**RESEARCH ARTICLE**

# Long-term factors associated with positive mental health outcomes for early adolescents during COVID-19-related school closures

Danielle Molloy-Vickers 🔟 | Jennifer Chopra | Pooja Saini | Emma Ashworth 🔟

School of Psychology, Liverpool John Moores University, Liverpool, UK

**Correspondence**
Jennifer Chopra, School of Psychology, Liverpool John Moores University, Byrom St, Liverpool L3 3AF, UK.
Email: j.chopra@ljmu.ac.uk

## Abstract

The COVID-19 pandemic had an immediate negative impact on young people worldwide. However, there is a paucity of research examining the factors associated with good mental health, and specifically the factors that contributed to longer-term positive outcomes. This study aimed to identify the protective factors among early adolescents in the United Kingdom that were associated with better mental health outcomes (internalizing and externalizing difficulties, and well-being) during the second national lockdown, and any differences in protective factors between the first and second lockdowns. Between September and December 2020 (T1; $N = 290$), and March and May 2021 (T2; $N = 72$), 11 to 14-year-olds across North-West England completed an online survey pertaining to their experiences of lockdown, and mental health and wellbeing. Hierarchical multiple regression was used to analyse the data. Results indicated that peer support was protective across all three mental health outcomes at T2. While optimism was protective across all three outcomes at T1, it was not significant at T2. School support and community and family connection were also significant predictors at T1 only. While support from multiple different sources may have been more

important in the early days of the pandemic, support from peers was key in maintaining long-term mental health.

**KEYWORDS**
COVID-19, early adolescence, mental health and well-being, peer support, protective factors

## 1 │ INTRODUCTION

The COVID-19 pandemic was an unprecedented event that prompted global unease. Lockdown restrictions in the United Kingdom began on March 23, 2020, as the Government felt it was necessary to save lives and stop the spread of the virus (Iacobucci, 2020). Restrictions included social distancing measures, stay-at-home orders, self-isolation, and closures of educational institutions around the country (Smith et al., 2020). The measures prevented movement and contact outside of the home, aiding in the reduction of infection rates, and overwhelming intensive care units (Colbourn, 2020). To date, schools have been closed for most pupils for two time periods: March–July 2020 and January–June 2021. Thus, school closures have accounted for 8 months of missed education for children.

As a result of the school closures, early adolescents (ages 11–14) have been one of the most disadvantaged populations during the lockdown (López-Bueno et al., 2021). Many young people from lower socioeconomic backgrounds have been deprived of contact with their peers and cognitive and physical stimuli essential for their growth. Early adolescence is a critical period in terms of mental health, with 50% of lifetime mental health difficulties beginning by age 14 (Kessler et al., 2005). Early adolescence is also a key developmental period, where young people are enhancing their social skills and creating new relationships (Vieno et al., 2007) commonly associated with positive mental health and wellbeing (Arslan, 2017). School closures during lockdown reduced the ability for adolescents to connect with others, leading to concerns of heightened anxiety, loneliness, and negative well-being (Singh et al., 2020). Loneliness and social isolation in childhood is linked to posttraumatic stress disorder, cardiovascular disease, obesity, emotional development (López-Bueno et al., 2021), and depression (Loades et al., 2020). It is thus vital that any potential negative impacts of the pandemic on adolescents are identified, so that effective mitigation strategies can be implemented.

Many suggest that children's mental health is disproportionally affected and overlooked during disasters, causing them to lose resilience factors and familial support (Danese et al., 2020). Indeed, while multiple studies were conducted early in the pandemic, to ascertain immediate impacts on adolescents' mental health and well-being, there is little known about how the extended and multiple periods of lockdown impacted adolescent mental health (Bignardi et al., 2020). The lockdown may have influenced their mental health in various ways, including decreased access to play and activities, which may have lowered their mood. Indeed, the depression rating of UK children grew considerably during the lockdown, compared to 18 months before (Bignardi et al., 2020). Because of the increased frequency of time spent at home during the lockdown, it was also projected that family violence and trauma would increase (Chanchlani et al., 2020).

In particular, there have been specific concerns regarding the effect of COVID-19 on the mental health of vulnerable groups, such as LGBTQ+ youth. Before the pandemic, LGBTQ+ youth were at an increased risk of anxiety, depression, and suicide (Green et al., 2020). Reduced social connections from school closures may negatively affect this group of young people, as peer interactions are vital for promoting well-being and suicide prevention. Many youth belonging to this group receive minimal family support and rely on peer interactions for encouragement (Chatterjee et al., 2020). Therefore, the school closures may have diminished the amount of support these individuals received, potentially negatively affecting their mental health and well-being.

Current reviews regarding the effects of lockdown on adolescent mental health are mixed. Home education posed challenges with unreasonable learning expectations owing to limited living space and inadequate learning equipment (Clemens et al., 2020). Adolescents may also have been subject to parental tension, which can increase anxiety and

reduce coping strategies. Additionally, adolescents with mental health difficulties (MHDs) suffered from school closures, as it reduced the availability of resources including peer support groups, mental health support, and face-to-face services (Lee, 2020). A school routine is an essential coping mechanism for adolescents with MHDs, and in particular for those with special education needs. Indeed, autistic children and young people were at particular risk of MHDs due to the disruption in their daily routines (Ashworth, Kirkby, et al., 2021). Furthermore, school closures can exacerbate existing inequalities for children, as many households are not prepared for home schooling (e.g., lack of Internet access or computers at home), which can deepen the education gap (Armitage & Nellums, 2020; Caffo et al., 2020). Schools also provide disadvantaged children with access to healthcare, safeguarding, and supervision, as well as helping with their personal hygiene, physical activity, and healthy eating habits (Ghosh et al., 2020).

However, not all young people experienced difficulties during lockdowns. Some children were relieved at the reduced schoolwork and enjoyed the increased screen time. Positive outcomes were associated with young people who had strong relationships with their parents, as one study found that some students at home performed better than others when receiving positive parental structure and support (Clemens et al., 2020). These young people were suited for online learning and were not subject to bullying or social exclusion. Furthermore, children who played with their parents seemed to increase well-being and resilience as it was an opportunity for shared experiences (Idoiaga Mondragon et al., 2020). Children with greater resilience had optimistic views regarding the lockdown and coped well with stress (Ashworth et al., 2022).

Resilience is the psychological ability to quickly rebound from a crisis (Masten & Barnes, 2018). This materializes through close relationships with primary caregivers and support offered in difficult times. Resilience was especially important during lockdown as it enables adolescents to self-regulate, adapt to situations, and solve problems. Although evidence suggests that the lockdown will negatively affect adolescents' mental health, some argue that it is an opportunity to build resilience (Dvorsky et al., 2021). Home learning can offer struggling children the chance to succeed with high self-efficacy and competence, at their own pace. Some may discover new hobbies or skills, while others may foster healthy family relationships. Additionally, children with moderate anxiety may adapt positively to the lockdown as it can drive protective behaviors such as hand-washing and physical distancing (Dvorsky et al., 2021). This was confirmed in a study that found during school closures, adolescents aged 13–14 in the Southwest of England had a decreased risk of anxiety and increased well-being (Widnall et al., 2020). School connectedness grew as students bonded with one another and teachers were able to create positive connections with pupils using new online teaching and communication methods. The reduction of stressors in the school environment, including academic pressure and bullying, may have resulted in positive effects.

