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Report

Children and young people's wellbeing and mental health during the Covid-19 pandemic

Summary of the evidence

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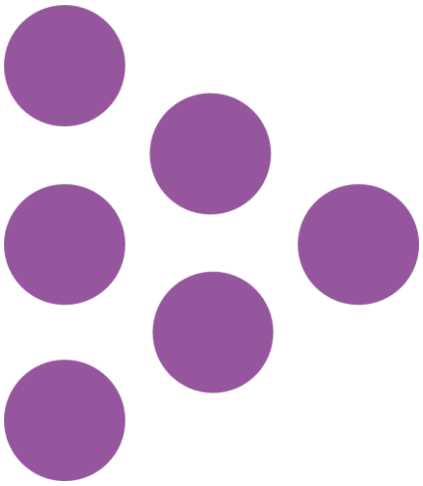

Children and young people's wellbeing and mental health during the Covid-19 pandemic

Lisa Kuhn, Ishbelle Norris, Georgia Sawyer, Gemma Schwendel and Liz Twist

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Executive summary

This report presents key findings from a review of the evidence about the impact of the Covid-19 pandemic and the country's response to it on children and young people's wellbeing and mental health.

This is a complex area: studies explore different aspects of mental health and wellbeing using different definitions and indicators, and apply different sampling strategies with different data collection time points. It is, therefore, difficult to draw any firm conclusions about the direct impact of the pandemic on wellbeing or mental health.

The terms wellbeing and mental (ill-)health are inherently different concepts, which interact and are linked to life outcomes in some way. We have included studies which use one or both terms but unless the same measures are used, the same term is not necessarily being defined in the same way.

To ensure the inclusion of the most robust evidence whilst also making the task manageable, we identified evidence which had already been subject to specific scrutiny, namely:

- 'official data', including that published by the Department for Education (e.g. Parent and Pupil Panel surveys); the Office for National Statistics; National Institute for Health Research; NHS Digital;
- studies funded by UKRI.

In addition, we included longitudinal studies, where there was adequate information provided about the sampling approach, the achieved sample and the analyses undertaken. Many sources met more than one of these criteria. We also conducted further secondary analysis of Understanding Society[1] data in order to explore the 10 year trend in mental health and shed light on how specific subgroups may have been affected by the pandemic.

To place the report in context, the mental health and wellbeing of young people had been declining prior to the pandemic and this has been an issue of long standing concern in the UK and also internationally. A small number of studies undertook an initial data collection before the first restrictions associated with the pandemic took effect in the UK (before March 2020) but some of the more robust studies were prospective and tracked children only after the start of the pandemic. Due to the limited amount of robust and timely pre-pandemic data, it is not possible to conclude definitively whether any further decline during the pandemic is a continuation of the pre-pandemic trend or is specifically a consequence of the pandemic.

[1] The UK Household Longitudinal Study (UKHLS), known as 'Understanding Society' and referred to as USoc in this report, is an annual household panel survey, collecting data from all household members across a range of topics.

It is perhaps not surprising, therefore, that studies draw different – and sometimes conflicting – conclusions.

There are, however, some tentative conclusions that can be drawn from this review of selected studies:

- Secondary-aged girls and primary-aged boys appear to have been most vulnerable to declines in mental health during the pandemic.This is in the context of secondary-aged girls having poorer pre-pandemic mental health than boys.
- Children and young people with SEND had lower wellbeing and mental health before the pandemic and this persisted through the pandemic.
- The evidence suggests that disadvantaged children and young people were not more negatively impacted than their non-disadvantaged peers but the pre-pandemic evidence is clear that disadvantage is associated with lower overall wellbeing and mental health.
- There is some evidence to suggest that the restrictions in early 2021 may have had a more negative impact than the first set of restrictions (March-June 2020).
- There is some evidence that for some young people, particularly those with pre-existing poorer mental health, the restrictions at the start of the pandemic may have been associated with some improvement in their mental health.
- Primary-aged children have greater fluctuations in their mental health and wellbeing than secondary-aged young people.
- By the summer of 2021, there was some suggestion of an improvement in children's and young people's mental health and wellbeing relative to earlier in the year but it may take a period of time before the effects of Covid on children's and young people's mental health and wellbeing become fully evident.

Implications

The crisis of the pandemic has drawn attention to existing concerns about children's and young people's mental health and wellbeing, which has been declining for a number of years. Some groups of children and young people have been particularly affected during the pandemic.

The support available to schools and families from external agencies is often limited and inadequate and needs to be reviewed in the light of these trends.

There is evidence that school connectedness – how young people feel they are accepted, supported, respected and included in the school community – is a protective factor and can prevent or reduce later mental health problems.

There is some evidence that students felt a greater connection with school during the pandemic. The association between school connectedness and wellbeing suggests that schools may want to explore what practices were introduced during this unprecedented time with a view to seeing if any aspects transfer to more conventional times. The promotion of connectedness and feelings of

belonging to a community could serve not only to improve pupils' day to day experience of school but also to contribute to the prevention of future mental health problems and improve young people's satisfaction with life, especially during these times of great uncertainty.

1 Introduction

There have been many concerns and questions raised about the potential effects of the Covid-19 pandemic, both temporary and long term. Whilst there has been an inevitable focus on the impact on physical health and children's academic learning, there has also been concern over how the pandemic and the country's response to it have affected wellbeing and mental health, particularly of children and young people. This was already an issue prior to the pandemic with some surveys showing a steady decline in wellbeing (The Children's Society, 2020, for instance) and there were concerns about a lack of access to adequate mental health support.

This report draws on the published results of high quality surveys to investigate whether the Covid-19 pandemic may have further impacted children and young people's mental health and wellbeing in the UK. Additionally, we augment this evidence with additional analysis of data from the Understanding Society survey. This report complements an NFER publication in March 2022 which focused on the evidence about the impact of Covid-19 on pupil attainment in England (Twist *et al.*, 2022).

We recognise that the pandemic and associated restrictions are just part of the influences on children's and young people's wellbeing and that a wide range of contextual factors play their part. This is not intended as a comprehensive review of these potential influences, and there is limited evidence of the role of contextual factors during the pandemic, but these reported surveys allow us to identify trends in what is a complex area and identify subgroups who may benefit from particular support.

To ensure the inclusion of the most robust evidence in the review, whilst also making the task manageable, we applied two sets of criteria. Firstly, we identified as admissible data sources those that transparently apply quality and scrutiny criteria and processes to survey design, analysis and data reporting. Secondly, once data was sourced, the survey data was further filtered by survey design, sample, the inclusion of a baseline and longitudinal data and analysis.

Following these criteria, we sourced data from:

- 'official data', including that published by the Department for Education (e.g. Parent and Pupil Panel surveys); the Office for National Statistics; National Institute for Health Research; NHS Digital;
- studies funded by UKRI.

A table summarising the surveys included in our review is included in Appendix B.

In addition, we included longitudinal studies, where there was adequate information provided about the sampling approach and the achieved sample and analyses undertaken. Many sources met more than one of these criteria.

We include evidence drawn from England or the UK as a whole but we acknowledge that there is a breadth of literature that looks at this issue from an international perspective. This was beyond the scope of this report.

In addition to considering a range of published survey data, we undertook some further analysis of the Understanding Society[2] data in order to explore the 10 year trend in mental health data and shed light on how specific subgroups may have been affected by the pandemic. This is discussed further in sections 3, 4 and Appendix A.

[2] The UK Household Longitudinal Study (UKHLS), known as 'Understanding Society' and referred to as USoc in this report, is an annual household panel survey, collecting data from all household members across a range of topics.

2 Background

Over the recent years, and before the global pandemic, data has revealed a decrease in children's and young people's wellbeing and an increase in mental health problems (e.g. The Children's Society, 2020; OECD, 2019, Sadler *et al*., 2018). Schools invest extensive resources to support children and young people with additional mental health needs, recognising that poor wellbeing and mental health affect the ability to learn and thrive in the school environment. It is accepted that early intervention can help to reduce the risk of significant difficulties in later life.

Whilst terms such as happiness, wellbeing and mental (ill-)health are often used within the same context, they are inherently different concepts, which interact and are linked to life outcomes in some way. Throughout this report, it is important to note that there are a range of approaches and definitions used in key papers when measuring wellbeing and mental health. We have identified these different approaches, and the measures used, where it clarifies or limits the applicability of the findings.

2.1 Trends in overall wellbeing prior to Covid-19

In the literature, one can find a wide variety of definitions of wellbeing. The What Works Centre for Wellbeing defines wellbeing as being 'about "how we are doing" as individuals, communities and as a nation and how sustainable this is for the future' (What Works Centre for Wellbeing, 2022). The studies included in this report consider 'subjective wellbeing' where respondents decide for themselves what they consider important in determining their own feelings of wellbeing; this is in contrast to composite measures of wellbeing such as that monitored by UNICEF, which include objective elements such as health at birth, housing conditions and material wellbeing.

Some studies reviewed in the present report discuss a decline in wellbeing prior to Covid-19, but it must be noted that 'wellbeing' might mean different things, depending on the study's methodology and sample. PISA, the OECD's Programme for International Student Assessment measuring 15-year-olds' ability in reading, mathematics, science knowledge and life skills, assesses students' wellbeing based on a single item measuring "life satisfaction". This study found that in the UK, young people's satisfaction with life was the third-lowest across 71 participating countries. Only just over half (53%) of 15 year olds participating in PISA in the UK reported that they were satisfied with life, which was significantly lower than the OECD average (67%) (OECD, 2019) and 5 percentage points lower than in 2015.

In the series of Good Childhood Reports (The Children's Society), participants' subjective wellbeing is assessed by asking how happy young people are with a range of factors such as school, family or their appearance. Together with the What Works Centre for Wellbeing, the Children's Society developed a conceptual framework for childrens and young people's wellbeing. In this work, they split subjective wellbeing into three domains: Affective wellbeing (happiness, positive and negative emotions), Cognitive wellbeing (reflection on how life is going) and

Eudaimonic wellbeing (meaning in life, meaningful relationships) (Soffia and Turner, 2021). The most recent Good Childhood Report (The Children's Society, 2022) showed that for 2019/2020, mean happiness scores for young people in the UK for life as a whole, friends, appearance and school were significantly lower than in 2009/2010 (on a scale where 0 is 'not at all happy' and 10 is 'completely happy'). There is some discontinuity in the time series but the annual surveys between 2016 and 2019 show no clear pattern in the data.

2.2 Trends in mental (ill-)health prior to Covid-19

Variables of wellbeing, such as happiness, are likely to be future predictors of mental (ill)-health. As The Children's Society (2021) states, "children who are not happy with their lives at 14 are more likely than others to have symptoms of mental health issues by the time they are 17". The outcome measure of mental health, or in fact ill-health, considers "whether a person has a higher likelihood of a clinically diagnosable illness" (ONS, 2015).

In comparison to wellbeing, mental health is often measured by looking at clinical measures of mental disorders such as anxiety and depression (e.g. University of Essex, Institute for Social and Economic Research, 2021; University of Essex, Institute for Social and Economic Research, 2022). Again, the use of heterogeneous measures is common: for individuals aged 16 and above, the General Health Questionnaire (Jackson, 2007) is often used to assess reported symptoms of mental health issues (e.g. Measures of National Wellbeing, ONS 2015). For younger participants aged 4 and above, mental (ill-)health is commonly assessed by using part or all of the self-report or parent-report Strengths and Difficulties Questionnaire (SDQ), which provides data on a range of aspects linked to mental health, such as emotional symptoms, conduct problems, hyperactivity or inattention, peer relationship problems, and pro-social behaviour (e.g. University of Essex, Institute for Social and Economic Research, 2022).

Large studies have reported that in England, the prevalence of probable disorders in 5 to 15 year olds, as measured by the SDQ, has been rising since 2017 (Newlove-Delgado *et al*., 2021; Ford and Cross, 2021; Vizard *et al*., 2020).

2.3 Underlying factors that may impact mental health and wellbeing

There are numerous factors that may impact on the mental health and wellbeing of young people and these persisted during the pandemic. NFER's own research on data collected prior to the pandemic suggested that a lack of sense of belonging, or of meaningful relationships at school, could be one cause of low satisfaction with life (Kuhn *et al*., 2021). There are some groups of young people which may be disproportionately affected by low wellbeing and might therefore be more vulnerable to future mental health disorders. Overall, secondary-aged girls in particular seem to be more unhappy, and it is suggested that this is often linked to the use of social media and pressures around their appearance (The Good Childhood Report, 2021). In addition, socioeconomic inequalities are linked to increased mental health problems and children that come

from disadvantaged households often report poorer mental health than their non-disadvantaged peers (Roberts, Donkin and Marmot, 2016). Meanwhile there is a “stark gap between available support and need for the one in eight children with a diagnosable condition” (Crenna-Jenkins and Hutchinson, 2020) and considerable regional disparities (Disability Rights UK, 2022; Ford *et al*., 2021).

