RESPOND

RAPID APPRAISAL REPORT ON HEALTH SYSTEM RESPONSIVENESS AND MENTAL HEALTH IMPACT ASSESSMENT, VERSION 3

DELIVERABLE D3.4

This project has received funding from the European Union's Horizon 2020 research and innovation programme Societal Challenges under Grant Agreement No 101016127.

Deliverable D3.4 – Rapid appraisal reports on health system responsiveness and mental health impact assessment, version 3

RESPOND: Improving the Preparedness of Health Systems to Reduce Mental Health and Psychosocial Concerns Resulting from the COVID-19 Pandemic

Project Acronym: RESPOND

Grant Agreement No 101016127

Deliverable Information	
Project start date	01/12/2020
Duration of the project	3 years (until 30/11/2023)
Deliverable number and name	D3.4
Due date	30/11/2022
Delivery	30/11/2022
Work package	WP3
Lead partner for deliverable	London School of Economics and Political Science (LSE), Université catholique de Louvain (UCLouvain)
Approved by	WP3 Partners (LSE, UCLouvain)
Dissemination level	PU
Keywords	Health systems, responsiveness, policy measures
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1. SUMMARY

The COVID pandemic has impacted on the mental health of populations in different ways; although the overall adverse impacts on mental health may be modest, there have been very heterogenous experiences across settings, countries and population groups. Countries also had varying levels of mortality rates from COVID, and different approaches in their policy responses to help suppress the transmission of the virus. These policy responses may also have had impacts on population mental health, both positive and negative.

This third updated, revised and expanded version rapid assessment report looks at the potential impacts of COVID-19 on population psychosocial health across Europe, including examination of how immediate and changing policy responses to counter the pandemic may have protected and/or exacerbated risks to mental health and wellbeing. It looks at how the pandemic impacted on economic conditions in Europe, selected pandemic suppression policies across countries and provides a mental health impact assessment framework summarising the strength of evidence on pandemic suppression measures and their links with mental health. Separate work in WP3 of RESPOND looking at the views of policy makers and other stakeholders has also been considered. Three case studies on suicide and self-harm rates, the long-term care system for older people and some emerging mental health policy implications of long COVID are also presented.

Our analysis indicates that the pandemic-triggered economic crisis has turned out to be quite different to past economic crises. Unlike the 2008/2009 economic crises, key economic indicators such as economic growth and employment rates rebounded quickly in all RESPOND countries and by summer 2021 had broadly returned to their pre-pandemic levels. Economic growth and a reduction in unemployment was seen throughout 2022, but now the outlook for 2023 is not good because of the additional economic shocks due to the war in Ukraine and related energy crisis. This new economic crisis is very likely to have further consequences for European population mental health, and some of the actions taken during the COVID pandemic may also be very relevant to these new challenges.

This third report indicates that although only limited evidence is available, and that evidence is very heterogenous, using various methods. It is highly probable that the very high levels of additional income protection and social protection measures introduced by different governments helped to mitigate the immediate economic impacts of the pandemic, also in turn cushioning its mental health impacts. This may be a reason why overall only modest impacts on population mental health have been seen; moreover, with some small exceptions in particular settings affecting some age groups, no major impact on suicide rates over the first 18 months of the pandemic has also been seen. That said, there is evidence that specific population groups have been more adversely affected by the economic consequences of the pandemic across Europe. These include workers who have been fully on furlough, women, school leavers, higher education students and the retired.

Most pandemic suppression measures have been removed across RESPOND countries during 2022. The most notable exceptions are measures to protect older people. As of October 2022, Germany and Italy still have the most stringent pandemic protective measures in place for older people; these include mandatory mask wearing in all health and social care settings with substantial measures also in place in Belgium, Spain and the UK. In the UK, for example, mask wearing remains mandatory for residential care staff, and highly advised for visitors. This may mean that more vulnerable older people, and health care workers, may continue to remain a group at higher risk of poor mental health.

More generally, going forward, additional resources to protect the mental wellbeing and resilience of individuals at high risk of not being in employment, education or training are likely to still be needed. As we have seen in this report, financial distress is a potential indicator of future risks to mental health. Financial distress levels are likely to increase

further in the near future due to the energy crisis and the war in Ukraine. This is at a time when most income protection and debt relief measures in Europe related to the COVID pandemic have come to an end. The magnitude of financial shocks due to the energy crisis may be on a much greater scale than the economic shocks during COVID.

From our report one key take away message has been the valuable development of longitudinal representative population surveys during the course of the COVID pandemic. Often, at least in the early part of the pandemic, data were collected on a very regular basis (as frequently as weekly or fortnightly). These surveys can act as an early 'radar' warning system. They can identify population groups whose mental health may be most affected by a new pandemic or other major societal shock (such as an energy crisis or inflation). Such surveys have been essential to pandemic planning and rapid response. Stakeholders that we interviewed pointed to the value of these surveys; we would argue that they need to be sustained not only to continue to monitor for longer term impacts of the pandemic, but now also to help identify population groups whose mental health may be particularly vulnerable to the new economic downturn and huge increases in the cost of energy.

Interviews with stakeholders and evidence used in our mental health impact assessment framework also points to the importance of financial support as an indirect protection for mental health through the alleviation of financial distress and fear of financial distress. Another takeaway message is therefore that these broad welfare support measures are key measures for protecting mental health; in crises that affect everyone such as COVID and the energy crisis provision of additional universal financial protection measures seems prudent. A proportionate approach could be adopted; where the intensity of financial and other support is proportionate to the degree of need, with the early warning surveillance systems at a population level and learning from previous economic and public health shocks helping to identify those in most need.

Our interviews with policymakers also reinforce the view that there is also a longer term need for policymakers not to just plan for future pandemics and other public health shocks but also to plan for the long-term recovery of the population after these shocks have ended. Some segments of populations may be especially vulnerable after these crises have ended. The impacts on mental health of policy responses can be formally determined through health impact assessment, as shown in our mental health impact assessment framework and mitigation measures put in place. Some governments have already developed long-term recovery plans, but these may now need further adaptation given that the economic situation in Europe has deteriorated rapidly since March 2022. As our report indicates, policy makers also now need to consider the mental health consequences of long-COVID, as evidence emerges on the increased risk of conditions such as PTSD, depression and anxiety.

2. AIMS AND OBJECTIVES

The COVID-19 pandemic continues to be one of the most dominant public policy issues, alongside climate change and now the war in Ukraine, not only in Europe, but worldwide As of November 2022, globally 6.6 million people have now died directly from COVID during the pandemic, including 2,597 per million people in the EU, (approximately 1.2 million) with many more hospitalised. We now are also beginning to know more about the long-term impacts of COVID, across all 53 countries of the WHO European Region; it is estimated that there are 17 million living with long-COVID, defined as symptoms that persist beyond 12 weeks (1). Studies in specific EU countries point to high levels of long COVID, in the Netherlands, for example, it has been estimated that almost 13% of people experience long-COVID (2) while in the UK as of October 2022 1.71 million people currently have long-COVID of which 1.06 million still have symptoms after one year and 0.51 million symptoms after two years (3). Some of these people are still experiencing severe side-effects and sometimes debilitating, life changes.

Sadly, the impacts of the pandemic go well beyond individuals who have contracted the disease and their families. COVID-19 initially triggered a wider health crisis: health systems had to deal with the pressures brought on by different waves of the pandemic, which reduced their ability to meet all routine demands for chronic and acute mental and physical care. All countries and all populations will have been affected by the pandemic, but the magnitude of mortality and morbidity impacts, including impacts on mental health and wellbeing have varied considerably. While many factors will contribute to these differences in country experiences, the ways in which health systems have responded to this public health crisis are likely to have played a major role.

Economies came under great pressure, due to a combination of major sudden reductions in economic activity and major investment in COVID-related financial protection, as well as in public health measures. There is increasing evidence on the impacts, both negative and positive, that measures to address the pandemic, such as lockdowns, school closures, travel restrictions, home working, as well as the roll out of mass and some mandatory vaccination programmes, may have had for mental health; there has also been some social unrest by a minority of populations who believed these measures to be unnecessary restrictions on civil liberties, as well as the spread of misinformation on COVID. A number of countries have also begun to hold inquiries into their own pandemic response.

While Europe has emerged from the COVID pandemic, with most restrictions now lifted, a new threat to mental health and wellbeing has emerged: the energy and wider cost of living crisis. In some countries, labour market instability is also an issue. While some of this is a direct consequence of the continuing conflict in Ukraine, it is also in part due to ongoing economic impacts of the pandemic, such as a reduction in the labour force across much of Europe and continuing difficulties in accessing goods and other materials due to the continuing very strict local response to any COVID outbreak in China. Some of the policy responses to the pandemic, such as major financial support programmes, which have helped protect mental health and reduce psychological distress, are therefore likely to be very relevant to this new European crisis.

This briefing report is the third in a series of rapid assessment reports that look at the potential impacts of COVID-19 on population psychosocial health across Europe, including ongoing examination of how immediate and changing policy responses to counter the pandemic may have protected and/or exacerbated risks to mental health and wellbeing. It should be noted that this report partly overlaps the previous report (D3.2 Rapid Appraisal Report), since it builds upon the results from the previous rapid recurring analyses of how health system responses to COVID-19 across Europe and Australia in addressing resilience, wellbeing and mental health in front-line workers, vulnerable groups, and the general population. This work has been undertaken as part of the EU Horizon 2020 RESPOND project (P**RE**paredness of health **S**ystems to reduce mental health and **P**sychosocial concerns resulting from the C**O**VID-19 pa**ND**emic). Ultimately,

RESPOND aims to improve the preparedness of European mental health care systems to meet the challenges of further waves of the current pandemic as well as future pandemics.

In this third report, we set out an updated timeline of key policy measures that have been implemented to tackle the pandemic and mitigate against some of its consequences, with a particular focus on how countries have responded to the need to protect resilience, wellbeing and mental health in the mid to long-term following the pandemic. Here we focus on our eight RESPOND countries: Netherlands, Belgium, France, Germany, Italy, Spain, Sweden and the UK, but we also draw on material from other European countries and elsewhere, to look at some of these issues. We also use our impact assessment framework matrix, described in our previous rapid appraisal reports, to document the ongoing mental health consequences of selected pandemic policy response measures and mitigations across selected RESPOND countries. The framework identifies risk factors and determinants of mental health and wellbeing and considers how these may be affected by the pandemic and pandemic policy responses.

The report also contains updated case studies that have been highlighted in the media as potential areas of concern. The first focuses on the accumulating evidence on the impacts of the pandemic on the risk of self-harm and suicide during the pandemic. The second looks at the longer-term impacts and challenges faced in the long-term care sector and the consequences for the mental health and wellbeing of care staff, families and people with long term care needs. An additional third case study looks at the emerging evidence on the mental health consequences of long-COVID.

The information collected in this report draws on information collected on a recurring basis from different sources, including analysis of policy documents, scientific advisory recommendations, behavioural-psychology informed public health communication strategies, print, social media, radio and broadcast media content analysis, as well as interviews with a range of stakeholders. It has been iteratively refined to highlight key steps and infrastructure to help adequately prepare health systems to respond rapidly to any future pandemic or similar public health shocks. In doing this, we have also tried where feasible to consider whether some pandemic policy response measures could also be helpful for the current cost of living crisis in Europe.

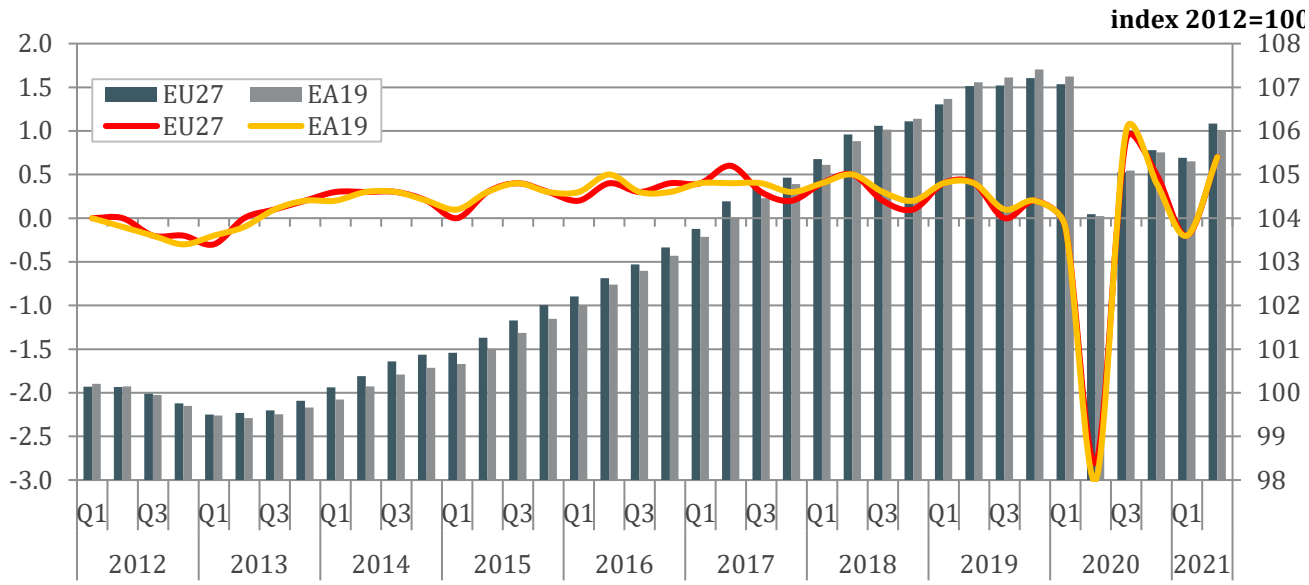
3. AN ECONOMIC CRISIS UNLIKE PREVIOUS CRISES BUT WITH SHARPLY CHANGED OUTLOOK FOR 2023

Before going on to look at the impacts on mental health, to set the context it is useful to look at how the economic crisis has developed as this has in the past been critical to mental health. In our previous version of this report 20 months on from the initial imposition of public health restrictions across Europe in March 2020, economic data indicated that, overall, European economies had strongly rebounded from the major economic shocks that they have experienced. As Figure 1 shows employment levels in the second quarter of 2020 contracted sharply, but increased sharply in the following quarter, then contracted again, albeit less sharply during winter 2020-2021 when COVID-19 rates across the continent again rose sharply (4). Employment grew by 0.7% in both the EU-27 and the euro area (EA-19) in the second quarter of 2021 compared to the previous one. Compared with the same period of the previous year, it increased by 1.9% (1.8% in the euro area).

Undoubtedly strong social welfare and job protection measures in many European countries, as well as the continued roll out of vaccines helped to markedly reduce the impact of the virus on economic activity. GDP grew by 5.0% % in the EU in the final quarter of 2021 compared to the final quarter of 2020. Economic growth has also continued to be strong, despite the Ukraine conflict in 2022 with annual GDP in the EU now estimated to increase by 3.3% (5) and unemployment levels continuing to fall in 2022 through to the third quarter of 2022 (See Figure 2). However, the

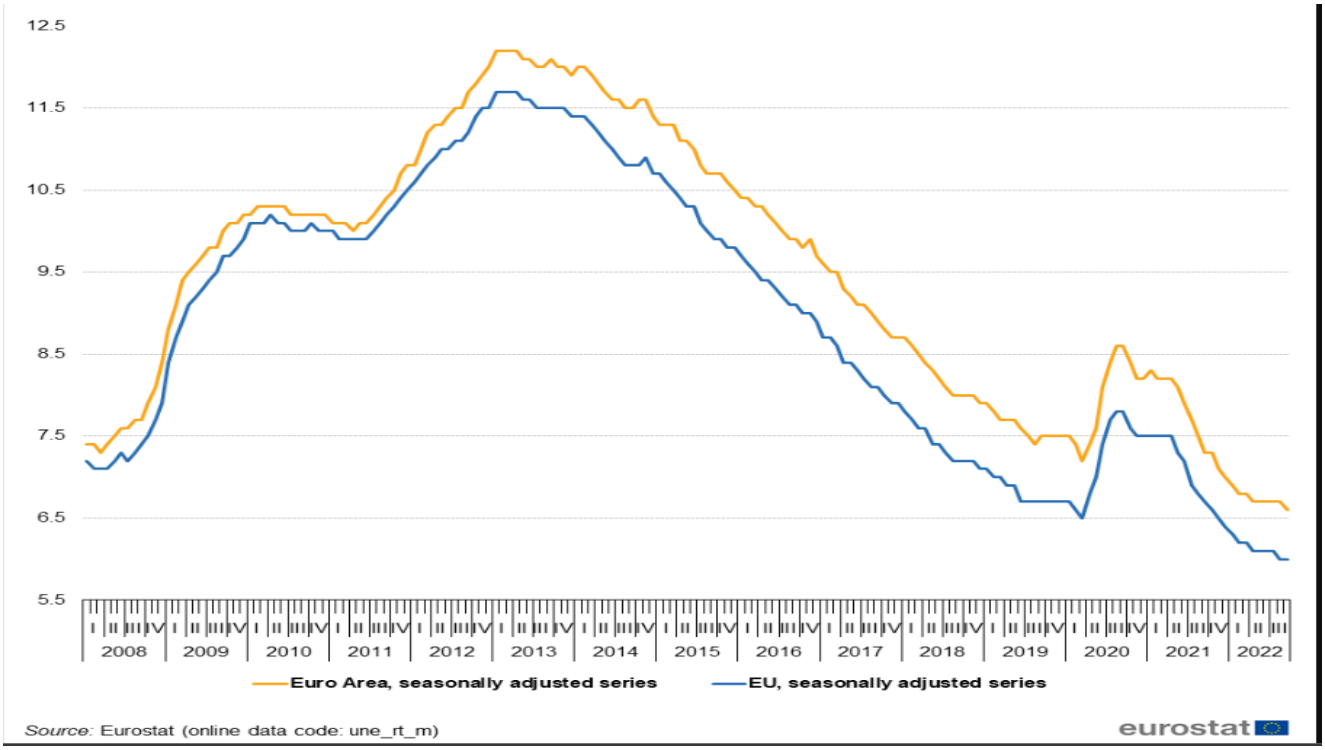
recovery in 2022 was uneven; younger people continue to face significant challenges, by the end of 2021 youth unemployment remained higher than it did before the pandemic (6). Of those in work, nearly 1 in 2 young people (45.9%) had temporary contracts, compared to 1 in 10 for all workers (10.2%). Temporary contracts have been associated with increased risks to mental health and wellbeing.

Figure 1: Employment level and employment growth – EU and euro area, 2012-2021



Source: Eurostat, National Accounts, seasonally and calendar adjusted data. Note: Cumulative growth (bars, right-hand scale), % change on the previous quarter (lines, left-hand scale)

Figure 2: Unemployment rates, EU and Euro area 2008 - 2022



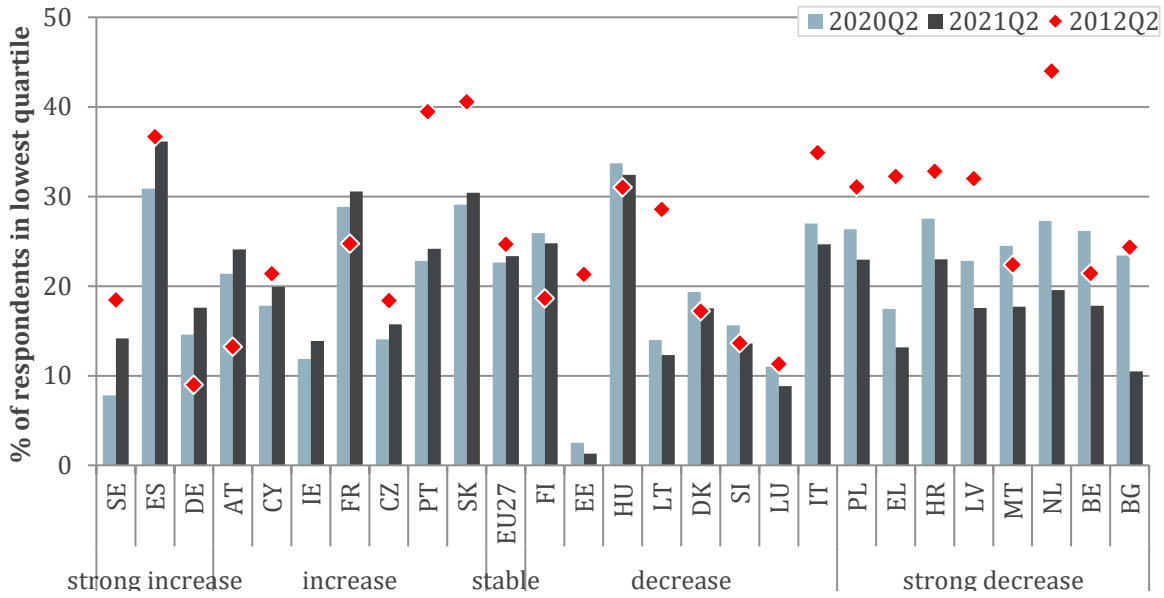
Prior to the invasion of Ukraine, these change in economic indicators meant that the pandemic led to a very different type of economic crisis to that seen in 2008-2009 where economic recovery was very slow taking many years to achieve. However, some of the impacts seen in that 2008-2009 crisis may yet come to pass given that the EU economy is expected to contract in the first quarter of 2023, with overall GDP growth for the entire year only expected to be 0.3% (5). There are significantly inflationary pressures now in the economy, partly due to workforce shortages during the economic recovery from COVID, but made much worse by ongoing conflict in Ukraine that began with the Russian invasion in February 2022. This makes it difficult to predict what the long-term consequences will be for population mental health and the extent to which these consequences will be due to the pandemic or these additional economic pressures and continuing global uncertainty.

That said there were already sections in society that did not benefit from the initial economic recovery; they may be particularly vulnerable to poor mental health in our changed economic circumstances. These include workers who have been unable to claim additional welfare support during the pandemic, as well as older workers. Workers with temporary contracts rather than permanent employment were also at greater risk of becoming unemployed during the pandemic (7).

However, higher unemployment rates were only a part of the picture; individuals can be at increased risk of poor mental health when they drop out of the labour force and become economically inactive. Many EU countries saw a reduction in the size of their active workforce during the pandemic. We have noted the young people have experienced an uneven recovery compared to the general population, with high rates of not being in employment, education or training seen in countries such as Romania, Italy and Greece. Although there are marked differences across the EU, adults under 30 are more likely to face difficulties in meeting their everyday expenses, such as those for bills and rent, with 61% worrying about finding or maintaining adequate housing in the next ten years (6). Additional resources to protect the mental wellbeing and resilience of individuals at high risk of not being in employment, education or training are needed.

Increased risk of poor mental health is also associated with increased levels of debt, as well as the fear of unmanageable debt. Financial distress is one way of potentially identifying these risks early. The pandemic has had very variable impacts on the level of financial distress, defined as being the need to draw on savings or to run into debt to cover current expenditures, based on personal perceptions, across the EU (4). While levels of financial distress across the EU fell in 2021 relative to 2020 for the second, third and highest income quartiles, these levels of distress remained stable at a high level affecting 24% of all in the lowest income quartile in 2021. Figure 3 shows that these effects also varied across countries, with levels of financial distress in the lowest income quartile increasing strongly in three countries Sweden, Germany and Spain in 2021, with some increased risk in another 7 countries. Going forward, especially given the recent economic shocks, including the energy and cost of living crisis it will be important to monitor financial distress and ensure that sufficient supports are in place, which may include measures for debt relief, protection from eviction and continued social welfare support. These may help reduce the future need for mental health support.

Figure 3: Reported financial distress in lowest income quartile – EU Member States, 2021 Q2



Source: European Commission, Business and Consumer Surveys 3-months moving average (DG EMPL A.4 calculations)

4. TIMELINE OF POLICY RESPONSE TO COVID ACROSS THE 8 RESPOND COUNTRIES

4.1. INTRODUCTION

This section discusses policy timelines, each depicting the eight RESPOND partner countries. As we have noted in this report, the COVID-19 pandemic has created a multitude of policies in each country, including social distancing and quarantining, travel bans, school closures, policies related to employment and the economy, or the health and care sector, to name a few. The majority of these policies are likely to have an impact on individuals' mental health, even though they may not be directly targeted at mental health (as is the case with the provision of online mental health services, for instance). In our first report to illustrate the impact of distinct policies on the population's mental health, we focused on the following three policy timelines:

1. *School closures,*
2. *Restrictions on gatherings, and*
3. *Stay at home requirements.*

These three policies were purposefully chosen, the literature indicating that they likely have a strong and continuous impact on the vast majority of the population. In our second report we also considered three additional areas for policy intervention:

4. *Measures to protect older people*
5. *Income support, and*
6. *Debt relief.*

In this third report we further update on how these policies have evolved in response to the pandemic. These include policies put in place to protect older people, a group we noted in our first assessment of policy responses that have been perhaps most vulnerable to contracting severe COVID, with rates of COVID mortality increasing with age. The income support and debt relief measures were chosen as policy areas to examine because these measures have been strongly associated with population mental health in previous economic crises; and may therefore also be particularly relevant to the current European cost of living crisis.

Before looking at the policy timelines, we briefly note the methodology and data sources needed to create the policy timelines will be discussed. This is followed by a descriptive analysis of the timelines.

4.1.1. AIM

Having highlighted these examples of policy responses to COVID-19, the broader objective of this project is to measure the impact of policies on mental health and wellbeing over time. In order to do so, the first step is to generate a general overview of what policies have been taken at different points in time. The description and analysis of these timelines helps in our assessment of the timing and strictness of measures in each of the 8 RESPOND countries, as well as how they compare. This will be useful for continuing work and further in-depth analysis in the final year of the RESPOND project.

4.1.2. DATA SOURCES AND APPROACH

The data used for the policy timelines was gathered from the Oxford COVID-19 Government Response Tracker (OGRT) a project developed by researchers at the University of Oxford's Blavatnik School of Government (Hale et al., 2020a). The data and their respective sources are publicly available online. There may be some inconsistencies in the data, due to coding flaws by the OGRT. Data was usually collected at a national level, though as indicated by the OGRT, "A country is coded as 'required closures' if at least some sub-national regions have required closures." (Hale et al., 2020b).

The data collected by the OGRT for the aforementioned policies are ordinal, meaning that they are measured in terms of their strength. For the two support measures higher scores represent stronger support; a 0-2 scale was used for both income support and debt relief. For the four policy restriction areas, higher scores represent stronger levels of restriction: a 0-3 scale was used for school closures, stay at home requirements, and protection of older people, and a 0-4 scale was used for restrictions on gatherings. For all policies, a score of 0 meant that there were no COVID-19 measures in place. Detailed descriptions of the different levels are now described.