The UK Government has recognized the MHDs of adolescents during the pandemic, suggesting one in six now suffer from a mental illness, up from one in nine in 2017 (NHS Digital, 2020). With this, there still remains little evidence regarding protective factors for children during the COVID-19 pandemic and school closures. Additionally, there is limited research for factors which may increase adolescents' mental health and well-being during the lockdown and reintegration into school. In the current crisis, youth rights and needs have been ignored, implying that their mental health may suffer in the long run (Townsend, 2020). In developing appropriate coping strategies to overcome adolescents' MHDs, it is crucial to consider their thoughts and feelings regarding the lockdowns (Idoiaga Mondragon et al., 2020). Implementing interventions (e.g., increasing resilience, optimism) to reduce MHDs in early crises can prevent and reduce poor longer-term health outcomes (Colizzi et al., 2020). Thus, understanding effective protective factors for positive well-being can help inform new practices and resources offered to adolescents to prevent the onset and maintenance of MHDs.

The Adolescents' Lockdown-Induced Coping Experiences (ALICE) study investigated the protective factors for MHDs among adolescents across the Northwest of England during the COVID-19 pandemic (Ashworth, Hunt, et al., 2021; Ashworth et al., 2022). Phase 1 of this study was conducted from September to December 2020, with 290 participants aged 11–13 years old. The results found that greater positive lockdown experience, higher optimism, and following Government guidelines were protective factors for internalizing difficulties and well-being. Strong family connection was a protective factor for externalizing difficulties, whilst stronger peer connection was

important for wellbeing. However, it is also vital to recognize the longer-term impacts of the lockdowns, particularly as they were more frequent and lasted longer than initially expected. Therefore, the current study aimed to conduct a 6-month follow-up to the ALICE study (phase 2), to help expand our understanding of this issue.

Similarly, to phase 1 of the ALICE study, this study aimed to examine not only the psychological protective factors, but also the social and environmental factors, that were associated with greater mental health outcomes during the second lockdown-related school closures, in early adolescents in the United Kingdom. Specifically, we aimed to identify the factors within the home, school, peers, and the community, as well as the factors related to the pandemic specifically (e.g., adherence to guidelines, living with key workers) that were associated with better mental health outcomes (internalizing difficulties [ID], externalizing difficulties [ED], well-being [WB]) during the second round of school closures. Thus, the present study addresses a key gap in the present literature by identifying protective factors across multiple domains for positive mental health outcomes among early adolescents during the COVID-19 pandemic. Furthermore, the study addresses the lack of information regarding how early adolescents coped during the second school closure specifically, an area that is currently under-researched. Finally, we aimed to address the lack of information currently available regarding differences in protective factors for mental health and wellbeing between the first and second lockdown.

## 2 | METHODS

### 2.1 | Design

The current study was a follow-up to the initial ALICE study (Ashworth et al., 2022), which was a study looking at early adolescents' experiences of the COVID-19 pandemic and associated lockdown. The first phase of the ALICE study was conducted between September and December 2020, as schools re-opened following the first national lockdown. Two hundred and ninety pupils in years 7–9 (the first 3 years of secondary education) across five schools participated in phase 1, which involved a cross-sectional online survey consisting of predictors based on participant demographics (e.g., age, gender, sexual orientation, free school meals [FSM] status), participant attitudes to and experiences of lockdown and COVID-19 (i.e., "lockdown factors"), and sources of support, and optimism (i.e., "resilience factors")—all of which are factors often found to be independently associated with mental health and well-being in the extant literature. There were three outcome measures pertaining to mental health: ID, ED, and WB. The present study (phase 2) was conducted between March and May 2021, 6 months after the initial phase, and immediately after the second national lockdown-related school closures. The same survey was re-administered to pupils of the same age across the same five schools. The ALICE study received ethical approval from the institutional Research Ethics Committee (Ref: 20/NSP/037).

### 2.2 | Participants and recruitment

Schools were recruited to the ALICE study through volunteer sampling. All mainstream secondary schools in the Northwest region of England were eligible to participate. Schools were approached through existing contacts and networks in the region. Five secondary schools volunteered to participate in the study; all met the inclusion criteria. Three schools were coeducational and two were single sex (one boys' school and one girls' school). The single sex schools were also academically selective, and the girls' school was fee paying. Schools that participated in phase 1 of the ALICE study were approached again and asked to consent to take part in phase 2. Participating schools shared parental information and a link to the survey with parents/carers of all pupils in years 7–9 (the first 3 years of secondary education). If parents/carers consented to their child participating in the study, they were asked to provide them with the survey link. Informed assent was sought from the adolescent participants, who were asked to tick a box at the beginning of the survey if they consented to taking part.

**TABLE 1** Demographic data.

| Demographic | Phase 1 N (%) | Phase 2 N (%) |
|---|---|---|
| Gender | | |
| Male | 152 (52.4) | 53 (73.6) |
| Female | 132 (45.5) | 18 (25.0) |
| Other/prefer not to say | 6 (2.1) | 1 (1.4) |
| Ethnicity | | |
| White | 223 (76.9) | 62 (86.1) |
| Asian/Asian British | 26 (9.0) | 2 (2.8) |
| Mixed ethnicity | 21 (7.2) | 4 (5.6) |
| Chinese/Chinese British | 6 (2.1) | 1 (1.4) |
| Black/Black British | 3 (1.0) | 1 (1.4) |
| Another ethnic group | 6 (2.1) | |
| Sexuality | | |
| Heterosexual | 233 (80.3) | 59 (81.9) |
| LGBTQIA+ | 27 (9.3) | 7 (9.7) |
| Prefer not to say | 29 (10.0) | 5 (6.9) |
| Religion | | |
| Christianity | 95 (32.8) | 40 (55.6) |
| Hinduism | 1.4 4 (1.4) | 1 (1.4) |
| No religion | 150 (51.7) | 23 (31.9) |
| Receiving free school meals | | |
| Yes | 26 (9.0) | 9 (12.5) |
| No | 242 (83.4) | 58 (80.6) |

A total sample size of 72 school children aged 11–14 ($M$ = 12.49, SD = 0.98) in the Northwest of England took part in phase 2 of the survey. 75% identified as male, while 25% identified as female. Additional demographic data can be found in Table 1 (demographics for participants from phase 1 are also provided for reference). Participant demographics were broadly reflective of national averages (Department for Education, 2021b) in terms of the proportion of young people eligible for FSM and those belonging to a Black or Minority Ethnic background.