2.4 This report

This report reviews published evidence and provides secondary analyses of publicly available data to investigate the impact that the global Covid-19 pandemic may have had on the wellbeing and mental health of young people in the UK. Unsurprisingly, the global pandemic has not only left its mark on school-related performance (Twist *et al*., 2022); the so-called ‘learning loss’ has been accompanied by some students’ worsening wellbeing and mental health. In addition, the most recent cost-of-living crisis is likely to exacerbate the present situation as more families struggle to provide environments where young people can feel safe and thrive (Child Poverty Action Group, 2022).

Throughout this report, the authors want to highlight that the picture around wellbeing and mental health is extremely complex and different individuals will have been affected in different ways. For example, while about a quarter of 10–15 year olds did not feel optimistic about the future following the pandemic, the majority did feel optimistic (The Good Childhood Report, 2021). This report will discuss in detail the impact Covid-19 may have had on the wellbeing and mental health of individual groups, broken down by, for example, age, gender and disadvantage.

However, looking at the trends of declining wellbeing and mental health prior to Covid-19, we recognise that there are obvious difficulties in attributing any effects to Covid-19 specifically. Studies require robust analyses and methodology to be able to draw reliable conclusions about the predictive nature of drivers of mental health and the role the global pandemic may have played in this.

3 Overview

- Over the past decade, up to the pandemic, there was a decline in children and young people's subjective wellbeing.
- The onset of the pandemic, in 2020, appears to be associated with further declines in wellbeing, with signs of a return to pre-pandemic levels in late 2021 and 2022.
- Mental health disorders among children and young people have been increasing in recent years prior to the pandemic. There is substantial fluctuation in the data during the pandemic, especially for younger children, and signs of a greater negative impact on specific subgroups. To date, any post-pandemic recovery is unclear.

In this section we provide a brief overview of key studies and data collected about children's and young people's wellbeing and mental health at different time points before and during the pandemic (Table 1). Of the studies highlighted, five have a pre-pandemic baseline: two large studies, Understanding Society (USoc) and The Children's Society's Good Childhood annual surveys, and three smaller studies (Bignardi *et al*., 2021; Widnall *et al*., 2020; Wright *et al*., 2021). Two of the large 'monitoring' studies with regular data collection sweeps were established during the pandemic (Co-SPACE; DfE Parent and Pupil Panel surveys). Key features of the studies are summarised in Appendix B.

We report the findings for the studies' samples as a whole; in section 4 we report evidence for different subgroups. In Table 1, studies are shown mapped against the chronology of the pandemic.

We have undertaken additional analysis of data from the UK Household Longitudinal Study ('Understanding Society') database in order to specifically look at the data collected prior to and during the pandemic concerning the mental health and wellbeing of children and young people. Understanding Society is an annual household panel survey, collecting data from all household members across a range of topics. Data is collected in waves and we have isolated data concerning three different age groups:

- children aged 5 and 8
- youths aged 10 to 15
- young adults aged 16 to 18.

These analyses are included in the relevant sections of this report. Further information on the methodology is included in Appendix A.

Table 1: Chronology of studies monitoring the wellbeing and mental health of children and young people between 2020 and 2022

Of the studies listed in the table, there are two which provide longitudinal data (USoc and NHS Digital); surveys by The Children's Society are annual and began pre-pandemic. All three collected data prior to 2020.

2020	Significant events	Sources of evidence		
March–June	Restrictions in UK begin Most children required to stay at home (14 weeks)	**March**: Parents/carers report on children/YP mental health (SDQ, 1066, 4 to 16 year olds).[3] **March:** 2nd data collection, self- and maternal reports of emotional and behavioural problems (226, 11-12 year olds, NW England).[4] **April–May**: 2nd data collection, adolescents self-reported anxiety, depression, and wellbeing (1000+, 13–14 year olds, in SW England).[5]	**April–June:** 2nd data collection parents reported children's mental health (SDQ, RCADS, 138, 8 to 12 year olds).[6] **April–June:** Annual data collection, Good Childhood Report, ~2000, 10 to 17 year olds.[7]	**April–Dec**: parents/carers report, and adolescents self-report, in monthly waves on mental health of children/YP (SDQ, 4–16-year-olds). Sample sizes range between 4458 parents / 939 adolescents (April) and 1562 parents / 216 adolescents (Nov.)[8]

[3] Burgess *et al*. (2022)
[4] Wright *et al*. (2021)
[5] Widnall *et al.* (2020)
[6] Bignardi *et al.* (2021)
[7] The Children's Society (2020)
[8] Burgess *et al*. (2022)

<table>
<tr><th>2020</th><th>Significant events</th><th colspan="2">Sources of evidence</th><th></th></tr>
<tr><td>June</td><td>GCSE and A-level exams replaced by centre-assessed grades

Schools open for more pupils</td><td colspan="2" rowspan="2">June: 3rd data collection, self- and maternal reports of emotional and behavioural problems (226, 11-12 year olds, NW England)[9]

June–July: Children/YP self-reported wellbeing (16,940, 8 to 18 year olds).[10]

July: Parents report on children/YP mental health using SDQ (3570, 5 to 16 year olds).[11]

July: Mental health of children aged 5 and 8 reported by parents (422, SDQ). Young people aged 11 to 15 self-reported mental health symptoms (1407, SDQ).[12]</td><td rowspan="5">April–Dec: parents/carers reported, and adolescents self-reported, in monthly waves on mental health of children/YP (SDQ, 4–16-year-olds). Sample sizes range between 4458 parents / 939 adolescents (April) and 1562 parents / 216 adolescents (Nov.)[13]</td></tr>
<tr><td>July</td><td>Restrictions ease</td></tr>
<tr><td>August</td><td>School summer holidays</td><td rowspan="3">Sept: Mental health of children aged 5 and 8 reported by parents (361, SDQ).[14]

Nov: Young people aged 11 to 15 self-reported mental health symptoms (1423, SDQ)[15]</td><td rowspan="3">Aug–Dec: Parents reported on children/YP's (reception to year 10 in 2019/20) happiness and anxiety, secondary pupils (years 6 to 13 in 2019/20) self-reported on wellbeing (recruitment wave, waves 1, 2, 4, 5 and 6).[16]</td></tr>
<tr><td>Sept.</td><td>Term starts: all schools open</td></tr>
<tr><td>Nov.</td><td>Further restrictions announced</td></tr>
<tr><td>Dec.</td><td>Christmas restrictions</td><td></td></tr>
</table>

[9] Wright *et al*. (2021)
[10] Soneson *et al*. (2022)
[11] Vizard *et al*. (2020)
[12] USoc University of Essex, Institute for Social and Economic Research (2022)
[13] Burgess *et al*. (2022)
[14] USoc University of Essex, Institute for Social and Economic Research (2022)
[15] USoc University of Essex, Institute for Social and Economic Research (2022)
[16] Department for Education (2021f) *COVID-19 Parent and Pupil Panel Technical Report*

<table>
<tr><th>2021</th><th>Significant events</th><th colspan="2">Sources of evidence</th><th></th></tr>
<tr><td>Jan.–Feb.</td><td>Restrictions in UK increased

Schools close for majority of children (8 weeks)</td><td colspan="2">Feb. Parents reported on children/YP's (year 1 to year 11) happiness and anxiety, secondary pupils (years 7 to 13) self-reported on wellbeing (wave 7).[17]</td><td rowspan="3">Jan–July: Parents/carers reported, and adolescents self-reported in monthly waves, on mental health of children/YP (SDQ, 4–16-year-olds).[18]</td></tr>
<tr><td>March–May</td><td>Schools reopen for all children</td><td>Feb.-Mar.: Parents reported on children/YP's mental health using SDQ (3667, 6 to 16 year olds).[19]

March: Mental health of children aged 5 and 8 reported by parents (395, SDQ). Young people aged 11-15 self-reported mental health symptoms (1114, SDQ).[20]</td><td>March and May: Parents reported on children/YP's (years 1 to 13) happiness and anxiety, secondary pupils (years 7 to 13) self-reported on wellbeing (wave 8 and 9).[21]

April–June: Annual data collection, Good Childhood Report, ~2000, 10 to 17 year olds.[22]</td></tr>
<tr><td>June</td><td>GCSE and A-level exams replaced by teacher-assessed grades</td><td colspan="2"></td><td rowspan="2"></td></tr>
<tr><td>July</td><td></td><td colspan="2">July: Parents reported on children/YP's (years 1 to 13) happiness and anxiety, secondary pupils (years 7 to 13) self-reported on wellbeing (wave 10).[23]</td></tr>
<tr><td>August</td><td>School summer holidays</td><td colspan="2"></td><td></td></tr>
</table>

[17] Department for Education (2021f) *COVID-19 Parent and Pupil Panel Technical Report*
[18] Burgess *et al*. (2022)
[19] Newlove-Delgado *et al*. (2021)
[20] USoc University of Essex, Institute for Social and Economic Research (2022)
[21] Department for Education (2021f) *COVID-19 Parent and Pupil Panel Technical Report*
[22] The Children's Society (2021)
[23] Department for Education (2021f) *COVID-19 Parent and Pupil Panel Technical Report*

2021/22	Significant events	Sources of evidence		
Sept.–Dec**.**	Term starts: all schools open Vaccines offered to YP aged 12+	**Nov-Jan:** Parents reported on children/YP's (years 1 to 11) happiness and anxiety, secondary pupils (years 7 to 11) self-reported on wellbeing (recruitment wave).[24]		
Jan. **22**				
Feb.	Vaccines offered to children aged 5+	**Feb**: Parents reported on children/YP's (years 1 to 11) happiness and anxiety, secondary pupils (years 7 to 13) self-reported on wellbeing (second research wave).[25]		
March		**March**: Parents and carers reported on CYP's mental health (SDQ, 4 to 16 year olds).[26]	**March**: Parents reported on children/YP's (years 1 to 11) happiness and anxiety, secondary pupils (years 7 to 13) self-reported on wellbeing (second research wave). [27]	
May		**May–June:** Annual data collection, Good Childhood Report, ~2000, 10 to 17 year olds[28]		
June	GCSE and A-level exams held			

[24] Department for Education (2022b) *Parent, Pupil and Learner Panel recruitment wave 1*
[25] Hingley *et al*. (2022a) *Parent, Pupil and Learner Panel - February wave*
[26] Burgess *et al*. (2022)
[27] Hingley *et al*. (2022b) *Parent, Pupil and Learner Panel - March wave*
[28] The Children's Society (2022)

3.1 Trends in wellbeing data

The Children's Society annual survey illustrates a trend in wellbeing prior to and during the pandemic. The Children's Society has administered a subjective wellbeing 'life as a whole' measure each spring/summer since 2009/10 with young people aged 10 to 15 in the UK. Due to a change to a different provider in 2020, caution is advised in comparing data before and after that time but we can tentatively draw two conclusions from the data:

- On the overall life satisfaction measure, there was a decline each year from 2010/11 until 2020 when 18% of respondents were categorised as having 'low wellbeing' (below the midpoint of the scale).
- Compared with 2020, data collected in 2021 showed an improvement (12% with 'low wellbeing'), and this was maintained in 2022 (11% with low wellbeing) (The Children's Society, 2021; 2022). The 2021 and 2022 data is more in line with pre-pandemic figures: 11% were recorded as having low wellbeing in 2018 and 2019 (The Children's Society, 2018; 2019).

Vizard *et al*. (2020) reported that 43% of 11 to 16 year olds felt that the first lockdown (March–June 2020) had made their life worse, 30% stated there had been no change to their life and just over a quarter said life had been made better. When the question was asked again in 2021, 56% reported that restrictions had made their life worse, 23% reported no change to their life, and 21% said their life was better or much better in lockdown (Newlove-Delgado *et al.,* 2021). This suggests that while a high proportion of young people of this age group struggled with the lockdown periods, a substantial number felt that life had improved or remained unchanged. It also suggests that the later lockdown (at the start of 2021) was perceived as more detrimental to wellbeing than the first.