In the case of school closures, the distinct levels signified the following:

- *Level 1: Recommendation to close schools or that all schools remain open with alterations (resulting in significant differences compared to non-COVID-19 operations).*
- *Level 2: Only some tiers or categories require closing (e.g. just secondary schools (for older children), or just publicly funded schools).*
- *Level 3: All schools are required to close.*

Regarding restrictions of public gatherings, the levels are coded as follows:

- *Level 1: Restrictions on very large gatherings (the limit is above 1000 people).*
- *Level 2: Restrictions on gatherings between 101-1000 people.*
- *Level 3: Restrictions on gatherings between 11-100 people.*
- *Level 4: Restrictions on gatherings of 10 people or less.*

When looking at stay at home requirements, the scale is the following:

- *Level 1: Leaving the house is not recommended.*
- *Level 2: Leaving the house is not permitted with exceptions for daily exercise, grocery shopping, and 'essential' trips.*
- *Level 3: Leaving the house is not permitted other than for minimal exceptions (e.g. allowed to leave once a week, or only one person can leave at a time, etc.).*

Regarding protection of older people, the following scale was used*:*

- *Level 1: Recommended isolation, hygiene measures, and visitor restriction measures in Long Term Care Facilities (LTCFs) and/or older people to stay at home.*
- *Level 2: Narrow restrictions for isolation, hygiene measures in LTCFs, some limitations on external visitors and/or restrictions protecting older people at home.*
- *Level 3: Extensive restrictions for isolation and hygiene measures in LTCFs, all non-essential external visitors prohibited, and/or all older people required to stay at home and not leave home with minimal exceptions, and receive no external visitors.*

When looking at the level of financial support available to protect salaried income the scale had two levels:

- *Level 1: Government is replacing less than 50% of lost salary (or if a flat sum, it is less than 50% of median salary).*
- *Level 2: Government is replacing 50% or more of lost salary (or if a flat sum, it is greater than 50% of median salary).*

Regarding debt relief measures for households the following scale was used

- *Level 1: Narrow relief, specific to one kind of contract.*
- *Level 2: Broad debt/contract relief.*

As will be seen in the policy timelines in the Figures, these levels were represented by different colours; a very light blue represents a level '0', whereas a light/middle blue will represent '1', a middle blue will represent '2', a middle/dark blue will represent level '3', and a dark blue will represent a level '4'. This was done to give a clearer overview of the change in policy strength, resembling a 'heat map'.

4.2. SCHOOL CLOSURE POLICY TIMELINE ANALYSIS

4.2.1. TIMING OF POLICIES

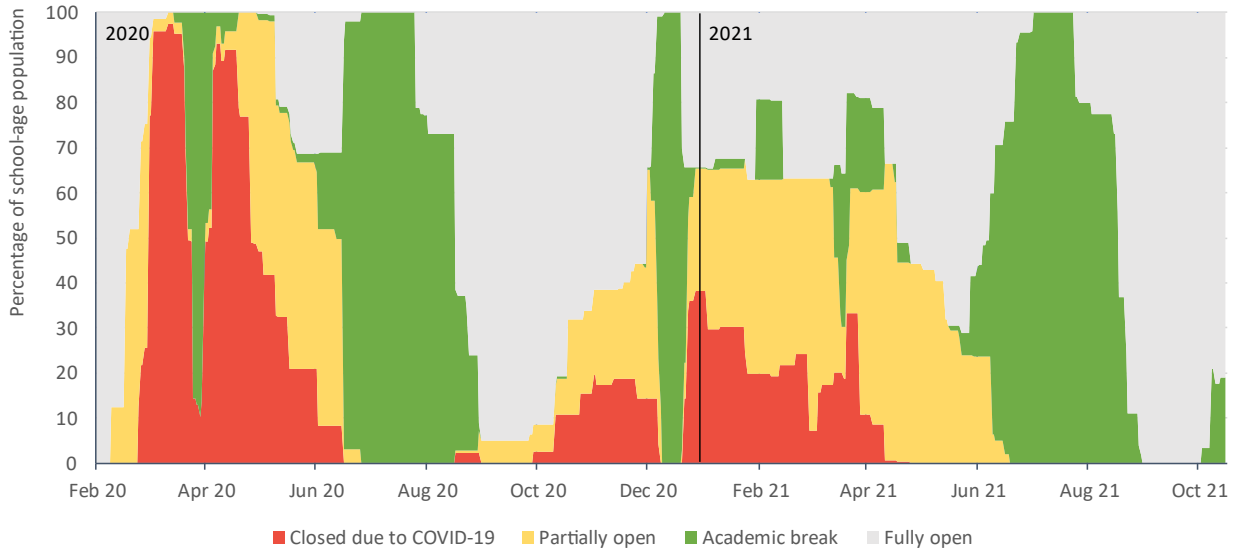
To recap on our previous rapid assessment reviews covering the periods until October 2021, we highlighted that all eight countries, with the exceptions of Belgium and Sweden, started closing down their schools approximately at the same time, i.e. between late February-mid March. Indeed, all eight EU RESPOND partner countries, with the exceptions of Belgium and Sweden, took this measure at some point of the pandemic, particularly throughout spring/summer 2020 – a period with strict suppression policies overall. Some countries, such as the Netherlands, Spain, Germany and France, initially had relatively short periods of complete school closures, while the UK and Italy, on the other hand, had much longer periods of complete closure. In the case of the UK, other than some limited use for vulnerable children and the children of key workers, schools were closed for the rest of the 2019/20 academic year. From autumn 2020 a 'second wave' of school closures took place across all countries other than Sweden, with Spain and the UK closing down all schools for a period in September and October. These closures were relatively short, but by late 2020, the emergence of the more infectious Delta variant of the COVID-19 virus led to longer restrictions in some countries.

By the end of 2021 EU RESPOND countries had generally relaxed school closures. As a general trend, Sweden remained the most 'liberal' nation, never having entirely closed down schools, and having all schools fully opened since May 2021. Germany is undoubtedly the strictest country in this regard, having shut down all schools from December 2020 to end of July 2021, i.e. the entire spring/summer semester, as well as for a short period towards the end of August. There were also long closures until February and March in the Netherlands and the UK respectively. Italy also closed schools for around two months in total in 2021.

Overall, RESPOND countries were relatively lenient in 2021, compared to 2020. This may have been due to the strong negative impacts school closures were perceived to have on individuals' mental health, not only affecting students, but also staff as well as parents. Furthermore, there was some increased evidence in some countries, that children were not, as previously believed, 'super-spreaders' of the virus, meaning that the negative effects of closing schools outweighed the positive benefits of reducing the spread of the disease (8). As of late spring/summer 2021, the majority of EU RESPOND countries recommended only closing schools or alternatively particular school grades or classrooms in case of one or several COVID-19 outbreaks (level 1). It is however worth mentioning that except for Sweden, in all EU

RESPOND countries, schools asked or have previously asked students and/or staff to be tested through rapid tests on a regular basis in order to ensure COVID-19 safety (9). Nevertheless, this policy varied between regions and schools, and was not always mandatory (ibid.) This trend in school closures is also line with wider experience across the whole EU in 2020 and 2021 (Figure 4). School closures were most widespread between April and June 2020 and a lesser but still substantial amount of closures were seen in Winter 2020-2021, after which school closures were not common and usually restricted to specific schools where there had been COVID-19 cluster outbreaks.

Figure 4: Share of students affected by school-closures in 2020 and 2021, EU27



Source: UNESCO (2021a) and UNESCO-UIS Education Database

Note : School-age population refers to 4-17 year-old population. The different school closure statuses are defined as follows: Closed due to COVID-19: Government-mandated closures of educational institutions affecting most or all of the student population enrolled from pre-primary through to upper secondary levels [ISCED levels 0 to 3]. Academic break: Most schools across the country are on scheduled academic breaks. All study during this period is suspended. Fully open: For the majority of schools, classes are being held exclusively in person, noting that measures to ensure safety and hygiene in schools vary considerably from context to context and/or by level of education. Partially open: Schools are : (a) open/closed in certain regions only; and/or (b) open/closed for some grade levels/age groups only; and/or (c) open but with reduced in-person class time, combined with distance learning (hybrid approach).

As Figure 5 indicates between November 2021 and October 2022, the impacts on schools were lesser still. There was a strict closure of schools in the Netherlands in early January 2022. While Italy still required school closures in some of its regions until end of April, all other RESPOND countries had 'recommended' school closures from the start of the year under specific narrow circumstances. The Netherlands was the first of the eight RESPOND countries to end all school closures, followed by Sweden. Belgium followed shortly after in mid-March, as well as France towards the end of March. Spain dropped all measures at the end of April, as did Germany shortly afterwards. Only Italy continued to recommend school closures until the autumn term in 2022, no other RESPOND country had any restrictions on schools beyond April 2022.

Figure 5: School Closure Policy Timeline November 2021 – October 2022

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Belgium	1	1	1	1	1	0	0	0	0	0	0	0
France	1	1	1	1	1	0	0	0	0	0	0	0
Germany	1	1	1	1	1	1	0	0	0	0	0	0
Italy	2	2	2	2	2	2	1	1	1	1	0	0
Netherlands	1	1	3	0	0	0	0	0	0	0	0	0
Spain	1	1	1	1	1	1	0	0	0	0	0	0
Sweden	0	0	1	1	0	0	0	0	0	0	0	0
UK	1	1	1	1	1	1	0	0	0	0	0	0

The much less restrictive approach to schools seen in 2022 in part reflects progress with vaccination roll out, but it also reflects an even more acute awareness of the possible consequences for children of school closures. Studies indicate several short and likely long-term repercussions of closing schools and switching to online learning on students, staff and parents' mental health. Some students were likely to be disadvantaged by a lack of structure to daily activities, a lack of physical exercise, increased screen time, and the lack of resources (including learning materials, help in learning, as well as food and safety) (10). This can lead to increased levels of anxiety, boredom, frustration, and overall reduced quality of life (ibid.). A Japanese analysis indicated that parents, particularly less-educated mothers with primary-aged school children, experienced worsening mental health (11). This might be due to several factors: firstly, this may have been due to the multiple responsibilities of mothers as primary cares as well as being in the workforce. Secondly, less-educated women may have felt less able to help their school-aged children, particularly when there were language barriers. Thirdly, less-educated women are more likely to occupy lower-paying jobs that cannot be done at home, which can add to frustration when they cannot properly help their child with home schooling. Lastly, young children require more help than older children, which may explain why mothers of younger children were particularly stressed, ultimately negatively impacting their mental health (ibid.). In addition, some teachers were more likely to feel a worsening in mental health due to online learning as well. The additional pressure of switching to online classes, as well as feeling unprepared to properly help students with both their learning and socio-emotional needs while teaching online in some instances also led to stress and anxiety (12).

Likewise, students' learning progress was also disrupted by online learning, and there was a fear among policymakers and educationalists that these losses would have long term impacts. For instance, a survey of 1,100 parents in Germany found that during online schooling in 2020, students cut their average learning time of 7.4h a day by approximately half (13). More worryingly, low-achieving students cut their learning hours by even more, i.e. an average of 4.1h per day, as compared to 3.7h for high-achievers (ibid.). The lost time to learning was mainly replaced by "detrimental activities" including additional screen time playing computer games or watching TV, which are not considered beneficial to child learning or development (13). An increase in daily screen time during school closures was also found in other studies (14). With regards to learning progress, similar results were found in a Netherlands study, which the authors called a 'best case scenario', since, the country had relatively lenient school closing policies throughout the pandemic (15). Nevertheless, that study found that all, and in particular, lower-income students, made little to no learning progress when studying entirely from home (15). A caveat for all of these findings on educational impacts across Europe, is that access to online education and daily support from schools varied across countries, for instance a much higher proportion of primary school children were offered online classes in Italy (65%) than in France (20%) during the first wave of the pandemic (16).

It is important to note that some children have benefitted from school closures. A small number of children reported feeling happier and more relaxed, particularly those with a pre-existing mental illness, as well as those who are on the autism spectrum and/or students who have previously been bullied (17). This was especially the case during the first lockdown (10). Nevertheless, a systematic review found that children and adolescents with disabilities, and/or pre-existing mental health issues had a significantly higher risk of developing anxiety during periods of lockdowns (18). The

authors argued that with many special education services being closed, students with special needs who usually rely on carefully constructed routines may feel anxious and stressed due to the lack of their usual daily activities (ibid.).

Given Germany, the UK and Italy's relatively longer periods of school closures, it may be that the most long term adverse impacts on the development and mental health are seen in UK, German and Italian children compared to those from countries with fewer restrictions such as Sweden. However, in order to determine this, longitudinal studies comparing the mental health of students, staff and parents of RESPOND and other countries are required that go beyond the period of the pandemic.

4.3. RESTRICTIONS ON GATHERINGS: POLICY TIMELINE ANALYSIS

4.3.1. TIMING OF POLICIES

Looking back at our previous reports, our first report covering 2020 indicated most RESPOND countries imposed the strictest level of restrictions on gatherings of 10 people or less, in mid to end March 2020, with Italy and France being the first countries to do so at the end of February (23rd and 29th of February, respectively). Generally speaking, in 2020 France had the longest period of the most severe level 4 restrictions, followed by the UK. Belgium, Spain and Germany, had similar lengths of restrictive periods when it came to restricting gatherings of 10 or less individuals (level 4), restricting gatherings between 11 and 100 individuals (level 3) and restricting gatherings between 101 and 1000 individuals (level 2). Italy, surprisingly, was relatively lenient over 2020; after the initial outbreak, the country switched between levels 1, 2, and 3, putting the country into level 2, i.e. being able to have gatherings of between 101 and 1000 people, for the longest time period. The Netherlands and Sweden only imposed the strictest measures, at a much later stage; at the beginning of August and end of November 2020 respectively.

Restrictions on gatherings remained relatively strict throughout 2021 in all RESPOND countries. This is because social distancing measures remained crucial to slowing the spread of the virus which spread rapidly in winter 2020/2021. The strictest country was Spain, followed by Belgium and the UK respectively, both of whom stayed at level 4 for the majority of winter, spring, and summer 2021. Spain and the UK continued with restrictions until the beginning of autumn. The most lenient country was the Netherlands, having only restricted very large gatherings of people above 1000 from mid-June onward, followed by Sweden and Italy.

While restrictions on gatherings had reduced markedly across Europe by autumn 2021, most RESPOND countries imposed Level 3 or Level 4 restrictions in winter 2021-2022; there were also new travel restrictions imposed in relation to the new Omicron variant of concern. Specific lockdowns were seen in other EU countries, e.g. in Austria, where for example there was a strict lockdown lasting 3 weeks from November 19 2021. As shown in Figure 6, with the exception of Spain, all restrictions on gatherings in RESPOND countries had been lifted by April 2022. Spanish autonomous communities imposed level 4 restrictions only allowing gatherings with 10 people or less from January until mid-March, and then some of these Spanish regions continued to restrict gatherings to a maximum of 100 people until September 2022. Germany was also very strict, maintaining level 4 restrictions only allowing meetings with 10 people or less from November 2021 until April 2022, when all restrictions on gatherings were dropped. The Netherlands became very strict with Level 4 restrictions between December 2021 until mid-February 2022, when all measures were dropped.

Sweden, in contrast to much of the previous 2 years, briefly imposed level 4 restrictions in response to the spread of Omicron, only allowing very small gatherings during January 2022, in February it allowed larger gatherings of between 10-100 people, before dropping all measures at the end of February. Belgium and France only allowed gatherings of up to 100 people between November 2021 and March 2022 after which all restrictions were dropped. The UK restricted gatherings to a maximum of 100 people between November 2021 until the end of February 2022, when all measures

dropped. Throughout the winter 2021-2022 Italy had the most lenient regime, only having some restrictions on gatherings above 1000 people. At the time of writing there are no restrictions on gatherings in any of the RESPOND countries.

Figure 6: Restrictions on Gatherings Policy Timeline November 2021 – October 2022

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Belgium	3	3	3	3	3	0	0	0	0	0	0	0
France	3	3	3	3	3	0	0	0	0	0	0	0
Germany	4	4	4	4	4	4	0	0	0	0	0	0
Italy	1	1	1	1	1	0	0	0	0	0	0	0
Netherlands	0	4	4	4	0	0	0	0	0	0	0	0
Spain	3	3	4	4	4	3	3	3	3	3	3	0
Sweden	0	0	4	3	0	0	0	0	0	0	0	0
UK	3	3	3	3	0	0	0	0	0	0	0	0

It is worth noting that the levels show large discrepancies within and between themselves, potentially meaning differences in how they impact on the mental health of people. There is a major difference between levels 2 and 3, for instance; being able to meet with 11 people rather than 100 (level 3), is very different to being allowed to meet with 101 people vs. 999 (level 2). As an example, a funeral with a maximum of only 11 attendees potentially will have more negative impacts on individuals than a funeral with 100 people. Additionally, it is unlikely that there are large effects on mental health for levels 1 and 2, since these both allow very large gatherings, and may therefore only negatively impact those who want to hold or attend large celebrations such as very large weddings, for example. It should moreover be mentioned that restrictions on gatherings are likely to mainly have brief acute effects on mental health rather than long-term, 'chronic' effects. School closures, for instance, are likely to impact people on a longer basis, as was discussed in the previous section.

While restrictions of religious gatherings, such as gatherings of worship, or funerals, in particular are likely to negatively impact people's mental wellbeing, the long-term effects still need to be further researched. During the first wave of the pandemic in Italy an online survey of 1,250 adults from across the country looked at the impact of the pandemic on spiritual levels of wellbeing and mental health (19). 41% of survey participants indicated that they were agnostic/atheist or did not have any religious beliefs, while 57.4% indicated they were religious, with 53% being Roman Catholic. The study reported lower levels of spiritual wellbeing, measured using the Jarel Spiritual Well-Being Scale (JSWB) (20), as well as lower levels of mental health (measured using the Italian version of the GHQ-12 (21), following the onset of the pandemic compared to data available before the pandemic. Spiritual wellbeing was lower in both the religious and the non-religious. The authors suggested that spiritual wellbeing may help strengthen resilience and possibly be protective of mental health during the pandemic; they also highlighted the importance of maintaining (as far as possible) traditional funeral rites following a COVID related death to bolster resilience. A qualitative study of bereaved people before and during the COVID pandemic suggested that they tried to compensate for the loss of many funeral related rituals through alternative ways of grieving (22).

Outside of Europe, a study by Osei-Tutu and colleagues on Christian church-leaders in Ghana indicated some negative effects on mental wellbeing due to restrictions of religious gatherings. Church-leaders mentioned "spiritual slacking, loss of fellowship, (and) disruption of normal routine" (p. 335) (23). However, some positive impacts were mentioned too, such as "increased faith, reduced stress, and increased family time" (p. 335). Another study on US adults found that more time spent outside (which may be more difficult in times of restrictions of gatherings, which also occur outside) was associated with better mental health, regardless of how physically active participants were (24). Although these studies suggest that religious gatherings may potentially be important factors in protecting mental health and wellbeing during the pandemic, especially for specific target groups such as older religious people, it remains the case

that little information is available on this issue in RESPOND countries. We were only able to find one study thus far from Italy that specifically focuses on these issues; additional longitudinal research on how restrictions of gatherings impact individuals' mental health in RESPOND countries are required. The potential impacts on the funeral workforce should also not be overlooked, a small survey of 287 funeral directors in Belgium highlighted that almost half felt that they experienced greater levels of distress during the pandemic (25).

4.4. STAY AT HOME REQUIREMENT POLICY TIMELINE ANALYSIS

4.4.1. TIMING OF POLICIES

In our first two reports, we first noted that in 2020, with the exception of Sweden, there was a general trend in countries to require their populations to stay at home (with very limited exceptions) from during the first wave of COVID from mid-March onward. Generally, restrictions were reduced between May to October, the period when incidence rates of COVID were lower, but then ramped up again in winter 2020. In the second general lockdown period, Belgium, Spain, France, and Italy consistently stayed in a strict level 2 lockdown, whereas Germany and the UK had periods of alleviating the lockdown to purely recommending staying at home, to even a short period of no measures (only the UK: a short period at the end of November).

Stay at home requirements, or lockdowns, remained some of the most used policies to halt the spread of the virus in early 2021, a period where access to vaccines was beginning to roll out at very different speeds across RESPOND countries. Lockdowns were present in nearly all RESPOND countries, with the exception of Sweden, from the beginning of 2021 until April 2021. Italy was hereby the strictest country, with nearly a continuous lockdown in at least a few of its regions. The UK, which had the fastest roll out of vaccinations in the over 50s of the RESPOND countries, essentially completing this task by end of February 2021, also had a relatively lenient stay at home possible. Scientific advisors felt it was possible to exit lockdown because of the success of the vaccination campaign, with many restrictions removed from mid-April 2021, although advice to work from home where possible remained until late summer. The Netherlands also reduced lockdown restrictions to level 2 from mid-January 2021 to the end of April 2021. With the exception of Italy, no stay at home requirements were in place in any RESPOND country by October 2021.

As Figure 7 indicates between November 2021 and October 2022 there were no stay at home restrictions in Belgium, France, Spain and the UK, and there were no strict level 3 lockdowns in any RESPOND country. Germany reintroduced and Italy maintained period of level 2 lockdowns, only permitting people to leave their homes for a number of permitted purposes between December 2021 and April 2022, and November 2021 and February 2022 respectively. Germany continued to have a level 1 recommendation to stay at home throughout 2022, with this recommendation also in place in the Netherlands between December 2021 and April 2022, as well as in Sweden in January and February 2022.

Figure 7: Stay at Home Requirements Policy Timeline November 2021 – October 2022

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Belgium	0	0	0	0	0	0	0	0	0	0	0	0
France	0	0	0	0	0	0	0	0	0	0	0	0
Germany	1	2	2	2	2	2	1	1	1	1	1	1
Italy	2	2	2	2	1	0	0	0	0	0	0	0
Netherlands	0	1	1	1	1	1	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0	0	0	0	0	0
Sweden	0	0	1	1	0	0	0	0	0	0	0	0
UK	0	0	0	0	0	0	0	0	0	0	0	0

Lockdown measures are potentially the most severe suppression measures with regards to mental health, as they greatly impact individuals' day-to-day lives and ability to socialise. Socialising represents an important buffer to adverse effects of stressors (26, 27). Therefore, when people are unable to socialise as per usual, they will run into greater risks of developing mental health issues such as symptoms of anxiety and depression (28). This is even more so the case in the already difficult period of the pandemic, where buffers such as social contacts are particularly crucial. Additionally, the loss of routine, daily activities, including for leisure, as well as the inability to socially interact may prove very difficult to everyone, increasing levels of depression and anxiety in the general population (29); however, systematic reviews indicate that particularly women, young people, and individuals with previous mental health disorders were more likely to experience adverse psychological impacts from lockdown measures as compared to the rest of the population (18, 29-31).

In general, women are particularly at risk of worse mental health outcomes for several reasons: 1) likely increase in carer responsibilities as well as general chores at home, 2) financial disadvantages, including greater risk of unemployment, salary cuts, less savings, and 3) higher chances of being victims of domestic violence, which increased during lockdown periods (32, 33). Likewise, young people are particularly at risk of developing mental health problems as they rely on peer relations for identity formation and wellbeing to a greater extent than adults (18, 29, 34). During strict lockdown restrictions, meeting friends and peers becomes increasingly difficult, if not impossible, which can lead to increased anxiety and depressive symptoms, anger, and irritability (18). Moreover, individuals with pre-existing mental health problems may be highly vulnerable during pandemics due to a reduction in psychiatric services as well as psychiatric hospitalisation (31). Individuals with pre-existing mental health problems are also more likely to be more vulnerable to life stressors and disruptions in routine than the general population, which can lead to increase in anxiety (ibid.).

Although most stay at home measures were removed in 2022, it is also worth noting that additionally workplace closures were still mandatory for some businesses in all RESPOND countries, except Sweden, where it was only 'recommended' at the beginning of 2022 until the end of January, when Germany also shifted towards 'recommended'. In some Italian regions, workplace restrictions became required again for everyone except key workers from end of January until the beginning of April 2022. The Netherlands dropped all measures from the beginning of March, followed by the UK at the end of April, and Germany at the end of May.

As an aside, at the beginning of 2022, all RESPOND countries except for the UK and Germany still banned international travel to high-risk regions. The UK and Germany were more lenient, allowing travel as long as it was followed by quarantine. Italy was the next to follow, in March 2022, allowing travel everywhere if travellers quarantined afterwards. Spain changed into a 'screening' phase at the beginning of April, where individuals were allowed to travel everywhere as long as they were tested upon return, as did Germany towards the end of April. The UK dropped all measures from mid-March onwards, as did Sweden at the beginning of April. However, the need for mandatory testing either pre-travel or on arrival, as well as the need to display vaccination certification, continued to be in place to varying degrees across Europe, especially for people travelling from non-EU countries, for much of 2022.

4.5. MEASURES TO PROTECT OLDER PEOPLE

4.5.1. TIMING OF POLICIES

During the first months of the pandemic there were growing concerns across many countries that not enough had been done to protect older people, who had been shown to be at much greater risk of hospitalisation and mortality from COVID-19. By 2021 some of the early public health lessons had been learnt, with stricter measures in place to protect

older people, and in particular measures to restrict contacts for individuals living in residential care homes. Unlike the previous policy measures we have looked at, some restrictions have continued to remain in place in all countries as of October 2022, as seen in Figure 8.

In our previous report we indicated that all RESPOND countries implemented some level of isolation/contact restriction to protect vulnerable older people during 2020 and 2021. Italy was the country with the longest lasting highest level of restrictions during this time period, starting with Level 2 and progressing to Level 3 from February 2021. In Sweden and in the UK, restrictions went in the opposite direction to Italy, starting 2021 in level 3 and moving to level 2 from February/March. In the UK this was probably made possible by the mass rollout of vaccination starting with the oldest age groups from December 2020. By early April 2021 most of the over 70s in the UK had been double vaccinated. In Belgium and Germany, restrictions were kept at level 2 throughout 2021, while in France they remained at this level until July, when it progressed to level 3, where it remained for the rest of the year. In the Netherlands, restrictions were kept at level 2 from January to June and eased to Level 1 from June to August, when it moved back to level 2. In Spain, restrictions have been kept at level 1 throughout the entire year until the current date.

As well as restrictions introduced into care homes, such as limiting visits and requirements for high levels of personal protective equipment, the continued roll out of vaccination has been seen as a key measure, which has helped reduced the need for the strictest levels of restrictions for much of 2022 in Belgium, Netherlands, Sweden and the UK. In some countries, as part of measures to prevent a repeat of the very high deaths seen at the beginning of the pandemic mandatory requirements for workers in residential care homes to be vaccinated against COVID-19 were introduced, as for instance was implemented in the UK in November 2021. One unintended consequence of this policy in the UK was a reduction in the available long term care workforce, with *'tens of thousands'* of staff unwilling to be vaccinated and leaving the care sector permanently (35). The guidance on mandatory vaccination was revoked in March 2022.