## 2.3 | Measures

The survey consisted of three parts: part 1 regarded participant demographic characteristics, part 2 asked about lockdown and their experiences, and part 3 included questions pertaining to their mental health and wellbeing. The survey used was the same as that administered in phase 1 (Ashworth et al., 2022), and so measures are summarized here.

### 2.3.1 | Part 1: Demographics

Part 1 included participant characteristics of age, sex, ethnicity, religion, sexual orientation, and FSM status. All questions were optional, with a choice for "prefer not to say."

### 2.3.2 | Part 2: Lockdown experiences

Part 2 had questions pertaining to the children's experiences during lockdown. It began with the type of environment they were living in (e.g., *is anyone in your home "shielding" for COVID-19*). Participants were asked about their knowledge of the virus (*1 = poor; 7 = good*) and three questions about their experience of lockdown each on a five-point Likert scale (*very bad-very good; very hard-very easy; very boring-very fun*). An overarching "lockdown experience" variable was summed, with higher scores indicating a better lockdown experience.

### 2.3.3 | Part 3: Health and well-being

Part 3 included multiple validated measures relating to participants' mental health and well-being during the lockdown. It began with general questions pertaining to their health (e.g., *do you have any long-term medical needs or disabilities?; yes/no/prefer not to say*). Children were then asked about self-harm with a trigger warning at the beginning of each question (e.g., *have you thought about hurting yourself, even if you would not really do it; ever, since the COVID-19 pandemic/lockdowns began; not at all/once or more*). Part 3 also included questions about their mental health difficulties using the Me and My Feelings Scale (M & MF; Deighton et al., 2013), well-being using the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS; Ng Fat et al., 2017), sources of support using four subscales (peer, community, school, and family connection) of the Student Resilience Survey (Lereya et al., 2016), and optimism using the Revised Life Orientation Test (Herzberg et al., 2006). Furthermore, given national statistics indicating a stark rise in deliberate self-harm amongst adolescents over the pandemic (Wong et al., 2022; YoungMinds, 2021), we added further items relating to previous experience and frequency of self-harm (SH) during phase 2.

## 2.4 | Analytic strategy

The three outcome variables used in the present study were all continuous in nature, and were derived from the M & MF Scale and SWEMWBS. M & MF is a validated 16-item self-report measure with two subscales: internalizing difficulties (e.g., emotional problems) and externalizing difficulties (e.g., behavioral problems). Scores were summed for each subscale, with higher scores indicating higher levels of difficulties. SWEMWBS is a seven-item self-report measure, consisting of a series of positively-worded statements about thoughts and feelings. Scores were summed for each participant, with higher scores indicative of higher positive mental well-being.

An individual one-way between-groups MANOVA was performed for each demographic in parts 1 and 2 (Table 3) to test their significance. Five significant independent variables emerged; therefore, the MANOVA was performed to investigate the differences in gender, sexual orientation, number of parents, shielding, and following government guidance with the three dependent variables.

Three hierarchical multiple regression analyses were conducted, using a least square estimation, to establish how much variance in the three outcome variables (ID, ED, WB) could be accounted for by the predictor variables (lockdown and resilience factors), after controlling for demographic characteristics (age, gender, sexual orientation, FSM status). The demographic characteristics were added in step 1 to control for their effects. Lockdown factors

were added in step 2 to determine the unique variance on the data relating to COVID-19 factors. Finally, resilience factors were added in step 3 to further establish protective factors. As the number of upper-level units (i.e., schools) was too small to warrant a multilevel model, we accounted for any potential school-level variance by including school as a covariate, along with demographic variables, in the first step of the regression models.

## 3  |  RESULTS

### 3.1  |  Descriptive statistics

Descriptive statistics can be viewed in Table 2. Well-being levels were in line with population norms for SWEMWBS (Ng Fat et al., 2017) and the mean scores for ID and ED fell around the mid-way point for both variables. There were no significant differences between scores for any of the outcome measures between the two timepoints.

On average, participants rated themselves as having high levels of support from home (18.15/20), school (14.18/20), the community (15.92/20), and their peers (45.20/50). In phase 2, scores for peer support were slightly higher, whereas scores for community support were slightly lower; however, these differences were not statistically significant. There was a significant difference between timepoints on how often participants kept in touch with others [$F(1) = 92.52$, $p < .0001$, partial eta squared = .21], with them keeping in touch more often with their peers at phase 2 than phase 1.

There was a significant difference between timepoints on COVID-19 knowledge [$F(1) = 4.37$, $p = .04$, partial eta squared = .013], with those in phase 2 showing higher levels of knowledge about COVID-19. There was also a significant difference between timepoints on lockdown experience, with those in phase 2 having a significantly worse experience of lockdown than those in phase 1 [$F(1) = 4.15$, $p = .04$, partial eta squared = .012]. There were no significant differences between timepoints on beliefs around COVID-19 suffering, fear of COVID-19, or COVID-19 infection risk.

### 3.2  |  Bivariate correlations

Bivariate correlations can be viewed in Table 3. Levels of optimism had the strongest relationship with WB and ID. For lockdown-related factors, shielding and lockdown experience correlated with WB and ID, while following government guidance correlated with all DVs. The family's knowledge of COVID-19 correlated with ED only. Family connection and self-harm were the two resilience factors that correlated with all three outcomes, while school connection, community connection, and peer support correlated with WB and ID only.

### 3.3  |  Regressions

Regression coefficients for phase 2 can be viewed in Table 4, and comparisons of significant predictors between phase 1 and phase 2 are presented in Table 5. Full results from phase 1 are available in Ashworth et al. (2022).

#### 3.3.1  |  Model 1—Internalizing difficulties

For Model 1, a significant model was identified in step 1 [$F(4,65) = 8.611$, $p < .001$] and step 3 [$F(19,65) = 5.494$, $p < .001$]. The model as a whole was significant as indicated by the ANOVA. Demographic characteristics were entered at step 1, explaining 36% of the variance in ID, indicative of a large effect size. Lockdown characteristics