It should be noted that Understanding Society uses the Strengths and Difficulties Questionnaire (SDQ) and the General Health Questionnaire (GHQ) to report on wellbeing. Because other studies (and other research) describe these questionnaires as assessing the concept of mental health, this data is included in section 3.2.

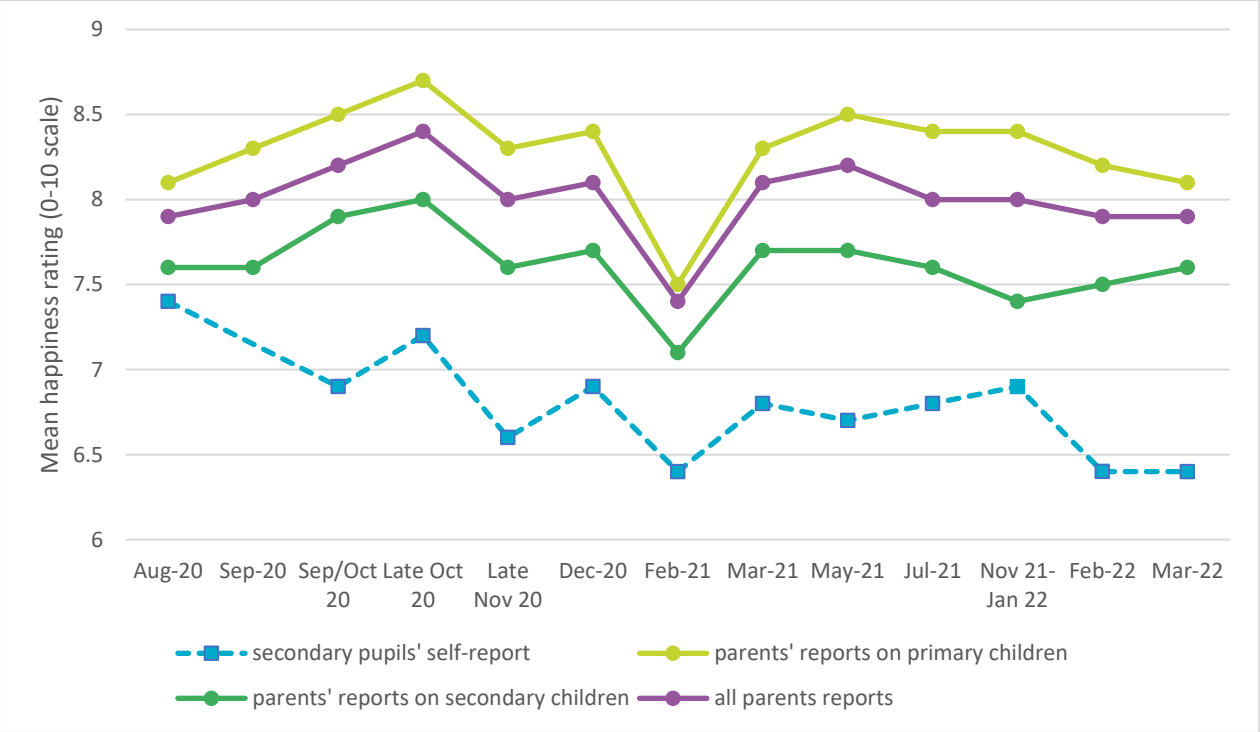
Other studies, such as Co-SPACE and the DfE Parent and Pupil Panel Surveys are prospective studies which initiated data collections at the start of the pandemic, often with regular waves, and so illustrate the fluctuations in wellbeing or mental health during Covid-19.

The Parent and Pupil Panel Surveys were commissioned by the DfE and included ONS-validated questions about personal wellbeing, such as how happy parents and pupils felt yesterday, their life satisfaction and the extent to which they felt the things they do in life were worthwhile. Mean happiness ratings are shown in Figure 1. The dip in February 2021 coincides with a high level of restrictions including partial school closures. It is clear that parents of secondary-aged children reported higher happiness levels for their children than the young people did themselves. Parents report consistently higher happiness scores for primary children than for secondary children. As there are recognised seasonal fluctuations in subjective wellbeing ratings, it is useful to compare ratings from the same point each year.

In October 2020 55% of secondary-aged pupils' reported that returning to school had had a positive impact on their 'mood and mental health'; 20% said it had had a negative impact (DfE, 2021a). A large majority of parents (85%) whose child had attended school in the autumn term, both primary- and secondary-aged, reported a positive impact on their child's mood and mental health.

Figure 1: Mean happiness ratings Aug. 2020 – March 2022

Note: a higher score indicates greater happiness



Source: DfE Parent and Pupil Panel Surveys (DfE, 2021e; 2022b; Hingley *et al*., 2022b)

3.2 Trends in mental health data

Rates of probable mental disorder in children and young people in England, as measured in 2020 and 2021, were significantly higher than in 2017 but remained similar between 2020 and 2021 (Vizard *et al*., 2020; Newlove-Delgado *et al*., 2021). Vizard *et al.* (2020) for NHS Digital reported that one in six (16%) children aged 5–16 years were identified as having a probable mental health disorder using the SDQ. This is an increase from one in nine (11%) children in 2017. The trend for 5 to 15 year olds includes prevalence of around 1 in 10 in 1999 and 2004 in two earlier NHS surveys (Sadler *et al*., 2018). Between 2004 and 2017 the increase was largely due to an increase in emotional disorders.

Against this backdrop of increasing concern about mental health since 2017, as discussed above, the increase recorded in 2020 cannot necessarily be attributed to the pandemic. There was also a change in survey mode, necessitated by the pandemic, from face to face to online data collection.

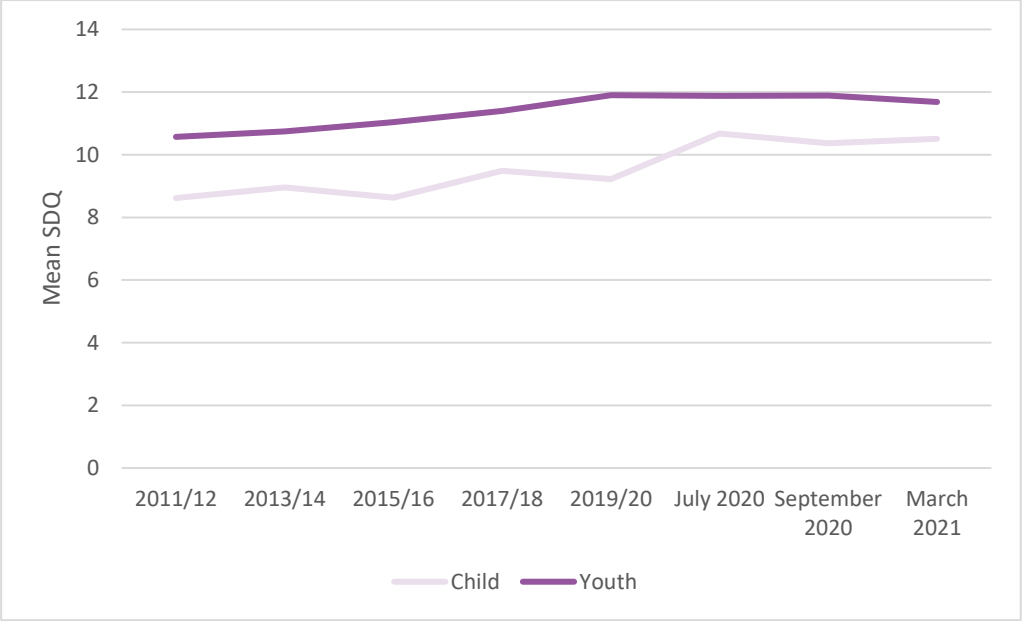
The Royal College of Psychiatrists reported an increase of 28% in the number of children and young people being referred to mental health services in April–December 2021 as compared to 2019. They suggested that "children and young people are bearing the brunt of the mental health crisis caused by the pandemic".

Understanding Society uses the Strengths and Difficulties Questionnaire (SDQ) and the General Health Questionnaire (GHQ) to report on mental wellbeing.[29] Mental health in children (ages 5 and 8) was reported by parents while mental health in youths (ages 10-15) was self-reported (Figure 2). The mental health of 10-15 year-olds has been slowly declining since 2011, however, moving into the pandemic, the data shows a levelling off of the reported "difficulties score", and in fact there is a very slight improvement in mental health for this age group by March 2021. Children (aged 5 and 8), while displaying more fluctuation in difficulties scores between survey waves, have also seen a decline in their mental health over the last decade, with the biggest increase in SDQ score – representing a decline in mental health/wellbeing – presenting itself between 2019/20 wave (Jan. 2019-Feb. 2020) and July 2020. Difficulties scores remained at this higher level throughout 2020 and into the beginning of 2021.

[29] In other studies, including in this report, these two instruments are seen as measures of mental health and data is therefore included in the mental health sections.

Figure 2: Mean SDQ scores 2011/12 to 2021 in children (parent report) and youth (self-report)

Note: a higher score indicates lower mental health



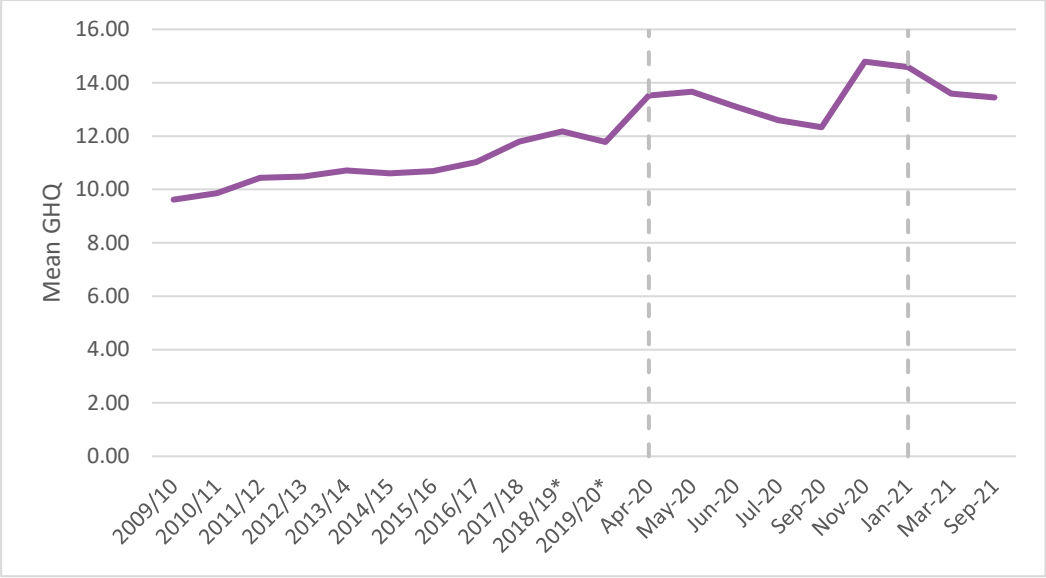
Source: USoc Main Survey & COVID-19 Survey

* Note that data collected after February 2020 has been excluded from the 2018/19 and 2019/20 waves

Analysis of the GHQ score for mental health also collected by Understanding Society shows that overall, the mental health of 16-19 year olds showed a steady decline over the decade leading up to the Covid-19 pandemic (Figure 3). There was fluctuation during the pandemic, with some improvement over the summer months of 2020. The mental health of this age group declined in the autumn of 2020 with some evidence of further improvement in 2021.

Figure 3: Mean GHQ scores 2009/10 to 2021 (16 to 19 year olds, self-report)

Note: a higher score indicates lower mental health



Source: USoc Main Survey & COVID-19 Survey

* Note that data collected after February 2020 has been excluded from the 2018/19 and 2019/20 waves

One unique data set is that generated by the Co-SPACE study (Burgess *et al*., 2022), a prospective study which conducted monthly surveys tracking the mental health of children and young people during the pandemic, using the SDQ (adolescent self-report and parent / carer report) and the Kessler 6 scale of psychological distress (adolescent self-report). Whilst not a representative sample, the repeated sweeps provide an opportunity to look at changes from March 2020 to March 2022. The greatest levels of behavioural, emotional and attentional difficulties were reported in June 2020 and in February 2021, coinciding with some of the highest levels of Covid-19 restrictions and school disruption (Shum *et al*., 2021). While self-reports of psychological distress were relatively stable throughout the pandemic, the average scores were highest (indicating more difficulties) in April 2020 and January / February 2021 when peak restriction measures were in place (Shum *et al*., 2021).

