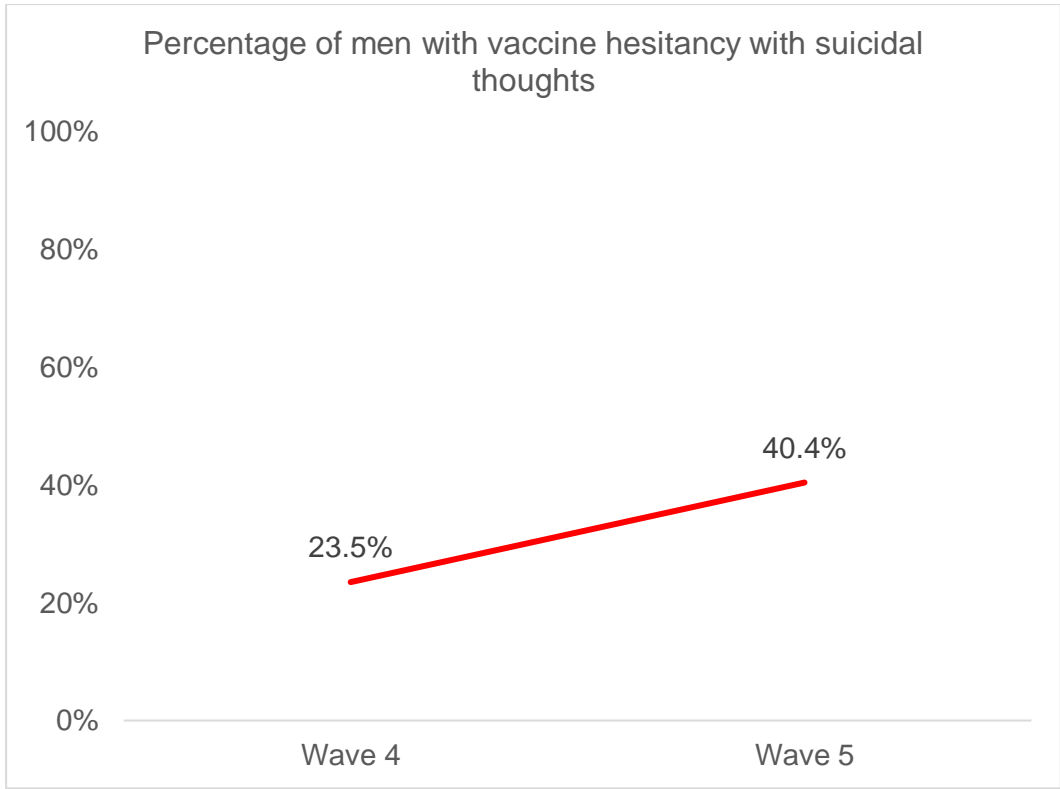
Evidence suggests that younger men may be less likely to come forward for the COVID-19 vaccination, according to NHS England there is a clear gender divide, with two thirds of men aged 18 to 24 having had a COVID-19 vaccine compared with nearly three quarters of women (NHS England, 2021).