**TABLE 2** Descriptive statistics.

|  | Mean | SD | Observed ranges |
|---|---|---|---|
| *Part 2* |  |  |  |
| Lockdown experience | 2.63 | 0.94 | 1–5 |
| Fear of COVID-19 | 3.60 | 0.83 | 1.22–5.78 |
| Number of parents at home | 1.81 | 0.40 | 1–2 |
| Number of siblings at home | 1.11 | 0.80 | 0–3 |
| Personal knowledge of COVID-19 | 5.92 | 1.23 | 2–7 |
| Family knowledge of COVID-19 | 6.40 | 0.89 | 4–7 |
| Following government guidance | 5.81 | 1.23 | 1–7 |
| *Part 3* |  |  |  |
| Resilience: Family connection | 4.62 | 0.55 | 2.75–5 |
| Resilience: School connection | 3.57 | 1.12 | 1–5 |
| Resilience: Community connection | 3.98 | 1.34 | 1–5 |
| Resilience: Peer support | 4.13 | 0.88 | 1.09–5 |
| Optimism | 3.26 | 0.48 | 2.20–5 |
| Self-harm | 1.17 | 0.31 | 1–2 |
| Outcomes |  |  |  |
| Internalizing difficulties | 1.70 | 0.45 | 1–3 |
| Externalizing difficulties | 1.59 | 0.30 | 1.17–2.50 |
| Well-being | 3.49 | 0.84 | 1.43–5 |

were added in step 2; the model was not significant, but it added an additional 15% to the overall variance explained. Resilience factors were added in step 3, explaining an additional 18%. At step 3, after controlling for demographic characteristics, two resilience factors, self-harm ($\beta = .276$, $p = .035$) and peer support ($\beta = -.276$, $p = .029$) emerged as significant predictors. Greater levels of self-harm indicated higher levels of ID (and thus was a risk factor), whilst greater peer support contributed to lowered ID (and thus was protective). No other predictors were significant.

In contrast to phase 1, where two lockdown variables were protective factors, no lockdown factors were significant predictors in phase 2. Optimism was also no longer a significant predictor at phase 2. In terms of sources of support, while higher levels of community and school connection were significant protective factors in phase 1, peer support was instead protective in phase 2.

### 3.3.2 | Model 2—Externalizing

For Model 2, a significant model was identified at step 2 [$F(13,65) = 3.683$ $p < .001$] and step 3 [$F(19,65) = 3.272$, $p = .001$]. The model as a whole was significant at step 2 and 3, indicated by the ANOVA. Demographic characteristics were added at step 1, explaining 8% of the variance, indicative of a small effect size. Lockdown factors were added at step 2, accounting for an additional 40% of the variance. Finally, resilience factors were added at step 3. After controlling for the demographic characteristics, two lockdown factors emerged as significant

**TABLE 3** Bivariate correlations: Phase 2.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Experience | – | -.01 | .27* | -.23 | .01 | .20 | -.14 | -.08 | -.01 | .12 | .09 | .23* | .18 | .11 | -.12 | -.26* | -.02 | .30* |
| 2. Fear | | – | .11 | .09 | .11 | -.34** | -.08 | -.02 | -.03 | -.02 | -.00 | -.08 | -.08 | .06 | .07 | .13 | .07 | -.09 |
| 3. N parents | | | – | -.06 | -.30* | -.15 | -.00 | .10 | .24* | .15 | .03 | -.07 | .17 | -.04 | .01 | -.29 | -.30* | .14 |
| 4. N siblings | | | | – | -.01 | -.11 | -.15 | -.16 | -.19 | -.17 | -.12 | -.24* | -.19 | -.02 | .14 | .17 | .06 | -.17 |
| 5. Keyworker | | | | | – | .19 | -.19 | .05 | -.28* | -.12 | .09 | -.02 | .06 | .02 | -.08 | .07 | .16 | -.16 |
| 6. Shielding | | | | | | – | .06 | -0.12 | .02 | .02 | .17 | .07 | .14 | .17 | -.21 | -.33** | -.22 | .25* |
| 7. Personal knowledge | | | | | | | – | .64** | .25* | .16 | .16 | .26* | .23 | .14 | -.14 | -.07 | .05 | .11 |
| 8. Family knowledge | | | | | | | | – | .12 | .07 | .07 | .12 | .32** | .05 | .16 | .12 | .30* | -.10 |
| 9. Guidance | | | | | | | | | – | .57** | .27* | .28* | .17 | .39** | -.37** | -.31** | -.50** | .51** |
| 10. Home support | | | | | | | | | | – | .32** | .54** | .35** | .31** | -.37** | -.41** | -.34** | .63** |
| 11. School support | | | | | | | | | | | – | .51** | .43** | .29* | -.48** | -.45** | -.08 | .50** |
| 12. Community support | | | | | | | | | | | | – | .33** | .36** | -.40** | -.38** | -.13 | .50** |
| 13. Peer support | | | | | | | | | | | | | – | .34** | -.06 | -.46** | .11 | .40** |
| 14. Optimism | | | | | | | | | | | | | | – | -.21 | -.42** | -.16 | .46** |
| 15. Self-harm | | | | | | | | | | | | | | | – | .55** | .41** | -.47** |
| 16. Internalizing | | | | | | | | | | | | | | | | – | .41** | -.67** |
| 17. Externalizing | | | | | | | | | | | | | | | | | – | -.42** |
| 18. Well-being | | | | | | | | | | | | | | | | | | – |

*p < .05; **p < .01.

**TABLE 4** Hierarchical multiple regression models (step 3).

| | Internalizing problems (T2) | | | Externalizing problems (T2) | | | Well-being (T2) | | |
|---|---|---|---|---|---|---|---|---|---|
| | $\Delta R^2$ | $\beta$ | $sr$ | $\Delta R^2$ | $\beta$ | $sr$ | $\Delta R^2$ | $\beta$ | $sr$ |
| *Step 1: Demographics* | .361*** | | | .079 | | | .199* | | |
| Gender | | .275* | | | −.047 | | | −.119 | |
| Sexual orientation (T2) | | .040 | | | −.146 | | | .013 | |
| Age | | .083 | | | −.189 | | | .013 | |
| FSM | | .046 | | | −.217 | | | −.062 | |
| *Step 2: Lockdown Factors* | .153 | | | .401*** | | | .298* | | |
| Experience of lockdown | | −.026 | | | .207 | | | .207* | |
| Fear of COVID-19 | | .007 | | | −0.086 | | | −0.022 | |
| Number of parents at home | | −.176 | | | −.210 | | | −.067 | |
| Number of siblings at home | | .035 | | | −.000 | | | −.013 | |
| Personal knowledge of COVID-19 | | −.014 | | | .045 | | | .051 | |
| Family knowledge of COVID-19 | | .180 | | | .200 | | | −.193 | |
| Following government guidance | | .126 | | | −.356* | | | .148 | |
| Family member shielding | | −.130 | | | −.226 | | | .117 | |
| Family member keyworker | | .145 | | | .047 | | | −.147 | |
| *Step 3: Resilience factors* | .180*** | | | .095 | | | .178* | | |
| Home connection | | −.064 | | | −.188 | | | .314* | |
| School connection | | −.093 | | | .105 | | | .223 | |
| Community connection | | −.006 | | | −.066 | | | .005 | |
| Peer support | | −.276* | | | .289* | | | .134 | |
| Optimism | | −.201 | | | −.064 | | | .128 | |
| Self-harm | | .276* | | | .256 | | | −.014 | |
| *Total $R^2$* | .694 | | | .575 | | | .675 | | |

*Note*: Standardized regression coefficients reported from step 3 of the model.