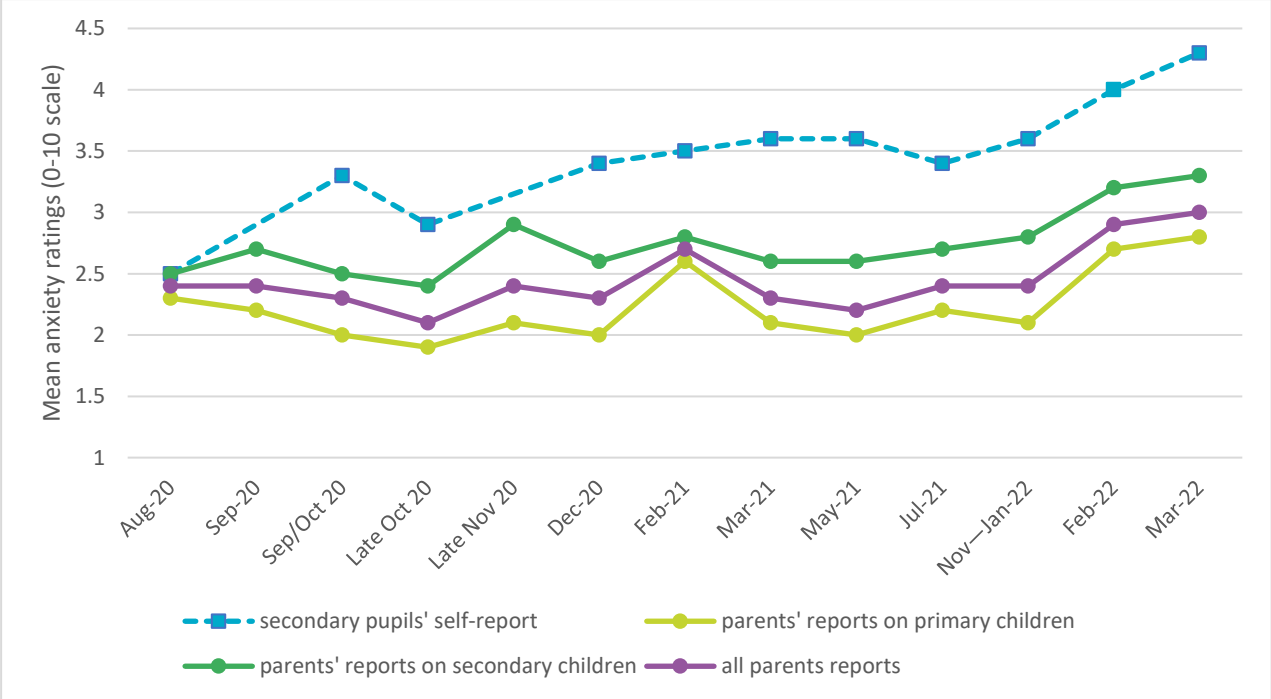
Other than the peaks in poor mental health reported during periods of tight restrictions, the study found that across both primary and secondary-aged pupils, behavioural and attentional difficulties remained stable and emotional difficulties, as measured by the SDQ, increased. The researchers hypothesised that the latter may be due to the increasing age of the sample.

The DfE's Parent and Pupil Panel Surveys included items designed to monitor anxiousness levels (Figure 4). Levels of perceived anxiety (parent reports) fell between August and October 2020 (DfE, 2021a) but had increased in the February 2021 wave; levels fell in March and were

consistent until July 2021 (DfE, 2021d). In March 2022, parent reported levels of anxiety in their child were higher than in March 2021 (Hingley *et al*., 2022b). Secondary pupils' self-reports indicate consistently higher levels of anxiety than the parent reports and look to be increasing in early 2022.

Figure 4: Mean anxiety ratings Aug. 2020 – March 2022

Note: a higher score indicates greater anxiety



Source: DfE Parent and Pupil Panel Surveys (DfE, 2021e; 2022b; Hingley *et al*., 2022b)

Two small, regional studies also included a pre-pandemic baseline; both were somewhat opportunistic and they are included here because of the sparsity of studies with proximal pre-pandemic baselines. Bignardi *et al*. is part of the Resilience and Education (RED) study and Wright *et al*. is a population-based birth cohort study (Wirral Child Health and Development Study). Bignardi *et al*. (2021), with a sample of 168, 7 to 11 year olds in the east of England, reported an increase in depression ratings in primary-aged children in data collected in April-June 2020 relative to 18 months earlier, but did not identify any significant change in anxiety or emotional problems. Wright *et al*. (2021) involved 202, 11-12 year-olds in the north of England and compared pre-pandemic (Dec. 2019-March 2020) data with that collected in August 2020. They also found an increase in symptoms of depression but no change in levels of anxiety.

3.3 Summary

Overall, when taking a view of the evidence as a whole, it appears that there was a decline in children and young people's subjective wellbeing during the pandemic, particularly during its first year. This is in the context of a steady decline over the past decade.

During the pandemic there is evidence of fluctuation in the levels of mental health and possibly some increase in emotional disorders. The increasing incidence of mental health problems was apparent before the pandemic.

Some researchers have reported no changes in behavioural and attentional difficulties, as measured by parts of the SDQ, between July 2021 and March 2022 (Burgess *et al*., 2022). However, when looking at the data more closely, it becomes apparent that the patterns look different for different groups of individuals, such as for primary- and secondary-aged children (e.g. DfE, 2021e). Throughout our research, we have noted considerable variation in the effects that the pandemic reportedly had on children's mental health and wellbeing. The next part of this report examines findings for specific sub-groups to help us better understand the possible consequences of the Covid-19 pandemic on young people's lives that may otherwise be missed when looking at the headline findings only.

4 Variation in wellbeing and mental health during the Covid-19 pandemic

- The mental health of secondary-aged girls and primary-aged boys appears to have been, on average, more negatively impacted by pandemic.
- Disadvantaged children and young people, who reported lower wellbeing and mental health before the pandemic, do not appear to have been impacted more negatively than their non-disadvantaged peers during the pandemic.
- Children with SEND had consistently lower wellbeing and mental health than other subgroups, before and during the pandemic.
- There is no clear pattern in the evidence about the impact of the pandemic on children and young people with existing mental health difficulties. There is some evidence that for some young people, the restrictions at the start of the pandemic may have been associated with some improvement in their mental health.

As suggested in the previous sections, the data concerning children and young people's mental health and wellbeing during the pandemic presents a complex picture, with different patterns likely to emerge for different individuals and over time. In this section we consider what the data tells us about these different subgroups, split by gender[30], age, disadvantage, special educational need and/or disability and pre-pandemic mental health status. In addition, the authors have conducted a secondary analysis of the Understanding Society: UK Household Longitudinal Study by examining how the SDQ data has changed over the previous 10 years, including the pandemic years, splitting this by gender and age. This analysis is included in the following sections as appropriate; further information is in Appendix A.

4.1 Gender

Wellbeing

In respect of wellbeing, there are some established differences in the ratings for males and females which persisted during the pandemic. In PISA 2018 (OECD, 2019) for example, in the UK and across most participating countries, 15 year old boys were more likely than girls of that age to be 'satisfied' with their lives. The Good Childhood Report (The Children's Society, 2021) summarises trend data from the Millennium Cohort Study and their own survey and suggests it indicates that "there are significant differences in well-being between boys and girls, with girls more likely to report lower well-being across a range of factors (e.g. overall life satisfaction, appearance). Boys score lower than girls on happiness with school" (p10).

[30] Note: In this report, we use the terms gender and sex interchangeably, as different terminology is used in the reviewed studies.

In the DfE's COVID-19 Parent and Pupil Panel reports, from August 2020 to July 2021, female secondary-aged pupils consistently reported lower overall scores around happiness, life satisfaction and worthwhileness than their male counterparts, echoing pre-pandemic data (DfE, 2021e). Similarly in the March 2022 wave (Hingley *et al*., 2022b), girls in Years 6 – 10 (aged 10-15) reported a lower mean happiness score compared to boys, and parents reported a lower mean happiness score for girls in reception to Year 10.

Two surveys looked at the notion of school connectedness, recognised as an important component of pupils' wellbeing in school. Differences were observed between the genders. The DfE's COVID-19 Parent and Pupil Panel (DfE, 2021d) explored one aspect of this concept – the support available in school for pupils. This data was collected, by means of self-report for secondary-aged pupils and reported by parents for both primary and secondary-aged pupils, in May 2021. It was found that male pupils, on average, expressed a higher level of school connectedness than female pupils.

Widnall *et al*. (2020) looked at connectedness in relation to family, peers and school just before the pandemic and during the first period of national lockdown. School connectedness (pupil relationships with teachers and sense of school community) was lower for girls before and during the pandemic, whereas there were no gender differences in family or peer connectedness. The team found no change in feelings of family or peer connectedness but an overall increase for both genders in school connectedness in during the first phase of partial school closures, a finding which may appear surprising.

Mental health

The picture with regards to mental health is more nuanced. Prevalence rates are affected by changing diagnostic definitions and criteria and trends need to be interpreted with caution. Sadler *et al*. (2018) for NHS Digital reported "a slight upward trend over time in the prevalence of any [mental health] disorder among 5 to 15 year olds" between 1999 and 2017. This was not significant in 5 to 10 year olds but was in 11 to 16 year olds. Rates of emotional disorders increased for boys and girls between 1999 and 2017 whereas behavioural and hyperactivity disorders remained stable (Sadler *et al*., 2018).

Prior to the pandemic, the ONS (2020) data for 16 to 24 year olds indicated that females were significantly more likely to report symptoms of anxiety and depression than males.

With regard to data collected during the pandemic, there was no significant difference in rates of probable and possible mental disorder in children and young people between 2020 and 2021, overall or by gender (Newlove-Delgado *et al*., 2021). Compared to 2017, in both 2020 and in 2021 there was a significant increase in probable mental disorders in 5-16 year olds (2020) and 6-16 year olds (2021) for both boys and girls (Vizard *et al*., 2020; Newlove-Delgado *et al*., 2021). In 2021, for young people aged 17 to 19, the increase was significant for young women only.

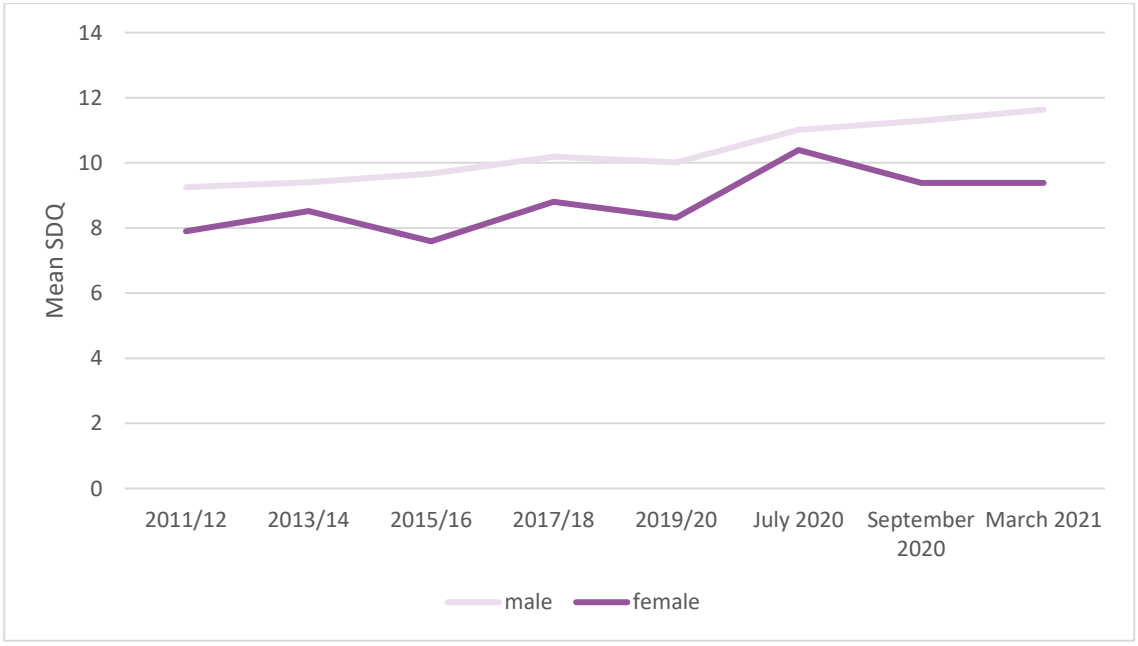
Vizard *et al*. (2020) note that the increase in 2020 was particularly influenced by a significant increase in the proportion of 'probable mental disorders' among boys aged 5 to 10.

