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# COVID-19: Impact on children living in out-of-home care and their carers

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**Abstract**

Children enter out-of-home care (OOHC) having experienced significant childhood adversities and trauma. Little is known about the short-term impacts of the COVID-19 pandemic on this vulnerable group. To gain some insights, we analysed the early impacts on the well-being and experiences of children in OOHC and their carers using the Pathways of Care Longitudinal Study data prior to and post the first lockdown restrictions. A total of 862 children, young people and their carers were interviewed either pre-COVID-19 restrictions ($n$ = 567) (April 2019–March 2020) or post-COVID-19 restrictions ($n$ = 295) (June–December 2020). While the two groups showed no significant differences in socio-emotional well-being, both the pre- and the post-COVID-19 restriction groups of children in OOHC had slight reductions in socio-emotional well-being. The interviews with the post-COVID-19 group showed that the pandemic restrictions affected children's well-being and behaviour, education, social and physical activities, as well as time spent with their birth family. Likewise, interviews with carers post-COVID-19 found a negative effect on carers' well-being, their ability to manage financially and their capacity to care and access services and support. The article contributes new evidence to inform OOHC policy and practice to support service systems facing unique challenges arising from a pandemic.

**KEYWORDS**

COVID-19 pandemic, longitudinal, out-of-home care, policy

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# 1 | INTRODUCTION

The COVID-19 pandemic has had a major impact on the lives and development of children and young people internationally (OECD, 2020). In Australia, the first confirmed case of COVID-19 was in January 2020, and as cases increased, this led to Australia's borders being closed (Bessell, 2021). Australian authorities implemented measures including social distancing, stay-at-home orders and school closures to control the spread of the disease, resulting in widespread disruptions to everyday life (Katz & Fallon, 2020). The research to date suggests children and families have been affected in both positive and negative ways. Beneficial impacts for some Australian families included less day-to-day busyness (Cornell et al., 2022), strengthened family relationships, new hobbies (Evans et al., 2020) and reduced parenting stress (Herbert et al., 2020). It may be, however, that family economic and educational advantages contribute to these positive attributions. Other families have faced significant burdens and risks throughout the pandemic, including illness, hospitalisation and death, and psychosocial and economic hardships (Jentsch & Schnock, 2020). Children and young people may have faced increased risk of family violence, child abuse and neglect as the pandemic aggravates risk factors experienced by families (Katz et al., 2021; Pereda & Díaz-Faes, 2020). Australian parents have reported higher depression, anxiety, distress and increased alcohol consumption compared with prepandemic levels (Westrupp et al., 2021). Many Australian children appear to have had their well-being challenged across several domains as a result of COVID-19.

School closures had a profound effect on children's educational engagement and outcomes, particularly in rural and poor communities where access to digital learning may be limited (Toros & Falch-Eriksen, 2020). In Australia, it has been estimated the achievement gap between advantaged and disadvantaged children has substantially increased during remote learning (Sonnemann & Goss, 2020). Limited computer and Internet access (digital poverty) (Johnson, 2020), together with low levels of parental confidence (Morse et al., 2022), may be experienced by vulnerable families in supporting remote learning. Furthermore, children experienced a lack of face-to-face connections with their peers and a cessation of outside-of-school activities, contributing to a sense of loneliness and social isolation. The protective value of schools in identifying child abuse has been reduced during lockdown, with schools in many Australian jurisdictions reporting fewer instances of suspected abuse to child protection services during lockdown (Katz et al., 2021).

The mental health consequences of the pandemic for children have been noted in Australia (Goldfeld et al., 2022; Sicouri et al., 2022), with increases in demand for telephone counselling, psychological services via telehealth and face-to-face services (Batchelor et al., 2021). Children's psychological well-being may have been directly affected by a change in routines and disruptions to everyday activities through lockdowns (Collins & Baldiga, 2020) and through factors such as social isolation, conflict in families, child maltreatment and anxiety about the future (Jentsch & Schnock, 2020). A recent international systematic review of the effects of COVID-19 on child and adolescent mental health concluded that lockdowns have contributed to psychological distress for many children, with particular challenges for those with preexisting mental health difficulties (Panchal et al., 2021). Similarly, an Australian study found one in three children and young people experiencing high to very high levels of difficulties and those with preexisting vulnerabilities were two to three times at greater risk of having mental health symptoms in the clinical range than other children (Sicouri et al., 2022). However, some children may have experienced less distress because lockdowns gave them respite from negative school experiences and challenging peer relationships (Larsen et al., 2021).