As can be seen in Figure 8, Italy continued to have the highest level of restrictions in place, with all non-essential external visitors prohibited, and/or all vulnerable older people required to stay at home and not leave home with minimal exceptions, and receive no external visitors throughout 2022. This highest level of restriction was also reintroduced in Germany in October 2022, having been previously downgraded in May 2022. The highest level of restrictions was in place in Spain between December 2021 and August 2022, and remained at level 2 as of October 2022. France also had the highest level of restrictions in place until March 2022. Sweden and the Netherlands only had level 1 restrictions in place, that is recommendations on public health and visitor access in long term facilities and in people's own homes, but no mandatory measures for much of 2022. Belgium and the UK maintained level 2 restrictions, that is some mandatory public health measures including additional cleaning and social distancing in care facilities, visitor restrictions and additional measures protecting older people at home

Figure 8: Measures to protect older people Policy Timeline November 2021 – October 2022

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Belgium	2	2	2	2	2	2	2	2	2	2	2	2
France	3	3	3	3	3	2	2	2	2	1	1	1
Germany	2	2	2	3	3	3	3	2	2	2	2	3
Italy	3	3	3	3	3	3	3	3	3	3	3	3
Netherlands	2	2	2	2	2	1	1	1	1	1	1	1
Spain	1	3	3	3	3	3	3	3	3	3	2	2
Sweden	2	2	1	1	1	1	1	1	1	1	1	1
UK	2	2	2	2	2	2	2	2	2	2	2	2

Steps taken to protect older people during the pandemic have perhaps been the most scrutinised of all public policy measures. This is in part because of the high level of potentially preventable excess deaths from COVID-19, particularly during the early waves of the pandemic potentially due to the slow reaction of some policy makers, as well as social and

emotional impacts that have arisen from care residents (of all ages) been separated from family members. This has also had an impact on the mental wellbeing of care staff and we look at these issues in more detail in Section 8 of this report.

4.6. INCOME PROTECTION MEASURES

4.6.1. TIMING OF POLICIES

Income protection measures are likely to have played a very important role in protecting the mental health and wellbeing of populations during the COVID-19 pandemic. They were introduced early and with the exception of Italy, all RESPOND countries continued to implement the highest level of income support (level 2: government replacing 50% or more of lost salary) throughout most of 2021. Belgium, Germany, Spain and the Netherlands had these measures in place throughout 2021, while in France level 2 support was provided until August 2021, when it was replaced by level 1 income support (government replacing less than 50% of lost salary). In the United Kingdom and Sweden level 2 support lasted until September 2021. Since then, these countries have not offered either Level 1 or Level 2 levels of support although in the case of the UK some financial support of £500 was still available until the end of February 2022 for individuals on low incomes that had to self-isolate (Test and Trace Isolation Payments), while an additional £20 per week for those on low incomes (universal credit uplift) was available until the end of October 2021. In Italy, level 1 financial support was offered throughout 2021.

As Figure 9 illustrates, as of October 2022, only two countries, Germany and the Netherlands were still providing the highest level of income protection, while a lower level of support was still available in Italy. With the exception of brief periods between November 2021 and January 2022, no additional income protection was provided in Belgium and Sweden; there was also no income protection in the UK throughout 2022. Spain ended its level 2 support in July 2022 and France its level 1 support in March 2022. Although income protection schemes, as seen in Figure 9, have been phased out in 5 of the 8 countries, it should be noted that some further substantial social protection measures and energy price caps have been introduced across Europe in 2022 to help mitigate the effects of increase in the costs of energy following the Russian attack on Ukraine in February 2022.

Figure 9: Income Protection Measures Policy Timeline November 2021 – October 2022

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Belgium	2	2	0	0	0	0	0	0	0	0	0	0
France	1	1	1	1	1	0	0	0	0	0	0	0
Germany	2	2	2	2	2	1	2	2	2	2	2	2
Italy	1	1	1	1	1	1	1	1	1	1	1	1
Netherlands	2	2	2	2	2	2	2	2	2	2	2	2
Spain	2	2	2	2	2	2	2	2	0	0	0	0
Sweden	0	1	1	0	0	0	0	0	0	0	0	0
UK	0	0	0	0	0	0	0	0	0	0	0	0

4.7. DEBT RELIEF MEASURES

4.7.1. TIMING OF POLICIES

In our previous report we indicated that in contrast to income support measures, only three of our RESPOND countries implemented extensive debt relief programmes in 2021. In Italy and Spain, level 2 (broad debt/contract relief) programmes were in place throughout 2021, in the UK, level 2 support was also implemented in 2021, and replaced with limited (level 1, narrow relief, specific to one kind of contract) debt relief from September 2021 until June 2022.

Belgium offered extensive debt relief only very early in 2021 which was soon, in January 2021, replaced with limited debt relief which, as Figure 10 indicates, ended in December 2021. In the Netherlands, limited debt relief was available from January to June, when the programme was halted. Since then and up until October 2022, the country has offered no debt relief to its citizens. In Sweden, limited debt relief was made available for a short period of time in March 2021 and, again, from June 2021 until December 2021; it was again in place between February and May 2022. the current date; no debt relief was offered in the remaining months. France and Germany have implemented no debt relief programmes in 2021, but Germany did offer Level 2 support between February and September 2022. Italy continued to provide level 2 support until March 2022, and then Level 1 support until September 2022. As of October 2022 no debt relief measures related to COVID-19 were in place in any of the eight RESPOND countries.

Figure 10: Debt Relief Measures Policy Timeline November 2021 – October 2022

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Belgium	1	1	0	0	0	0	0	0	0	0	0	0
France	0	0	0	0	0	0	0	0	0	0	0	0
Germany	0	0	0	2	2	2	2	2	2	2	2	0
Italy	2	2	2	2	2	1	1	1	1	1	1	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0
Spain	2	2	2	2	2	0	0	0	0	0	0	0
Sweden	1	1	0	1	1	1	1	0	0	0	0	0
UK	1	1	1	1	1	1	1	1	0	0	0	0

5. A FRAMEWORK FOR EXPLORING THE IMPACTS ON MENTAL HEALTH OF COVID-19 AND POLICY RESPONSE MEASURES

RESPOND is focused on the potential impacts of COVID-19 on population psychosocial health across Europe, including ongoing examination of how immediate and changing policy responses to counter the pandemic may have protected and/or exacerbated risks to mental health and wellbeing. In our first appraisal report we highlighted a number of areas where we might anticipate impacts of COVID-19 on mental health. Many of these would be recognised determinants of mental health and wellbeing (36). It is well known that, beyond individual vulnerability, key social determinants play an important role on wellbeing and mental health, acting either as aetiological factors for the development of mental disorders (e.g., violence, deprivation and other contextual features that might increase psychological distress) or as protective factors (e.g., social capital, job and economic security and other factors that might buffer negative effects of adversity). The availability of protective factors that might increase resilience is also critical.

Additionally, it is also well established that "[positive] mental health is a fundamental element in the resilience, health assets, capabilities and positive adaptation that enable people both to cope with adversity and to reach their full potential" (37), and that, therefore, mental health should be defined as a cross-cutting component of life, which interacts with all other dimensions in a bidirectional way, so that both impacts on and is impacted by whatever happens in other spheres of life (e.g., physical health, economic circumstances, participation in social life etc.).

As a result, our framework is based on two fundamental principles:

1. *That even "a small improvement in population wide levels of wellbeing will reduce the prevalence of mental illness [and bring a number of] benefits associated with positive mental health" (37) and, as result, increase resilience and enhance people's ability to cope.*

2. *That although specific policy/interventions targeting mental health are needed/welcome, the importance of mental health as a driving force should be considered across all sectors and in all policy-making decisions, and that potential mental health impact of any policy should be considered before implementation.*

Table 1 lists key transitions in the life course where we believe the social determinants of mental health are particularly visible and may be further influenced by the pandemic. Table 2 also highlights specific additional risk factors that may be exacerbated during the pandemic. These were all described in detail in the first version of our appraisal report. In doing this we want to highlight that while a lot of attention understandably is focused on the immediate risks for mental health of the pandemic, there are also potential consequences that may not be immediately visible but nonetheless have consequences for decades to come. This is perhaps most evident when we look at childhood and adolescence, a key developmental period during the life course when mental capital is formed and accumulated (38). Mental capital 'encompasses a person's cognitive and emotional resources, including their cognitive ability, how flexible and efficient they are at learning, and their 'emotional intelligence', such as their social skills and resilience in the face of stress' (39).

Table 1: Key periods in the life course where mental health and wellbeing may be particularly vulnerable and potentially exacerbated by COVID-19

Perinatal period	Maternal, paternal and infant health, parental and infant bonding. Potential benefits to mental health of more time spent by both parents with infants during pandemic. Risks to mental health, include limited access to external support e.g. from extended families due to pandemic restrictions.
Pre-school period	Child cognitive and emotional development benefits from contact with other young children. Opportunities for structured group play may be limited during periods of pandemic restriction. Potential benefits to mental health of more time spent by both parents with young children during pandemic.
School – period	Protective impacts of school attendance, educational attainment; risks of adverse impacts of disrupted social bonding and interrupted education during periods of school closure or self-isolation from school due to pandemic.
Transition from school to higher education or work	Time period when incidence of severe mental disorder can be greatest, especially in young men. Moreover, not being in employment, education, or training (NEET) increases risk of long-term economic disadvantage and social exclusion, including increased risks to mental health. Risks likely to increase due to pandemic. Also, reduction / uncertainty in career aspirations due to pandemic uncertainty.
Working life period	Stable, secure employment in good working environment with opportunities for personal development can be protective to mental health. Maybe income and employment uncertainties due to pandemic varied effects on employment sector. Potentially also impacts on self-employed, if less access to governmental support than employed workers. Differential impacts on mental health linked to ability to work from home. Risks to mental health of workers who feel more 'exposed' to virus as working in 'public facing roles'.
Family period	Can be risks to mental health of family carers if not adequately supported. Not just caring for children, but potentially double caring for parents; significant caring responsibilities still more likely to be faced by women. During pandemic may be additional responsibilities for parents, e.g. long periods of home schooling or bringing an older relative into COVID bubble. Potential benefits of more time spent with families during periods of lockdown, but also potential risks of more interpersonal mental and physical violence.
Transition from work to retirement	Retirement can mean the loss of role, social status, income and social networks, all of which can be protective to mental health. Risks may be greatest for men, who still are more likely to have social networks that revolve solely around work than women.
Older age period	Increased risks to mental health due to multi-morbidities, physical frailty, bereavement and isolation.

Table 2: Additional determinants of mental health and wellbeing potentially exacerbated by COVID-19

Living with pre-existing mental ill health	Potential impacts on access to mental health services and other supports may impact on mental health.
Living with pre-existing physical illness and/or disability	Potential impacts on access to physical health services and other supports may impact on mental health.
Specific family circumstances	Single parent households may be at greater risk because of lack of support. 'Looked after' children not living with families may be at higher risk.
Ethnicity and cultural factors	Marginalised populations often at higher risk of poor mental health.
Housing and living conditions	Housing conditions are associated with mental health. In addition, physical space and location of housing may be of greater importance during periods of lockdown and enforced home working.
Financial insecurity	Financial insecurity or fear of financial insecurity associated with risks to mental health, which can be heightened during pandemic. Critically important may be security of accommodation; may be fears of home repossessions or evictions if unable to pay mortgage or rent due to COVID related impacts on income.
Access to green space	Green space may be protective to mental health. During lockdowns, with some exceptions, RESPOND countries have permitted periods of outdoor exercise. Individuals who live in settings with little access to parks, nature or other green space may be at more risk of poor mental health.

6. MENTAL HEALTH IMPACT ASSESSMENT OF THE COVID-19 RESPONSE

As part of RESPOND we have developed a mental health impact assessment framework to look specifically at the additional impacts of COVID-19, either in exacerbating existing risks to the determinants of mental health, as well as documenting impacts that has arisen solely to conditions seen in the pandemic. Further details of the development of the framework are provided in the first version of our assessment report. In this section we provide illustrative summary information which has been expanded from our second assessment report to take account of new evidence on the mental health impact assessment of all six policy responses that we have described earlier in the policy timeline section of this report. In these illustrations we have considered evidence across all 8 RESPOND countries as well as comparable information from other relevant country contexts, e.g. other high income countries.

Here we have also taken into account detailed analysis of interviews with country stakeholders on the necessity for policy measures, the strictness of these measures and the potential trade-offs to be faced between pandemic control and population mental health. We have also drawn on information on the way in which the pandemic and its response are communicated and in particular the way in which mental health impacts are covered by both traditional and social media**.** Our analysis is also informed by and in turn will inform other work packages. In particular, we have drawn on

some of the initial work looking at the **policy and practice implications of analysis of data sets** being explored in WP2, as well as **practical experience in implementing mental health supports** in WPs 4 and 5.

Table 6, for example, provides information on the potential impacts on mental health and wellbeing of stay at home requirements across RESPOND countries. We highlight direct impacts on mental health and wellbeing for the general population and for specific groups across the life course. We also include indirect impacts on mental health and wellbeing. These include impacts on access to relevant services, as well as impacts on some determinants of mental health and wellbeing. We have adopted a convention that has been used in health impact assessment, that looks at both positive (shaded green) and negative impacts (shaded red) of policy actions. In each case using this approach we look at the likelihood that the positive or negative impact will happen; this draws heavily on published literature and will ultimately also make use of material from WP2 in RESPOND. The intensity of each impact as well as its duration is also considered, using the terminology used by Public Health Wales in their health impact assessments (40). (See Table 3). Where we leave cells blank, insufficient information is available to make any judgement on impact.

Table 3: Measures of impact used in mental health impact assessment framework [Source: (40)]

Type of impact	
Positive: Impacts that are considered to improve mental health or wellbeing directly or indirectly	**Negative:** Impacts that are considered to reduce mental health or wellbeing directly or indirectly
Likelihood of impact	
Confirmed	Strong direct evidence e.g. from a wide range of sources that an impact has already happened or will happen
Probable	More likely to happen than not. Direct evidence but from limited sources
Possible	May or may not happen. Plausible, but with limited evidence to support
Intensity / severity of impact	
Major	Significant in intensity, quality or extent. Significant or important enough to be worthy of attention, noteworthy
Moderate	Average in intensity, quality or degree
Minimal	Of a minimum amount, quantity or degree, negligible
Duration of impact	
Short term (Short)	Impact seen over 0 – 1 year
Medium term (Medium)	Impact seen over 1 – 5 years
Long term (Long)	Impact seen over > 5 years

6.1. MENTAL HEALTH IMPACT OF SCHOOL CLOSURES

Table 4: Mental health impact assessment of school closures

School Closures							
	Positive impacts			Negative Impacts			
	Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	Comments
Direct Impacts							
Direct Impacts on mental health and wellbeing of people with caring responsibilities	Confirmed	Minimal	Short	Confirmed	Major	Short	Multiple studies report parents experienced higher levels of stress due to extra home schooling responsibilities
Direct Impacts on mental health and wellbeing of infants, children and adolescents	Confirmed	Moderate	Short	Confirmed	Major	Short	Multiple studies reporting adverse impacts on mental health and wellbeing of school children Multiple studies report that a small minority of children had improved mental health and wellbeing, as their school, experience, e.g. being bullied was detrimental to their mental health.
Impact on Access to Mental Health Promotion, Prevention and Treatment Services							
Access to specialist mental health services	Possible	Minimal	Short	Possible	Minimal	Short	Some increase in online provision of school -based mental health promotion services may increase access to support In some countries school-based mental health promotion services would potentially have identified problems.
Impacts on determinants of mental health and wellbeing							

Physical activity	**Possible**	**Minimal**	**Short**	**Possible**	**Minimal**	**Short**	**Government guidance in RESPOND countries encouraged regular exercise during school closures which may promote mental health** **Loss of access to regular sport exercise activities and active commutes to school**
Home working				**Probable**	**Moderate**	**Short**	**Women more likely to have to home school children and experiencing more adverse mental health events.** **Home working parents reported more stress than home workers without children**
Domestic violence and abuse				**Probable**	**Moderate**	**Short**	**Some studies reporting increased physical abuse of children in households where family dynamics poor and living space limited**
Housing	**Confirmed**	**Moderate**	**Short**	**Confirmed**	**Moderate**	**Short**	**More stress and reduced mental health reported in children and parents where living space limited. Increased levels of depression symptoms associated with poorer quality housing for university students.** **Better housing quality and space associated with better mental health**
Green Space	**Possible**	**Minimal**	**Short**	**Possible**	**Minimal**	**Short**	**Some evidence for more than one study that children and adults living in areas where possible to access green space had better mental health than children and adults with limited access to green space**
Low household income				**Probable**	**Moderate**	**Medium**	**Lack of access to internet and digital equipment more likely in low income households hampering learning. Low-income also associated with more camped living space that impacts on health**

Table 4 summarises our mental health impact assessment of school closures. There is evidence from systematic reviews that school closures helped reduce the spread of the virus and contain prevent hospitalisations (41). However, the effectiveness of these pandemic suppression successes must be considered against adverse impacts on mental health and wellbeing. There is evidence from multiple sources that school closures can have detrimental impacts on the mental health of school aged children, as well as their parents. Long-term disruption to school may lead to interrupted learning (42, 43); if this in turn could impact on life chances as education “is one of the strongest predictors of the health and the wealth of a country's future workers” (43). Multiple systematic reviews point to a range of adverse impacts on the mental health and wellbeing of children following the introduction of school closures, lockdowns and other measures (44-47). For example, one systematic review including 36 studies from 11 countries found that a combination of school closures and lockdowns were associated with 18% to 60% of children scoring above thresholds for risk of psychological difficulties, higher than seen before the pandemic (45). Longitudinal analysis, mainly of US

studies, but also including analysis from the Netherlands and Peru, reported that depression, but not anxiety, increased significantly following the onset of the pandemic, suggesting that lockdown measures may have played an importance role in this deterioration in mental health (48).

It is also important to note that many studies also point to improved mental health for a minority of children following the start of the pandemic. For example, secondary analysis of a longitudinal 3-wave panel survey (pre-pandemic (October 2019), during lockdown (May 2020) and shortly after returning to school (October 2020), including 603 students aged 13-14 in schools in in 17 secondary schools across south-west England found that students who had the poorest level of connectedness to school pre-pandemic experienced a reduction in symptoms of anxiety during the time of school closure and their anxiety levels increased again when schools reopened (49). Some students may have benefited from being away from the school environment, which they may have found stressful and also may have been subject to bullying, which has been shown in various studies to be associated with longer term poor mental health(50), increased risks of self-harm (51-53) and poorer educational outcomes in young people (50, 54, 55).

Poor quality housing was associated with poorer mental health outcomes, and particularly in households with children, as observed in analysis of survey data from nearly 70,000 people in Denmark, France and the UK, in the first wave of the pandemic (56). The quality of housing also had an impact on the mental health of young people spending more time at home during the pandemic. This was also seen in university students, for example poorer housing quality was associated with more depressive symptoms in university students in northern Italy during the first lockdown of the pandemic (57).

Parents, and in particular women, typically are more affected by school closures. Because of gender norms, women are more likely to take care of children who need to be home-schooled due to COVID-19 school closures (58), even if both partners are working from home. In analysis of housing conditions from surveys of nearly 70,000 people in Denmark, France and the UK during the first months of the pandemic, women living in households with children reported higher levels of anxiety compared to men and younger adults living with children (56). In situations where gender norms are strong, women have tended to have less time available for their jobs, take more holidays to cope with the additional tasks of home-schooling, or switch to part-time work (potentially resulting in a loss of financial resources and independence, which can cause psychological distress). Moreover, if they decide to keep working, they may feel like they have to juggle several distinct tasks simultaneously, which can also lead to psychological distress (59). While researching the effects of the current pandemic on individuals' mental wellbeing, several studies have indeed demonstrated a gender difference in psychological distress between men and women (60-62). Traunmüller and colleagues, for instance, argue that this is due to an increase in unpaid care labour, such as taking care of children at home, which today is still largely done by women (62).

Many parents were also unprepared to take up the role of substitute teacher during the pandemic (63). A survey of more than 6,700 parents across all RESPOND countries, except France, during the first wave of the pandemic in Spring 2020 reported many negative impacts of home schooling on parents and their children aged 5 to 19 (64). There was a significant difference in parental stress due to the extra workload of home schooling in six RESPOND countries compared with Sweden. Rates of parental stress were just 14% in Sweden compared to rates between 47% and 59% in the other countries. This is unsurprising as in Sweden only schools for young people aged 16-19 closed; all other schools remained open, in contrast to the other countries.

In all countries, parents of children with mental health conditions felt significantly more stressed than parents of children without mental health conditions. Separate analysis of survey data of 1586 parents of children in the first wave of COVID in Germany also found that the number of children experiencing mental health problems in general, as well as anxiety, almost doubled during this immediate pandemic period (65). There is also some limited evidence on increased exposure to violence and abuse of pupils spending an increasing amount of time in vulnerable situations at home (66) but further empirical research is required to confirm these initial concerns. Another German study of 1024 parents

found small adverse impacts of mental health, while 48% reported a decrease in their children being exposed to violence, abuse or neglect compared to one third who reported increases (67).

Overall, in a cross-country study on school closures 67% and 57% of children and their parents also felt socially isolated during this period (64). Young people heavily rely on school and extra-curricular activities to meet with friends and peers (68). During adolescence, friendships become increasingly crucial, with research suggesting that they become even more important than youngsters' relationship with parents. While a good relationship to one's parents evidently also plays a crucial role to adolescents' mental health, adolescents' identity formation has been indicated to rely on friendships with peers (69). Any resulting increase social isolation, despite the maintenance of online connections, and a loss in daily structure (due to school closures, no longer being able to pursue hobbies outside, etc.) is likely to negatively impact on child and adolescent mental health (70, 71). This has also been found in preliminary research, studying the effects of COVID-19 on young people's mental health, as indicated in a systematic review (72). While most of the evidence points to negative impacts of school closures, again there is also some evidence indicating that between a quarter and one third of parents felt that home schooling had been a positive experience for themselves and their children (64).

6.2. MENTAL HEALTH IMPACT OF RESTRICTIONS ON GATHERINGS

Table 5: Mental health impact assessment of restrictions on gatherings

Restrictions on Gatherings							
	Positive impacts			Negative Impacts			
	Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	Comments
Direct Impacts							
Direct Impacts on mental health and wellbeing of general population				Confirmed	Major	Short	Multiple studies indicate decrease in mental wellbeing, increased levels of stress, anxiety and depression
Direct Impacts on mental health and wellbeing of people with pre-existing mental health problems				Confirmed	Major	Short	Multiple studies indicate that mental health of people with pre-existing problems has declined
Direct Impacts on mental health and wellbeing of infants, children and adolescents				Confirmed	Major	Short	Multiple studies point to increased isolation and loneliness in children and adolescents

Direct Impacts on mental health and wellbeing of older people				**Probable**	**Moderate**	**Medium**	**Mixed evidence on impacts on older people; loss of social networks associated with increased isolation**
Impacts on determinants of mental health and wellbeing							
Physical activity				**Probable**	**Moderate**	**Short**	**Studies point to reduced participation in team sporting activities and general leisure activities, e.g. indoor swimming**
Employment				**Confirmed**	**Moderate**	**Medium**	**Studies point to decreased levels of mental health in employees of industries most affected by pandemic, e.g. hospitality, leisure. Especially if not able to access income protection schemes,**
Crime rates	**Probable**	**Moderate**	**Short**				**Crime surveys and official crime statistics point to reduced levels of crime during periods of restriction**

Table 5 summarises our mental health impact assessment of restrictions on gatherings. After studying the mental health of adults in Germany, one study found that a general increase of social restrictions led to lower life satisfaction, as well as an increase in psychosocial concerns and loneliness (73). Being unable to have the same level of social contact, coupled with an increase in perceived life changes due to public health policies and a negative perception of these policies, was positively linked with increased anxiety, depression, psychosocial distress and overall lower life satisfaction. The authors stressed that it was the perception of public health policy mandated social restrictions rather than the actual restrictions that impacted on adult mental health in Germany.

Looking at impacts on determinants of mental health and wellbeing, loneliness is associated with increased risks to physical and mental health. This may be exacerbated due to social restriction measures and increase risks of mental health issues such as anxiety, depression and PTSD (74, 75). Additionally, particularly vulnerable individuals with pre-existing mental health issues are likely to have much reduced contact with their social support networks and the general communities during lockdowns, which may worsen their condition (76). For example, Bu and colleagues indicated that individuals who were struggling with self-harm or suicidal thoughts were facing difficulties in accessing formal mental health support in the first month of the pandemic (76). On the other hand, by studying the initial month of UK lockdown and its impacts on adults' mental health, another study suggested that there was no relationship between being vulnerable to the effects of the pandemic and mental health (77).

The pandemic may also have had some benefits for previously marginalised populations, such as people with physical disabilities. One Spanish study compared levels of loneliness in the population before and after the lockdown (78). Results indicate that individuals felt significantly less lonely than before the pandemic, particularly when it came to the

feeling of exclusion, even when one was confined alone. The authors believe that the feelings of community, inclusion and belonging fostered at the beginning of the lockdown helped in this regard.

Additionally, it is noteworthy that certain personal factors may increase vulnerability of developing mental health issues due to the effects of the pandemic. Indeed, being female, a student, having pre-existing health issues, a lower socio-economic status, and lower levels of education have been linked to higher risks of developing mental health disorders during the pandemic (60-62, 79-81). The fact that women are particularly affected may be due to a higher risk of developing mental health issues such as depression, as well as due to the fact that they are more likely to face an increase of household chores, child rearing due to school closures, and other unpaid labour tasks, in addition to their own jobs (62), as noted earlier in this report. As we have observed in our discussion of the determinants of mental health and wellbeing, socioeconomic status and income play an important role. Individuals in lower socio-economic groups may be particularly vulnerable as they may either have jobs which may be less easily performed at home, which may mean either that they have to contend with higher risks of contracting COVID-19 in the workplace or may be at increased risk of worklessness. They have a higher likelihood of experiencing COVID-related job loss, in addition to pre-existing issues such as unstable working conditions, financial hardship, poorer health conditions (e.g. living in overcrowded areas) and poorer access to health care services (80).