The UK Household Longitudinal Study (USoc) (COVID 19: University of Essex, Institute for Social and Economic Research, 2021; and Main study: University of Essex, Institute for Social and Economic Research, 2022) provides an opportunity to look at SDQ trend data over 10 years including at three points during the pandemic. The mental health of children under the age of 10 in USoc was reported by parents and questions were asked only for children aged 5 and 8; Figure 5 shows this data by sex.

Although girls' SDQ scores appear to fluctuate more between survey waves than boys' scores, both sexes display a similar upward trend overtime between 2011/12 and 2019/20, indicating a decline in their mental health. Girls displayed a notable increase in their difficulties scores in July 2020, with a mean SDQ score of 10.4 compared to 8.3 pre-pandemic. However, this did not remain constant and improves to 9.4 in the following waves. Boys showed a smaller increase moving into the pandemic, with a mean SDQ score of 11.0 compared to 10.0 pre-pandemic. However, the mental health of boys appeared to continue to decline in the following waves, with their mean SDQ score increasing to 11.6 by March 2021.

Figure 5: Mean SDQ scores by sex 2011/12 to 2021 (children aged 5 and 8, parent-reports)

Note: a higher score indicates greater difficulties



Source: USoc Main Survey & COVID-19 Survey

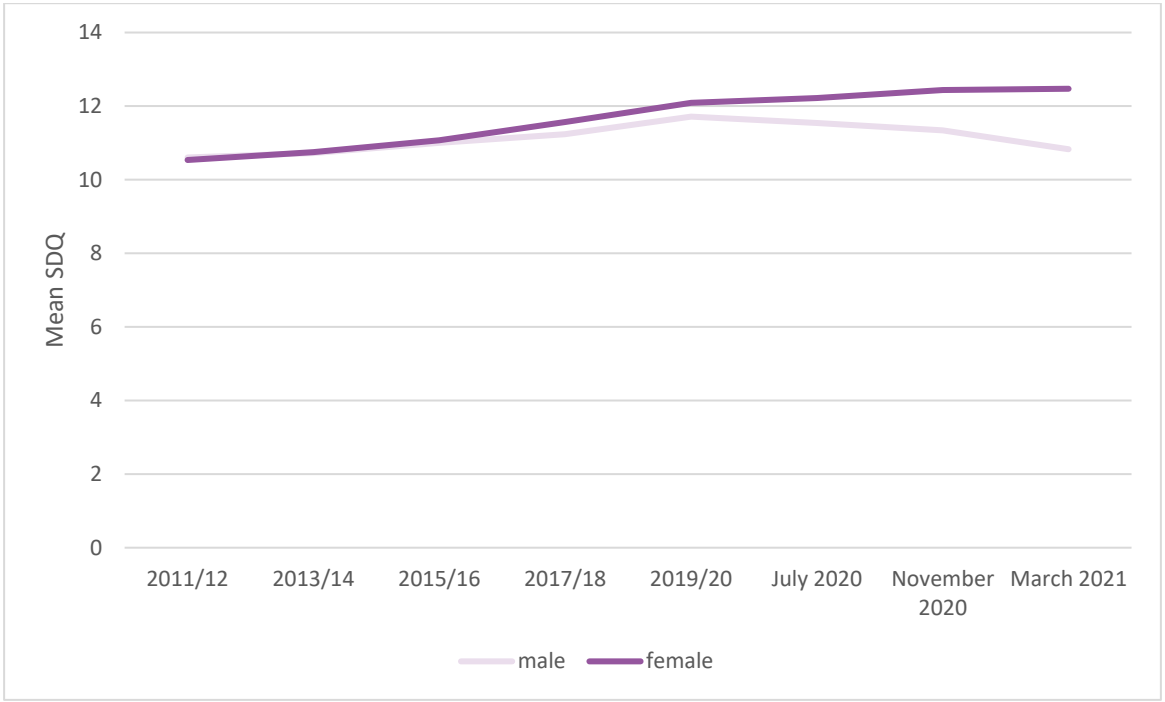
Note that data collected after February 2020 has been excluded from the 2018/19 and 2019/20 waves

Analysis of SDQ scores from the self-report youth survey for 10 to 15 year olds shows that both boys and girls reported a continued decline in their mental health between 2011 and 2019, with no notable difference in SDQ scores between the sexes up to 2015/16 (see Figure 6).

Girls' mental health continued to decline into and throughout the pandemic, with a mean SDQ score of 12.2 in July 2020 which increased to 12.5 by March 2021. Conversely, there is a distinct change in the trend for boys moving into the pandemic. Boys reported a very slight improvement in mental health, with a mean SDQ score of 11.5 in July 2020 just after the first period of restrictions, having fallen from 11.7 in the 2019/20 wave of the survey. This improvement in boys' mental health continued in the following wave, with their mean SDQ score falling further to 10.8 by March 2021 and the gap between boys and girls increasing.

Figure 6: Mean SDQ scores by sex 2011/12 to 2021 (10 to 15 year olds, self-report)

Note: a higher score indicates greater difficulties



Source: USoc Main Survey & COVID-19 Survey

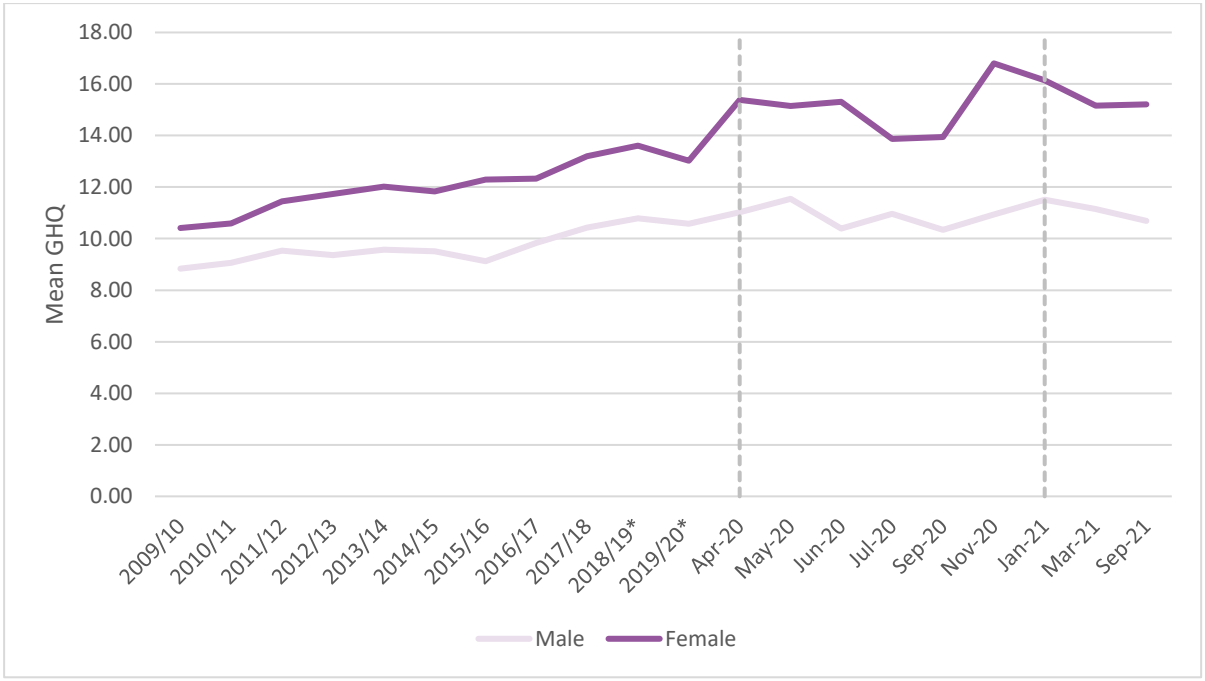
Note that data collected after February 2020 has been excluded from the 2018/19 and 2019/20 waves.

Understanding Society uses the General Health Questionnaire (GHQ) to monitor the subjective mental wellbeing of young people aged 16–19 years. Both males and females show a similar worsening in their mental health over the last decade, with mean GHQ scores increasing (i.e. mental health declining) from 10.4 in 2009/10 to 13.1 in 2019/20 for females, and increasing from

8.8 to 10.7 over the same time period for males (see Figure 7). Girls saw a halt in this decline during the early part of the pandemic which was then followed by improvement until September 2020. Despite these fluctuations at notable time points during the pandemic, the overall trends seen pre-March 2020 continue, particularly for females.

Figure 7: Mean GHQ scores by sex 2009/10 to 2021 (16 to 19 year olds, self-report)

Note: a higher score indicates lower mental health



Source: USoc Main Survey & COVID-19 Survey

* Note that data collected after February 2020 has been excluded from the 2018/19 and 2019/20 waves

In the regular Co-SPACE surveys undertaken throughout the pandemic, parents and carers of primary- and secondary-aged pupils reported greater behavioural and attentional difficulties for boys, and greater emotional difficulties for girls, also using the SDQ (Burgess *et al*., 2022).

Widnall *et al*. (2020) reported on a data set that has a clear pre-Covid baseline and includes Year 9 pupils' self-reports with validated measures (Hospital Anxiety and Depression Scale; Warwick-Edinburgh Mental Well-Being Scale) but with restricted geographical coverage (south west England) and a relatively small sample (~750 with matched data pre-pandemic and during the first period of restrictions). It was found that 54% of girls were deemed 'at risk of anxiety' in October 2019, falling to 45% in April 2020 during the first period of partial school closures. Equivalent figures for boys were 26% and 18% respectively. On a measure of risk of depression, 31% of girls

and 21% of boys were deemed ‘at risk’ in October 2019. By April 2020, this figure had risen slightly for girls to 34% whereas for boys it had fallen slightly to 19%. Finally in this data set, boys reported a higher overall wellbeing score in October 2019 compared to girls. While the scores for both genders increased by April 2020, the boys’ increase was greater although not large enough to be considered ‘meaningful’. It should be noted that this data is not controlled for age; these adolescents are 6 months older at the time of the second data collection and any changes between the two timepoints may be related to their increased age.

Mansfield *et al*. (2021) report a survey from June-July 2020, completed by 11,765 pupils in Years 8–13. The data is from the OxWell survey, an annual survey of schools and further education colleges in southern England which includes the Revised Children's Anxiety and Depression Scales and “multiple questions to assess the risk of mental health disorders”. Their findings are consistent with other reports that suggest that females are at greater risk of depression, anxiety and a deterioration in wellbeing.

It is interesting to note that three regionally-focused surveys (Bignardi *et al*., 2021; Widnall *et al*., 2020; and Wright *et al*., 2021), which are relatively small in terms of sample size but which have a pre-pandemic baseline, all find an increase in depressive symptoms (or risk of depression) around the time of the first lockdown with the greater impact on females (in fact, just on females in the case of Widnall *et al*.). Bignardi *et al*., who used the Revised Child Anxiety and Depression Scale (RCADS) warn that, “Studies that only measure mental health using broad, brief mental health measures may fail to detect more specific effects.”

In summary, there is clear pre-pandemic evidence that secondary-aged females reported lower wellbeing than males. Looking at the data collected during the pandemic, this indicates that the pandemic had a greater negative impact on the mental health of females aged 10+ than on males of the same age. Conversely, there is some evidence to suggest that primary-aged boys have been more negatively impacted than girls.

4.2 Age

Research has indicated a general decline in the wellbeing of young people in recent years and an increase in mental health issues, particularly as young people reach later adolescence. For example, Gagné, Nandi and Schoon (2021) found increases in psychological distress between 2009/10 and 2018/19 in those aged 16–18. The Good Childhood Report 2022 also reports declining subjective wellbeing with age, citing evidence from across The Children’s Society’s Household Studies, the Millennium Cohort Study and Understanding Society (The Children’s Society, 2022). In this section, we consider if the restrictions due to Covid-19 had markedly different impacts on children and young people of different age groups. This largely focuses on comparing primary and secondary school age groups.

Wellbeing

The DfE's COVID-19 Parent and Pupil Panel Surveys (DfE, 2021a-e) collected parent-reported and adolescent self-reported wellbeing measures in ten waves between August 2020 and July 2021, using ONS-validated questions about personal wellbeing, including how happy pupils felt or their parents reported they were, on the previous day, their life satisfaction and the extent to which they felt the things they did in life were worthwhile.