*p < .05; **p < .01; ***p < .001.

predictors: family's knowledge of COVID-19 ($\beta = .427$, $p = .004$) and following government guidance ($\beta = −.473$, $p < .001$) were associated with lowered levels of ED and were thus protective. There was also one significant resilience factor, peer support ($\beta = .289$, $p = .052$), with higher peer support associated with lowered ED.

In comparison with phase 1, while lockdown factors were still significant predictors, it was now family knowledge of COVID-19 and following government guidance that were predictors, rather than lockdown experience, as in phase 1. At phase 2, the significant resilience factor was peer support, as opposed to family connection and optimism at time 2.

**TABLE 5** Comparison of protective factors between phase 1 (T1) and phase 2 (T2).

| Protective factors | Internalizing difficulties | | Externalizing difficulties | | Well-being | |
| --- | --- | --- | --- | --- | --- | --- |
| | T1 | T2 | T1 | T2 | T1 | T2 |
| *Lockdown factors* | | | | | | |
| Lockdown experience | ✓ | | ✓ | | ✓ | ✓ |
| Adherence to guidance | ✓ | | | ✓ | ✓ | |
| Number of parents at home | | | ✓ | | | |
| Family member as keyworker | | | ✓ | | ✓ | |
| Family knowledge of COVID-19 | | | | ✓ | ✓ | |
| *Resilience factors* | | | | | | |
| Peer support | | ✓ | | ✓ | ✓ | ✓ |
| School support | ✓ | | | | | |
| Community connection | ✓ | | | | | |
| Family connection | | | ✓ | | | |
| Optimism | ✓ | | ✓ | | ✓ | |

### 3.3.3 | Model 3—Well-being

For Model 3, each step was significant. After the variables in step 1 were added, the overall model explained 5% of the variance ($p = .004$). After step 2, it explained 31%, and after block 3, it explained 55%. Step 2 explains an additional 26% of the variance ($p < .001$), and step 3 an additional 25% of the variance ($p < .01$). The model as a whole was significant ($F(17) = 16.68$, $p < .001$).

After controlling for demographic factors, one lockdown factor emerged as a significant predictor: lockdown experience. A more positively rated lockdown experience ($\beta = .207$, $p < .001$), was associated with higher levels of well-being, and was thus protective. One resilience factor, peer support, was also protective, with higher ratings of peer support ($\beta = .314$, $p < .05$) associated with higher levels of well-being.

In comparison to phase 1, there were fewer significant protective factors at phase 2 for well-being. Adherence to government guidance, having a family member as a keyworker, and family knowledge of COVID-19 were no longer significant lockdown factors, and optimism was no longer a significant resilience factor. However, lockdown experience and peer support were significant protective factors at both timepoints.

## 4 | DISCUSSION

The present study was a 6-month follow-up aimed at identifying protective factors associated with better mental health and well-being for 11 to 14-year-olds, following the second COVID-19 lockdown in the United Kingdom. Peer support was a protective factor across all three mental health outcomes, adherence to government guidelines and family knowledge of COVID-19 were protective for ED only, and lockdown experience was protective for WB only. While optimism and lockdown experiences were protective factors across all three outcomes at phase 1, lockdown experience was only a significant predictor of WB at phase 2, and optimism was not significant at all. Furthermore, school support and community and family connection were significant predictors of at least one

mental health outcome at phase 1 but, again, they were not significant predictors for any of the three outcomes at phase 2.

Of particular note in the present study is the seemingly vital role of peer support in promoting mental health and well-being in the later stages of the pandemic, with it being a significant protective factor for all three outcomes. Peers were the only source of support that were significant at phase 2, despite school support, family connection, and community connection also playing a significant role in adolescents' outcomes at phase 1. Thus, this suggests a shift over time in the relative importance of different sources of support. While the provision of support from multiple sources spanning school, family, and the wider community was more important for adolescents' mental health during the early days of the pandemic, it was peers who were seemingly more important in promoting positive mental health outcomes in the longer term. This also coincides with a significant increase in reports of keeping in touch with peers from phase 1 to phase 2. The importance of peers in adolescents' general development (Shanahan et al., 2007; Telzer et al., 2018), as well as overall wellbeing during the pandemic specifically, has been emphasized in previous studies (Demkowicz et al., 2022). For instance, according to one study, 58% of 13 to 25-year-olds reported that loneliness/isolation had the greatest influence on their mental health during lockdown (YoungMinds, 2021). However, the findings from the present study highlight the particularly important role of peer support during the *later* stages of the pandemic.

Schools provide adolescents with access to peers and opportunities for socialization (Singh et al., 2020), and may be a useful place for them to foster social relationships and access peer support following the pandemic. Indeed, the Government has mandated £79 million for mental health support in schools, as an attempt to recognise the impact of lockdown on adolescents (Department of Health and Social Care, 2021). However, the mental health initiatives may be overshadowed by Government initiatives to "catch up" on learning for pupils who missed school due to the lockdown, such as instituting a longer school day (Department for Education, 2021a; Weale, 2021). While academically beneficial, these initiatives may put additional strain on pupils and reduce opportunities for engagement with peers. Instead, some advocate for the extended school days provide a safe space for students to focus on play and socialization, rather than concentrating on enhanced learning (British Psychological Society, 2021; Cartwright-Hatton et al., 2020). Given the potential importance of peers to adolescents' longer-term mental health, it is essential that schools provide pupils with opportunities to maintain a strong sense of peer connection, to promote positive reintegration into school and reduce internalizing and externalizing difficulties. One way to do this may be through the introduction of peer support initiatives into the classroom, which have been shown promote wellbeing and positive mental health (AFNCCF, 2019). These types of initiatives not directly benefit mental health outcomes, but also facilitate appropriate and quality access to help and signposting for further support (AFNCCF, 2019). Given that adolescents have a preference for help-seeking from informal sources, such as peers, if they are experiencing mental health difficulties (Radez et al., 2020; Rickwood et al., 2005), these initiatives may be particularly valuable for this age group.

Regarding lockdown experience, mean scores for this were significantly lower than those in phase 1, suggesting that adolescents had a harder and less enjoyable experience. This is consistent with several studies that have found the lockdown reduces wellbeing, and that the experience is worse the longer it lasts (Evans et al., 2021; Mead et al., 2020; Murat Baldwin et al., 2021). Furthermore, there is some evidence to suggest that adolescents experienced increased self-harming behavior and a loss of hope and motivation for the future in the second UK lockdown, owing to the fact that the second lockdown was more difficult to cope with than the first (Wong et al., 2022; YoungMinds, 2021). However, it is interesting to note that while a positive lockdown experience was a protective factor across all three mental health outcomes during the first phase of the ALICE study, it was a significant predictor of WB only by phase 2. This suggests that lockdown experience may have been less important to adolescents' mental health as the pandemic progressed, despite ratings of the experience being worse. Furthermore, in general, there were fewer lockdown-related factors that emerged as significant predictors at phase 2 than in phase 1. While the reasons for this are not known, it may have been that adolescents were more adjusted to lockdowns by phase 2 and so did not find them as daunting, had identified new ways of coping, or were kept

more engaged by their schooling. Indeed, teachers have reported that they provided more activities, a clearer routine, and greater structure to remote working during the second school closures relative to the first (Ashworth, Kirkby, et al., 2021), which may have been beneficial to adolescents' mental health.