## 1.1 | Pandemic-related impacts on children in out-of-home care and their carers

Examining the effects of the pandemic on vulnerable children, including those in out-of-home care (OOHC), is still at early stages (Jones et al., 2020). Children in OOHC experience a sequence

of precare and within-care developmental challenges (early and prolonged exposure to maltreatment; loss of their parents; adjusting to new families and OOHC placements; managing family and carer relationships; exposure to OOHC systemic stressors), which increase their developmental vulnerability to the effects of new adversity (Lee et al., 2021; McCrory & Viding, 2015; Tarren-Sweeney, 2016). From the start of the pandemic, concerns were raised about the potential impact of COVID-19 restrictions, in particular movement restrictions, including in-person visits from caseworkers affecting monitoring, assessment and support (Collins & Baldiga, 2020; Jentsch & Schnock, 2020). Face-to-face contact with birth families has also been restricted (Katz et al., 2021), which, together with delays in reunification planning (Lee et al., 2021), may contribute to attachment difficulties (Singer & Brodzinsky, 2020) and feelings of isolation (Wong et al., 2020). There is further concern that the increasing pressures of the pandemic may have led to placement instability (Galvin & Kaltner, 2020) Reservations have been also raised about safety for some children in OOHC, given schools are a critical part of the reporting process for child welfare systems and were less able to monitor for child maltreatment during closures and at-home learning (Jentsch & Schnock, 2020; Lee et al., 2021).

Like parents, carers of children in OOHC may also have experienced increased parental stress since the start of the pandemic. One initial study in the United States found foster carers with fewer financial resources, poorer mental health and raising children solo experienced heightened parenting stress (Miller et al., 2020). Carers may have been challenged by trying to work from home, provide childcare and support home-based learning (Toros & Falch-Eriksen, 2020). Digital schooling may have been difficult to engage with for some children in OOHC who already face educational vulnerability, and some carers may not have the educational resources to support children with their learning (Townsend et al., 2020). Additionally, some of the existing challenges experienced by children in OOHC—such as trauma, mental health difficulties, self-harm, suicidal behaviours and running away—may have increased with the removal of supports in lockdown isolation (Miller et al., 2020). The combination of these pressures can contribute to placement breakdown (Wong et al., 2020). Children living in kinship care often live with older grandparents, who may be at increased risk of COVID-19 hospitalisation and death (Wilke et al., 2020). Furthermore, Aboriginal and Torres Strait Islander kinship carers may also face increased risks of COVID-19 (Finlay & Wenitong, 2020). To the authors' knowledge, no Australian studies exploring the experiences of this group of carers have been published to date.

## 1.2 | The current study

This study is located in NSW, Australia, where on 30 June 2021, there were 15,895 children in OOHC, of which 6829 (43%) were Aboriginal. Around 8527 of the children were placed in kinship care, while 6354 were in foster care and 548 in residential care (Australian Institute of Health and Welfare, 2021). The POCLS population cohort is a census of all children and young people who entered OOHC for the first time in NSW over the 18-month period between May 2010 and October 2011. A subset of children and young people who went on to receive final Children's Court care and protection orders by 30 April 2013 were eligible to participate in the study.

The purpose of this study was to first understand the experiences of children in OOHC and their foster and relative/kinship carers during the early phases of the COVID-19 pandemic in NSW, and second, to contribute evidence to inform OOHC policy and practice to support service systems facing challenges due to the pandemic. Through qualitative interviews and standardised assessments, we sought to understand the early impacts of COVID-19 on the well-being and experiences of children in OOHC and the impacts on their carers' mental health and satisfaction with being a carer. In this examination, we sought to understand whether there were differences based on placement type, Aboriginality or age of the child.

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# 2 | METHODOLOGY

The POCLS has been following a cohort of 4126 children and young people as they first entered OOHC in NSW. The POCLS aimed at better understanding the life course development and experiences of children living in or who have exited from OOHC and the factors that shape their outcomes. Ethical approval was obtained from the University of NSW Human Research Ethics Committee, Aboriginal Health and Medical Research Council of NSW Ethics Committee, NSW Department of Education and Communities State Education Research Approval Process and the NSW Population & Health Services Research Ethics Committee. The POCLS data collection measures children's development and experiences prospectively at 18- to 24-month intervals (waves), with the fifth wave being the most recent. Data are collected from child and carer individual interviews, and it typically takes 18–24 months to complete all of the child and carer interviews for each wave.

This study utilises POCLS data to understand the short-term impacts of COVID-19 on children in OOHC, and their families and carers. Interviewing for Wave 5 of the POCLS commenced in April 2019, so was already underway when the first COVID-19 cases were detected in Australia in January 2020. Across NSW, a strict lockdown was in place from 23 March 2020 to 25 May 2020. This was followed by a slow easing of restrictions up until 25 June 2020. Interviewing was paused during the strict lockdown, and the mode of data collection was changed from face-to-face to telephone interviewing. Interviewing recommenced in June 2020 and was complete by the end of December 2020. Interviews that were conducted prior to the strict lockdown (between April 2019 and March 2020) are referred to as the "pre-COVID-19" subcohort, and interviews conducted after the strict lockdown (between June and December 2020) are referred to as the "post-COVID-19" subcohort.