Mean happiness ratings are shown in Figure 1 in section 3. The parents of primary-aged children consistently rated their children's happiness as higher than the ratings given by parents of secondary-aged children. The fluctuations in the ratings of both age groups follow a similar pattern with a dip in February 2021 coinciding with a high level of restrictions including partial school closures. It is clear that parents of secondary-aged children reported higher happiness levels for their children than the young people did themselves. The same dataset suggests that the wellbeing of primary-aged children during the pandemic fluctuated more in line with changes in restrictions than that of secondary-aged pupils. As there are recognised seasonal fluctuations in subjective wellbeing ratings, it is useful to compare ratings from the same point each year.

Related to ratings of happiness, in October 2020 55% of secondary-aged pupils' reported that returning to school had had a positive impact on their mood and mental health; 20% said it had had a negative impact (DfE, 2021a). In May 2021, parents of secondary-aged pupils also reported lower school connectedness scores than parents of primary-aged pupils (DfE, 2021d).

Analysis of OxWell data collected at one time point (June/July 2020) from 16,940 8–18 year olds, found that, of the subgroup of children and young people self-reporting a decline in wellbeing because of the lockdown, almost half were in key stage 3: 16% were 8 to 11 years old, 46% were 12 to 14 years old and 23% were 15 to 16 years old (Soneson *et al*., 2022).

Mental health

With regard to data collected during the pandemic, there were no significant differences in rates of probable and possible mental disorder in children and young people between 2020 and 2021, overall or by age[31] (Newlove-Delgado *et al*., 2021). Data was collected in July 2020 and in February/March 2021.

Rates of mental disorder increase with age. This was evident before the pandemic (Sadler *et al*., 2018) and also during it. In the Co-SPACE surveys, which tracked children's mental health symptoms throughout the pandemic, parent/carer reports and adolescent self-reports indicated that both primary- and secondary-aged children had their highest levels of emotional, behavioural and restless/attentional difficulties during peak lockdown restrictions (surveyed June 2020 and January/February 2021) (Shum *et al*., 2021; Burgess *et al*., 2022). However, the SDQ scores of

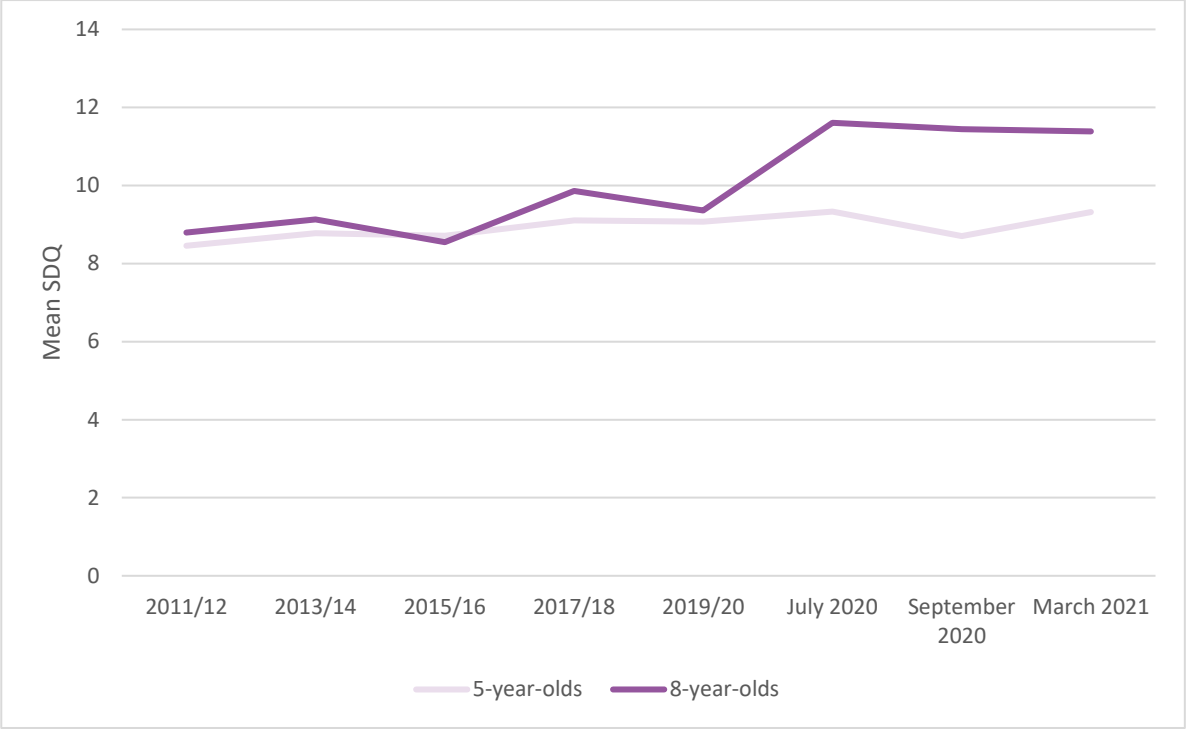
[31] Cross sectional data, 6-16 year olds

secondary-aged pupils suggested greater stability in mental health throughout the pandemic and less responsiveness to restriction measures than those of primary-aged children (Shum *et al*., 2021; Skripkauskaite *et al*., 2021a). Primary pupils' SDQ scores substantially increased (across subscales) (i.e. mental health worsened) from March to June 2020, significantly decreased from July to October 2020, increased again from December 2020 and decreased significantly from February to May 2021 (Skripkauskaite *et al.,* 2020; Shum *et al*., 2021). The changes in secondary pupils' scores were less marked and did not align clearly with lockdown dates. For example, across a one-month period at the start of the first lockdown, parents of secondary pupils reported stability in behavioural symptoms, a significant reduction in emotional difficulties, with only restless/attentional issues increasing (Pearcey *et al.,* 2020). Adolescents did not report a significant change in any subscale at the same data collection points.

The mental health of children aged 5 and 8 was reported by parents using the SDQ in Understanding Society (University of Essex, Institute for Social and Economic Research, 2022). These age groups mark the beginning of key stages 1 and 2 respectively. Figure 8 shows SDQ trend data for these ages over the last 10 years. Our analysis of the USoc child data (mainstage and COVID surveys) shows that while the mean difficulties scores fluctuated slightly from one wave of the survey to the next, parents of both age groups reported similar difficulties scores with a slight decline in their child's overall mental health between 2011 and 2019 (8 year olds had a mean SDQ score of 8.8 in 2011/12 compared to 9.4 in 2019/20, while 5 year olds had a mean score of 8.5 in 2011/12 compared to 9.1 in 2019/20). We see a notable decline in the reported mental health of 8 year olds coming out of the first lockdown period in July 2020, with SDQ scores increasing to 11.6 from a pre-pandemic 9.4. Difficulties scores remain at this level for the following waves, measuring 11.4 by March 2021.

Figure 8: Mean SDQ scores by age 2011/12 to 2021 (children aged 5 and 8, parent-reported)

Note: a higher score indicates lower mental health



Source: USoc Main Survey & COVID-19 Survey

Taken together, the research included in this section suggests that both the wellbeing and the mental health of primary-aged children were more responsive to changes in pandemic-related restrictions (whether schools were closed to most pupils or not), with significant declines in both wellbeing and mental health reported during times of peak restrictions. The fluctuation in mental health and in wellbeing ratings among secondary-aged pupils appears to be less clearly aligned with restriction changes although there is some evidence that the later lockdown (winter/spring 2021) had a greater negative impact than the first lockdown. Longitudinal studies reported comparatively stable mental health scores for this older age group and some evidence of improved mental health for some young people during early periods of lockdown. In contrast, with more frequent data collection points, the DfE's COVID-19 Parent and Pupil Panel recorded fluctuating but declining wellbeing over the course of the pandemic. The picture for the secondary age group is further complicated by differences noted between parent-reports and self-reports, as well as methodological differences between the studies included.

4.3 Disadvantage

A frequent finding in surveys before the onset of the pandemic was that disadvantaged pupils reported (or were observed by parents / carers as having) lower subjective wellbeing. For example, in PISA 2018 (OECD, 2019) disadvantaged students were less likely to report being satisfied with their lives than non-disadvantaged students. Similarly, the NHS Digital 2017 survey of the mental health of children and young people in England reported that "mental disorders tended to be more common in children living in lower income households" (Sadler *et al*., 2018, p17).

The question we explore here is whether there is evidence that the pandemic differentially affected disadvantaged and non-disadvantaged pupils.

Two studies have a pre-pandemic baseline, although each has a sample which has a limited age range. Wright *et al*. (2021) reported an increased incidence of depressive symptoms among a sample of 11–12 year olds in June 2020, compared to the incidence in data collected between December 2019 and March 2020, before the first lockdown, and the increase was proportionally less amongst children in the most disadvantaged families. The authors speculate that, "it may be that COVID-19 does not add substantially to the pressures already experienced by those with fewer economic resources, while those with less prior deprivation experience a greater change" (p 8).

Widnall *et al*. (2020) were able to compare pre-pandemic data from October 2019 with data collected from 13–14 year olds during the first lockdown (April 2020). At baseline, they found higher depression scores for students eligible for free school meals (FSM) but not higher levels of anxiety or lower wellbeing. At time point 2, the disadvantaged subgroup showed a reduction in anxiety and depression and a small increase in wellbeing, in line with changes seen in the non-disadvantaged group.

The DfE's COVID-19 Parent and Pupil Panel surveys in August and October 2020 (DfE, 2021a) and February 2021 (2021b) found that parents whose children (primary- or secondary-aged) were eligible for FSM reported lower happiness and higher anxiousness scores for their children than parents of non-disadvantaged children. In August 2020, 25% of secondary-aged pupils eligible for FSM reported a low happiness score, compared with 20% of pupils not eligible for FSM. These findings echo what was seen before the pandemic in other studies. However, in contrast to August and October 2020, in February 2021, the researchers note that there was no significant difference on measures of life satisfaction, worthwhileness and anxiousness by FSM status for secondary-aged pupils, indicating that the gap in these ratings between disadvantaged and non-disadvantaged pupils had narrowed (DfE, 2021b).

The Co-SPACE surveys used a different definition of disadvantage, namely a household income of less than £16,000 per year (Burgess *et al*., 2022). Reporting responses from parents and carers using the behavioural, attentional and emotional difficulties subscales of the SDQ in several waves during the pandemic, they recorded greater difficulties in each category for children from low

income families compared to non-disadvantaged children in March 2020 to July 2021, and again at follow up in March 2022. There is some evidence that the gap in the extent of reported emotional difficulties narrowed between disadvantaged and non-disadvantaged children between August 2020 and June 2021, but this gap appears to have increased again by the final wave of data collection in July 2022. Hu and Qian's (2021) analysis of the Understanding Society data reported that the pandemic had a particularly adverse impact on the mental health of adolescents from one-parent, one-child, and low-income families.

Soneson *et al*. (2022) analysed data from the OxWell Student Survey 2020, a self-report, cross-sectional survey of children and young people (8–18 year olds) predominantly in schools in southern England during the pandemic. They explored the characteristics of the group of young people (approximately a third of the sample) who reported improved wellbeing during the first Covid-19 lockdown compared to the group (also approximately a third of the sample) who reported no change and those who reported worse wellbeing. They found no association between FSM status and membership of these groups.

In a different analysis of the Oxwell Student Survey data, Mansfield *et al*. (2021) found that experience of food poverty (but not FSM eligibility) was one of the factors associated with risk of depression, anxiety and a deterioration in wellbeing.[32]

From our review of the evidence, the pre-pandemic position of disadvantaged children and young people having poorer mental health and lower wellbeing persisted into the pandemic. There is, however, some evidence that disadvantaged children and young people may have been slightly less negatively impacted during the pandemic but the picture is not totally consistent.

4.4 Special Educational Needs and/or Disabilities

Wellbeing

Widnall *et al*. (2020) point out that children and young people with SEND were reported as having lower levels of wellbeing pre-pandemic but the picture is not entirely consistent: sweep 6 of the Millennium Cohort Study found that differences in subjective wellbeing of 14 year olds with and without SEND were not significant (The Good Childhood Report, 2018). Barnes and Harrison (2017), analysing Understanding Society data, found that children with SEND had lower levels of wellbeing (higher average unhappiness scores) than children without SEND when talking about their school, their school work, and their friends but that there was no significant difference between the two groups when considering wellbeing in relation to appearance, family and life as a whole. However, when other factors, such as SES, are controlled for, the only significant difference

[32] 'Food poverty' is not defined in the paper but it is noted that figures for self-reported food poverty were higher than for self-reported eligibility for FSM.

between the wellbeing of children and young people with and without SEND was in relation to school.