Furthermore, optimism was a protective factor for all three mental health outcomes during phase 1 but was not a significant predictor for any outcome at the follow-up point. This is particularly notable as the mean optimism score in this study was nearly identical to the previous phase, but the relative importance of optimism in terms of adolescents' mental health differed. This is perhaps surprising given that phase 2 was conducted during and shortly after the second UK lockdown, where anxiety, uncertainty, and emotional difficulties were prevalent among adolescents (Shum et al., 2021). Indeed, reports suggest that 67% of adolescents were worried about the long-term impacts of lockdown on their mental health (British Science Association, 2020), and existing research suggests that optimism mediated the relationship between COVID-19 related stress and psychological difficulties (Arslan & Yıldırım, 2021; Arslan et al., 2020). However, optimism was not a significant predictor in either direction in the present study, meaning low levels of optimism were also not a risk factor; instead, optimism may simply have played less of a role in adolescents' mental health outcomes as the pandemic progressed. While further research would be needed to establish the exact reason for this, it may be due to adolescents' adjustment to the situation, or the "new normal," as time progressed. The first lockdown was characterized by concerns from many regarding how long the pandemic would last and what would happen in the future (e.g., Demkowicz et al., 2020); thus, the more optimistic adolescents may have coped better during this time. However, by the second lockdown, the majority of adolescents may have found alternative effective coping strategies that helped ease their anxieties and allowed them to adapt, meaning their mental health was no longer being negatively affected.

## 4.1 | Strengths and limitations

The study has key strengths that can be highlighted. Specifically, this study provided novel insights into the experiences of a particularly vulnerable age group of participants, who have previously been underrepresented in COVID-19 related research. It is also only one of a handful of studies to look at differences in outcomes among early adolescents during the first and second lockdowns and school closures, thus allowing for the identification of changes over time, as well as sustained difficulties. Furthermore, participant demographics were broadly reflective of national averages (Department for Education, 2021b) in terms of the proportion of young people eligible for FSM and those belonging to an ethnic minority background.

However, there are also several limitations to this study that should be noted. The study's recruitment was limited, as the schools were under intense pressure to reopen in a "covid safe" manner when the survey was launched. This caused a delay and reduced the number of participants who took part and resulted in different sample sizes between phase 1 and 2, with a smaller sample size ($n = 72$) for phase 2. Furthermore, participants were limited to the Northwest of England, with a self-selecting sample. This raises the possibility of nongeneralizable findings for this age group nationally. In addition, participant attrition was an issue as, while the survey closed with 141 participants, most of the data were missing and thus unusable for a sizeable proportion of the sample, resulting in the removal of just under half ($n = 69$) of the sample. There was an incentive of a "Socially Responsible Research Award" for participants to download at the end of the survey, but it was not enough to keep them interested in completion. In the future, more schools should be recruited to provide an acceptable sample size for generalizability. Another incentive could also be provided for completing the survey, to achieve maximum participant attrition. It is also worth highlighting potential issues with the use of the term "protective factors" in the present study. There is some contention in the resilience literature regarding the use of the terms protective and promotive factors; some suggest the use of the term "protective factors" is only appropriate when examining the interaction term or moderating effect of factors on the relationship between risk factors and poorer mental health outcomes. Conversely, "promotive" should be used for factors that are directly associated with positive outcomes,

regardless of risk status (Luthar & Zelazo, 2003). As risk factors or interaction terms were not directly explored in the present study, there may be some question over whether protective factors were truly identified. However, Luthar and Cicchetti (2000) have suggested that the emphasis on interaction effects should not detract from the significance of main-effect associations, and the term "protective" should be used in a broader sense, referring to all constructs linked with positive adaptation in the face of risk. Arguably the COVID-19 pandemic has been a risk factor for all adolescents in terms of their mental health and well-being and, although they have not all had equal experiences, evidence suggests that as a group they have been at increased risk of developing mental health difficulties as a result of the pandemic (e.g., Loades et al., 2020). Nevertheless, future research should seek to explore longitudinally the distinct promotive and protective factors that contributed to the onset of adolescent mental health difficulties for at-risk groups, as a direct consequence of the pandemic.

## 5 | CONCLUSION

The present study was a follow-up of the ALICE study, aiming to identify the protective factors for positive mental health outcomes among early adolescents during the second national lockdown and school closures associated with the COVID-19 pandemic. The findings emphasize the particularly important role of peer support in promoting the mental health and wellbeing of early adolescents as we continue to progress through the pandemic, and particularly in the event of any further lockdowns. While support from multiple different sources may have been more important in the early days of the pandemic (Ashworth et al., 2022), it appears that support from peers was key in maintaining long-term mental health.

### CONFLICT OF INTEREST STATEMENT
The authors declare no conflict of interest.

### DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request. Data are available from the authors upon request.

### ORCID
*Danielle Molloy-Vickers* http://orcid.org/0000-0002-0907-3113
*Emma Ashworth* http://orcid.org/0000-0002-5279-4514

### REFERENCES
AFNCCF. (2019). *Peer support for children and young people's mental health and emotional wellbeing: Program facilitator toolkit.*

Armitage, R., & Nellums, L. B. (2020). Considering inequalities in the school closure response to COVID-19. *The Lancet Global Health*, *8*(5), e644. https://doi.org/10.1016/S2214-109X(20)30116-9

Arslan, G. (2017). Social exclusion, social support and psychological wellbeing at school: A study of mediation and moderation effect. *Child Indicators Research*, *11*(3), 897–918. https://doi.org/10.1007/s12187-017-9451-1

Arslan, G., & Yıldırım, M. (2021). Coronavirus stress, meaningful living, optimism, and depressive symptoms: A study of moderated mediation model. *Australian Journal of Psychology*, *73*(2), 113–124. https://doi.org/10.1080/00049530.2021.1882273

Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., & Allen, K. A. (2020). Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the coronavirus stress measure. *International Journal of Mental Health and Addiction*, *19*(6), 2423–2439. https://doi.org/10.1007/s11469-020-00337-6

Ashworth, E., Hunt, A., Chopra, J., Eames, C., Putwain, D. W., Duffy, K., & Saini, P. (2021). Adolescents' lockdown-induced coping experiences (ALICE) study: A qualitative exploration of early adolescents' experiences of lockdown and reintegration. *The Journal of Early Adolescence*, *42*(4), 514–541. https://doi.org/10.1177/02724316211052088