6.3. MENTAL HEALTH IMPACT OF STAY AT HOME REQUIREMENTS

Table 6: Mental health impact assessment of stay at home requirements

Staying at Home Requirement							
	Positive impacts			Negative Impacts			
	Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	Comments
Direct Impacts							
Direct Impacts on mental health and wellbeing of general population	Probable	Moderate	Short	Confirmed	Moderate	Short	Multiple studies indicate adverse impacts of lockdowns on mental health for many in population, although many studies also indicate no change or improvements in wellbeing for minority of population.
Direct Impacts on mental health and wellbeing of people with pre-existing mental health problems				Probable	Major	Short	Multiple studies indicate that people with pre-existing mental health conditions were more likely to report their mental health had worsened, but difficult to link to any one policy change.
Direct Impacts on mental health and wellbeing of people with pre-existing				Probable	Moderate	Short	Stay at home requirements in multiple studies have been associated with a reduction in

physical health problems							physical activity for general population.
Direct Impacts on mental health and wellbeing of people with caring responsibilities	Possible	Moderate	Short	Possible	Moderate	Short	Multiple studies indicate that caregivers (especially for dementia) were at increased risk of psychological problems during the pandemic. Some carers who were able to switch to homeworking during the pandemic reported better mental health.
Direct Impacts on mental health and wellbeing of infants, children and adolescents	Confirmed	Moderate	Short	Confirmed	Major	Short	Mixed evidence, multiple studies indicate adverse impacts on mental wellbeing for majority but also indicate minority where mental health and wellbeing benefited.
Direct Impacts on mental health and wellbeing of students				Confirmed	Moderate	Short	Multiple studies indicate that anxiety and depression levels rose in students. The risks to mental health were higher in students who experienced financial hardship

							during the pandemic
Direct Impacts on mental health and wellbeing of homeless	Confirmed	Moderate	Short				In some country settings, e.g. in UK, access to housing was provided for homeless people. Wellbeing for many benefited, but likely to be a temporary measure.
Direct Impacts on mental health and wellbeing of older people				Probable	Moderate	Medium	Multiple data from across European countries indicate that on average lockdown measures were associated with an increase in common mental health problems as well as insomnia.
Impact on Access to Mental Health Promotion, Prevention and Treatment Services							
Access to specialist mental health services	Possible	Moderate	Short	Probable	Moderate	Short	Some evidence of preference for use of new online mental health services and reduced use of physical services Some evidence in RESPOND countries that current demands for mental health services may be greater than current use

Impacts on determinants of mental health and wellbeing							
Alcohol consumption				Possible	Minimal	Short Term	Some evidence of changes in alcohol consumption patterns, with increased consumption / binge drinking in minority of lockdown populations
Physical activity	Probable	Moderate	Short	Possible	Moderate	Short	Pandemic guidance has encouraged daily exercise during lockdown; normalised regular exercise Evidence also that physical activity has reduced in some populations
Home working	Probable	Moderate	Long	Probable	Moderate	Short	Mixed evidence: home working associated with improved mental health and wellbeing in some and significant decline in mental health and/or increase in stress, anxiety and depression in others
Employment				Confirmed	Moderate	Medium	Studies point to decreased levels of mental health in employees of industries most affected by pandemic, e.g. hospitality,

							leisure. Especially if not able to access income protection schemes
Domestic Violence and Abuse				Confirmed	Moderate	Short	Multiple studies in RESPOND countries indicate increased reporting of domestic violence during pandemic
Crime rates	Probable	Moderate	Short				Crime surveys and official crime statistics point to reduced levels of crime during periods of restriction
Housing	Confirmed	Moderate	Short	Confirmed	Moderate	Short	Restricted living space associated with poor mental health in several studies in RESPOND countries
Green Space	Confirmed	Moderate	Short	Confirmed	Moderate	Short	Some longitudinal studies indicate proximity / access to green space was associated with better mental health status both before and during pandemic

There are both positive and negative impacts on mental health from stay at home policies (Table 6). There is growing evidence from multiple sources that lockdowns have adverse impacts on mental health; however the magnitude of this impact is variable, as for instance noted in a meta-analysis of longitudinal studies during the pandemic (82). This meta-analysis, including European studies found a small but significant impact of COVID-19 lockdowns on mental health. That review also found no impact on mental wellbeing, nor on loneliness. The impact of social distancing and quarantine measures on individuals' mental health is complex, but variations in study methodology may also explain variations. For

instance, some studies reported lower rates of mental health, higher rates of anxiety and depression and increased alcohol consumption in individuals during the very strict quarantine imposed in China due to the COVID-19 pandemic (83, 84).

The impacts of the pandemic on different population groups have varied, as we have indicated earlier in this report. It is though difficult to determine the contribution of specific individual policy measures to mental health outcomes. An online cross-sectional survey of 2,869 people (72% women) with pre-existing diagnosed mental health conditions in Wales looked at their mental health status during the first wave of the pandemic in Spring 2020 (85). 60% reported that their mental health had worsened during the pandemic, 10% reported that it had got better and 28% reported that it had stayed the same. There were also adverse impacts on mental wellbeing. The study found that difficulty accessing mental health services was associated with a 3.77-point increase (95% CI 3.20–4.34) in GAD-7 score (anxiety), a 4.92-point increase (95% CI 4.25–5.59) in PHQ-9 score (depression) and 2.98-point reduction (95% CI −3.48 to −2.49) in WHO-5 score (wellbeing). People who had difficulty accessing mental health services had 2.47 (95% CI 1.97–3.12) increased odds of reporting that their mental health had worsened during the pandemic.

A cross-sectional general population survey of just over 1,000 people four weeks after the first lockdown in the UK reported that 52% of respondents screened positive for a common mental disorder, and 28% screened positive for clinical insomnia (86). More severe mental health problems were associated with adults less than 35 years, being a woman, having low income or being unemployed. Analysis in the UK also compared differences in the duration of lockdown measures in England and Scotland and their association with mental health (87). Using a 'difference in difference' methods approach the study indicating that more rapid easing of lockdowns was associated with improvements in mental health, measured using the GHQ-12. This was equivalent to a 31% improvement in mental health status following the end of lockdown measures. The study also found that individuals with lower socioeconomic status in terms of education or financial situation benefited more from the end of the strict lockdown, whereas they experienced a larger decline in mental health where the lockdown was extended.

The results of this study can be contrasted with analysis of 11 longitudinal studies with 50,000 participants in the UK looking at the association between pandemic wave, pandemic suppression measures and mental health (88). Impacts were compared across three time periods. Surveys from April to June 2020 covered the first wave of the pandemic with high infection and mortality rates. Surveys between July to October 2020 took place at a time when restrictions were being eased and mortality and infection rates were declining. Surveys between November 2020 and March 2021 covered a time period when infection rates and deaths rose sharply and the highest levels of lockdown measures were introduced, including restrictions around the Christmas period. Overall, the study found that mental health worsened during the pandemic and did not improve over time. The study found that the prevalence of high psychological distress either worsened or was stable over these three time periods. Women were more affected than men and that these differences widened over the course of the pandemic.

A cross-national self-report convenience sample survey comparison across four countries (Norway, UK, USA and Australia) examined the differences in mental health between those individuals employed and those not employed during the first social distancing implementation in the pandemic in April and May 2020 (89). The study found that for participants working remotely, having this remote option was associated with better mental health outcomes than for individuals who experienced little change in their work life. Participants from Norway reported better mental health outcomes than in the other three countries, and this the authors suggested might be because Norwegian participants were more likely to work remotely during the pandemic.

Lower mental wellbeing was also reported in 31% of 560 survey participants during the first lockdown in Austria (90). Patterns of alcohol use generally can be complex; one Belgian cross-sectional convenience survey of more 2800 people found that alcohol consumption patterns remained stable in around 50% of respondents during the first lockdown, with consumption declining in 25% and increasing in the remaining 25% (91). There was an association between anxiety and

depression and increased levels of alcohol consumption in this analysis. Concerns have been raised that living in a small space (92, 93), living in environments that are psychologically draining or have increased risk of interpersonal violence and abuse (94-96), being unable to revert back to coping mechanisms, such as sports or religious activities (97), boredom and frustration (98), and generally having to witness significant lifestyle changes (99), may lead to mental health issues during times of lockdown.

Turning to impacts on older people, during the first COVID-19 wave, data from the Survey of Health, Ageing and Retirement in Europe (SHARE COVID-19 questionnaire) were combined with the Oxford COVID-19 Government Response Tracker for 17 countries to look at the causal effect of lockdown policies on mental health by combining cross-country variability in the strictness of the policies with cross-individual variability in face-to-face contacts prior to the pandemic (100). The study found that lockdown policies worsened insomnia, anxiety, and depression by 5, 7.2 and 5.1 percentage points, respectively. This effect was stronger for women and for those aged between 50 and 65. Interestingly, lockdown policies notably damaged the mental health of healthy populations.

However, another study also using SHARE data did not find an impact, but this study looked at both lockdown and economic support measures on the mental health of people over 50 across 26 countries (101). Using data from the SHARE COVID-19 questionnaire, it looked at how responses differed relative to individual exposure to different policy contexts within countries. Overall, the authors concluded that lockdown measures did not adversely impact on mental health and this may in part been helped by the different financial support measures, including income protection that were in place across countries (101).

Unpaid carers are another population group whose mental health may have been particularly vulnerable during the pandemic. Multiple systematic reviews looking at carers of people with dementia have reported a majority of carers experiencing deteriorations in their mental health (102-104). The lack of access to respite care and the withdrawal of many at-home supports during periods of lockdown were key factors contributing to a deterioration in the mental and physical health of many carers.

Another vulnerable group were students, particularly those who were not living in their parental homes. Stay at home measures, as well as the switch to online learning, may have meant that students felt that they were missing out on an essential element of the university experience, including the social life; and this may have adversely impacted on their mental health. A systematic review identified 17 longitudinal studies, including studies in the Netherlands and Italy, looking at the mental health of more than 20,000 higher education students during the pandemic (105). It concluded that there was an overall worsening of mental health and a decline in wellbeing in these students during the pandemic. Some groups of students more likely to have higher levels of anxiety and depression included female and lesbian, gay, bisexual, and transgender students.

Another systematic review of cross-sectional studies focused on rates on anxiety in university students (106). From 36 studies, nine in Europe were identified. They had a pooled prevalence for anxiety of 51% in students during the first year of the pandemic. An earlier review, covering a shorter time period in the pandemic and mainly including Asian studies reported a lower pooled prevalence rate for anxiety of 31% and 34% for depression (107). Again, prevalence rates for anxiety and depression were higher in women. Students were at higher risk of financial impoverishment during the pandemic, as the additional income that many obtained from working in the retail and hospitality sectors was curtailed. A cross-sectional survey, conducted in spring 2020, and included 91,871 students from 23 countries looked at the extent to which students were experiencing financial distress and whether this also impacted on their mental health (108). 13% of students experienced financial loss during the first lockdown and 52% had high depression scores, although there were large differences between countries. The study suggested that there was a 35% increased probability of depressive symptoms in students who had also experienced financial distress. Data from the Covid-19 International Student Wellbeing Study, including 133 higher education institutions in 26 countries, lalso ooked at the impact of the pandemic during early 2020 (109). This study found that school and/or workplace closures and stay-at-

home restrictions were significantly related to students' depressive symptoms. Countries with stricter and broader implementations of these measures had higher levels of depressive symptoms.

People with pre-existing medical conditions might also be particularly vulnerable during the COVID pandemic. Evidence on whether this does lead to poor mental health outcomes is however mixed; while there may be a reduction in physical activity levels in the population in general, with exercise being protective of mental health, longitudinal analysis of the impacts on people with chronic conditions is equivocal. One longitudinal convenience sample of over 1000 people with pre-existing chronic health conditions in multiple European and some other countries looked at changes in mental health over the first year of the pandemic (110). A substantial minority of participants, more than one third, sustained their levels of mental resilience over the study time period. Maintaining employment and supporting pandemic containment policies were associated with greater likelihood of sustained mental resilience. However, continued restrictions in the daily lives of some people with chronic conditions, if particularly vulnerable to COVID and unable to take the vaccine, may still have long term adverse impacts on their mental health.

There is also however evidence that the lockdowns have had some positive impacts on mental health and wellbeing, Home working was a positive experience for many workers; it also opened up the possibility of a permanent shift in working arrangements, avoiding time and costs of commuting, having more time with families and generally having a better work life balance (111). This however depends on the quality of the housing space; limited space and precarious tenancy, particularly for renters in the private sector, has had adverse impacts on mental health during periods of lockdown (112).

In Ireland a one day snapshot survey was conducted with 604 members of the public just after the imposition of a national lockdown in March 2020 (113). The survey found that '*while most time was spent in the home (74%), time spent outdoors (8%) was associated with markedly raised positive affect and reduced negative emotions. Exercising, going for walks, gardening, pursuing hobbies, and taking care of children were the activities associated with the greatest benefits [for positive affect*]'. Public health messages on the importance of daily exercise may also have nudged individuals into more exercise, something that should have benefits for mental health. Crime rates fell during lockdowns, something that should impact on mental health. Homeworking has also been associated with better levels of wellbeing in a longitudinal study comparing individuals pre-pandemic and during the first wave of the pandemic in the UK (114).

Longitudinal analysis in the UK from more than 35,000 people found that during the first lockdown in 2020 an increase in the number of days spent outside was associated with decreases in depressive and anxiety symptoms and an increase in life satisfaction. Associations were stronger for people living with others, and among those who were satisfied with the parks and other green spaces in their local neighbourhoods (115). Studies across Europe also continue to have generally reported lower rates of contact with mental health services and reduced levels of self-harm (see suicide and self-harm section of this report). There is some evidence that demand for services is now increasing but it has not surpassed levels seen pre-pandemic.

6.4. MENTAL HEALTH IMPACT OF MEASURES TO PROTECT OLDER PEOPLE

Table 7: Mental health impact assessment of measures to protect older people

Measures to Protect Older People							
	Positive impacts			Negative Impacts			
	Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	Comments
Direct Impacts							
Direct Impacts on mental health and wellbeing of older people with pre-existing mental health problems				Possible	Moderate	Short	Some limited evidence from cross sectional data that the mental health of people with dementia has been adversely affected during the pandemic.
Direct Impacts on mental health and wellbeing of older people with pre-existing physical health problems				Probable	Moderate	Medium	Multiple studies across countries report some adverse impacts on mental health of people with existing physical health problems, e.g. from a lack of physical activity.
Direct Impacts on mental health and wellbeing of people with caring responsibilities	Possible	Minimal	Short	Confirmed	Major	Medium	Some limited evidence of benefits to carers who live with person they care for Multiple studies indicate mental health of carers . including family members, especially those who do not live with person they care for, has been adversely impacted. Many worries about impacts of loss of

							human contact with relatives
Direct Impacts on mental health and wellbeing of older people				Confirmed	Major	Short	Multiple studies across RESPOND countries report adverse impacts on mental health and wellbeing of very vulnerable (housebound or institutionalised)
Impact on Access to Mental Health Promotion, Prevention and Treatment Services							
Access to specialist mental health services				Possible	Moderate	Short	Insufficient evidence on access to non-dementia related mental health services specifically for older people, but contact for all populations with mental health services reduced with potential adverse consequences.
Impacts on determinants of mental health and wellbeing							
Physical activity	Probable	Moderate	Short	Probable	Moderate	Short	Some evidence that physical activity has reduced in some populations with limited access to outdoor activities
Employment				Possible	Moderate	Short	
Domestic Violence and Abuse				Possible	Moderate	Short	Some studies have pointed to increased levels of domestic abuse for some housebound vulnerable older people
Low household income							

Table 7 summarises our mental health impact assessment on measures to protect older people. These measures may have led to increased isolation of older people and a restriction on access to professional care and family support. While there have been negative impacts on the mental health and wellbeing of older people, much evidence indicates that these impacts were less pronounced than for some other segments of populations. For example, in analysis of data

on loneliness across Germany, France, Spain, Italy and Sweden, older people were less likely to feel lonely during the pandemic than younger population groups (116). A survey of 677 people taking part in an ongoing longitudinal study, mainly living at home during lockdown and aged over 85 in France also looked at their mental health and knowledge of the pandemic (117). That study noted very little deterioration in mental health during the pandemic and the study noted that "*the results of this study point toward a rather positive attitude, or at least a weakened impact on mental health, as some individuals who seemed to have little resources to deal with the burden generated by the pandemic showed remarkable adaptive abilities*".

Early analysis of the wellbeing of more than 1,000 older people in summer 2020 in Sweden as part of a longitudinal study that had been ongoing since 2015 reported that wellbeing levels were unchanged (life satisfaction and loneliness) or even better (health status or financial satisfaction) compared to their pre-pandemic values (118). Analysis of SHARE (Survey of Health, Aging, and Retirement in Europe) data collected in summer 2020 alongside data on the stringency of lockdown measures as measured by the Oxford COVID-19 Government Response Tracker (OGRT) found no consistent relationship between stringency measures and mental health (119). The study did however find that older age appeared to be protective for mental health (depression and anxiety) whilst being a woman increased the risk of poor mental health.

Nonetheless, loneliness in older people is associated with poorer levels of mental health. A recent global narrative systematic review looking at impacts of social isolation on the physical and mental health of healthy older adults, including multiple studies from Spain and the UK, as well as Sweden and Ireland, reported a reduction in physical activity levels, deterioration of mental health, such as depression or anxiety and increases in levels of loneliness (120). More physical activity and lower levels of loneliness were associated with better mental health outcomes, but these studies mainly focused on the early months of the pandemic.

Another global systematic review examined the mental health effects, with a particular focus on stress, of COVID and SARS outbreaks and lockdown measures for older adults (121). It included multiple studies from Italy and Spain, as well as a study from the UK and, overall, in the 20 studies, stress, post-traumatic stress, depression, anxiety, and general mental well-being were better in older participants in almost all studies. The authors did however note the low numbers of older people in included studies, with the oldest age group in some studies starting at age 50 or even younger in 6 of the studies.

A representative survey of more than 1,000 people aged 65 and older in Germany looked at loneliness, social isolation and depression during the first lockdown (122). 13% of participants reported being lonely. The study showed a significant association between loneliness and levels of depression, whereas social isolation was not associated with levels of depression. Previous analysis of the same survey data also indicated that the first lockdown in Germany did not have a detrimental impact on mental wellbeing (123). Participants also expressed strong support for the pandemic suppression measures that had been introduced. Higher levels of resilience were associated with lower depressive symptoms, with the authors arguing that intervention strategies to mitigate the impacts of pandemic suppression measures being targeted at lonely people, rather than isolated people. In contrast to the findings in Germany however, social isolation was associated with higher levels of depression or anxiety symptoms in older people living with re-existing chronic physical health conditions (cardiometabolic diseases) in Sweden (124). Where individuals were not isolated no association between chronic physical health status and mental health was found.

As we note in our case study (see Section 9 of this report) institutionalised older people have been particularly vulnerable. High levels of mortality in long-term care residences, coupled with a fear among staff, visitors and residents of contracting and passing on the virus potentially create the conditions for substantial additional levels of psychological stress. There is now evidence that this did indeed affect the mental health of care home residents. For instance, one small qualitative study of 56 nursing home residents in Belgium reported that the loss of independence

because of pandemic restrictions had an impact on their psychological wellbeing and increased levels of depression and anxiety (125).

We also have already noted equivocal evidence from the Survey of Health, Ageing and Retirement in Europe (SHARE COVID-19 questionnaire) when combined with the Oxford COVID-19 Government Response Tracker for 17 countries found that lockdown policies worsened insomnia, anxiety, and depression, with this effect being stronger for women and those aged between 50 and 65 (100). Another study using SHARE data did not find an impact of lockdowns, but that may be because the analysis also took account of potentially protective income support measures in countries (101).

There are also multiple studies that indicate that the mental health and wellbeing of care home workers and social care staff visiting people in their own homes has been affected. Early evidence from northern Italy in a survey of 1000 long term care workers found that 43% of workers had moderate to severe symptoms for PTSD or anxiety; 18% of workers had both conditions. The prevalence of PTSD was almost double that of anxiety disorders. The study also reported that female workers were twice as likely to have moderate-to-severe symptoms of PTSD or anxiety as men. Workers in recent contact with other workers suspected of having COVID-19 were 1.7 times more likely to have moderate symptoms of PTSD or anxiety (126).

Increased workloads on care workers as a result of pandemic restrictions and the need for regular staff self-isolation has also been associated with a decline in mental wellbeing in a survey of UK care workers during and after the first wave of the pandemic in 2020. Two studies in Spain looked at the working conditions of care home workers. One survey of nursing home workers in Madrid and Barcelona during the first wave of the pandemic actually reported a high level of job satisfaction; it emphasised the importance of working conditions and social support to help prevent staff burnout (127). Another survey of care workers came to similar conclusions, noting that the risk of burnout was linked to rapid deterioration in mental health and lack of support for care workers in stressful situations (128).

Adverse impacts on care home staff appear to be long lasting. Analysis in Ireland looked at the mental health of 390 care home workers during the third wave of the pandemic between November 2020 and January 2021 (129); a period by which significant measures to protect older people were firmly in place. Albeit just a cross-sectional survey 45% of staff were found to have moderate to severe PTSD, while 38% of all staff reported low levels of mental wellbeing (measured using the WHO-5). In the Netherlands a qualitative study looking at the lifting of some pandemic restrictions in long-term care homes, reported that even months after restrictions had been eased, wellbeing for both staff and care home residents was perceived to be adversely affected. This was partly because of an increased workload on care home staff and a continued reduction in the number of people visiting their relatives (130). Similar findings in a small qualitative survey were also seen in Finland, a country with a relatively low level of pandemic impact (131).

Unpaid carers are another population group whose mental health may have been particularly vulnerable during the pandemic. A small survey of informal carers in France in the first wave of the pandemic reported that more than 50% of carers had depression, anxiety or stress. There was no difference in the level of adverse mental health between carers who lived with the person they cared for and people who lived independently (132). There is also some emerging evidence that the mental health of people living with dementia, as well as their carers has been adversely affected by the pandemic. Informal carers in Finland reported being frustrated and anxious about not being able to visit their relatives, and felt there had been a rapid decline in their relatives' health during the pandemic (131).

Multiple systematic reviews looking at carers of people with dementia build on this earlier evidence. They have now reported a majority of carers experiencing deteriorations in their mental health (102-104). The lack of access to respite care and the withdrawal of many at-home supports were key factors contributing to a deterioration in the mental and physical health of many carers. A rapid review of evidence on the impact of the COVID-19 pandemic on unpaid care found that, as well as other financial, care commitment and physical health impacts, a large proportion of carers, in

several countries, have experienced increased stress related symptoms, more social isolation and loneliness and worsened depression and anxiety (133).

6.5. MENTAL HEALTH IMPACT OF INCOME PROTECTION MEASURES

Table 8: Mental health impact assessment of income protection measures

Income Protection Measures							
	Positive impacts			Negative Impacts			
	Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	Comments
Direct Impacts							
Direct Impacts on mental health and wellbeing of general population	Confirmed	Major	Medium				Multiple studies now point to protective impacts on population mental health of measures to protect worker income. Multiple economic data also indicate mass increase in unemployment averted
Direct Impacts on mental health and wellbeing of people with pre-existing mental health problems	Possible	Major	Medium				Limited specific evidence on populations with mental health problems but also likely to benefit from income protection
Direct Impacts on mental health and wellbeing of people with pre-existing physical health problems	Possible	Major	Medium				Limited specific evidence on populations with physical health problems but also likely to benefit from income protection
Direct Impacts on mental health and wellbeing of people with caring responsibilities	Possible	Moderate	Short				Limited specific evidence on caring populations with physical health problems but working carers also likely to benefit from income protection
Direct Impacts on mental health and wellbeing of students							Unclear whether these measures had an impact; measures may not have been well targeted at students.

Direct Impacts on mental health and wellbeing of homeless							**Unclear whether these measures had an impact; measures were not focused on homeless people**
Direct Impacts on mental health and wellbeing of older people	**Possible**	**Moderate**	**Short**				**Limited specific evidence on caring populations with physical health problems but working carers also likely to benefit from income protection**
Impacts on determinants of mental health and wellbeing							
Employment	**Probable**	**Moderate**	**Short**				**Multiple economic data indicate mass increased in unemployment averted, unlike previous economic crises without this level of income protection**
Domestic Violence and Abuse							**While there is evidence of an increase in domestic violence and abuse this has not been directly linked to differences in income protection programmes**
Crime rates	**Possible**	**Moderate**	**Short**				**Multiple studies report lower rates of 'real world' crime; but is difficult to link directly to differences in income protection programmes**
Housing	**Probable**	**Moderate**	**Short**				**Multiple data indicated home repossessions and eviction rates not significantly different to pre-pandemic levels**
Low Household Income	**Probable**	**Moderate**	**Short**				**Causal link yet to be established but multiple economic data indicate mass increased in unemployment averted. Some income protection measures targeted also at non-working households**

Table 8 summarises our mental health impact assessment of income protection measures.

Before looking at pandemic related evidence it is important to note that there is ample evidence from previous economic crises that economic hardship affects not only those directly hit by loss of income, but many others in the

entire population (134-137). There are a number of high risk groups consistently identified across studies, “including children, young people, single-parent families, unemployed people, ethnic minorities, migrants and older people” (138) - e.g., economic pressure may lead to family economic stress and undermine the quality of parenting and of family environment, which, in turn, may affect the mental health of children and young people (ibid.).

From a wellbeing and mental health perspective, we consider that income support during the pandemic is a fundamental protective factor, as the link between economic hardship and mental health problems in past crises has been well documented. A systematic review of welfare policies in high income countries between 1979 and 2020 also found that policies that improve social security benefit eligibility/generosity are associated with improvements in mental health, whilst those that reduce generosity were associated with a worsening of mental health status (139).

Considering differences in income support policies across RESPOND countries, we hypothesised based on previous crises that mental health and wellbeing will be more affected in countries with lower levels of support, and/or in those countries which halt support earlier. We also consider it to be important to look at the available data in more detail so as to examine, e.g., which proportion of the population has had access to support and whether this has reached the most vulnerable subgroups, as evidence shows that economic crises tend to hit vulnerable groups the hardest (138) and that the economic burden of the pandemic had disproportionately fallen “on the shoulders of workers in lower prestige-ranked jobs”.

There is now, two years after the start of the pandemic, a range of studies that have looked that the association between income protection measures and mental health. For example, the link between economic hardship and mental health problems has been documented in a survey carried out in six European countries (four of them included in the RESPOND project: Germany, Italy, Netherlands and Spain) (140). The study found that, among active members of the labour market, economic consequences of the pandemic led to increased prevalence of mental health complaints, particularly of feelings of depression and anxiety. Research from 12 longitudinal studies in the UK has also shown how those with poorer pre-pandemic mental health were more likely to encounter economic disruptions (i.e., usual economic activity, job loss, loss of income, changes to working hours) due to the pandemic than other population groups (141). Moreover, Canadian analysis indicates the people with existing disabilities or chronic health conditions were at higher risk of poor mental health during the pandemic due to the adverse financial conditions and income loss that they experienced (142).

In Spain a general population cross-sectional survey conducted during the first lockdown, included 2,381 adults who had experience job loss and/or income loss (143). Those who had lost their jobs permanently or temporarily as a result of the lockdown represented 27% of the broader survey population. Those whose income was reduced representing 43% of the wider survey population. The study found that income loss, but not job loss, was associated with higher levels of depression and panic attacks. However, this may be because job loss does not necessarily translate into immediate income loss, and over a longer time period an association between length of unemployment and deterioration of mental health might be expected.

In France, analysis of longitudinal online survey questionnaire data completed by 864 individuals between April 2020 and July 2021, suggested that being unemployed during the COVID-19 pandemic or having financial difficulties compared to being fully employed were associated with a higher risk (1.89 and 1.43 respectively) of symptoms of anxiety or depression (144). In the Netherlands, longitudinal data from more than 1,100 households were used to look at how changes in household economic status in the pandemic were associated with financial stress and mental health (145). Data in November/December 2020 were compared with the same time periods in 2018 and 2019. This analysis revealed substantial heterogeneity in the impacts of the pandemic, with almost equal proportions of the survey experiencing better or worse mental health. Increases in financial distress were associated with decreases in mental health, with increases in financial distress associated with lower levels of savings and higher levels of debt. Studies in

other countries, with less generous welfare protection, such as Chile have also shown a relationship between financial distress and increased levels of psychological wellbeing during the pandemic (146).