The DfE's COVID-19 Parent and Pupil Panel surveys from August 2020 to July 2021 found that, across all 10 waves of the survey, parents of children with SEND gave consistently lower happiness scores and higher anxiety scores for their children than those parents of children without SEND. There was also variability in secondary pupils' self-reported levels of anxiety between the two groups, with pupils with SEND reporting significantly higher anxiety in the March 2021 and May 2021 waves although by July 2021, anxiety ratings were in line with those of pupils without SEND (DfE, 2021e). In contrast, throughout the waves, no significant differences were reported in secondary pupils' self-reports of happiness, life satisfaction and worthwhileness between young people with SEND and those without.

Mental health

Prior to the pandemic, research indicated that children and young people with special educational needs and/or disabilities (SEND) had poorer mental health than those without SEND. For example, the NHS Digital survey of the mental health of children and young people in England in 2017 reported that 44% of children with SEND had a probable mental disorder compared to 8% without SEND (Sadler *et al*., 2018). Four years later, the NHS Digital Survey 2021 (Newlove-Delgado *et al*., 2021) found that over half of children with SEND had a probable mental health disorder compared to 13% without SEND, indicating increased mental health issues for both children with and without SEND during this time.

The Co-SPACE study, though not a nationally representative sample, tracked the mental health of over 1600 children and young people (4–16 years old) with special educational needs and/or neurodevelopmental differences (SEN/ND) throughout the pandemic (around 18% of the sample so exceeding the national percentage of 15%) (Skripkauskaite *et al*., 2021a; Burgess *et al*., 2022). They found that parents / carers of children with SEN/ND reported SDQ scores above the average for all children across all time points during the pandemic on three subscales (attentional difficulties, emotional difficulties, behavioural difficulties) although this may simply reflect the pre-pandemic picture.

Analysing Co-SPACE data (from early lockdown in Spring 2020) of 2673 parents / carers, Waite *et al*. (2021) found that children with SEN/ND had a significant decrease in emotional symptoms whereas children without SEN/ND had a significant increase.

These results, together, indicate that children and young people with SEND had, on average, lower wellbeing and also poorer mental health throughout the pandemic when compared to those without SEND. However, there is no evidence that the mental health of children and young people with SEND was more negatively affected during the pandemic than those without SEND; rather, it showed a continuation of pre-pandemic patterns. The longitudinal studies conducted during the pandemic suggested that children and young people with SEND may have had more consistent

wellbeing and also mental health scores across time points than children and young people without SEND.

4.5 Pre-pandemic wellbeing and mental health status

Here we see a particularly complex picture, which may be affected by the variety of measures used to identify pre-existing conditions.

One study analysed data from over 11,000 adolescents in Years 8–13 in southern England (taken from the OxWell dataset) to identify pre-existing factors that may have increased adolescents' risk of anxiety, depression and worsening subjective wellbeing during the pandemic (Mansfield *et al.,* 2021). The following measures were used to collect data in June–July 2020: the Revised Children's Anxiety and Depression Scale; a single item on pupils' perceived changes to wellbeing due to the pandemic; and questions on background factors.

Using regression analysis, the Oxwell team reported that those who had accessed mental health support prior to the pandemic had nearly quadruple the likelihood of getting to clinical thresholds for both anxiety and depression in June-July 2020; they were also more likely to report worsened subjective wellbeing.

In contrast to this finding (that those who had poorer mental health at the start of the pandemic were more vulnerable) Widnall *et al*. (2020) and Hu and Qian (2021) found that this group reported improvements in their mental health during the first lockdown (Widnall *et al*.) and just after (Hu and Qian), as noted below.

With a baseline measure from October 2019, Widnall *et al*., using the Hospital Anxiety and Depression Scale (HADS) and the Warwick-Edinburgh Wellbeing Scale (WEMWBS), found that in April–May 2020 i.e. during the first period of restrictions, young people (13–14 year olds) who at baseline were at risk of anxiety and/or depression reported improved mental health in these areas. Those who at baseline were not at risk reported a slightly increased risk of anxiety and depression. In terms of wellbeing, young people with low wellbeing pre-pandemic showed a 'meaningful' increase in their wellbeing at timepoint 2 whereas those with average-high wellbeing at baseline showed no change.[33]

This study also explored school connectedness, described as student relationships with teachers and sense of school community. This is a key component of young people's wellbeing at school and the researchers found that young people reported greater feelings of connectedness with school during the first lockdown compared to pre-pandemic. The authors report that, "Students with low school connectedness pre-pandemic showed a greater increase in wellbeing scores and a

[33] Widnall *et al*. point out that on the WEMWBS, a change of 3-8 points is considered meaningful. In this instance the change was +10 points.

greater reduction in anxiety in comparison to those with average-high school connectedness. This group also showed a small reduction in depression scores." (p 12)

Using nationally representative longitudinal data from the Understanding Society COVID-19 survey, Hu and Qian (2021) compared the pre-pandemic SDQ scores of 886 10–16 year olds to scores collected in July 2020. Using person fixed-effects models, they measured how the pandemic impact varied according to a person's pre-pandemic mental health. They found that those with better mental health before the pandemic reported increased emotional problems, conduct problems, hyperactivity, and peer relationship problems. Scores of those with worse mental health before the pandemic suggested the opposite effect, a finding similar to that of Widnall *et al.* (2020).

Using data from a UK birth cohort study (the Wirral Child Health and Development Study), Wright *et al*. (2021) compared the mental health of 226 11–12 year olds 3 months prior to the first period of restrictions (December 2019), at the start of the restrictions (March 2020) and 3 months into the lockdown (June 2020). They found that maternal and self-reports of clinically significant depressive symptoms and behavioural problems during the pandemic were predicted by pre-existing emotional and behavioural problems. However, mothers reported a greater proportional increase in symptoms and behavioural problems in children without prior symptoms – suggesting that problems emerged during the pandemic for many children not previously regarded as a concern.

There is conflicting evidence as to the impact of the pandemic on the mental health and wellbeing of children and young people with pre-existing mental health conditions. This is possibly due to the use of different thresholds to identify possible mental health needs and also to different measures.

5 Limitations

We applied a number of criteria to determine which sources would be included in the present report (see section 1), but a number of challenges remain when summarising the findings. This section will highlight some of the limitations of the results and discuss what this means for the generalisability of the findings.

5.1 Sample heterogeneity

A number of studies used robust sampling methodologies, for example the COVID-19 Parent and Pupil Panel surveys commissioned by the DfE, and USoc. Other studies recognised that they were working with data from unrepresentative samples, such as Co-SPACE, and some findings included in the present report are from studies that have regionally-specific samples. For example, the OxWell Student Survey data analysed by Mansfield *et al*. (2021) and Soneson *et al*. (2022) was drawn from southern England only. Similarly, Widnall *et al*. (2020) reported data from Year 9 students (aged 13–14) in 17 schools across south west England. Sample sizes also vary greatly between studies. Sample heterogeneity means that generalising findings across studies is difficult; we have noted where the samples are more limited.

5.2 Assessment of concepts

As discussed in section 2, a range of methodologies and of definitions of wellbeing and mental health are sometimes used interchangeably throughout the reviewed papers. Some constructs, such as anxiety, are included in some studies as an aspect of wellbeing and in others as part of mental health. Ultimately, this means that it can be very difficult to draw conclusions about findings that inherently assess different constructs. We have largely reported findings in relation to wellbeing and mental health separately, except where for reasons of clarity about particular studies we have described the findings together.

Even if the same construct was assessed across studies, it is highly likely that different measures were used. For example, to measure subjective wellbeing, PISA used a single item on life satisfaction whereas The Children's Society commonly uses a range of indicators, mostly focusing on children's happiness with a range of variables.

Secondly, due to different age-groups being included in different studies, a combination of data from parents as well as self-report is often used (e.g. Understanding Society). Research has shown that children's and adults' responses to the same set of questions may differ. Goodman, Lamping and Ploubidis (2010) report 'low to moderate' correlations between child and parent reports of the sub-scales of the SDQ. The Children's Society found that a single measure of subjective wellbeing completed by a cohort of children aged around 14 years was a stronger predictor of self-harm than a 20-item measure of emotional and behavioural difficulties completed by a parent (The Children's Society, 2021, p.12).

Studies that included numerous data points (e.g. Newlove-Delgado *et al*. (2021) for NHS Digital 2021, wave 1 versus wave 2) sometimes changed the mode of delivery, with early studies being conducted face to face and as a result of Covid-19, the mode changed to online surveys. The mode of delivery can influence responses to self-reported wellbeing items (ONS, 2017). As such, it is difficult to draw conclusions about children's wellbeing if this includes comparing data from different age-groups or different modes of delivery.

5.3 Data collection points

We found that across studies, the number of data collection points varied greatly. Whereas some only collected data at baseline (pre-pandemic or early pandemic) and once later on in the pandemic (e.g. Widnall *et al*., 2020), others have produced more regular outputs (e.g. Co-SPACE; DfE COVID-19 Parent and Pupil Panels). Often, data was collected over a longer time-window and coincided with a number of different pandemic measures (University of Essex, Institute for Social and Economic Research, 2021; 2022). The number of studies with a pre-pandemic baseline is limited.

This issue is further complicated by the fact that some of the variables assessed focus on short-term versus long-term wellbeing or mental health. Changes that influence our wellbeing can take time to take effect (for example changes that affect long-term friendships) and this may not always accurately represent what has been happening in children's and young people's lives at the time of data collection (i.e. there may be a lag in data collection and changes reported in wellbeing). In summary, it is difficult to attribute changes in wellbeing as measured at various time points to specific events on the Covid-19 timeline.

The nature of the data collection in longitudinal studies means it is often accompanied by high attrition rates as participation tends to decrease over time. The number of data points that can be matched across all participants is therefore often quite small and further affects the generalisability of findings (e.g. Understanding Society).

5.4 Causality

Although there may be a longitudinal element, the lack of proximal or any pre-pandemic baseline data in a number of studies means that care must be taken in interpreting the data and drawing conclusions about the extent to which the findings reflect the impacts of the pandemic.

Related to this, studies also often lack control covariates such as other external factors that are known to influence wellbeing. For example, some of the trends coincide with other cycles that are known (season of year, e.g. Magnusson, 2000) or can be expected (school terms / holidays) to impact on reported wellbeing.

In addition, for more recent data, it is possible that changes in wellbeing might also be attributed to the current cost-of-living crisis or the war in the Ukraine. All these events cause uncertainty and

emotional upheaval and it will become more difficult to tease apart the effects of these events on wellbeing.

5.5 Pre-Covid complexities

Complexities in measuring and reporting wellbeing or mental health already existed pre-Covid. The reported findings from various sub-groups in this report mostly follow pre-pandemic patterns; in the absence of control groups, it is impossible to know how trends may have developed if there had been no global pandemic. What is interesting is that for some groups, the difficulties have been exacerbated whilst others have reported a reduction in the challenges experienced. For interpretation purposes, the observation of different directions of trends across different sub-samples is interesting, but often, these differences are obscured when looking at the overall sample. Whether pre-Covid-19 or as a consequence of Covid-19, measuring wellbeing and mental health bears a range of methodological as well as conceptual challenges.

6 Conclusions

This review of the evidence of the impact of the pandemic on children and young people is in the context of a steady decline in young people's mental health and wellbeing in recent years. We find that there are few studies with adequate pre-pandemic baseline data and some findings are contradictory. Despite this, by drawing together evidence from a range of sources, we have been able to identify some patterns and trends in the data showing how the pandemic may have affected particular groups.

Secondary-aged girls and primary-aged boys appear to have been more vulnerable to declines in mental health during the pandemic. This is in the context of secondary-aged girls having poorer pre-pandemic mental health than boys.

The evidence suggests that disadvantaged children and young people were not more negatively impacted than their non-disadvantaged peers by the pandemic but the pre-pandemic evidence is clear that disadvantage is associated with lower overall wellbeing and mental health.

There is some evidence that for some young people, particularly those with pre-existing poorer mental health, the restrictions at the start of the pandemic were associated with some improvement in their mental health.

It is notable that for children and young people with SEND, on average they reported lower levels of wellbeing and poorer mental health before and during the pandemic.

We see evidence of more volatility in both the wellbeing and the mental health of some children and young people during the pandemic, particularly primary-aged children (for whom data was usually provided by parents or carers), with deterioration but also improvement. By summer 2021, there appears to be less fluctuation in the data.