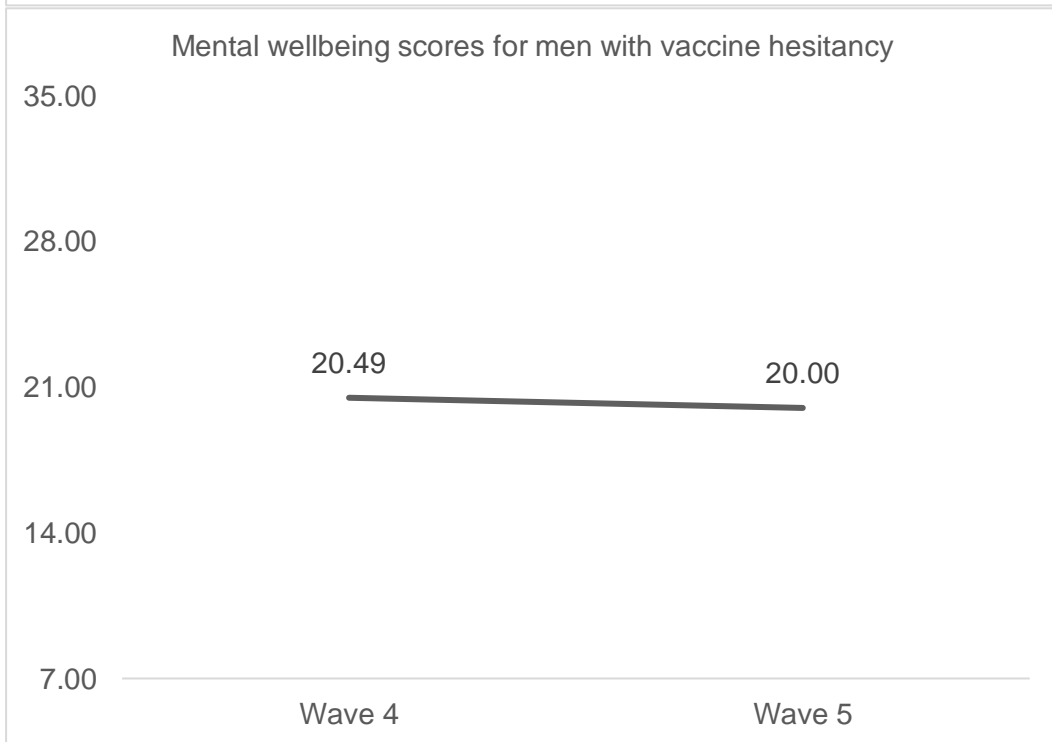
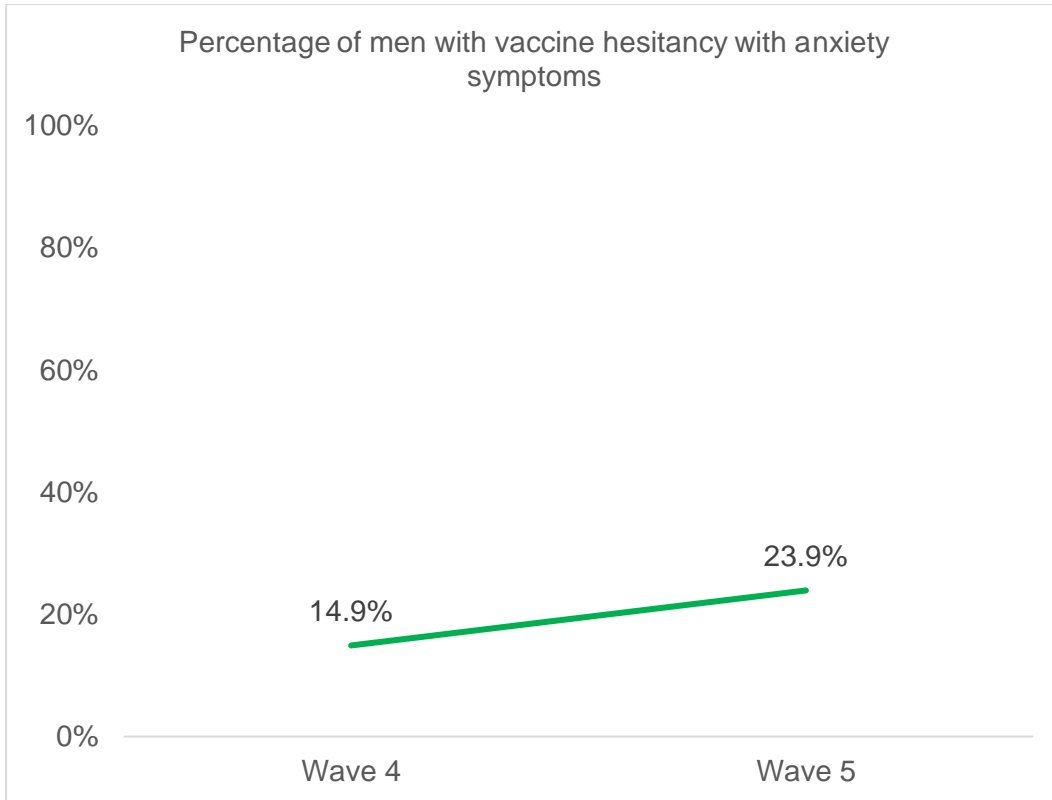
Looking at the background and health of men with vaccine hesitancy, at Wave 5 44.6% were in the lower SEG, 53.8% reported that their working status had changed (i.e., furloughed, lost job), and 33.0% were key workers. 22.8% had caring responsibilities and 4.3% had dependents under 5 years at home. 21.7% had a pre-existing mental health condition and 7.6% had a pre-existing physical health condition. Compared with men with no vaccine hesitancy, men with vaccine hesitancy were more likely to be in the lower SEG, having caring responsibilities, and have a mental health condition, factors which may make them more vulnerable to poorer mental health.

Findings from Wave 4 and Wave 5 of the SCOVID study suggest that men with vaccine hesitancy tended to be at higher risk of mental health problems than men with no vaccine hesitancy. For example, at Wave 5, 18.0% of men with no vaccine hesitancy reported depressive symptoms, compared with 39.8% of men with vaccine hesitancy (see Annex 4, Table F). Additionally, men with vaccine hesitancy reported higher rates of suicidal thoughts and depressive symptoms at Wave 5 compared with women who also had vaccine hesitancy.

Figure A4.3 illustrates mental health outcome trends (suicidal thoughts, depressive symptoms, anxiety symptoms, and the SWEMWBS wellbeing scores) for men with vaccine hesitancy at Wave 4 and Wave 5 of the SCOVID study. Looking at these trends in context of changes in pandemic restrictions, men with vaccine hesitancy reported the highest rates of suicidal thoughts, anxiety symptoms and lowest mental wellbeing at Wave 5 (June - July 2021), a time that coincided with restrictions being eased. Therefore, it appears the mental health of men who were vaccine hesitant overall was poorer when restrictions were not in place. As a booster sample was added at Wave 5, this finding should be interpreted with caution as this is a sample is made up of different participants than at the previous waves.

Figure A4.3 Rates of suicidal thoughts (%), depressive symptoms (%), anxiety symptoms (%), and mental wellbeing (mean score) from Wave 1 to Wave 5 for men with vaccine hesitancy







© Crown copyright 2022

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/> or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

This document is also available from our website at www.gov.scot.
ISBN: 978-1-80435-092-8

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

Produced for
the Scottish Government
by APS Group Scotland
PPDAS1031958 (02/22)
Published by
the Scottish Government,
February 2022



Social Research series
ISSN 2045-6964
ISBN 978-1-80435-092-8

Web Publication
www.gov.scot/socialresearch

PPDAS1031958 (02/22)