A nationally representative cross-sectional survey in Wales early in the pandemic also reported significantly increased risk of low levels of wellbeing in people who been made unemployed, but not in people receiving income protection through the UK furlough scheme (Coronavirus Job Retention Scheme) as well as in those who had changed job (147). The UK furlough scheme and other welfare supports were less generous to self-employed people during the pandemic. Using data from the Understanding Society longitudinal dataset, one study compared the subjective wellbeing between salaried employees and the self-employed during the early months of the pandemic (148). They found that the subjective wellbeing of the self-employed was lower than for salaried workers. The authors found that the impact of reduced working hours was greater than that of income reductions, and they suggested that this maybe because self-employed people are more attached to their work. Loss of income also impacted adversely given the less generous protection compared to salaried workers. Analysis of survey data in France early in the pandemic also indicates that burnout rates in the self-employed were higher in the pandemic compared to pre-pandemic, with the need to stay at home and fear of the risk of bankruptcy being key factors in this increase (149).

The overall impact of the pandemic on unemployment and employment rates also strongly suggests that social protection measures have been effective. Longitudinal data now provide multiple evidence suggesting that income protection measures also were protective of mental health. Longitudinal data from more than 25,000 people of working age in the UK indicate that individuals who were eligible for the furlough scheme that covered up to 80% of salaries, had better mental health and wellbeing that individuals who became unemployed during the COVID pandemic (150). Outside Europe analysis in the different US states of looking at prevalence of depression and anxiety found that states with the highest prevalence of depression among people experiencing household income shocks were more likely to lack important social policies related to economic security and health (151).

In the UK earlier data from the Understanding Society UK Household Longitudinal COVID-19 study was used to examine the impact of reduced hours of working during the first wave of the pandemic on 8,708 employees (152). Despite the reduction in working hours no significant increase in psychological distress was found; indeed a non-significant reduction in psychological distress was found in workers that had been placed on furlough. In contrast, and perhaps predictably, workers who did lose their jobs did have higher rates of distress, but loss of employment was very low because of furlough – only 1% of employees in this survey were made redundant. Income protection appears to have been extremely important, but it was applied unevenly and different population groups did not benefit equally; older workers were one group, another were young adults outside the labour market, such as students, who did not receive much financial support, as well as workers of all ages who were on temporary or even no contracts and were not able to benefit from income protection schemes.

Another specific example of the impacts of income protection on mental health during the COVID pandemic is research that has been conducted in Australia, covering the period between April 2020 and May 2021. (153) In Australia the national government introduced an income support programme known as the Coronavirus Supplement (CVS) in April 2020. It was a temporary supplement paid to unemployment benefit and various other welfare benefits recipients and was intended to replace the lost income of people with limited or no employment during the pandemic. The research made use of data from 32 waves, each with 1,200 adults, of the Taking the Pulse of the Nation (TTPN) Survey, conducted by the Melbourne Institute of Applied Economic & Social Research. This is a nationally representative survey initiated during the pandemic that collects information on many impacts of COVID including mental health, labour force status, and perceptions of financial stress. Data were collected initially weekly and then every two weeks.

Analysis of CVS recipients in the survey found that "*almost 72% of unemployed respondents reporting feeling depressed or anxious "none", "a little", or "some of the time" during the past week, compared to approximately 28 per cent feeling*

depressed or anxious 'most of the time' or 'all of the time'"(153). The study also reported a positive relationship between financial distress and mental distress. When the first CVS payments were made mental distress decreased, and as the value of the CVS payments declined over time, (initially payments were $A 550, and then reduced to $A250 and then $A150) the level of mental distress increased. The study concluded that "*the income support measure was significantly associated with reduced mental distress because it relieved reported levels of financial stress*". This effect was found for both unemployed men and women, but less pronounced in unemployed people over the age of 50. They also concluded that the measure was no longer effective when the payments were reduced, suggesting that payments need to be of sufficient magnitude to have an impact on financial distress and therefore mental health.

We have not found much evidence on how income protection supported students. Looking specifically at students, data from the Covid-19 International Student Wellbeing Study, including 133 higher education institutions in 26 countries, looked at the impact of the pandemic during early 2020 (109). That study did not find any impact of income protection measures on the mental health of students, but the authors speculated that this may have been because these measures often did not target students or may have had more of a delayed effect compared to the impact on the working population. They noted that the "*broader economic impact of the pandemic and the role of the associated economic support measures will probably only become visible in the long run, and particularly in countries with a pronounced imbalance between the costs of higher education and the capacity of students to shoulder increasing debt burdens*."

6.6. MENTAL HEALTH IMPACT OF DEBT RELIEF MEASURES

Table 9: Mental health impact assessment of debt relief measures

Debt Relief Measures							
	Positive impacts			**Negative Impacts**			
	Likelihood	**Intensity**	**Duration**	**Likelihood**	**Intensity**	**Duration**	**Comments**
Direct Impacts							
Direct Impacts on mental health and wellbeing of general population	**Possible**	**Moderate**	**Short**				**Multiple studies indicate that unmanageable debt had an adverse impact on mental health during the pandemic**
Direct Impacts on mental health and wellbeing of people with pre-existing mental health problems	**Possible**	**Moderate**	**Short**				**Multiple studies indicate that unmanageable debt had an adverse impact on mental health, including people with pre-existing**

							mental health conditions during the pandemic
Direct Impacts on mental health and wellbeing of students							**Insufficient focus of debt relief programmes on students to make judgement**
Impacts on determinants of mental health and wellbeing							
Employment							
Crime rates	**Possible**	**Moderate**	**Short**				
Housing	**Probable**	**Major**	**Short**				**Some studies indicate that support for rent or eviction protections help protect mental health**
Low household income	**Probable**	**Major**	**Short**				**Rental protection measures are more likely to be of relevance to low income households**

There is still little evidence on the specific impact of debt relief schemes on mental health and wellbeing during the pandemic (Table 9), so while we have identified domains which may be affected, some remain blank. However, the links between debt and poor mental health prior to the pandemic have been well documented, with evidence suggesting debt as being a potential mechanism through which economic difficulties affect mental health and wellbeing. For example, a study with a representative sample of households in the UK, found that the relationship between low income and mental disorders was attenuated after adjustment for debt, suggesting that the latter acts as a mediator of such relationships (154). Other studies have found debt remains associated with perceived mental and physical health problems even after controlling for socioeconomic status and other potential confounders, suggesting it to be an independent risk factor (155). Debt or the fear of unmanageable debts can be a risk factor for suicide and self-harm (see section 8 in this report).

The issue is likely to become of even greater importance given that most RESPOND countries have phased out debt relief measures related to the pandemic, although some energy-cost related measures may now be in place. One UK study looked at the associations between perceived manageability of debt and mental health among a representative sample of 2,058 UK adults in Autumn 2021 during the COVID-19 pandemic (156). 24% of the sample reported problems in managing their debts. Individuals who reported problems managing debt were significantly more likely to meet clinical criteria for anxiety and depression. The study also noted that the greater the level of debt unmanageability, the higher the likelihood of anxiety. Higher rates of contact with mental health services were also seen in those with unmanageable debts.

A cross-sectional survey of more than 3,000 adults in Canada in 2020 looked at changes in household debt due to the COVID-19 pandemic, mental and general health (157). 17.5% of survey participants stated that their household debts

had increased because of the COVID pandemic. In logistic regression analyses an increase in household debt was associated with a threefold increased serious psychological distress, and a twofold risk of poor mental or physical health and a fourfold increased risk of suicidal ideation.

Protection from unmanageable debts is therefore likely to be an important tool in protecting mental health, for instance eliminating the fear of being evicted through rent arrears protection. In some countries, protections against eviction and rent controls were introduced during the pandemic. One example is analysis from the United States, which takes advantage of the variation in eviction protection measures for renters in US states in the first six months of the pandemic (158). In regression models adjusted for factors including variation in the incidence of COVID, ethnicity, compared to no eviction protections, strong protections were associated with a significant 13% relative reduction in the probability of mental distress; weak protections were not associated with any significant impact on mental distress.

Another analysis in the US, making use of cross-sectional survey data during the pandemic for more than 14,500 adults between July 2021 and March 2022 found higher rates of depression (59% compared to 37%) and anxiety (67% compared to 43%) for survey respondents facing eviction in the following two months compared to participants who did not have a risk of eviction (159). In regression analysis, the risk of depression or anxiety in the eviction risk group were more than double those for individuals without this risk. Another US analysis, using the same survey, between April and July 2020, individuals with mortgage debt and renters had significantly higher levels of mental distress compared to home owners who did not have mortgages (160).

7. LESSONS LEARNT FROM THE INITIAL PANDEMIC POLICY RESPONSE

Our work in RESPOND has sought to identify some of the lessons, both positive and negative that can be learnt from the initial policy response to the pandemic. These insights can also be important inputs to deliberations on the formulation of the proposed new strategy for mental health in Europe that was announced by Commission President Ursula Von der Leyen in September 2022. More recently, Stella Kyriakides, Commissioner for Health and Food Safety commented that "*President von der Leyen spoke loud and clear for a comprehensive approach to mental health, involving all relevant EU funding actions and policies. An approach to boost mental health awareness across Europe, step up prevention, health promotion, improving access to mental healthcare services. A comprehensive approach with commitment and cooperation from all actors*" (161). This necessitates both better planning for future pandemics as well as the development of policy and practice to support individuals whose mental (and physical) health continues to be affected, in part because of the severe consequences experienced by a minority of individuals who experience long COVID (defined as having more than 12 weeks of symptoms).

As part of RESPOND, in-depth interviews were undertaken with a range of stakeholders including selected public health and mental health policymakers. (See deliverable D3.3 for a detailed discussion of issues raised) They investigated the salience of mental issues, the beliefs held by stakeholders and described how and when their interactions have affected the way mental health and wellbeing issues were taken on board during the COVID pandemic. In addition, RESPOND is also undertaking an online survey (known as a discrete choice experiment) looking at how policymakers and others weigh up the relative merits of policy actions to protect against the virus with their potential impacts on mental health and the economy.

Our analysis in the RESPOND project, looking at these data, plus our analysis of policy documentation and scientific literature suggests that mental health -understandably- was not a major consideration for many policymakers back in Spring 2020 when the pandemic first hit Europe hard. Nearly all European countries experienced restrictions on freedom of movement and social activities intended to suppress the spread of the virus, in order to not only limit onward transmission and therefore avoid deaths but also to avoid the complete break-down of the healthcare system. Some of these measures we now know had some consequences for mental health, but as we have highlighted earlier in this report not all of the population was affected negatively (162), evidence continues to accumulate that a minority of the population experienced better mental health and wellbeing as a result of these measures. As the pandemic went on, our interviews indicate that policymakers more actively and explicitly did begin to take into account impacts on mental health when formulating policy, including for example, the balance between virus transmission and the educational and mental health benefits of reopening schools (163).

A key weakness noted by interviewees of pre-existing pandemic planning documents was a lack of any strong focus on mental health. Going forward it is essential that plans consider the impacts on mental (and physical) health of public health measures that place restrictions on movement and our activities. Mitigation measures to help support mental health can then be developed as part of this plan; this for instance could include access to a range of telephone and online self-help services to help promote and protect the mental resilience of all. One recurrent theme in interviews was also the toll that the pandemic has had on the mental health and wellbeing of policymakers and service planners, with respondents speaking of working non-stop for months at a time, and with little support in place for their own mental health. It is important that they also protect their own mental health and mental resilience.

The mental health impact framework that we have described earlier in this report considers the strength of the evidence on the impacts of different policy measures, including both their potential positives and negative impacts. Such a framework could inform plan development. For example, our RESPOND analysis indicates that during the first lockdown in 2020 an increase in the number of days spent outside was associated with decreases in depressive and

anxiety symptoms and an increase in life satisfaction (115); policymakers taking this into consideration might for instance think about their public health messaging during a pandemic on the importance of taking exercise and spending some time in green spaces. Groups without easy access to green space may be in need of additional support.

Our analysis also highlighted the lack of access to readily updated population level measures of mental health during the early stages of the pandemic. Policymakers had to rely mainly on data on the number of contacts with mental health services; these data were not helpful, in part because they mainly focused on individuals with pre-existing mental health conditions, and secondly because there was a general reluctance in the public to come into contact with any health services early in the pandemic, for fear of being infected. As we have highlighted in this report, the mental health of some sections of the population including young people, single parent families, those in insecure and poor accommodation and workers with temporary or no employment contract were more likely to be adversely affected than that of the population as a whole. Earlier detection followed by provision of additional mental health support to these groups within the population is desirable.

One policy option is to put in place a 'radar' mechanism to identify these groups; for example this could be done through large scale random sampling of the population on a longitudinal basis during times of public health (and also other crises, e.g., the energy price shock and cost of living crisis). One example of this is the rapidly created COVID Social Study in the UK which rapidly recruited more than 70,000 participants, collecting data on a bi-weekly basis for more than 2 years (164). We would also suggest that these data need to be collected beyond the end of any crisis, as there can be time lags before mental health impacts are seen.

At the start of the COVID-19 pandemic, there were concerns that rates of self-harm and suicide would increase as a result of the pandemic and pandemic response. In fact, this has not occurred. Detailed analysis of official public-sector sources and scientific literature from 33 countries worldwide, in fact found some evidence of lower than expected rates, and no association with the stringency of public health response measures (165). One reason for this may be the high level of additional social welfare support seen in many countries. Longitudinal data now provide multiple evidence suggesting that income protection measures may be protective of mental health. For example, longitudinal data from more than 25,000 people of working age in the UK indicate that individuals who were eligible for the furlough income protection scheme that covered up to 80% of salaries, had better mental health and wellbeing than individuals who became unemployed during the COVID pandemic (150).

Therefore, additional support measures that reduce financial distress, as well as the fear of financial distress, can be important tools/mitigation measures to be used during any public health crisis that impacts on economic activity. At the time of writing Europe is facing a major cost of living crisis, largely driven by the increase in the costs of energy due to the Ukraine conflict. Although a very different crisis to the pandemic, it also has major public health concerns, and additional financial support may equally be protective to mental health. Although governmental finances are under considerable pressure at the moment; our work in RESPOND suggests that a proportionate universalistic approach to address any future public health crisis is an option. In crises that affect everyone, such as COVID and the energy crisis, then some provision of universal financial protection measures seems prudent. This would mean ensuring that everyone receives some additional support, with further targeted support for individuals in most need (166). These individuals might be identified rapidly through the real-time large-scale surveillance mechanisms that focus on identification of psychological distress that we have noted, as well as learning from previous economic and public health shocks helping to identify those in most need.

Our interviews with policymakers also reinforce the message that there is also a longer term need for policymakers not to just plan for future pandemics and other public health shocks but also to plan for the long-term recovery of the population after these shocks have ended. Some governments have already developed long-term recovery plans, but these may now need further adaptation given that the economic situation in Europe has deteriorated rapidly since March 2022. More generally as well, guidance documents on the promotion and protection of mental health need to

be adapted to take account of changes in the way in which we lead our lives following the pandemic; for instance, new WHO guidelines on protecting mental health at work have been adapted to consider the likely permanent increase in the number of people working from home (167).

8. CASE STUDY: RISKS OF SUICIDE AND SELF-HARM DURING AND POST THE COVID-19 PANDEMIC. CAN WE LEARN FROM PAST ECONOMIC SHOCKS?

Non-fatal deliberate self-harm and completed suicide are often seen as important indicators of population mental health and there is some limited systematic review evidence that previous infectious disease emergencies, e.g. SARS, have been associated with increased rates of suicide behaviours (168). In our earlier versions of this rapid appraisal report we noted that studies were starting to emerge looking at patterns of self-harm and suicide after the onset of the pandemic. We noted in those reports that early studies of suicide patterns need to be treated very cautiously as it can take considerable time for any potential suicide to be formally investigated and cause of death to be determined; moreover, there is often a substantial time lag in the release of suicide data by national statistical agencies. That said, our first report came to the view that by early 2021 no substantive impact of the pandemic on suicide rates in Europe had been reported.

Since then, evidence has continued to accumulate, with most of it still indicating that the pandemic has had no impact on suicide rates. The most comprehensive and striking evidence to date comes from interrupted time series analysis of changes in suicide rates, pre and post the onset of the pandemic in 21 countries, including data from 5 RESPOND countries: Germany, Italy, The Netherlands, Spain and the UK (169). In an effort to overcome reporting time lags in official suicide statistics, this study sought to obtain validated real-time suicide surveillance data during the first waves of the pandemic until July 2020. This study found no significant increase in suicide rates in any of the countries in the analysis; in fact, suicide rates fell significantly compared to expected rates in data from 12 countries, including in Germany and Australia. When extending the analysis to include data up to October 2020, the results remained unchanged, with the exception of data from the city of Vienna in Austria and from all of Japan. In both cases a small but significant increase in suicide rates was observed.

Separately analysis in England, using real time suicide surveillance data covering one quarter of the English population also looked at changes in suicide rates, pre and post the pandemic (170). No significant difference in suicide rates was found, either during the first period of national lockdown in April and May 2020, nor during subsequent months to October 2020 during which most of the restrictions had been lifted. Similarly, an interrupted time series looking at suspected suicides in the Australian state of Queensland in the first 7 months after the pandemic also found no change in suicide rates, nor did it find any change in economic reasons for suicide that might be due to the pandemic such as unemployment or unmanageable financial problems (171). In Germany, suicide rates in Leipzig in the nine months from April 2020 in an interrupted time series were also not found to be significant different from expected trends based on previous suicide rates (172). Research still under peer review also reports no difference in suicide rates for young people aged under 18 between April and December 2020 using data from the National Child Mortality Database in England (173).

Since then, evidence has continued to accumulate and further strengthen the view that the pandemic does not appear to have had a substantial impact on the suicide rate globally. One key study has looked at longer term trends synthesising suicide trend data from 25 countries and 34 areas within countries for the first 9-15 months of the pandemic. Time-series models were used to consider pre-pandemic suicide trends. Again, the study overall found that suicide rates remained unchanged in nearly all 33 study areas, notable exceptions being Japan and some areas within

India, Iran and the Russian Federation. Rates were also higher than expected in the Austrian region of Carinthia. However, there was no general trend towards changes in suicide rates for specific age groups or genders (165), again Japan and the New Delhi region of India being exceptions. The study included 5 RESPOND countries; in both England and Wales and Sweden the suicide across all ages and in many sub-groups for age and gender was actually significantly lower than expected. A meta-analysis focused solely on suicide in young people globally also found no significant change in suicide rates (174). Some authors have however cautioned that there may be gaps in our knowledge, for instance on how suicide rates in minority populations within countries have changed (175).

Thankfully, suicide remains a relatively rare event, which potentially can make it difficult to identify statistically significant changes in suicide rates. This means that potentially hospital-presenting self-harm, which is more prevalent, may initially be of more use to policy makers. While self-harm is not always suicidal in intent, such self-harm events often precede completed suicide and any increase in self-harm may be associated with an increase in the rate of suicide. In our first rapid assessment we highlighted a number of early analyses in Europe which indicated that that during the first period of national lockdown in Spring 2020, that rather than an increase, a reduction was seen in rates of hospital-presenting self-harm. For instance, data from English hospitals in Oxford and Derby that have collected detailed data on self-harm for many years found little change in self-injury presentations but marked reductions in poisoning-related presentations (176). Similar findings of reduced rates of hospital presenting self-harm were reported in Paris (177), Madrid (178) and Geneva (179). Trauma centres in both London and Milan that had to adapt to the COVID pandemic both however reported higher proportions of patients presenting as a result of traumatic self-injury during the early phase of the pandemic (180, 181).

Again, data on rates of hospital-presenting self-harm, as well as related indicators such as suicidal ideation, has continued to accumulate during the pandemic. An update of a systematic review on self-harm and suicidal behaviour published in June 2021, again indicated that overall that there had been a fall in hospital presentations for self-harm although there was some limited evidence of an increase in suicidal thoughts among people who had contracted COVID (182).

In Spain, one early output from RESPOND is analysis of a longitudinal survey that looked at changes in levels of depression and suicidal ideation in more than 1,100 respondents in Barcelona and Madrid in the immediate COVID period when stringent measures were introduced in Spain (183). While suicide ideation rates did increase, this difference was not significant. The study did however find that there was a significant association between levels of social support and suicidal ideation, with each standard deviation increase in social support associated with a 66% reduced rate of reporting suicidal ideation.

Interrupted time series analysis in Denmark looking at hospital records from hospitals that cover nearly half of the population also found no significant change in hospital presenting suicidal behaviour in the both the first Danish lockdown in March to May 2020 and the second lockdown from December 2020 and February 2021 compared to the pre COVID period (184). There was also no change in hospital presenting suicidal behaviour in the period between the two lockdowns in 2020.

While most publications from Europe also indicate little impact on suicidal behaviour and self-harm presentations during the first year of the pandemic, there are some exceptions. One Italian analysis assess the characteristics of psychiatric admissions to 12 general hospitals during different time periods during the COVID-19 pandemic. This study looked at admissions and suicidal ideation pre pandemic with the initial first three months of the pandemic and found some limited evidence of a 35% increase in inpatients with suicidal ideation (185). A recent systematic review explored whether there were changes in rates of hospital presenting self-harm during the pandemic (186). It concluded that reductions in rates of self-harm presentations at hospital had been sustained into the first half of 2021 although the quality of studies in the review was mixed. The authors did however flag up a potential increase in presentations by adolescent girls, which they considered to be concerning.

Longitudinal analysis in one region of Germany between 2017 and the end of 2021 also did not observe any increased in hospital presenting suicide attempts (187). In France data from the national hospital database was used to look at rates of hospital presenting self-harm up until August 2021 (188). Compared to 2019 it found that self-harm hospitalisations remained lower, but self-harm rates had significantly increased for adolescent girls, but not boys. Other research has looked at the association between lockdown intensity and the presence of through an online survey of 55,000 people worldwide, suggesting that there may be a positive albeit weak relationship between suicidality and the intensity of lockdowns (189). Suicidality however does not however always translate into suicidal actions.

It still remains too early to know what impact the pandemic will have on long term suicide and self-harm rates, and it may be difficult in many country settings to disentangle effects of the pandemic and pandemic response, from later economic shocks caused by the war in Ukraine and the cost of energy crisis. A major factor for the lack of changes in suicide rates is likely to be the high levels of fiscal support and other social welfare protection measures have helped to reduce the immediate suicide risk. We have noted earlier in this report that some studies indicate that income protection measures were also protective of mental health, and mental health remains a key driver of suicidal behaviour.

It is essential to have good surveillance systems in place to monitor how rates may change in future to determine whether there is any longer-term impact, regardless of the origins of the current economic shocks. Economic theories on motivation for suicide and suicidal behaviour would suggest that risks increase when economic resources are depleted, or when there is great concern and anxiety that these resources will be depleted. As the energy crisis really starts to bite in Europe and there is total uncertainty on how long the war in Ukraine will last, it is very important to take measures to strengthen our economic and mental resilience. Not all European economies have rebounded equally positively from the pandemic. A feature of this pandemic that we have highlighted is that many of most adverse impacts on mental health have been in younger people. Studies already point to a detrimental effect of the pandemic on young people. Representative cross sectional surveys in the UK indicated that people aged 18-24 had higher levels of hopelessness than the general adult population (190). There was also a worrying increase in suicidal thoughts in young people in particular in one UK longitudinal analysis (34). They may, for instance, be concerned about their future career prospects and they have also lost out on some life experiences. This may also lead to future levels of poor mental health, including risks of suicidal behaviour if supports for young people are not put in place and/or maintained. We have noted earlier in this report that even in early 2022 youth unemployment rates remained very high in some European countries. The self-employed also in some countries have not had the same level of income protection as employees and may be more vulnerable. Not everyone will be able to return to fulltime work and they also may be more vulnerable. There will also be people on long term sick leave due to the effects of long Covid.

So can we learn from past economic shocks? COVID-19 is a global economic as well as public health shock. While it is still too early to see how self-harm and suicide rates may have been affected by COVID-19 and the policy response, and perhaps now is difficult to determine because of the new economic crises in Europe, there is potentially much that we can learn from looking at how suicide rates changed during and after the end of previous economic shocks. For instance, a previous systematic review looked at what is known on how rapid economic change, including recessions, economic recoveries and economic uncertainty may impact on suicidal behaviour (134). The review focused on identifying econometric or statistical analyses of the association between non-fatal suicidal behaviour and/or completed suicidal acts during times of economic recession (defined as two or more quarters of negative growth) or economic recovery following recession. Longitudinal studies, both individual- and aggregate-level, were eligible for inclusion. It concluded that economic shocks in general, both recessions, but also a widening of inequalities when economies are growing, can be associated with increased risk of suicidal behaviour. This is discussed further in sections 8.1.1, 8.1.2 and 8.1.3.

8.1.1. UNEMPLOYMENT AND ECONOMIC SHOCKS

Several multi-country aggregate-level longitudinal studies in the review on economic conditions and suicidal behaviour (134) suggest that the link between suicide and the economy is important in most countries, but that a change in unemployment rates is just one of many risk factors. It is also important to remember that people with existing mental health problems may also be at increased risk of unemployment during an economic downturn. Analysis of data from 27 European countries in one study suggests that during an economic downturn, the gap in the rate of employment between those with and without mental health problems will widen (191).

At a macroeconomic level three different patterns of association between economic conditions and suicide have been identified: an interruption in the downward trend in suicide caused by the economic crisis followed by a period of stabilisation (as seen in France and the UK), a temporary interruption of a downward trend in suicides (Belgium, Spain and Sweden) or a reverse in the downward trend (Germany, Italy, the Netherlands) (192).

One analysis of eight western European countries, including France, Germany, the Netherlands, Spain, Sweden and the UK, modelled changes in the level of unemployment between 2008 and 2010, relative to unemployment rates in 2000 (193). A 10% increase in a country's unemployment rate was associated with 2% increase in suicide in France and 1% increase in Germany and the Netherlands, adjusted to take account of the 2008-2010 economic crisis. An association between changes in unemployment rates and changes in male suicide rates between 2007 and 2011 was also reported for 20 EU countries, including all RESPOND countries except Belgium (194). Overall, across all countries a significant 0.94% increase in completed suicides was observed for every 1% increase in unemployment. Each 1% increase in financial debt was also associated with a significant 0.54% increase in suicide.

At country level, Ireland has a very detailed national self-harm registry, in addition to suicide data. Ireland was also badly affected by the global economic crisis, with severe austerity measures having to be introduced, and rates of unemployment rising to a peak of 15% in 2012. A positive association between suicide and the recession was found when comparing the periods 2000-2007 with 2008-2012 (195). Male suicide rates increased 57% more than would have been expected if pre-recession trends had continued. There was also an age effect for men, with completed suicides being significantly higher in the 25-44 and 45-64 age groups only. Hospital presenting self-harm was also significantly higher than expected in women. Positive associations between non-fatal self-harm and rising unemployment in men were also reported after the onset of the 2008 economic crisis in Andalucia, Spain (196). RESPOND is also looking at the situation in Australia; in the past analysis has reported that compared with 2006, the year before the financial crisis began in Australia, the risks of suicide in unemployed/ economically inactive men and women were also significantly higher by 22% and 19% respectively in 2008 (197).

While there is much to be learnt from the past, it is important to stress that not all studies in Europe and beyond conclude that there is evidence of a positive association between economic downturns and suicidal behaviour. For instance, while most US analysis support this association analysis using national, state and county level data from all 50 states between 1976 and 2013 found that periods of economic recessions were associated with a small reduced risk of suicide which more than offset the increased risk of suicide that was found to be associated with increasing unemployment. No interpretation was made by the author of this finding, other than arguing for more research into better understanding of the local versus national impacts of recessions (198).