There is some evidence to suggest that the restrictions in early 2021 may have had a more negative impact than the first set of restrictions (March-June 2020).

By the summer of 2021, there was some suggestion of an improvement in children's and young people's mental health and wellbeing relative to earlier in the year. By summer 2022, there is some evidence of a return to pre-pandemic levels, although emotional difficulties may be elevated for some children and young people. It may take a period of time before the effects of Covid on children's and young people's mental health and wellbeing become fully evident.

6.1 Implications

We are not yet in a position to identify and understand the longer term impacts of the pandemic but the crisis has drawn attention to existing concerns about children's and young people's mental health and wellbeing, which was in decline for a number of years prior to the pandemic. The

support available to schools and families from external agencies is often limited and inadequate and needs to be reviewed in the light of these trends.

There is evidence that school connectedness – how young people feel they are accepted, supported, respected and included in the school community – is a protective factor and can reduce later mental health problems. Shochet *al al*. (2006) report a clear predictive link between school connectedness and poor mental health one year later in 12 to 14 year olds. For adolescents, feeling connected to school has long-lasting protective factors and can reduce later mental health problems such as emotional distress or health risk behaviours (Steiner *et al*., 2019). For young people who are already socially vulnerable, feeling connected to others plays a particularly important role (Foster *et al*., 2017) and has therefore been identified as a promising preventative strategy. The DfE's COVID-19 Parent and Pupil Panel (DfE, 2021d) explored one aspect of this notion – the support available in school for pupils – using self and parent reports.

The finding that students felt a greater connection with school during the pandemic (DfE, 2021d; Widnall *et al*., 2020), and specifically, in the case of the Widnall *et al*. study, during the first phase of restrictions, may be a somewhat counterintuitive finding. The association between school connectedness and wellbeing suggests that schools may want to explore what practices were introduced during this unprecedented time with a view to seeing if any aspects transfer to more conventional times. As educators, the main goal is to provide a happy and healthy environment in which pupils can learn and thrive. As such, the promotion of connectedness and feelings of belonging to a community could serve not only to improve pupils' day to day experience of school but also to contribute to the prevention of future mental health problems and improve young people's satisfaction with life, especially during these times of great uncertainty.

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Appendix A

In addition to identifying key evidence sources that met our criteria (see section 1) we also undertook additional secondary analysis of the Understanding Society longitudinal dataset.

- The UK Household Longitudinal Study (UKHLS), known as 'Understanding Society' and referred to as USoc throughout this report, is an annual household panel survey, collecting data from all household members across a range of topics.
- A wave typically collects data over a two-year period, with a small number of interviews followed up at a later date. For example, the data for the 2019/20 wave was collected from January 2019 to December 2020, with a few interviews being carried out between January and May 2021. In order to present a true "pre-pandemic" baseline for 2019/20, all data collected after February 2020 has been excluded from both the 2019/20 and 2018/19 waves for all three age groups.
    - children aged 5 and 8
    - youths aged 10 to 15
    - young adults aged 16 to 18.
- Data on mental wellbeing for young adults (aged 16-19) is measured using the General Health Questionnaire-12 (https://www.gl-assessment.co.uk/assessments/products/general-health-questionnaire/), from which an overall GHQ score is derived, with a higher score indicating lower mental health.
- Data on mental health for children is measured using the Strengths and Difficulties Questionnaire (SDQ). Children ('youths') aged 10-15 self-complete this module. For younger children, data is collected for 5- and 8-year-olds via their parents/carers.
- The SDQ is made up of 5 subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour. Scores for each subscale are added together to generate a total SDQ score, where a higher score indicates poorer mental health.
- From April 2020 to September 2021 data was also collected via a short web-survey in order to understand the changing impact of the pandemic on the welfare of UK individuals and their families. Wellbeing data was collected at different timepoints for the different age-groups according to the table below.
- Wellbeing/Mental health data was collated for each of the three age groups and mean GHQ/SDQ scores were calculated in order to see how subjective wellbeing has changed since before the pandemic began. The same data was then split by sex (and for the child dataset, by age) to look for any differences in trend between groups

Table A1 Understanding Society data collection waves during Covid-19 pandemic

Wave	Collection Time Point	Children (5 and 8 year olds) and Youths (10-16)	Young adults (16-19)
1	April 2020		GHQ data collected
2	May 2020		GHQ data collected
3	June 2020		GHQ data collected
4	July 2020	SDQ data collected	GHQ data collected
5	September 2020	SDQ data collected (children only)	GHQ data collected
6	November 2020	SDQ data collected (youth only)	GHQ data collected
7	January 2021		GHQ data collected
8	March 2021	SDQ data collected	GHQ data collected
9	September 2021		GHQ data collected

The analysis of the UKHLS used data from children (aged 5 and 8), youths (aged 10-15), and young adults (aged 16-19) from both the mainstage and the COVID surveys. This gave approximately 1,100 children and 2,800 youths in the 2017/18 wave, and 1,400 young adults in the 2018/19 wave. These are the most recent complete pre-pandemic waves for each dataset. Weighted means for either the overall SDQ score, or GHQ score, were then calculated. After UKHLS data has been collected, a number of weights are calculated to be used when the data is analysed. In our analysis, the data has been considered on a cross-sectional rather than longitudinal basis. Therefore, the cross-sectional weightings have been used to calculate these weighted means as set out in the table below:

	Mainstage Survey	COVID survey
Children (5- and 8-year-olds)	Cross-sectional person UKHLS+BHPS weight	Cross-sectional child weight, beta version
Youths	Cross-sectional youth interview weight	Cross-sectional youth weight, beta version
Young adults (16-19 year olds)	Cross-sectional adult self-completion interview weight	Cross-sectional individual telephone and web survey weight, beta version

Descriptive analysis has then been used to compare the results in two ways:

- Firstly, the change in either mean overall SDQ or overall mean GHQ over time was analysed, with particular reference to differences in trends pre- and during the COVID-19 pandemic.
- Secondly, any differences in trends for the scores over time between different groups were examines. Differences by gender, age, SEN and disadvantaged/non-disadvantaged were analysed, with results from groups that exhibit notable differences presented in this report.

Appendix B

Table B1: Features of studies included in review

Data source / authors	Age range of sample	Sample size / representativeness	Measures used	Pre-pandemic baseline	Data collection: waves / timepoints
Bignardi *et al*. (2020)	7-11 year olds	N = 168 Age, gender and SES were controlled in sensitivity analyses	Revised Child Anxiety and Depression Scale (RCADS) SDQ (emotional problems subscale)	Yes	T1: June 2018-Mar. 2019 / Dec. 2018-Sep. 2019 T2: April-June 2020
Co-SPACE reports 4 to 12 (see Burgess et al (2022) for report 12)	4-16 year olds	Self-selected sample - not nationally representative 2020 N range = 1066 (Mar) to 4458 (Apr) parents, 216 (Nov) to 939 (Apr) adolescents 2021 N range = 1161 (Jul) to 2277 (Feb) parents 2022 March: N = 1977 parents	SDQ (partial)	No	Monthly waves from March 2020 to July 2021 Final wave: March-April 2022
Good Childhood Reports 2020, 2021, 2022 (The Children's Society)	10-17 year olds	N ~2000, annually Weighted for representativeness Up to 2019 (inc.) England, Scotland & Wales. From 2020, N Ireland included.	The Good Childhood Index 3 ONS measures of personal wellbeing & overall life satisfaction (based on Huebner's Student Life Satisfaction Scale); 6 happiness items from USoc	Yes (but change to new provider in 2020 may have affected comparability with previous years)	Annually since 2015 June-July 2019 April-June 2020 April-June 2021 May-June 2022

Data source / authors	Age range of sample	Sample size / representativeness	Measures used	Pre-pandemic baseline	Data collection: waves / timepoints
Mansfield *et al*. (1) / Soneson *et al*. (2)	8-18 year olds	N = 16,940 pupils in schools and FE college in southern England Representativeness not analysed	OxWell Student Survey instrument; core questions plus new questions related to C-19 Warwick-Edinburgh Mental Wellbeing Scale Pupils in years 8-13: Revised Child Anxiety and Depression Scale (RCADS)	No	June-July 2020
NHS Digital Wave 1: NHS Digital (2020) Wave 2: Newlove-Delgado *et al*. (2021)	2017: 2-19 year olds Wave 1: 11-22 year olds / parents of 5-16 year olds Wave 2: 6-23 year olds	Samples weighted to ensure representativeness 2017: N = 9,117 Wave 1: N = 3,570 Wave 2: N = 3,667	SDQ	No	2017 baseline (F2F) Jan-Sep. 2017 Wave 1 follow up (online): July 2020 Wave 2 follow up (online) Feb/Mar 2021

Data source / authors	Age range of sample	Sample size / representativeness	Measures used	Pre-pandemic baseline	Data collection: waves / timepoints
Parent and Pupil Panel Surveys (Department for Education, 2021)	Years 1 to 13	Recruitment: N = 7191 parents, 5327 pupils; W1: N = 4005 parents; W2: N = 3491 parents, 1780 pupils; W4: N = 3542 parents, 1780 pupils; W5: N = 3388 parents, 1612 pupils; W6: N = 3237 parents, 1555 pupils; W7: N = 3082 parents, 1537 pupils; W8: N = 3084 parents, 1531 pupils; W9: N = 3084 parents, 1537 pupils; W10: N = 3080 parents, 1511 pupils.	ONS-validated questions about personal wellbeing	No	2020: Recruitment wave: 13 Aug – 1 Sep W1: 16-20 Sep; W2: 30 Sep-4 Oct W3: 30 Oct-1 Nov; W5: 25-30 Nov; W6: 16-21 Dec; 2021: W7: 3-5 Feb; W8: 22-25 Mar W9: 12-17 May; W10: 30 June-5 July
Parent, Pupil and Learner Panel (Department for Education, 2022)	Years 1 to 13	Recruitment: N = 4,047 parents, 4,228 pupils; Years 12-13 recruitment: N = 2158; Feb wave: N = 2396 parents, 1810 pupils; Mar wave: N = 2639 parents, 2865 pupils.	ONS-validated questions about personal wellbeing	No	Recruitment wave: 29 November 2021 – 6 January 2022 Years 12-13 recruitment: 2-24 Feb 2022 Feb wave: 2-7 Feb March wave: 9-14 March

Data source / authors	Age range of sample	Sample size / representativeness	Measures used	Pre-pandemic baseline	Data collection: waves / timepoints
Understanding Society (UKHLS) USoc	5–19-year olds	5 and 8 year olds: N ranges from approx. 500 to 1500 pre-pandemic and. from approx. 360 to 420 for pandemic waves 10-15-year olds: N ranges from approx. 1400 to 4400 pre-pandemic and from approx. 1100 to 1400 for pandemic waves 16–19-year olds: N ~1,400 in 2018/19 Weighted for representativeness and according to whether data is used cross-sectionally or longitudinally. UK-wide coverage	5–15-year-olds: Overall SDQ score 16–19-year-olds: Subjective wellbeing (GHQ): Likert	Yes	Annual waves pre-pandemic from 2009/10 to 2019/20 (data after February 2020 has been excluded) During pandemic: April 2020 May 2020 June 2020 July 2020 September 2020 November 2020 January 2021 March 2021 September 2021

Data source / authors	Age range of sample	Sample size / representativeness	Measures used	Pre-pandemic baseline	Data collection: waves / timepoints
Widnall *et al*.	13-14 year olds	N = 721 – 770 pupils with matched data (both timepoints) Pupils in schools in 4 LAs in SW England Sample responding at T2 had fewer BAME, fewer FSM, fewer pupils with long term illness or disability than non-responding sample	Pandemic Anxiety Scale (PAS) Hospital Anxiety and Depression Scale (HADS) Warwick-Edinburgh Mental Wellbeing Scale Measures on family, peer and school connectedness as used by Jose *et al*. (2012)	Yes	T1 October 2019 T2 April/May 2020
Wright *et al*.	11-12 year olds	N = 202 children with matched data (both timepoints) Population-based birth cohort (Wirral Child Health and Development Study)	Short Mood and Feelings Questionnaire (SMFQ) Child Trauma Scale symptoms scale Short Spence Anxiety Scale Child Behaviour Checklist (CBCL) Aggressive Behaviour subscale	Yes	T1 Dec. 2019-Mar. 2020 T2 June 2020

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The Mere, Upton Park, Slough, Berks SL1 2DQ
T: +44 (0)1753 574123 • F: +44 (0)1753 691632 • enquiries@nfer.ac.uk

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