Ashworth, E., Kirkby, J., Bray, L., & Alghrani, A. (2021). The impact of the COVID-19 pandemic on the education, health and social care provision for children with special educational needs and disabilities (SEND): The Ask Listen Act Study. Evidence Briefing: Quantitative Survey Data. https://www.ljmu.ac.uk/-/media/files/ljmu/research/centres-and-institutes/rcbb/quantitative-evidence-briefing.pdf

Ashworth, E., Putwain, D. W., McLoughlin, S., Saini, P., Chopra, J., Rosser, B., & Eames, C. (2022). Ordinary magic in extraordinary circumstances: Predictors of positive mental health outcomes for early adolescents during the COVID-19 pandemic. *Research Square*. https://doi.org/10.21203/rs.3.rs-504757/v1

Bignardi, G., Dalmaijer, E. S., Anwyl-Irvine, A. L., Smith, T. A., Siugzdaite, R., Uh, S., & Astle, D. E. (2020). Longitudinal increases in childhood depression symptoms during the COVID-19 lockdown. *Archives of Disease in Childhood*, *106*, 791–797. https://doi.org/10.1136/archdischild-2020-320372

British Psychological Society. (2021). *Extended school days should focus on play, socialisation and wellbeing of children, say educational psychologists*. https://www.bps.org.uk/news-and-policy/extended-school-days-should-focus-play-socialisation-and-wellbeing-children-say

British Science Association. (2020). *New survey results: Over half of young people expect that COVID-19 will still be having a significant impact on their lives in up to two years' time*. https://www.britishscienceassociation.org/news/new-survey-results-over-half-of-young-people-expect-that-covid-19-will-still-be-having-a-significant-impact-on-their-lives-in-up-to-two-years-time

Caffo, E., Scandroglio, F., & Asta, L. (2020). Debate: COVID-19 and psychological well-being of children and adolescents in Italy. *Child and Adolescent Mental Health*, *25*(3), 167–168. https://doi.org/10.1111/camh.12405

Cartwright-Hatton, S., Dodd, H., & Lester, K. (2020). *Play first: Supporting children's social and emotional wellbeing during and after lockdown [Internet]*. http://www.infocoponline.es/pdf/Childrens-right-to-play.pdf

Chanchlani, N., Buchanan, F., & Gill, P. J. (2020). Addressing the indirect effects of COVID-19 on the health of children and young people. *Canadian Medical Association Journal*, *192*(32), E921–E927. https://doi.org/10.1503/cmaj.201008

Chatterjee, S., Biswas, P., & Guria, R. T. (2020). LGBTQ care at the time of COVID-19. *Diabetes & Metabolic Syndrome*, *14*(6), 1757–1758. https://doi.org/10.1016/j.dsx.2020.09.001

Clemens, V., Deschamps, P., Fegert, J. M., Anagnostopoulos, D., Bailey, S., Doyle, M., Eliez, S., Hansen, A. S., Hebebrand, J., Hillegers, M., Jacobs, B., Karwautz, A., Kiss, E., Kotsis, K., Kumperscak, H. G., Pejovic-Milovancevic, M., Christensen, A., Raynaud, J.-P., Westerinen, H., & Visnapuu-Bernadt, P. (2020). Potential effects of "social" distancing measures and school lockdown on child and adolescent mental health. *European Child & Adolescent Psychiatry*, *29*(6), 739–742. https://doi.org/10.1007/s00787-020-01549-w

Colbourn, T. (2020). Unlocking UK COVID-19 policy. *The Lancet Public Health*, *5*(7), e362–e363. https://doi.org/10.1016/S2468-2667(20)30135-3

Colizzi, M., Lasalvia, A., & Ruggeri, M. (2020). Prevention and early intervention in youth mental health: Is it time for a multidisciplinary and trans-diagnostic model for care? *International Journal of Mental Health Systems*, *14*(1), 23. https://doi.org/10.1186/s13033-020-00356-9

Danese, A., Smith, P., Chitsabesan, P., & Dubicka, B. (2020). Child and adolescent mental health amidst emergencies and disasters. *The British Journal of Psychiatry*, *216*(3), 159–162. https://doi.org/10.1192/bjp.2019.244

Deighton, J., Tymms, P., Vostanis, P., Belsky, J., Fonagy, P., Brown, A., Martin, A., Patalay, P., & Wolpert, M. (2013). The development of a school-based measure of child mental health. *Journal of Psychoeducational Assessment*, *31*(3), 247–257. https://doi.org/10.1177/0734282912465570

Demkowicz, O., Ashworth, E., Mansfield, R., Stapley, E., Miles, H., Hayes, D., Burrell, K., Moore, A., & Deighton, J. (2020). Children and young people's experiences of completing mental health and wellbeing measures for research: Learning from two school-based pilot projects. *Child and Adolescent Psychiatry and Mental Health*, *14*(1), 35. https://doi.org/10.1186/s13034-020-00341-7

Demkowicz, O., Ashworth, E., O'neill, A., Hanley, T., & Pert, K. (2022). "Will My Young Adult Years be Spent Socially Distancing?": A qualitative exploration of adolescents' experiences during the COVID-19 UK lockdown. *Journal of Adolescent Research*. https://doi.org/10.1177/07435584221097132

Department for Education. (2021a). *Catch-up premium*. https://www.gov.uk/government/publications/catch-up-premium-coronavirus-covid-19/catch-up-premium

Department for Education. (2021b). Schools, pupils and their characteristics: Academic year 2019/20.

Department of Health and Social Care. (2021). *£79 million to boost mental health support for children and young people*. https://www.gov.uk/government/news/79-million-to-boost-mental-health-support-for-children-and-young-people

Dvorsky, M. R., Breaux, R., & Becker, S. P. (2021). Finding ordinary magic in extraordinary times: Child and adolescent resilience during the COVID-19 pandemic. *European Child & Adolescent Psychiatry*, *30*, 1829–1831. https://doi.org/10.1007/s00787-020-01583-8

Evans, S., Alkan, E., Bhangoo, J. K., Tenenbaum, H., & Ng-Knight, T. (2021). Effects of the COVID-19 lockdown on mental health, wellbeing, sleep, and alcohol use in a UK student sample. *Psychiatry Research*, *298*, 113819. https://doi.org/10.1016/j.psychres.2021.113819

Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020). Impact of COVID -19 on children: Special focus on the psychosocial aspect. *Minerva Pediatrica*, *72*(3), 226–235. https://doi.org/10.23736/S0026-4946.20.05887-9

Green, A., Dorison, S., & Price-Feeney, M. (2020). Implications of COVID-19 for LGBTQ youth mental health and suicide prevention. *The Trevor Project*. https://www.thetrevorproject.org/2020/04/03/implications-of-covid-19-for-lgbtq-youth-mental-health-and-suicide-prevention/

Herzberg, P. Y., Glaesmer, H., & Hoyer, J. (2006). Separating optimism and pessimism: A robust psychometric analysis of the Revised Life Orientation Test (LOT-R). *Psychological Assessment*, *18*(4), 433–438. https://doi.org/10.1037/1040-3590.18.4.433