We can also look to the past to potentially consider the long-term impacts of the COVID-19 related economic downturn and eventual economic recovery. Risks of suicide and self-harm may remain higher in individuals who are 'left-behind' by economic recovery. An individual level study following more than three million Swedes who had been employed in 1990 indicates that suicide rates for those who lost their jobs in the economic crisis in the mid-1990s and were still unemployed when the country was recovering were at greater risk of suicide than during the crisis itself. These effects

were more pronounced for unemployed men, who were 1.5 times more likely to have completed suicide in the period of economic recovery between 1997 and 2002 compared to those who were employed, compared to a 1.3 times increased rate of suicide for women (199, 200). Other studies found that the risks of suicide in Sweden and Denmark (men only) in those who had lost their jobs were almost double those of individuals who remained in employment for up to four years following job loss (201, 202).

8.1.2. JOB INSECURITY AND ECONOMIC DOWNSIZING

We potentially can learn from the past not just about the impacts of rapid changes in unemployment, but also about other labour market impacts. One of the consequences of the COVID-19 pandemic is an increase in job insecurity arising from restrictions in economic activity. Some sectors of the economy have been particularly affected, with redundancies likely if and when additional government support for wages is phased out. Some business, such as retailers, have also started to downsize because of these public health restrictions. Risks to mental health among those who experience job insecurity may be as great as for those who are unemployed (203), as well as for employees who keep their jobs and 'survive' a workplace downsizing (204).

8.1.3. UNMANAGEABLE FINANCIAL DEBT

Interviews in England with both employed and economically inactive individuals that self-harmed as a result of economic pressures document the profound levels of distress experienced as a result of unmanageable debt. Analysis of coroner records of nearly 300 people who died by suicide in England in 2010 and 2011 has also revealed that "4% of suicides entirely related to the recession, employment or financial-related difficulties and a further 9% where such difficulties contributed a lot to the suicide" (205). In Spain 90% of women and 84% of men in mortgage arrears and threatened with eviction had poor mental health compared with rates of 15% and 10% in the general population (206). A Swedish study linked data on 23,000 court imposed rental eviction notices with use of mental health services and records of completed suicides or deaths of undetermined cause in the following 12 months (207). After controlling for mental health, socio-economic status, receipt of social welfare benefits, having a criminal record and being a substance abuser, individuals who received an eviction notice were four times more likely to complete suicide than the general population.

8.2. DISCUSSION

The pandemic has had significant impact on mental health, but it is still too early to see if this will translate itself into a national rise in suicide/self-harm across countries. However, policy can potentially be informed by looking at the similarities and differences between the current crisis and previous economic shocks.

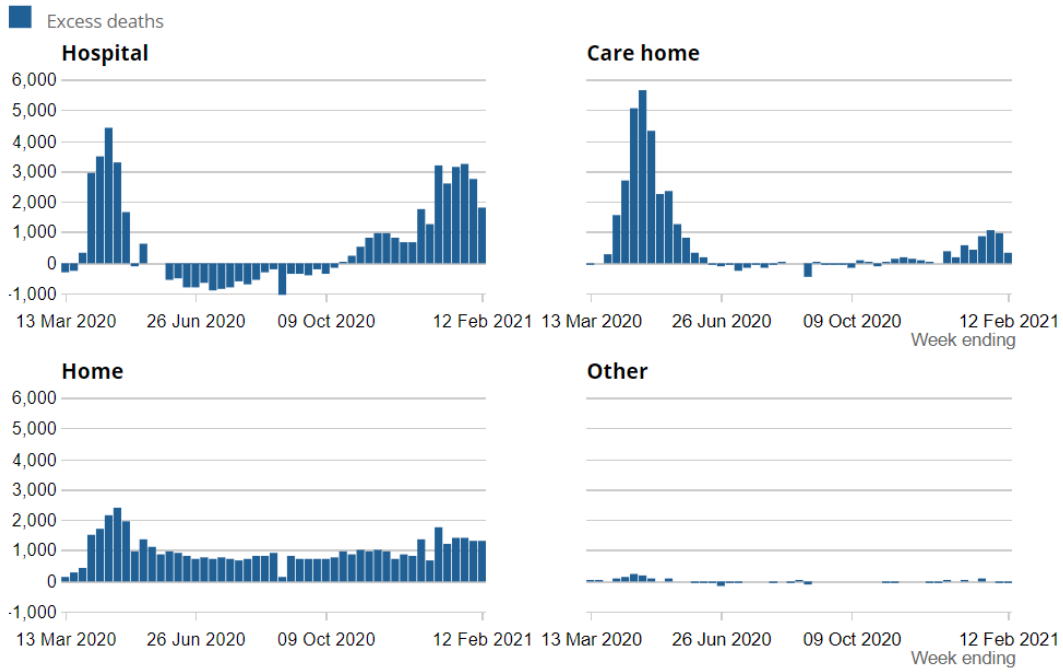
Much literature from Europe suggests that individuals experiencing socio-economic disadvantage during periods of economic change are at increased risk of suicidal behaviour. There can be an elevated risk of suicide when crises end, especially for individuals or communities whose economic circumstances do not recover. These increased risks can last for several years; potentially they may be further compounded if governments maintain austerity measures in the longer term beyond the end of any period of economic crisis. Involuntary part-time work, job insecurity and workplace downsizing can be important risk factors for suicidal behaviour. Individuals with pre-existing mental health problems may be particularly vulnerable to the risk of job loss. There is also empirical evidence that unmanageable debt is a risk factor for suicidal behaviour.

Like the economic crisis in 2008, this crisis appears to have the most severe economic impacts on young people; there is an evidence base on actions to alleviate the mental health impacts of economic crises (137). We can potentially learn from how different countries responded to the previous economic crisis as part of RESPOND, for instance in terms of differences in social protection policy and other measures and impacts on self-harm and suicide, and examine how these measures may work in the current context. We can also now see how income protection measures during the pandemic made a difference; they are important measures to consider during the current energy crisis caused by the war in Ukraine.

9. CASE STUDY: COVID AND THE LONG-TERM CARE SECTOR

A second illustrative example we briefly highlight in this report is the long-term care sector. We highlight the care sector given that mortality rates from COVID-19 are highly correlated with age and care homes have been particularly vulnerable across Europe. In some European countries (Belgium, France, the Netherlands, Slovenia, Spain, Sweden and the UK) more than 5% of all care home residents have died from COVID-19. In England and Wales, for example, in the first wave of the pandemic, care homes were the most common place of excess deaths (208). (See Figure 9) These high mortality rates, particularly early in the pandemic, led to stringent pandemic suppression measures being introduced in all RESPOND countries for periods of time; moreover, as we noted in Section 4.5 of this report as of October 2022 Germany and Italy still have the most stringent pandemic protective measures in place, with substantial measures also in place in Belgium, Spain and the UK.

Figure 9: Location of excess deaths in England and Wales post pandemic outbreak. Source: (208)



Source: Office for National Statistics – Deaths registered weekly in England and Wales

9.1. PSYCHOLOGICAL IMPACTS OF THE PANDEMIC ON CARE SECTOR STAFF

High levels of mortality in long-term care residences, coupled with a fear among staff, visitors and residents of contracting and passing on the virus potentially create the conditions for substantial additional levels of psychological stress. This is in part because of the difficulties in supporting people who may have significant physical and behavioural difficulties, but it is also because of pre-existing factors that have meant that long term care workplaces tend to have elevated levels of psychosocial stress compared to many other health workers. These factors include less income, qualifications and status compared to their health care counterparts.

What do we know about the initial psychosocial impacts on the pandemic on staff? Among the most robust peer-reviewed evidence early in the pandemic was a detailed survey of more than 1,000 residential and other long-term care workers undertaken in Northern Italy in June and July 2020, a time period after the end of the first COVID wave in the country (126). More than 70% of all nursing residential care home in Italy are in this northern part of the country and the survey sample covered about one third of all nursing home staff in the area. 85% of workers surveyed were women.

The survey used self-report measures to determine the prevalence of post-traumatic stress disorders (PTSD) and anxiety disorders. 43% of workers had moderate to severe symptoms for one of these conditions; 18% of workers had both conditions. The prevalence of PTSD was almost double that of anxiety disorders. The study also reported that female workers were twice as likely to have moderate-to-severe symptoms of PTSD or anxiety as men. Workers in recent contact with other workers suspected of having COVID-19 were 1.7 times more likely to have moderate symptoms of PTSD or anxiety.

The authors of this study did not find any difference in prevalence of mental health problems related to differences in access to personal protective equipment (PPE), hours worked in previous two weeks or rules on family visits. This was in contrast to studies in the US and Poland, where less access to PPE was linked to significantly higher rates of depression, anxiety and PTSD in nursing home staff (209, 210). While the authors were careful to note that they did not have any information on prevalence of PTSD or anxiety disorders in these workers prior to the pandemic, so the results must be treated cautiously, they do point to potential substantive increased risks to psychological wellbeing following the first major wave of the pandemic. This would suggest brief psychological interventions, including those being examined in RESPOND, are appropriate for these long-term care workers.

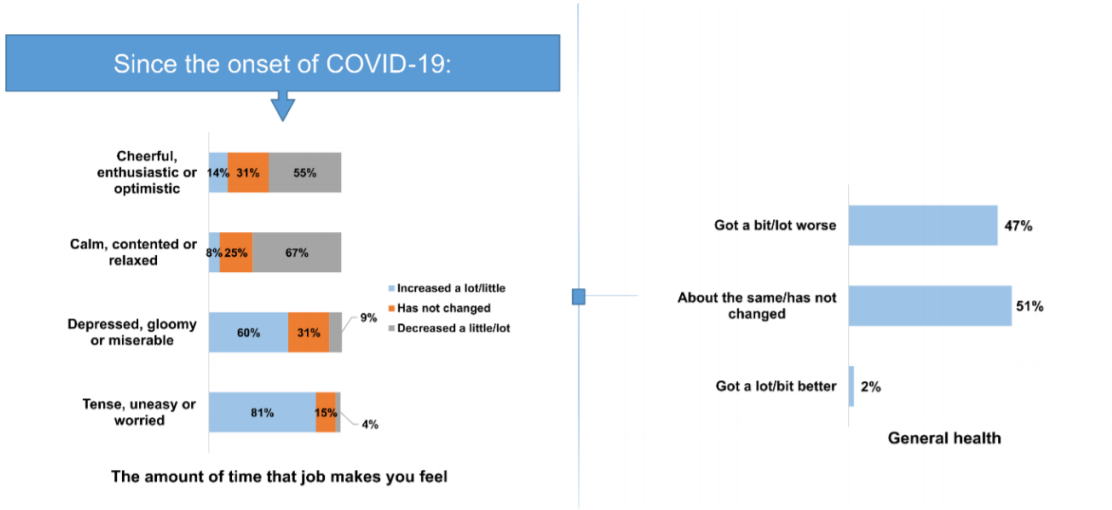
Elsewhere a survey of nearly 300 frontline care workers from across the UK was also conducted in summer 2020 (211). This survey found that 56% of these had increased their working hours and 81% had increased their workload as a result of the pandemic. This is partly because of the large number of care staff who stopped working during the pandemic. Moreover, nearly 20% of staff who had to self-isolate or stop working because of COVID-19 received no pay. The survey also asked about carer psychological wellbeing, with substantial numbers indicating that their jobs made them feel depressed, gloomy or miserable as well as being tense, uneasy or worried (Figure 10). Service users that they are supporting may also become distressed by pandemic restrictions which also has an adverse impact on the working environment. A later survey of 1,037 workers in the UK noted adverse impacts on worker wellbeing, in part due to abuse, violence and bullying during the pandemic (212). .

Analysis in Ireland looked at the mental health of 390 care home workers during the third wave of the pandemic between November 2020 and January 2021 (129); a period by which significant measures to protect older people were firmly in place. Albeit just a cross-sectional survey, the 1-week prevalence of moderate to severe PTSD in staff was 45%, while 38% of all staff reported low levels of mental wellbeing (measured using the WHO-5). The study found that mental health outcomes were significantly worse in nurses compared with health care assistants; while 2.5% of participants reported severe suicidal ideation. 13.8% of staff had some suicidal ideation in the past week.

Two studies in Spain looked at the working conditions of care home workers. One survey of nursing home workers in Madrid and Barcelona during the first wave of the pandemic actually reported a high level of job satisfaction; it emphasised the importance of working conditions and social support to help prevent staff burnout (127). Another survey of care workers came to similar conclusions, noting that the risk of burnout was linked to rapid deterioration in mental health and lack of support for care workers in stressful situations (128).

In the Netherlands a qualitative study looking at the lifting of some pandemic restrictions in long-term care homes, reported that even months after restrictions had been eased, wellbeing for both staff and care home residents was perceived to be adversely affected. This was partly because of an increased workload on care home staff and a continued reduction in the number of people visiting their relatives (130). Similar findings in a small qualitative survey were also seen in Finland, a country with a relatively low level of pandemic impact (131).

Figure 10: Self-reported changes in UK long term care worker psychosocial health after onset of the pandemic. Source: (211)



9.2. EVIDENCE OF PSYCHOLOGICAL DISTRESS AMONG CARE HOME RESIDENTS AND THEIR FAMILY MEMBERS

Multiple studies have documented the adverse psychosocial impacts for people living in care homes and their relatives attributed to some of the measures adopted to try to reduce the risk of COVID-19 infections and deaths. The restrictions on family visits over a long period of time have been a particularly difficult issue, but other measures such restrictions of the movement of residents within the care home and staff wearing PPE may have also have played a role, particularly as some residents with cognitive difficulties may not be able to understand why some of these measures are in place or with the disruption in well-established routines.

An international review of evidence and policies in relation to visiting restrictions during the pandemic found accumulating evidence of severely negatively impacted mood and behaviour of care home residents, resulting in a significant increase in psychotropic medication use (213). It also found evidence suggesting that visiting bans increased feelings of guilt, fear, worry and isolation in residents' families. There are also multiple examples of adverse impacts from qualitative analysis. For instance, one small qualitative study of 56 nursing home residents in Belgium reported that the loss of independence because of pandemic restrictions had an impact on their psychological wellbeing and

increased levels of depression and anxiety (125). In the Netherlands a small survey of 193 care home residents in April and May 2020, during a period of extreme lockdown measures, noted that 77% felt at least moderately lonely with more than half meeting criteria for poor mental health (214). Outside of Europe, a survey of 288 nursing home staff in Australia in September and October 2020 reported that 36% were anxious and 20% depressed as a result of the pandemic (215).

A systematic review of longitudinal studies with data pre and post lockdown looked at the effects of isolation during COVID-19 on the cognitive, psychological and functional symptoms of people with dementia or mild cognitive impairment (216). 9 of 15 identified were from RESPOND countries, and 13 studies were in the EU. The narrative review suggested a worsening of cognition, more behavioural and psychological symptoms and reduced functioning of people with dementia both in the community and in residential care homes. An increase in use of antipsychotics and benzodiazepines was also noted.

Meanwhile, other experience in the Netherlands suggests some of the adverse psychosocial impacts can be resolved. A qualitative study across 26 nursing homes reported overcoming pandemic restrictions is associated with positive improvements in the wellbeing of both staff and residents when family visits were permitted under strict guidance (217). This also reduced the guilt and disquiet that staff had felt when they previously had to deny access to families to visit very frail relatives.

9.3. IMPACTS ON UNPAID CARERS

We have focused in this section on long term care staff and residents, but briefly we also can indicate that there may be risks for informal carers. Multiple systematic reviews looking at carers of people with dementia have reported a majority of carers experiencing deteriorations in their mental health (102-104). The lack of access to respite care and the withdrawal of many at-home supports were key factors contributing to a deterioration in the mental and physical health of many carers. A rapid review of evidence on the impact of the COVID-19 pandemic on unpaid care found that, as well as other financial, care commitment and physical health impacts, a large proportion of carers, in several countries, have experienced increased stress related symptoms, more social isolation and loneliness and worsened depression and anxiety (133).

A small survey of informal carers in France in the first wave of the pandemic reported that more than 50% of carers had depression, anxiety or stress. There was no difference in the level of adverse mental health between carers who lived with the person they cared for and people who lived independently (132). There is also some emerging evidence that the mental health of people living with dementia, as well as their carers has been adversely affected by the pandemic. Informal carers in Finland reported being frustrated and anxious about not being able to visit their relatives, and felt there had been a rapid decline in their relatives' health during the pandemic (131). A cross-sectional survey of nearly 1000 caregivers in the Netherlands also found that carers who had frequently visited their relatives in long term care facilities before the pandemic were more anxious than carers who had more limited contact with their relatives; the authors potentially suggested that the former are a possible group to target for mental health support (218).

9.4. CAN WE LEARN FROM PAST INFECTION OUTBREAKS?

Unlike the example looking at suicide and self-harm, where there may be much to learn from past economic shocks, there may be fewer parallels with previous events. One option is to look at very early experience with the current pandemic in countries such as China, but is it possible to look at the psychological impacts of previous infectious disease outbreaks, such as SARS? A recent rapid review looked at the potential impact of infection outbreaks on the psychological state of long-term care staff identified six previous studies on this topic (219). Two of these were from RESPOND countries, Sweden and the UK, while another was from Australia, but all were very small-scale studies. All identified fear of illness and infection, workplace tension and stress as concerns. A larger study of nearly 400 residential care workers in Norway identified included in the review looked at the impacts of an MRSA outbreak (220). Although this study did not use validated instruments to assess psychological health, fear and anxiety associated with being infected or becoming a carrier, as well as restrictions on social life because of infection were reported by more than 75% of survey participants.

10. CASE STUDY: POLICY IMPLICATIONS OF THE IMPACT OF LONG-COVID ON MENTAL HEALTH

We end this report by brief highlighting the issue of long COVID. The emergence of long COVID, defined as symptoms lasting for at least 12 weeks, raises additional challenges for mental health policy and practice. Across all 53 countries of the WHO European Region it is estimated that there are 17 million living with long-COVID (1). Studies in specific EU countries also point to high levels of long COVID, in the Netherlands, for example, it has been estimated that almost 13% of people experience long-COVID (2) while in the UK as of October 2022 1.71 million people currently have long-COVID of which 1.06 million still have symptoms after one year and 0.51 million symptoms after two years (3). Some of these people are still experiencing severe side-effects and sometimes debilitating, life changes. Data from 10 UK longitudinal cohort studies also indicate that individuals who had long-COVID, which the authors defined as symptoms lasting for at least 12 weeks, ranged between 8% and 17% (221). 1% to 5% of the participants of these cohorts experienced a significant deterioration of their physical functioning.

There is also now some information about the mental health consequences of long COVID. A meta-analysis examined the prevalence of neuropsychiatric symptoms at post-acute or later time-points after COVID-19 infection and in control groups (222). Mean duration of follow up was 77 days, with a pooled prevalence of 19% for anxiety and 16% for PTSD. An observational study of more than 247,000 non-hospitalised adults across 6 countries, Denmark, Estonia, Iceland, Norway, Sweden, and the UK, looked at the prevalence of adverse mental health symptoms among individuals diagnosed with COVID-19 in the general population by acute infection severity up to 16 months after diagnosis (223). Almost 10,000 of these cohort participants were diagnosed with COVID. Individuals who experienced mild forms of COVID had a significantly lower risk of depression over the study period compared to individuals who experienced severe COVID (22% of all those with COVID) and were confined to bed for more than a week (prevalence ratio 0.83 versus 1.61). The severe COVID group also had significantly higher rates of poor sleep quality and higher levels of anxiety.

A small longitudinal observational study in the Netherlands followed up 239 adults with persistent symptoms of COVID for 6 months (224). 27%, 35% and 41% of these individuals had PTSD, depression or anxiety respectively at 6 month follow up. There was no difference in prevalence of these conditions between people who had been hospitalised and those that had not. A cross-sectional survey in Quebec, Canada also noted that the longer individuals had been

hospitalised for COVID, the more likely they were to experience psychological/mental health symptoms at least two months post hospitalisation (225).

A three-month national matched cohort study of adolescents in England with or without a COVID diagnosis also was undertaken between January and March 2021 (226). While no difference in self-reported mental health state was seen between the two cohorts, poor mental health prior to COVID diagnosis was associated with a higher risk of multiple symptoms of COVID at 3 month follow up.

All of these studies suggest a potential need for mental health screening early in individuals suspected of having long COVID, with appropriate psychological and other interventions then provided. Careful ongoing monitoring of the mental health of people who contract COVID may be important in planning future follow up care. Research on interventions to support the mental health of people with long COVID is also needed; one recent review identified 42 registered trials, 17 of which are in Europe, looking at psychological, pharmacological, and herbal remedies, as well as physiotherapy and rehabilitation (227).

11. CONCLUSIONS

This is the third health systems appraisal report of RESPOND WP3, whose overarching aim is to provide an ongoing and evolving assessment of policy responses to the wellbeing and mental health impact of the COVID-19 pandemic. These responses are being investigated for the general population and high-risk groups. Below we briefly provide some updated conclusions on our findings.

The economic crisis linked to the pandemic is very different to previous crises, but we now face new economic shocks

This report confirms that the economic crisis has turned out to be quite different to recent economic crises. Unlike the 2008/2009 economic crises, key economic indicators such as economic growth and employment rates have rebounded quickly in all RESPOND countries and by summer 2021 had broadly returned to their pre-pandemic levels. Economic growth and a reduction in unemployment was seen throughout 2022, although the outlook for 2023 is not good because of the additional economic shocks due to the war in Ukraine and related energy crisis.

Although only limited evidence is available, it is highly probable that the very high levels of additional income protection and social protection measures have helped to mitigate the immediate economic impacts of the pandemic, which in turn have cushioned the mental health impacts of the pandemic. This may be a reason why overall only modest impacts on population mental health have been seen; moreover no immediate impact on suicide rates has also been seen. That said, there is evidence that specific population groups have been more adversely affected by the economic consequences of the pandemic across Europe. These include workers who have been fully on furlough, women, school leavers, higher education students and the retired.

Additional resources to protect the mental wellbeing and resilience of individuals at high risk of not being in employment, education or training are likely to be needed. As we have seen in this report financial distress is a potential indicator of future risks to mental health. Financial distress levels are likely to increase further in the near future due to the energy crisis and the war in Ukraine. This is at a time when most income protection and debt relief measures in Europe related to the COVID pandemic have come to an end. The magnitude of financial shocks due to the energy crisis may be on a much greater scale than the economic shocks during COVID.

Policies to control the pandemic and their impacts on mental health

We have looked at six policy responses that are particularly important: school closures, restrictions on gatherings, stay at home instructions, measures to protect older people, as well as income support and debt relief. These policies were chosen because they affect a large share of the population (horizontal equity), they are likely to hit vulnerable groups harder (vertical equity), they were more strictly imposed where the COVID-19 pandemic was more severe and finally they strongly affect the social life and thus mental health status of individuals. The policies were tracked with Oxford COVID-19 Government Response Tracker (OGRT) for the eight countries reviewed in this report. We found first that different countries had different levels of restriction (ranging from level 1 (minor) to level 4 (severe). We noted that our previous report indicated that these restrictions changed over time between March and December: Belgium and Sweden had somewhat less strict policies in comparison with Italy and the UK. Also, some policies began with very stringent enforcement; they were relaxed later on (school closure) whereas other policies (restrictions on gatherings) were strictly implemented and remained strict for the rest of 2020, thus offering possibilities to assess the differential effect of these policies on mental health. In the winter of 2020/2021 high levels of restriction were in place in most countries as a result of the spread of the Delta variant of COVID-19. These periods of restriction were longer than those initially seen in Spring 2020. By Spring 2022 these measures started to ease off and by October 2022 most of these measures had been lifted in nearly all RESPOND countries. However, measures remain very stringent in respect of the protection of older people in Italy and Germany (level 3 restrictions) with level 2 restrictions in Belgium, Spain and the UK.

Information is continuing to accumulate on the impacts of these measures on population mental health, although it remains the case that much of the recently published literature is still concentrated on impacts in 2020 and early 2021. The evidence base is very heterogenous and methodologies used also vary which means that any interpretation of findings has to be cautious. Careful trade offs have had to be made by policymakers; these have been essential to help reduce the spread of virus and protect lives, but they also can have adverse impacts.

We have used our previously developed mental health impact assessment framework and used this to examine each of these six policies, looking at what can be said about their direct impacts on mental health and wellbeing, impacts on access to mental health services and impacts on determinants of health and wellbeing. We have also taken into account the views of stakeholders on impacts. While information on the longer-term impacts of the pandemic is still limited it is already clear that the stringency of pandemic responses is likely to have influenced population mental health. We know that there are some adverse impacts of school closures, social distancing, lockdowns and measures to protect older people on mental health, particularly on depression and anxiety; but what we don't know is what the impacts on mental health and wellbeing would have been had the pandemic not been controlled. We also know that some of these measures may be associated with improvements in mental health and wellbeing in some population segments.

There are also issues that are difficult to link in the impact assessment framework to any single policy action, but rather are a consequence both of the pandemic and collective policy measures. For instance, there is emerging evidence that depression and anxiety in adults with substance abuse problems deteriorated between the first and second waves of the pandemic, as for instance observed in the Belgian analysis, but this cannot be associated with a single policy, but rather with a range of measures that may have reduced access to relevant support services (228). As policies overlap, we may hypothesise that the countries which have the longest, stricter and more overlapping policies may experience the greatest impacts on mental health; some evidence would support this hypothesis, but it is still limited. For instance, we noted that earlier removal of measures such as lockdowns in England has been associated with better levels of mental health compared with Scotland where lockdowns were longer lasting (87).

When looking at the impact of multiple policies there are also clear differences in timing patterns between policies across countries that we need to account for. For example, whereas school closures started off strict, the majority of the countries (with the exceptions of Germany, the Netherlands, and the UK), went back to more lenient policies and

stayed this way until winter 2020/2021 and eased off again early in 2022. Strict restrictions on gatherings began nearly simultaneously to school closures, but in comparison to school closures, stayed very strict for the vast majority of the time (with some exceptions in the summer months). Regarding stay at home requirements, policies started off strict in spring 2020, became more lenient in the summer, and became stricter again during the second wave in autumn 2020 (with the exception of the Netherlands and Sweden), similarly to school closure patterns in Germany, Spain, the UK, and the Netherlands. They again eased off rapidly in 2022.

Highlighted themes

We have also updated what we know in this report on two issues that have been discussed much in the media in relation to the pandemic: risks of suicide and self-harm and mental health impacts in the long-term care sector, to provide a brief summary of what is actually known in peer-reviewed publications, and also consider whether policy and practice can be informed from past public health or economic shocks.

Suicide and self-harm

Suicide is a negative indicator of mental health and is also considered as an indicator of mental health system performance. Suicide has decreased in most EU countries over the last decade by about 20%. It is thus important to assess whether suicide was affected by the COVID-19 pandemic. There is now multiple and consistent evidence that the first 18 months of the pandemic was associated with stable or in many cases significantly lower rates of hospital presenting self-harm as well as suicide. Yet, despite this overall downward trend, more sophisticated analyses over a longer time frame are still needed to monitor whether there is an impact. There is some emerging evidence from multiple sources of an increase in self-harm in female adolescents, while sub-national analyses of suicide in a small number of settings points to less favourable and perhaps even increasing suicide rates. But these, it should be stressed, are outliers.

Although the pandemic does not appear to have led to a long-lasting economic crisis, some population groups have not benefited from the economic recovery during COVID. Past economic shocks suggest that there could be longer term increased risks of self-harm and suicide even when the crisis has ended and it is prudent to take measures to try to identify these population groups early and provide appropriate support. These groups include new entrants into the labour market as well as older workers, women and individuals in the lowest socio-economic groups. These groups overlap with many of the groups that have been identified in Europe as having had the greatest impacts on their mental health from the pandemic. These groups may also be very vulnerable to the increased costs of energy and other spillover impacts of the Ukraine war. It is vital, as noted by several stakeholder interviewees, that surveillance systems continue to carefully monitor changes in some of the risk factors for future poor mental health such as financial distress and levels of loneliness. Representative population surveys that collect data very frequently, e.g. every two weeks, may be expensive but they have played a vital role in understanding the pandemic and their continuation may be critical in acting as an early warning radar system on the lasting impacts of COVID as well as the current and future predicted economic crisis linked to the Ukraine war and energy crisis.

Long-term care

We highlight the long-term care sector, given the high levels of mortality in long-term care residents, and the pre-existing vulnerability to elevated levels of psychosocial stress in long-term care workplaces. More than two years after the beginning of the pandemic, evidence on the impacts on measures on the mental health of older people, especially in residential care settings remains limited. Experience in Northern Italy in particular, suggests that levels of PTSD and anxiety were very high in care workers after the first COVID-19 wave. Further subsequent studies across Europe have also reported further impacts on the mental health of care staff; these impacts are more evident when workplace support for staff is not available. But most of these studies still concentrate on the first few months of the pandemic,

yet pandemic suppression measures continue to be in place in most RESPOND countries. Information both on longer term outcomes and the effectiveness of measures to protect the mental health of older people, as well as health and social care staff is still needed. This is particularly important given the growing evidence from across Europe suggesting that the pandemic may lead to a severe deterioration in the mood and behaviour of care home residents, with potential increased use of psychotropic medication use. Unlike suicide and self-harm, there appears to be much more limited evidence from past public health or economic shocks that could inform policy thinking.

Long-COVID

Long COVID is associated with higher risk of poor mental health, this risk may increase with the severity of COVID, but the evidence remains relatively limited. Policies need to be put in place to help identify and follow up mental health status in people who experience persistent COVID symptoms. Evidence on effective and cost effective interventions to address the mental health consequences of long COVID are also needed.

12. REFERENCES

1. Wise J. Covid-19: WHO urges action as 17 million long covid cases are estimated in Europe. Bmj. 2022;378:o2232.
2. Ballering AV, van Zon SKR, Olde Hartman TC, Rosmalen JGM. Persistence of somatic symptoms after COVID-19 in the Netherlands: an observational cohort study. Lancet. 2022;400(10350):452-61.
3. Office for National Statistics. Prevalence of ongoing symptoms following coronavirus (COVID-19) infection in the UK. London: Office for National Statistics; 2022 November.
4. European Commission: Employment Social Affairs & Inclusion. Employment and social developments in Europe. Quarterly Review. Luxembourg: Publications Office of the European Union; 2021.
5. Autumn 2022 Economic Forecast: The EU economy at a turning point [press release]. Brussels: European Commission, 11 November 2022 2022.
6. Directorate-General for Employment SAaI. Employment and Social Developments in Europe 2022: Young Europeans: employment and social challenges ahead. Brussels: European Commission; 2022.
7. Gray BJ, Kyle RG, Song J, Davies AR. Characteristics of those most vulnerable to employment changes during the COVID-19 pandemic: a nationally representative cross-sectional study in Wales. J Epidemiol Community Health. 2021.
8. Buonsenso D, Roland D, De Rose C, Vásquez-Hoyos P, Ramly B, Chakakala-Chaziya JN, et al. Schools Closures During the COVID-19 Pandemic: A Catastrophic Global Situation. Pediatr Infect Dis J. 2021;40(4):e146-e50.
9. Verge P. Editorial Perspective: The mental health impact of school closures during the COVID-19 pandemic. Les Echos. 2021.
10. Almeida M, Challa M, Ribeiro M, Harrison AM, Castro MC. Editorial Perspective: The mental health impact of school closures during the COVID-19 pandemic. Wiley Online Library; 2021.
11. Yamamura E, Tsustsui Y. School closures and mental health during the COVID-19 pandemic in Japan. Journal of Population Economics. 2021:1-38.
12. Müller L-M, Goldenberg G. Education in times of crisis: The potential implications of school closures for teachers and students. A review of research evidence on school closures and international approaches to education during the COVID-19 pandemic Chartered College of Teaching Retrieved on. 2020;2(6):2020.

13. Grewenig E, Lergetporer P, Werner K, Woessmann L, Zierow L. COVID-19 and educational inequality: How school closures affect low- and high-achieving students. European Economic Review. 2021;140:103920.
14. Kovacs VA, Starc G, Brandes M, Kaj M, Blagus R, Leskošek B, et al. Physical activity, screen time and the COVID-19 school closures in Europe–An observational study in 10 countries. European Journal of Sport Science. 2021:1-10.
15. Engzell P, Frey A, Verhagen MD. Learning loss due to school closures during the COVID-19 pandemic. Proceedings of the National Academy of Sciences. 2021;118(17):e2022376118.
16. Champeaux H, Mangiavacchi L, Marchetta F, Piccoli L. Learning at home: distance learning solutions and child development during the COVID-19 lockdown. 2020.
17. Ford T, John A, Gunnell D. Mental health of children and young people during pandemic. Bmj. 2021;372:n614.
18. Panchal U, Salazar de Pablo G, Franco M, Moreno C, Parellada M, Arango C, et al. The impact of COVID-19 lockdown on child and adolescent mental health: systematic review. European Child & Adolescent Psychiatry. 2021.
19. Coppola I, Rania N, Parisi R, Lagomarsino F. Spiritual Well-Being and Mental Health During the COVID-19 Pandemic in Italy. Front Psychiatry. 2021;12:626944.
20. Hungelmann J, Kenkel-Rossi E, Klassen L, Stollenwerk R. Focus on spiritual well-being: harmonious interconnectedness of mind-body-spirit--use of the JAREL spiritual well-being scale. Geriatr Nurs. 1996;17(6):262-6.
21. Piccinelli M, Bisoffi G, Bon MG, Cunico L, Tansella M. Validity and test-retest reliability of the Italian version of the 12-item General Health Questionnaire in general practice: a comparison between three scoring methods. Compr Psychiatry. 1993;34(3):198-205.
22. Mitima-Verloop HB, Mooren TTM, Kritikou ME, Boelen PA. Restricted Mourning: Impact of the COVID-19 Pandemic on Funeral Services, Grief Rituals, and Prolonged Grief Symptoms. Front Psychiatry. 2022;13:878818.
23. Osei-Tutu A, Kenin A, Affram AA, Kusi AA, Adams G, Dzokoto VA. Ban of Religious Gatherings during the COVID-19 Pandemic: Impact on Christian Church Leaders' Well-Being in Ghana. Pastoral Psychology. 2021;70(4):335-47.
24. Cindrich SL, Lansing JE, Brower CS, McDowell CP, Herring MP, Meyer JD. Associations Between Change in Outside Time Pre- and Post-COVID-19 Public Health Restrictions and Mental Health: Brief Research Report. Frontiers in Public Health. 2021;9(8).
25. Van Overmeire R, Vesentini L, Bilsen J. Post-Traumatic Stress Disorder among Funeral Directors after the First Wave of COVID-19 in Belgium. Psych [Internet]. 2022; 4(3):[605-14 pp.].
26. Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. Psychol Bull. 1985;98(2):310-57.
27. Umberson D, Crosnoe R, Reczek C. Social relationships and health behavior across the life course. Annual review of sociology. 2010;36:139-57.
28. Umberson D, Montez JK. Social relationships and health: a flashpoint for health policy. J Health Soc Behav. 2010;51 Suppl(Suppl):S54-66.
29. Santomauro DF, Mantilla Herrera AM, Shadid J, Zheng P, Ashbaugh C, Pigott DM, et al. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. The Lancet. 2021;398(10312):1700-12.
30. Xiong J, Lipsitz O, Nasri F, Lui LMW, Gill H, Phan L, et al. Impact of COVID-19 pandemic on mental health in the general population: A systematic review. Journal of Affective Disorders. 2020;277:55-64.
31. Neelam K, Duddu V, Anyim N, Neelam J, Lewis S. Pandemics and pre-existing mental illness: A systematic review and meta-analysis. Brain, Behavior, & Immunity - Health. 2021;10:100177.
32. Piquero AR, Jennings WG, Jemison E, Kaukinen C, Knaul FM. Domestic violence during the COVID-19 pandemic - Evidence from a systematic review and meta-analysis. J Crim Justice. 2021;74:101806.
33. Kourti A, Stavridou A, Panagouli E, Psaltopoulou T, Spiliopoulou C, Tsolia M, et al. Domestic Violence During the COVID-19 Pandemic: A Systematic Review. Trauma Violence Abuse. 2021:15248380211038690.

34. O'Connor RC, Wetherall K, Cleare S, McClelland H, Melson AJ, Niedzwiedz CL, et al. Mental health and well-being during the COVID-19 pandemic: longitudinal analyses of adults in the UK COVID-19 Mental Health & Wellbeing study. Br J Psychiatry. 2020:1-8.
35. Ford M. Warning 'many' care workers will not return to jobs despite vaccine rule change. Available at https://www.nursingtimes.net/news/social-care/warning-many-care-workers-will-not-return-to-jobs-despite-vaccine-rule-change-02-03-2022/. Nursing Times. 2022.
36. Lund C, Brooke-Sumner C, Baingana F, Baron EC, Breuer E, Chandra P, et al. Social determinants of mental disorders and the Sustainable Development Goals: a systematic review of reviews. Lancet Psychiatry. 2018;5(4):357-69.
37. Friedli L, World Health Organization. Mental health, resilience and inequalities. Copenhagen: WHO Regional Office for Europe:; 2009.
38. McDaid D, Hamilton M, King D, Park A-L, Scopel Hoffman M, Silva-Ribeiro W, et al. An investment framework to build mental capital in young people. Melbourne: Orygen and World Economic Forum; 2020.
39. Government Office for Science. Mental Capital and Wellbeing: Making the most of ourselves in the 21st century. London: Government Office for Science; 2008.
40. Green L, Ashton K, Azam S, Dyakova M, Clemens T, Bellis MA. Using health impact assessment (HIA) to understand the wider health and well-being implications of policy decisions: the COVID-19 'staying at home and social distancing policy' in Wales. BMC Public Health. 2021;21(1):1456.
41. Krishnaratne S, Littlecott H, Sell K, Burns J, Rabe JE, Stratil JM, et al. Measures implemented in the school setting to contain the COVID-19 pandemic. Cochrane Database Syst Rev. 2022;1(1):Cd015029.
42. Onyema EM, Eucheria NC, Obafemi FA, Sen S, Atonye FG, Sharma A, et al. Impact of Coronavirus pandemic on education. Journal of Education and Practice. 2020;11(13):108-21.
43. Viner RM, Russell SJ, Croker H, Packer J, Ward J, Stansfield C, et al. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. Lancet Child Adolesc Health. 2020;4(5):397-404.
44. Ng CSM, Ng SSL. Impact of the COVID-19 pandemic on children's mental health: A systematic review. Front Psychiatry. 2022;13:975936.
45. Viner R, Russell S, Saulle R, Croker H, Stansfield C, Packer J, et al. School Closures During Social Lockdown and Mental Health, Health Behaviors, and Well-being Among Children and Adolescents During the First COVID-19 Wave: A Systematic Review. JAMA Pediatr. 2022;176(4):400-9.
46. Elharake JA, Akbar F, Malik AA, Gilliam W, Omer SB. Mental Health Impact of COVID-19 among Children and College Students: A Systematic Review. Child Psychiatry Hum Dev. 2022:1-13.
47. Saulle R, De Sario M, Bena A, Capra P, Culasso M, Davoli M, et al. School closures and mental health, wellbeing and health behaviours among children and adolescents during the second COVID-19 wave: a systematic review of the literature. Epidemiol Prev. 2022;46(5-6):In press.
48. Barendse MEA, Flannery J, Cavanagh C, Aristizabal M, Becker SP, Berger E, et al. Longitudinal Change in Adolescent Depression and Anxiety Symptoms from before to during the COVID-19 Pandemic. J Res Adolesc. 2022.
49. Widnall E, Winstone L, Plackett R, Adams EA, Haworth CMA, Mars B, et al. Impact of School and Peer Connectedness on Adolescent Mental Health and Well-Being Outcomes during the COVID-19 Pandemic: A Longitudinal Panel Survey. Int J Environ Res Public Health. 2022;19(11).
50. McKay MT, Kilmartin L, Meagher A, Cannon M, Healy C, Clarke MC. A revised and extended systematic review and meta-analysis of the relationship between childhood adversity and adult psychiatric disorder. J Psychiatr Res. 2022;156:268-83.
51. John A, Lee SC, Puchades A, Del Pozo-Baños M, Morgan K, Page N, et al. Self-harm, in-person bullying and cyberbullying in secondary school-aged children: A data linkage study in Wales. J Adolesc. 2022.
52. Karanikola MNK, Lyberg A, Holm AL, Severinsson E. The Association between Deliberate Self-Harm and School Bullying Victimization and the Mediating Effect of Depressive Symptoms and Self-Stigma: A Systematic Review. Biomed Res Int. 2018;2018:4745791.

53. Geoffroy MC, Arseneault L, Girard A, Ouellet-Morin I, Power C. Association of childhood bullying victimisation with suicide deaths: findings from a 50-year nationwide cohort study. Psychol Med. 2022:1-8.
54. Hoffmann MS, McDaid D, Salum GA, Silva-Ribeiro W, Ziebold C, King D, et al. The impact of child psychiatric conditions on future educational outcomes among a community cohort in Brazil. Epidemiol Psychiatr Sci. 2021;30:e69.
55. Ganesan K, Shakoor S, Wertz J, Agnew-Blais J, Bowes L, Jaffee SR, et al. Bullying behaviours and other conduct problems: longitudinal investigation of their independent associations with risk factors and later outcomes. Soc Psychiatry Psychiatr Epidemiol. 2021;56(11):2041-52.
56. Keller A, Groot J, Matta J, Bu F, El Aarbaoui T, Melchior M, et al. Housing environment and mental health of Europeans during the COVID-19 pandemic: a cross-country comparison. Sci Rep. 2022;12(1):5612.
57. Morganti A, Brambilla A, Aguglia A, Amerio A, Miletto N, Parodi N, et al. Effect of Housing Quality on the Mental Health of University Students during the COVID-19 Lockdown. Int J Environ Res Public Health. 2022;19(5).
58. Sarker MR. Labor market and unpaid works implications of COVID-19 for Bangladeshi women. Gender, Work & Organization. 2020.
59. Heggeness ML. Estimating the immediate impact of the COVID-19 shock on parental attachment to the labor market and the double bind of mothers. Review of Economics of the Household. 2020;18(4):1053-78.
60. Gandré C, Coldefy M, Rochereau T. Les inégalités face au risque de détresse psychologique pendant le confinement: Premiers résultats de l'enquête COCLICO du 3 au 14 avril 2020. Questions d'économie de la santé. 2020(249).
61. Hamdani SU, Huma ZE, Rahman A, Wang D, Chen T, van Ommeren M, et al. Cost-effectiveness of WHO Problem Management Plus for adults with mood and anxiety disorders in a post-conflict area of Pakistan: randomised controlled trial. Br J Psychiatry. 2020;217(5):623-9.
62. Traunmüller C, Stefitz R, Gaisbachgrabner K, Schwerdtfeger A. Psychological correlates of COVID-19 pandemic in the Austrian population. BMC Public Health. 2020;20(1):1395.
63. Garbe A, Ogurlu U, Logan N, Cook P. Parents' experiences with remote education during COVID-19 school closures. American Journal of Qualitative Research. 2020;4(3):45-65.
64. Thorell LB, Skoglund C, de la Peña AG, Baeyens D, Fuermaier ABM, Groom MJ, et al. Parental experiences of homeschooling during the COVID-19 pandemic: differences between seven European countries and between children with and without mental health conditions. Eur Child Adolesc Psychiatry. 2021:1-13.
65. Ravens-Sieberer U, Kaman A, Erhart M, Devine J, Schlack R, Otto C. Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. Eur Child Adolesc Psychiatry. 2021:1-11.
66. Abramson A. How Covid-19 may increase domestic violence and child abuse. American Psychological Association. 2020.
67. Calvano C, Engelke L, Di Bella J, Kindermann J, Renneberg B, Winter SM. Families in the COVID-19 pandemic: parental stress, parent mental health and the occurrence of adverse childhood experiences-results of a representative survey in Germany. Eur Child Adolesc Psychiatry. 2022;31(7):1-13.
68. Crosnoe R. Friendships in childhood and adolescence: The life course and new directions. Social psychology quarterly. 2000:377-91.
69. Jones RM, Vaterlaus JM, Jackson MA, Morrill TB. Friendship characteristics, psychosocial development, and adolescent identity formation. Personal Relationships. 2014;21(1):51-67.
70. Imran N, Zeshan M, Pervaiz Z. Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan journal of medical sciences. 2020;36(COVID19-S4):S67.
71. Power E, Hughes S, Cotter D, Cannon M. Youth mental health in the time of COVID-19. Irish Journal of Psychological Medicine. 2020;37(4):301-5.

72. Nearchou F, Flinn C, Niland R, Subramaniam SS, Hennessy E. Exploring the impact of CoViD-19 on mental health outcomes in children and adolescents: a systematic review. International journal of environmental research and public health. 2020;17(22):8479.
73. Benke C, Autenrieth LK, Asselmann E, Pané-Farré CA. Stay-at-home orders due to the COVID-19 pandemic are associated with elevated depression and anxiety in younger, but not older adults: results from a nationwide community sample of adults from Germany. Psychological Medicine. 2020:1-2.
74. Palgi Y, Shrira A, Ring L, Bodner E, Avidor S, Bergman Y, et al. The loneliness pandemic: Loneliness and other concomitants of depression, anxiety and their comorbidity during the COVID-19 outbreak. Journal of affective disorders. 2020.
75. González-Sanguino C, Ausín B, Castellanos M, Saiz J, López-Gómez A, Ugidos C, et al. Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. Brain Behav Immun. 2020;87:172-6.
76. Nosè M, Tarsitani L, Tedeschi F, Lotito C, Massetti P, Purgato M, et al. Association of traumatic events with levels of psychological distress and depressive symptoms in male asylum seekers and refugees resettled in Italy. BMC Psychiatry. 2020;20(1):576.
77. White RG, Van Der Boor C. Impact of the COVID-19 pandemic and initial period of lockdown on the mental health and well-being of adults in the UK. BJPsych open. 2020;6(5).
78. Bartrés-Faz D, Macià D, Cattaneo G, Borràs R, Tarrero C, Solana J, et al. The paradoxical effect of COVID-19 outbreak on loneliness. BJPsych Open. 2021;7(1):e30.
79. Institut français d'Edmr. Conseil Supérieur de la Santé. Prise en charge psychosociale pendant la pandémie COVID-19. Bruxelles: CSS; 2020. Avis n° 9589. Institut français d'EDMR; 2020.
80. Patel JA, Nielsen FBH, Badiani AA, Assi S, Unadkat VA, Patel B, et al. Poverty, inequality and COVID-19: the forgotten vulnerable. Public health. 2020;183:110.
81. Zhu S, Wu Y, Zhu C-Y, Hong W-c, Yu Z-x, Chen Z-k, et al. The immediate mental health impacts of the COVID-19 pandemic among people with or without quarantine managements. Brain, behavior, and immunity. 2020.
82. Prati G, Mancini AD. The psychological impact of COVID-19 pandemic lockdowns: a review and meta-analysis of longitudinal studies and natural experiments. Psychol Med. 2021:1-11.
83. Ahmed MZ, Ahmed O, Aibao Z, Hanbin S, Siyu L, Ahmad A. Epidemic of COVID-19 in China and associated psychological problems. Asian journal of psychiatry. 2020;51:102092.
84. Xiang Y-T, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. The Lancet Psychiatry. 2020;7(3):228-9.
85. Lewis KJS, Lewis C, Roberts A, Richards NA, Evison C, Pearce HA, et al. The effect of the COVID-19 pandemic on mental health in individuals with pre-existing mental illness. BJPsych Open. 2022;8(2):e59.
86. Pieh C, Budimir S, Delgadillo J, Barkham M, Fontaine JRJ, Probst T. Mental Health During COVID-19 Lockdown in the United Kingdom. Psychosom Med. 2021;83(4):328-37.
87. Serrano-Alarcón M, Kentikelenis A, McKee M, Stuckler D. Impact of COVID-19 lockdowns on mental health: Evidence from a quasi-natural experiment in England and Scotland. Health Econ. 2021.
88. Patel K, Robertson E, Kwong ASF, Griffith GJ, Willan K, Green MJ, et al. Psychological Distress Before and During the COVID-19 Pandemic Among Adults in the United Kingdom Based on Coordinated Analyses of 11 Longitudinal Studies. JAMA Netw Open. 2022;5(4):e227629.
89. Ruffolo M, Price D, Schoultz M, Leung J, Bonsaksen T, Thygesen H, et al. Employment uncertainty and mental health during the COVID-19 pandemic initial social distancing implementation: a cross-national study. Global Social Welfare. 2021;8(2):141-50.
90. Simon J, Helter TM, White RG, van der Boor C, Łaszewska A. Impacts of the Covid-19 lockdown and relevant vulnerabilities on capability well-being, mental health and social support: an Austrian survey study. BMC Public Health. 2021;21(1):314.
91. Schmits E, Glowacz F. Changes in Alcohol Use During the COVID-19 Pandemic: Impact of the Lockdown Conditions and Mental Health Factors. Int J Ment Health Addict. 2021:1-12.

92. Luo X, Estill J, Wang Q, Lv M, Liu Y, Liu E, et al. The psychological impact of quarantine on coronavirus disease 2019 (COVID-19). Psychiatry Research. 2020;291:113193.
93. Winkler P, Formanek T, Mlada K, Kagstrom A, Mohrova Z, Mohr P, et al. Increase in prevalence of current mental disorders in the context of COVID-19: analysis of repeated nationwide cross-sectional surveys. Epidemiol Psychiatr Sci. 2020;29:e173.
94. Mazza M, Marano G, Lai C, Janiri L, Sani G. Danger in danger: Interpersonal violence during COVID-19 quarantine. Psychiatry research. 2020;289:113046.
95. Lee J. Mental health effects of school closures during COVID-19. The Lancet Child & Adolescent Health. 2020;4(6):421.
96. Sacco MA, Caputo F, Ricci P, Sicilia F, De Aloe L, Bonetta CF, et al. The impact of the Covid-19 pandemic on domestic violence: The dark side of home isolation during quarantine. Medico-Legal Journal. 2020;88(2):71-3.
97. Ammar A, Chtourou H, Boukhris O, Trabelsi K, Masmoudi L, Brach M, et al. COVID-19 home confinement negatively impacts social participation and life satisfaction: a worldwide multicenter study. International journal of environmental research and public health. 2020;17(17):6237.
98. Serafini G, Parmigiani B, Amerio A, Aguglia A, Sher L, Amore M. The psychological impact of COVID-19 on the mental health in the general population. QJM: An International Journal of Medicine. 2020;113(8):531-7.
99. Usher K, Bhullar N, Jackson D. Life in the pandemic: Social isolation and mental health. Wiley Online Library; 2020.
100. García-Prado A, González P, Rebollo-Sanz YF. Lockdown strictness and mental health effects among older populations in Europe. Econ Hum Biol. 2022;45:101116.
101. Yastrebov G, Maskileyson D. The effect of COVID-19 confinement and economic support measures on the mental health of older population in Europe and Israel. Soc Sci Med. 2022;314:115445.
102. Giebel C, Talbot CV, Wharton E, Lorenz-Dant K, Suárez-González A, Cannon J, et al. The early impacts of COVID-19 on unpaid carers of people living with dementia: part II of a mixed-methods systematic review. Aging Ment Health. 2022:1-16.
103. Hughes MC, Liu Y, Baumbach A. Impact of COVID-19 on the Health and Well-being of Informal Caregivers of People with Dementia: A Rapid Systematic Review. Gerontol Geriatr Med. 2021;7:23337214211020164.
104. Carbone EA, de Filippis R, Roberti R, Rania M, Destefano L, Russo E, et al. The Mental Health of Caregivers and Their Patients With Dementia During the COVID-19 Pandemic: A Systematic Review. Front Psychol. 2021;12:782833.
105. Buizza C, Bazzoli L, Ghilardi A. Changes in College Students Mental Health and Lifestyle During the COVID-19 Pandemic: A Systematic Review of Longitudinal Studies. Adolesc Res Rev. 2022;7(4):537-50.
106. Liyanage S, Saqib K, Khan AF, Thobani TR, Tang WC, Chiarot CB, et al. Prevalence of Anxiety in University Students during the COVID-19 Pandemic: A Systematic Review. Int J Environ Res Public Health. 2021;19(1).
107. Chang JJ, Ji Y, Li YH, Pan HF, Su PY. Prevalence of anxiety symptom and depressive symptom among college students during COVID-19 pandemic: A meta-analysis. J Affect Disord. 2021;292:242-54.
108. Tancredi S, Burton-Jeangros C, Ruegg R, Righi E, Kagstrom A, Quesnel Vallee A, et al. Financial Loss and Depressive Symptoms in University Students During the First Wave of the COVID-19 Pandemic: Comparison Between 23 Countries. Int J Public Health. 2022;67:1604468.
109. Buffel V, Van de Velde S, Akvardar Y, Bask M, Brault MC, Busse H, et al. Depressive symptoms in higher education students during the COVID-19 pandemic: the role of containment measures. Eur J Public Health. 2022;32(3):481-7.
110. Tarsitani L, Pinucci I, Tedeschi F, Patanè M, Papola D, Palantza C, et al. Resilience of people with chronic medical conditions during the COVID-19 pandemic: a 1-year longitudinal prospective survey. BMC Psychiatry. 2022;22(1):633.