Iacobucci, G. (2020). Covid-19: UK lockdown is "crucial" to saving lives, say doctors and scientists. *BMJ*, *368*, m1204. https://doi.org/10.1136/bmj.m1204

Idoiaga Mondragon, N., Berasategi Sancho, N., Dosil Santamaria, M., & Eiguren Munitis, A. (2020). Struggling to breathe: A qualitative study of children's wellbeing during lockdown in Spain. *Psychology & Health*, *36*, 179–194. https://doi.org/10.1080/08870446.2020.1804570

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry*, *62*(6), 593–602. https://doi.org/10.1001/archpsyc.62.6.593

Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health*, *4*(6), 421. https://doi.org/10.1016/S2352-4642(20)30109-7

Lereya, S. T., Humphrey, N., Patalay, P., Wolpert, M., Böhnke, J. R., Macdougall, A., & Deighton, J. (2016). The student resilience survey: Psychometric validation and associations with mental health. *Child and Adolescent Psychiatry and Mental Health*, *10*(1), 44. https://doi.org/10.1186/s13034-016-0132-5

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., Linney, C., McManus, M. N., Borwick, C., & Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry*, *59*(11), 1218–1239.e3. https://doi.org/10.1016/j.jaac.2020.05.009

López-Bueno, R., López-Sánchez, G. F., Casajús, J. A., Calatayud, J., Tully, M. A., & Smith, L. (2021). Potential health-related behaviors for pre-school and school-aged children during COVID-19 lockdown: A narrative review. *Preventive Medicine*, *143*, 106349. https://doi.org/10.1016/j.ypmed.2020.106349

Luthar, S., & Zelazo, L. (2003). Research on resilience: An integrative review. *Resilience and Vulnerability: Adaptation in the Context of Childhood Adversities* (pp. 510–550). Cambridge University Press. https://doi.org/10.1017/CBO9780511615788.023

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology*, *12*(4), 857–885. https://doi.org/10.1017/S0954579400004156

Masten, A., & Barnes, A. (2018). Resilience in children: Developmental perspectives. *Children*, *5*(7), 98. https://doi.org/10.3390/children5070098

Mead, J., Fisher, Z., Tree, J., Wong, P., & Kemp, A. H. (2020). *Predictors of wellbeing during the COVID-19 pandemic: Key roles for gratitude and tragic optimism in a UK based cohort*. https://doi.org/10.31234/osf.io/z2pxg

Murat Baldwin, M., Fawns-Ritchie, C., Altschul, D., Campbell, A., Porteous, D., & Murray, A. L. (2021). *Brief report: Predictors of adolescent mental health and wellbeing during the COVID-19 pandemic*. https://doi.org/10.31234/osf.io/yra6v

Ng Fat, L., Scholes, S., Boniface, S., Mindell, J., & Stewart-Brown, S. (2017). Evaluating and establishing national norms for mental wellbeing using the short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS): Findings from the Health Survey for England. *Quality of Life Research*, *26*(5), 1129–1144. https://doi.org/10.1007/s11136-016-1454-8

NHS Digital. (2020). *Mental health of children and young people in England, 2020: Wave 1 follow up to the 2017 survey*. https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2020-wave-1-follow-up

Radez, J., Reardon, T., Creswell, C., Lawrence, P. J., Evdoka-Burton, G., & Waite, P. (2020). Why do children and adolescents (not) seek and access professional help for their mental health problems? A systematic review of quantitative and qualitative studies. *European Child & Adolescent Psychiatry*, *30*, 183–211. https://doi.org/10.1007/s00787-019-01469-4

Rickwood, D., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people's help-seeking for mental health problems. *Australian e-Journal for the Advancement of Mental Health*, *4*(3), 218–251. https://doi.org/10.5172/jamh.4.3.218

Shanahan, L., McHale, S. M., Osgood, D. W., & Crouter, A. C. (2007). Conflict frequency with mothers and fathers from middle childhood to late adolescence: Within- and between-families comparisons. *Developmental Psychology*, *43*(3), 539–550. https://doi.org/10.1037/0012-1649.43.3.539

Shum, A., Skrlpkauskalte, S., Pearcey, S., Walte, P., & Creswell, C. (2021). Report 10: Children and adolescents' mental health: One year in the pandemic. Co-Space Study, Issue. http://cospaceoxford.org/wp-content/uploads/2021/04/Report-10_05May2021.pdf

Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Research*, *293*, 113429. https://doi.org/10.1016/j.psychres.2020.113429

Smith, L. E., Amlôt, R., Lambert, H., Oliver, I., Robin, C., Yardley, L., & Rubin, G. J. (2020). Factors associated with adherence to self-isolation and lockdown measures in the UK: A cross-sectional survey. *Public Health*, *187*, 41–52. https://doi.org/10.1016/j.puhe.2020.07.024

Telzer, E. H., Hoorn, J. V., Rogers, C. R., & Do, K. T. (2018). Social influence on positive youth development: A developmental neuroscience perspective. *Advances in Child Development and Behavior*, *54*, 215–258. https://doi.org/10.1016/bs.acdb.2017.10.003

Townsend, E. (2020). Debate: The impact of school closures and lockdown on mental health in young people. *Child and Adolescent Mental Health*, *25*(4), 265–266. https://doi.org/10.1111/camh.12428

Vieno, A., Santinello, M., Pastore, M., & Perkins, D. D. (2007). Social support, sense of community in school, and self-efficacy as resources during early adolescence: An integrative model. *American Journal of Community Psychology*, *39*, 177–190. https://doi.org/10.1007/s10464-007-9095-2

Weale, S. (2021). *Schools minister refuses to rule out longer school days in England*. https://www.theguardian.com/education/2021/feb/09/schools-minister-refuses-rule-out-longer-school-days-england

Widnall, E., Winstone, L., Mars, B., Haworth, C., & Kidger, J. (2020). *Young people's mental health during the COVID-19 pandemic*. https://sphr.nihr.ac.uk/wp-content/uploads/2020/08/Young-Peoples-Mental-Health-during-the-COVID-19-Pandemic-Report-Final.pdf

Wong, B. H., Vaezinejad, M., Plener, P. L., Mehdi, T., Romaniuk, L., Barrett, E., Hussain, H., Lloyd, A., Tolmac, J., Rao, M., Chakrabarti, S., Carucci, S., Moghraby, O. S., Elvins, R., Rozali, F., Skouta, E., McNicholas, F., Baig, B., Stevanovic, D., … Ougrin, D. (2022). Lockdown stringency and paediatric self-harm presentations during COVID-19 pandemic: Retrospective cohort study. *BJPsych Open*, *8*(2), e75. https://doi.org/10.1192/bjo.2022.41

YoungMinds. (2021). *Coronavirus: Impact on young people with mental health needs*. https://youngminds.org.uk/media/4350/coronavirus-report-winter.pdf