111. Green L, Morgan L, Azam S, Evans L, Parry-Williams L, Petchey L, et al. A Health Impact Assessment of the 'Staying at Home and Social Distancing Policy' in Wales in response to the COVID-19 pandemic. Main Report. Cardiff: Public Health Wales NHS Trust; 2020.
112. Bower M, Buckle C, Rugel E, Donohoe-Bales A, McGrath L, Gournay K, et al. 'Trapped', 'anxious' and 'traumatised': COVID-19 intensified the impact of housing inequality on Australians' mental health. International Journal of Housing Policy. 2021:1-32.
113. Lades LK, Laffan K, Daly M, Delaney L. Daily emotional well-being during the COVID-19 pandemic. Br J Health Psychol. 2020;25(4):902-11.
114. Pelly D, Daly M, Delaney L, Doyle O. Worker Well-being Before and During the COVID-19 Restrictions: A Longitudinal Study in the UK. 2021.
115. Stock S, Bu F, Fancourt D, Mak HW. Longitudinal associations between going outdoors and mental health and wellbeing during a COVID-19 lockdown in the UK. Sci Rep. 2022;12(1):10580.
116. Caro JC, Clark AE, D'Ambrosio C, Vögele C. The impact of COVID-19 lockdown stringency on loneliness in five European countries. Soc Sci Med. 2022;314:115492.
117. Hernández-Ruiz V, Meillon C, Avila-Funes JA, Bergua V, Dartigues JF, Koleck M, et al. Older Adults and the COVID-19 Pandemic, What About the Oldest Old? The PACOVID Population-Based Survey. Front Psychiatry. 2021;12:711583.
118. Kivi M, Hansson I, Bjälkebring P. Up and About: Older Adults' Well-being During the COVID-19 Pandemic in a Swedish Longitudinal Study. J Gerontol B Psychol Sci Soc Sci. 2021;76(2):e4-e9.
119. Lüdecke D, von dem Knesebeck O. Decline in Mental Health in the Beginning of the COVID-19 Outbreak Among European Older Adults-Associations With Social Factors, Infection Rates, and Government Response. Front Public Health. 2022;10:844560.
120. de Maio Nascimento M, da Silva Neto HR, de Fátima Carreira Moreira Padovez R, Neves VR. Impacts of Social Isolation on the Physical and Mental Health of Older Adults During Quarantine: A Systematic Review. Clin Gerontol. 2022:1-21.
121. Sterina E, Hermida AP, Gerberi DJ, Lapid MI. Emotional Resilience of Older Adults during COVID-19: A Systematic Review of Studies of Stress and Well-Being. Clin Gerontol. 2022;45(1):4-19.
122. Müller F, Röhr S, Reininghaus U, Riedel-Heller SG. Social Isolation and Loneliness during COVID-19 Lockdown: Associations with Depressive Symptoms in the German Old-Age Population. Int J Environ Res Public Health. 2021;18(7).
123. Röhr S, Reininghaus U, Riedel-Heller SG. Mental wellbeing in the German old age population largely unaltered during COVID-19 lockdown: results of a representative survey. BMC Geriatr. 2020;20(1):489.
124. Dove A, Guo J, Calderón-Larrañaga A, Vetrano DL, Fratiglioni L, Xu W. Association between social isolation and reduced mental well-being in Swedish older adults during the first wave of the COVID-19 pandemic: the role of cardiometabolic diseases. Aging (Albany NY). 2022;14(6):2462-74.
125. Kaelen S, van den Boogaard W, Pellecchia U, Spiers S, De Cramer C, Demaegd G, et al. How to bring residents' psychosocial well-being to the heart of the fight against Covid-19 in Belgian nursing homes-A qualitative study. PLoS One. 2021;16(3):e0249098.
126. Riello M, Purgato M, Bove C, MacTaggart D, Rusconi E. Prevalence of post-traumatic symptomatology and anxiety among residential nursing and care home workers following the first COVID-19 outbreak in Northern Italy. R Soc Open Sci. 2020;7(9):200880.
127. Blanco-Donoso LM, Moreno-Jiménez J, Gallego-Alberto L, Amutio A, Moreno-Jiménez B, Garrosa E. Satisfied as professionals, but also exhausted and worried!!: The role of job demands, resources and emotional experiences of Spanish nursing home workers during the COVID-19 pandemic. Health Soc Care Community. 2021.
128. Navarro Prados AB, Jiménez García-Tizón S, Meléndez JC. Sense of coherence and burnout in nursing home workers during the COVID-19 pandemic in Spain. Health Soc Care Community. 2021.
129. Brady C, Fenton C, Loughran O, Hayes B, Hennessy M, Higgins A, et al. Nursing home staff mental health during the Covid-19 pandemic in the Republic of Ireland. Int J Geriatr Psychiatry. 2021.

130. Backhaus R, Verbeek H, de Boer B, Urlings JHJ, Gerritsen DL, Koopmans R, et al. From wave to wave: a Dutch national study on the long-term impact of COVID-19 on well-being and family visitation in nursing homes. BMC Geriatr. 2021;21(1):588.
131. Paananen J, Rannikko J, Harju M, Pirhonen J. The impact of Covid-19-related distancing on the well-being of nursing home residents and their family members: a qualitative study. Int J Nurs Stud Adv. 2021;3:100031.
132. Borg C, Rouch I, Pongan E, Getenet JC, Bachelet R, Herrmann M, et al. Mental Health of People with Dementia During COVID-19 Pandemic: What Have We Learned from the First Wave? J Alzheimers Dis. 2021;82(4):1531-41.
133. Lorenz-Dant K, Comas-Herrera A. The impacts of COVID-19 on unpaid carers of adults with long-term care needs and measures to address these impacts: a rapid review of the available evidence. . London: LTCcovid.org; 2020.
134. McDaid D. Suicide and socio-economic disadvantage during times of economic recession and recovery. In: Platt S, Stace S, Morrissey J, editors. Socioeconomic disadvantage and suicidal behaviour. London: Samaritans; 2017.
135. Quaglio G, Karapiperis T, Van Woensel L, Arnold E, McDaid D. Austerity and health in Europe. Health Policy. 2013;113(1-2):13-9.
136. Silva M, Resurrección DM, Antunes A, Frasquilho D, Cardoso G. Impact of economic crises on mental health care: a systematic review. Epidemiol Psychiatr Sci. 2018;29:e7.
137. Wahlbeck K, McDaid D. Actions to alleviate the mental health impact of the economic crisis. World Psychiatry. 2012;11(3):139-45.
138. Wahlbeck K, Anderson P, Basu S, McDaid D, Stuckler D. Impact of economic crises on mental health. Copenhagen: World Health Organization Regional Office for Europe; 2011.
139. Simpson J, Albani V, Bell Z, Bambra C, Brown H. Effects of social security policy reforms on mental health and inequalities: A systematic review of observational studies in high-income countries. Soc Sci Med. 2021;272:113717.
140. Witteveen D, Velthorst E. Economic hardship and mental health complaints during COVID-19. Proc Natl Acad Sci U S A. 2020;117(44):27277-84.
141. Di Gessa G, Maddock J, Green MJ, Thompson EJ, McElroy E, Davies HL, et al. Pre-pandemic mental health and disruptions to healthcare, economic and housing outcomes during the COVID-19 pandemic: evidence from 12 UK longitudinal studies. Br J Psychiatry. 2022;220(1):21-30.
142. Pettinicchio D, Maroto M, Chai L, Lukk M. Findings from an online survey on the mental health effects of COVID-19 on Canadians with disabilities and chronic health conditions. Disabil Health J. 2021;14(3):101085.
143. de Miquel C, Domènech-Abella J, Felez-Nobrega M, Cristóbal-Narváez P, Mortier P, Vilagut G, et al. The Mental Health of Employees with Job Loss and Income Loss during the COVID-19 Pandemic: The Mediating Role of Perceived Financial Stress. Int J Environ Res Public Health. 2022;19(6).
144. Hecker I, El-Aarbaoui T, Wallez S, Andersen AJ, Ayuso-Mateos JL, Bryant R, et al. Impact of work arrangements during the COVID-19 pandemic on mental health in France. SSM-Population Health. 2022.
145. Simonse O, Van Dijk WW, Van Dillen LF, Van Dijk E. The role of financial stress in mental health changes during COVID-19. npj Mental Health Research. 2022;1(1):15.
146. Borrescio-Higa F, Droller F, Valenzuela P. Financial Distress and Psychological Well-Being During the COVID-19 Pandemic. Int J Public Health. 2022;67:1604591.
147. Gray BJ, Kyle RG, Song J, Davies AR. Characteristics of those most vulnerable to employment changes during the COVID-19 pandemic: a nationally representative cross-sectional study in Wales. J Epidemiol Community Health. 2022;76(1):8-15.
148. Yue W, Cowling M. The Covid-19 lockdown in the United Kingdom and subjective well-being: Have the self-employed suffered more due to hours and income reductions? International Small Business Journal. 2021;39(2):93-108.

149. Torrès O, Benzari A, Fisch C, Mukerjee J, Swalhi A, Thurik R. Risk of burnout in French entrepreneurs during the COVID-19 crisis. Small Business Economics. 2022;58(2):717-39.
150. Jacques W, Booth C, Wielgoszewska B, Green MJ, Di Gessa G, Huggins CF, et al. Mental and social wellbeing and the UK coronavirus job retention scheme: Evidence from nine longitudinal studies. Soc Sci Med. 2022;308:115226.
151. Donnelly R, Farina MP. How do state policies shape experiences of household income shocks and mental health during the COVID-19 pandemic? Soc Sci Med. 2021;269:113557.
152. Ferry F, Bunting B, Rosato M, Curran E, Leavey G. The impact of reduced working on mental health in the early months of the COVID-19 pandemic: Results from the Understanding Society COVID-19 study. J Affect Disord. 2021;287:308-15.
153. Botha F, Butterworth P, Wilkins R. Protecting mental health during periods of financial stress: Evidence from the Australian Coronavirus Supplement income support payment. Soc Sci Med. 2022;306:115158.
154. Jenkins R, Bhugra D, Bebbington P, Brugha T, Farrell M, Coid J, et al. Debt, income and mental disorder in the general population. Psychol Med. 2008;38(10):1485-93.
155. Sweet E, Nandi A, Adam EK, McDade TW. The high price of debt: household financial debt and its impact on mental and physical health. Soc Sci Med. 2013;91:94-100.
156. Shevlin M, Redican E, Hyland P, Butter S, McBride O, Hartman TK, et al. Perceived manageability of debt and mental health during the COVID-19 pandemic: A UK population analysis. PLoS One. 2022;17(9):e0274052.
157. Nigatu YT, Elton-Marshall T, Hamilton HA. Changes in household debt due to COVID-19 and mental health concerns among adults in Ontario, Canada. Int J Soc Psychiatry. 2022:207640221136795.
158. Leifheit KM, Pollack CE, Raifman J, Schwartz GL, Koehler RD, Rodriguez Bronico JV, et al. Variation in State-Level Eviction Moratorium Protections and Mental Health Among US Adults During the COVID-19 Pandemic. JAMA Netw Open. 2021;4(12):e2139585.
159. Acharya B, Bhatta D, Dhakal C. The risk of eviction and the mental health outcomes among the US adults. Prev Med Rep. 2022;29:101981.
160. Bushman G, Mehdipanah R. Housing and health inequities during COVID-19: findings from the national Household Pulse Survey. J Epidemiol Community Health. 2022;76(2):121-7.
161. Kyriakides S. Video Keynote Speech by Commissioner Stella Kyriakides at the High-Level Conference on Mental Health, organised by the Czech Presidency. Available at https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_22_6742. 2022.
162. Penninx BWJH, Benros ME, Klein RS, Vinkers CH. How COVID-19 shaped mental health: from infection to pandemic effects. Nature Medicine. 2022;28(10):2027-37.
163. Lorant V, Seeber K, Silva-Ribeiro W, Nicaise P, Evans-Lacko S, McDaid D. RESPOND Deliverable D3.3 – Report on strategies that stakeholders are prioritising, to mitigate and respond to the mental health challenges of the COVID-19 outbreak. Amsterdam: VU; 2022.
164. Fancourt D, Steptoe A, Bradbury A. Tracking the Psychological and Social Consequences of the COVID-19 Pandemic across the UK Population: Findings, Impact, and Recommendations from the COVID-19 Social Study (March 2020 – April 2022). London: UCL; 2022.
165. Pirkis J, Gunnell D, Shin S, Del Pozo-Banos M, Arya V, Aguilar PA, et al. Suicide numbers during the first 9-15 months of the COVID-19 pandemic compared with pre-existing trends: An interrupted time series analysis in 33 countries. EClinicalMedicine. 2022;51:101573.
166. Marmot M, Allen J, Goldblatt P, Boyce T, McNeish D, Grady M, et al. Fair Society, Healthy Lives. The Marmot Review. London; 2010.
167. World Health Organization. World mental health report: transforming mental health for all. Geneva: WHO; 2022.
168. Zortea TC, Brenna CTA, Joyce M, McClelland H, Tippett M, Tran MM, et al. The Impact of Infectious Disease-Related Public Health Emergencies on Suicide, Suicidal Behavior, and Suicidal Thoughts. Crisis. 2021;42(6):474-87.

169. Pirkis J, John A, Shin S, DelPozo-Banos M, Arya V, Analuisa-Aguilar P, et al. Suicide trends in the early months of the COVID-19 pandemic: an interrupted time-series analysis of preliminary data from 21 countries. Lancet Psychiatry. 2021;8(7):579-88.
170. Appleby L, Richards N, Ibrahim S, Turnbull P, Rodway C, Kapur N. Suicide in England in the COVID-19 pandemic: Early observational data from real time surveillance. Lancet Reg Health Eur. 2021;4:100110.
171. Leske S, Kõlves K, Crompton D, Arensman E, de Leo D. Real-time suicide mortality data from police reports in Queensland, Australia, during the COVID-19 pandemic: an interrupted time-series analysis. Lancet Psychiatry. 2021;8(1):58-63.
172. Radeloff D, Papsdorf R, Uhlig K, Vasilache A, Putnam K, von Klitzing K. Trends in suicide rates during the COVID-19 pandemic restrictions in a major German city. Epidemiol Psychiatr Sci. 2021;30:e16.
173. Odd D, Williams T, Appleby L, Gunnell D, Luyt K. Child Suicide Rates During the COVID-19 pandemic in England. medRxiv. 2021:2021.07.13.21260366.
174. Bersia M, Koumantakis E, Berchialla P, Charrier L, Ricotti A, Grimaldi P, et al. Suicide spectrum among young people during the COVID-19 pandemic: A systematic review and meta-analysis. EClinicalMedicine. 2022;54:101705.
175. Webb RT, John A, Knipe D, Bojanić L, Dekel D, Eyles E, et al. Has the COVID-19 pandemic influenced suicide rates differentially according to socioeconomic indices and ethnicity? More evidence is needed globally. Epidemiol Psychiatr Sci. 2022;31:e72.
176. Hawton K, Casey D, Bale E, Brand F, Ness J, Waters K, et al. Self-harm during the early period of the COVID-19 pandemic in England: Comparative trend analysis of hospital presentations. J Affect Disord. 2021;282:991-5.
177. Pignon B, Gourevitch R, Tebeka S, Dubertret C, Cardot H, Dauriac-Le Masson V, et al. Dramatic reduction of psychiatric emergency consultations during lockdown linked to COVID-19 in Paris and suburbs. Psychiatry Clin Neurosci. 2020;74(10):557-9.
178. Hernández-Calle D, Martínez-Alés G, Mediavilla R, Aguirre P, Rodríguez-Vega B, Bravo-Ortiz MF. Trends in Psychiatric Emergency Department Visits Due to Suicidal Ideation and Suicide Attempts During the COVID-19 Pandemic in Madrid, Spain. J Clin Psychiatry. 2020;81(5).
179. Ambrosetti J, Macheret L, Folliet A, Wullschleger A, Amerio A, Aguglia A, et al. Impact of the COVID-19 Pandemic on Psychiatric Admissions to a Large Swiss Emergency Department: An Observational Study. Int J Environ Res Public Health. 2021;18(3).
180. Hay D, Jamal MS, Al-Tawil K, Petohazi A, Gulli V, Bednarczuk NF, et al. The effect of the COVID-19 pandemic on mental health associated trauma, admissions and fractures at a London major trauma centre. Ann R Coll Surg Engl. 2021;103(2):114-9.
181. Chevallard G, Veronese G, Giudici R, Pressato L, Pozzi F, Compagnone C, et al. Facing increased suicide attempts during COVID-19 pandemic lockdown: the experience from the major trauma center in Lombardy, Italy. Minerva Anestesiol. 2021;87(2):243-5.
182. John A, Eyles E, Webb RT, Okolie C, Schmidt L, Arensman E, et al. The impact of the COVID-19 pandemic on self-harm and suicidal behaviour: update of living systematic review. F1000Res. 2020;9:1097.
183. Ayuso-Mateos JL, Morillo D, Haro JM, Olaya B, Lara E, Miret M. Changes in depression and suicidal ideation under severe lockdown restrictions during the first wave of the COVID-19 pandemic in Spain: a longitudinal study in the general population. Epidemiol Psychiatr Sci. 2021;30:e49.
184. Rømer TB, Christensen RHB, Blomberg SN, Folke F, Christensen HC, Benros ME. Psychiatric Admissions, Referrals, and Suicidal Behavior Before and During the COVID-19 Pandemic in Denmark: A Time-Trend Study. Acta Psychiatr Scand. 2021;144(6):553-62.
185. Boldrini T, Girardi P, Clerici M, Conca A, Creati C, Di Cicilia G, et al. Consequences of the COVID-19 pandemic on admissions to general hospital psychiatric wards in Italy: Reduced psychiatric hospitalizations and increased suicidality. Prog Neuropsychopharmacol Biol Psychiatry. 2021;110:110304.
186. Steeg S, John A, Gunnell DJ, Kapur N, Dekel D, Schmidt L, et al. The impact of the COVID-19 pandemic on presentations to health services following self-harm: systematic review. Br J Psychiatry. 2022;221(4):603-12.

187. Kastner UW, Javaheripour N, Arand J, Schönherr D, Sobanski T, Fehler SW, et al. Effects of the COVID-19 pandemic on suicide attempts in a rural region in Germany, a 5-year observational study. J Affect Disord. 2022;318:393-9.
188. Jollant F, Roussot A, Corruble E, Chauvet-Gelinier JC, Falissard B, Mikaeloff Y, et al. Prolonged impact of the COVID-19 pandemic on self-harm hospitalizations in France: A nationwide retrospective observational study. Eur Psychiatry. 2022;65(1):e35.
189. Fountoulakis KN, Karakatsoulis GN, Abraham S, Adorjan K, Ahmed HU, Alarcón RD, et al. The effect of different degrees of lockdown and self-identified gender on anxiety, depression and suicidality during the COVID-19 pandemic: Data from the international COMET-G study. Psychiatry Res. 2022;315:114702.
190. Kousoulis A, McDaid S, Crepaz-Keay D, Solomon S, Lombardo C, Yap J, et al. Coronavirus: The divergence of mental health experiences during the pandemic. London: Mental Health Foundation; 2020.
191. Evans-Lacko S, Knapp M, McCrone P, Thornicroft G, Mojtabai R. The mental health consequences of the recession: economic hardship and employment of people with mental health problems in 27 European countries. Plos One. 2013;8(7):e69792.
192. Fountoulakis KN, Kawohl W, Theodorakis PN, Kerkhof AJFM, Navickas A, Höschl C, et al. Relationship of suicide rates to economic variables in Europe: 2000-2011. The British Journal Of Psychiatry: The Journal Of Mental Science. 2014;205(6):486-96.
193. Laanani M, Ghosn W, Jougla E, Rey G. Impact of unemployment variations on suicide mortality in Western European countries (2000-2010). Journal Of Epidemiology And Community Health. 2015;69(2):103-9.
194. Reeves A, McKee M, Gunnell D, Chang S-S, Basu S, Barr B, et al. Economic shocks, resilience, and male suicides in the Great Recession: cross-national analysis of 20 EU countries. European journal of public health. 2015;25(3):404-9.
195. Corcoran P, Griffin E, Arensman E, Fitzgerald AP, Perry IJ. Impact of the economic recession and subsequent austerity on suicide and self-harm in Ireland: An interrupted time series analysis. International journal of epidemiology. 2015;44(3):969-77.
196. Córdoba-Doña JA, San Sebastián M, Escolar-Pujolar A, Martínez-Faure JE, Gustafsson PE. Economic crisis and suicidal behaviour: the role of unemployment, sex and age in Andalusia, southern Spain. International Journal For Equity In Health. 2014;13:55-.
197. Milner AJ, Niven H, LaMontagne AD. Occupational class differences in suicide: evidence of changes over time and during the global financial crisis in Australia. BMC Psychiatry. 2015;15:223.
198. Ruhm CJ. Health Effects of Economic Crises. 2015.
199. Garcy AM, Vagero D. The length of unemployment predicts mortality, differently in men and women, and by cause of death: a six year mortality follow-up of the Swedish 1992-1996 recession. Social science and medicine. 2012;74(12):1911-20.
200. Garcy AM, Vågerö D. Unemployment and suicide during and after a deep recession: a longitudinal study of 3.4 million Swedish men and women. American Journal Of Public Health. 2013;103(6):1031-8.
201. Browning M, Heinesen E. Effect of job loss due to plant closure on mortality and hospitalization. Journal of health economics. 2012;31(4):599-616.
202. Eliason M, Storrie D. Does job loss shorten life? The Journal of Human Resources. 2009;44(2):277-303.
203. Kim TJ, von dem Knesebeck O. Is an insecure job better for health than having no job at all? A systematic review of studies investigating the health-related risks of both job insecurity and unemployment. BMC Public Health. 2015;15:985.
204. Brenner MH, Andreeva E, Theorell T, Goldberg M, Westerlund H, Leineweber C, et al. Organizational downsizing and depressive symptoms in the European recession: the experience of workers in France, Hungary, Sweden and the United kingdom. Plos One. 2014;9(5):e97063.
205. Coope C, Donovan J, Wilson C, Barnes M, Metcalfe C, Hollingworth W, et al. Characteristics of people dying by suicide after job loss, financial difficulties and other economic stressors during a period of recession (2010–2011): A review of coroners' records. Journal of affective disorders. 2015;183:98-105.

206. Vasquez-Vera H, Rodriguez-Sanz M, Palencia L, Borrell C. Foreclosure and Health in Southern Europe: Results from the Platform for People Affected by Mortgages. J Urban Health. 2016;93(2):312-30.
207. Rojas Y, Stenberg SA. Evictions and suicide: a follow-up study of almost 22 000 Swedish households in the wake of the global financial crisis. J Epidemiol Community Health. 2016;70(4):409-13.
208. Office for National Statistics. Deaths registered weekly in England and Wales, provisional: week ending 12 February 2021. London: Office for National Statistics,; 2021.
209. Arnetz JE, Goetz CM, Sudan S, Arble E, Janisse J, Arnetz BB. Personal Protective Equipment and Mental Health Symptoms Among Nurses During the COVID-19 Pandemic. J Occup Environ Med. 2020;62(11):892-7.
210. Senczyszyn A, Lion KM, Szcześniak D, Trypka E, Mazurek J, Ciułkowicz M, et al. Mental Health Impact of SARS-COV-2 Pandemic on Long-Term Care Facility Personnel in Poland. J Am Med Dir Assoc. 2020;21(11):1576-7.
211. Hussein S, Saloniki E, Turnpenny A, Collins G, Vadean F, Bryson A, et al. COVID-19 and the Wellbeing of the Adult Social Care Workforce: Evidence from the UK. Canterbury: PSSRU, University of Kent; 2020.
212. Saloniki E-C, Turnpenny A, Collins G, Marchand C, Towers A-M, Hussein S. Abuse and Wellbeing of Long-Term Care Workers in the COVID-19 Era: Evidence from the UK. Sustainability. 2022;14(15):9620.
213. Low L-F, Hinsliff-Smith K, Sinha S, Stall N, Verbeek H, Siette J, et al. Safe visiting at care homes during COVID-19: A review of international guidelines and emerging practices during the COVID-19 pandemic. London: LTCcovid.org, International Long-Term Care Policy Network; 2021.
214. Van der Roest HG, Prins M, van der Velden C, Steinmetz S, Stolte E, van Tilburg TG, et al. The Impact of COVID-19 Measures on Well-Being of Older Long-Term Care Facility Residents in the Netherlands. J Am Med Dir Assoc. 2020;21(11):1569-70.
215. Brydon A, Bhar S, Doyle C, Batchelor F, Lovelock H, Almond H, et al. National Survey on the Impact of COVID-19 on the Mental Health of Australian Residential Aged Care Residents and Staff. Clin Gerontol. 2022;45(1):58-70.
216. Suárez-González A, Rajagopalan J, Livingston G, Alladi S. The effect of COVID-19 isolation measures on the cognition and mental health of people living with dementia: A rapid systematic review of one year of quantitative evidence. EClinicalMedicine. 2021;39:101047.
217. Verbeek H, Gerritsen DL, Backhaus R, de Boer BS, Koopmans R, Hamers JPH. Allowing Visitors Back in the Nursing Home During the COVID-19 Crisis: A Dutch National Study Into First Experiences and Impact on Well-Being. J Am Med Dir Assoc. 2020;21(7):900-4.
218. Prins M, Willemse B, van der Velden C, Pot AM, van der Roest H. Involvement, worries and loneliness of family caregivers of people with dementia during the COVID-19 visitor ban in long-term care facilities. Geriatr Nurs. 2021;42(6):1474-80.
219. Embregts P, van Oorsouw W, Nijs S. Impact of infection outbreak on long-term care staff: a rapid review on psychological well-being. Journal of Long-Term Care. 2020;2020:70-9.
220. Thorstad M, Sie I, Andersen BM. MRSA: A Challenge to Norwegian Nursing Home Personnel. Interdiscip Perspect Infect Dis. 2011;2011:197683.
221. Thompson EJ, Williams DM, Walker AJ, Mitchell RE, Niedzwiedz CL, Yang TC, et al. Long COVID burden and risk factors in 10 UK longitudinal studies and electronic health records. Nat Commun. 2022;13(1):3528.
222. Badenoch JB, Rengasamy ER, Watson C, Jansen K, Chakraborty S, Sundaram RD, et al. Persistent neuropsychiatric symptoms after COVID-19: a systematic review and meta-analysis. Brain Commun. 2022;4(1):fcab297.
223. Magnúsdóttir I, Lovik A, Unnarsdóttir AB, McCartney D, Ask H, Kõiv K, et al. Acute COVID-19 severity and mental health morbidity trajectories in patient populations of six nations: an observational study. Lancet Public Health. 2022;7(5):e406-e16.
224. Houben-Wilke S, Goërtz YM, Delbressine JM, Vaes AW, Meys R, Machado FV, et al. The Impact of Long COVID-19 on Mental Health: Observational 6-Month Follow-Up Study. JMIR Ment Health. 2022;9(2):e33704.

225. Feldman DE, Boudrias MH, Mazer B. Long COVID symptoms in a population-based sample of persons discharged home from hospital. Can J Public Health. 2022;113(6):930-9.
226. Stephenson T, Pinto Pereira SM, Shafran R, de Stavola BL, Rojas N, McOwat K, et al. Physical and mental health 3 months after SARS-CoV-2 infection (long COVID) among adolescents in England (CLoCk): a national matched cohort study. Lancet Child Adolesc Health. 2022;6(4):230-9.
227. Hawke LD, Nguyen ATP, Ski CF, Thompson DR, Ma C, Castle D. Interventions for mental health, cognition, and psychological wellbeing in long COVID: a systematic review of registered trials. Psychol Med. 2022:1-15.
228. Van Baelen L, Gremeaux L, Antoine J, Bruggeman H, Gisle L, Plettinckx E, et al. COVID-19 and people who use drugs: Impact of the pandemic on general anxiety and depressive disorders among adults in Belgium. J Affect Disord. 2021;295:946-53.