The timing of the data collection period provided a unique opportunity to understand the impact of COVID-19 on this population. New questions were added to the post-lock down interviews to understand the impact of COVID-19. Children were asked about how COVID-19 impacted their school work, social activities, sport and activities and relationships with the people they live with and those who are special and important to them. The children's carers were asked their perspectives on how COVID-19 had impacted the children and also the impact on themselves. These questions were informed by the Living with the COVID-19 Experience Monash University study (Fisher et al., 2020), the impacts of COVID-19 on Canadians' study (Statistics Canada, 2020) and through consultation with the POCLS scientific committee.

The incidence of COVID-19 in the NSW population was very low in 2020. At the stage that POCLS telephone interviews commenced in June 2020, fewer than one in every 2500 NSW residents had had a confirmed case of COVID-19, and by the end of fieldwork, it was only just over one in 2000 NSW residents. None of the interviewed samples had had a case of COVID-19 by the time of their interview.

## 2.1 | Sample

Table 1 provides a description of the pre-COVID-19 ($n$ = 567) and post-COVID-19 ($n$ = 295) Wave 5 subcohorts.

## 2.2 | Measures

Social-emotional well-being was measured in this study from the Child Behaviour Checklist Total Problems T score. The Child Behaviour Checklist (CBCL) (Achenback & Rescorla, 2001) measures a range of common child and adolescent problem behaviours across eight empirically derived clinical subscales; as well as two higher-order, broadband scales approximating spectrums of depressive/anxious symptoms (internalising) and disruptive behavioural symptoms (externalising); as well as a total problems score that provides a measure of global socio-emotional well-being

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(Achenback & Rescorla, 2001). In addition to continuously distributed scores, the CBCL defines scores as being within "normal," "borderline clinical" and "clinical" ranges. The psychometric properties of the CBCL are generally exceptional (Meikamp et al., 2015), with validation data being published from hundreds of international studies over the past four decades. The CBCL has particularly strong construct validity, due to its scales being derived empirically through factor analysis. The CBCL total problems scale also has very high internal consistency (Cronbach's alpha = 0.94) (Achenbach & Rescorla, 2001).

## 2.3 | Analytic method

Children's responses and carers' responses about the children were compared by the age group of the child at the time of the interview (7–11 or 12–17 years old), Aboriginality of the child and their current placement type at the time of the interview. Carers' responses about themselves were compared by the carer's age group, the placement type of the first child who was interviewed in their care and the Aboriginality of the household. Differences in the mean scores for the comparison groups were tested using T-test or ANOVAs. Post hoc comparisons were undertaken for the ANOVAs with Bonferroni adjustment applied. Correlations between the child and carer questions were tested using Pearson correlations. To compare the change in the CBCL total problems T score between the pre- and post-COVID-19 cohorts, an independent samples T-test was used.

Qualitative data were analysed using thematic analysis, and exemplar quotes are provided. To protect the confidentiality of the children and families in the quotes, some details may have been changed that do not add to our understanding of the narrative, such as gender, location and the use of age ranges.

# 3 | FINDINGS

## 3.1 | Description of the pre- and post-COVID-19 subcohorts

The pre- and post-COVID-19 subcohorts were compared with a view to estimating the extent to which post-COVID-19 participants are representative of the Wave 5 study cohort. Table 1 lists contingency tables and chi-squared statistics comparing rates of children by age ranges,

**TABLE 1** Comparison of pre-COVID-19 ($n$ = 567) and post-COVID-19 ($n$ = 295) Wave 5 subcohorts

| | Wave 5 subcohort *n* (%) | |
|---|---|---|
| | **Pre-COVID-19 (*n* = 567)** | **Post-COVID-19 (*n* = 295)** |
| Child/adolescent age group | $\chi^2$ = 15.5, 1df, $p$ < .001 | |
| 7–11 years, $n$ = 556 (64.5%) | 392 (69.1%) | 164 (55.6%) |
| 12–17 years, $n$ = 306 (35.5%) | 175 (30.9%) | 131 (44.4%) |
| Child placement type | $\chi^2$ = 16.0, 3df, $p$ = .001 | |
| Foster care, $n$ = 340 (39.4%) | 209 (36.9%) | 131 (44.4%) |
| Relative/kin care, $n$ = 238 (27.6%) | 165 (29.1%) | 73 (24.7%) |
| Guardianship, $n$ = 148 (17.2%) | 114 (20.1%) | 34 (11.5%) |
| Other[a], $n$ = 136 (15.8%) | 79 (13.9%) | 57 (19.3%) |
| Child Aboriginality | $\chi^2$ = 2.0, 1df, $p$ = .16 (ns) | |
| Aboriginal child, $n$ = 349 (40.5%) | 220 (38.8%) | 129 (43.7%) |
| Non-Aboriginal child, $n$ = 513 (59.5%) | 347 (61.2%) | 166 (56.3%) |

[a]Other—residential care/adopted/restored to parental care.

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placement type and Aboriginality. The post-COVID-19 group had a significantly greater proportion of 12- to 17-year-olds (44.4%) and relatively fewer 7- to 11-year-olds (55.6%) than the pre-COVID-19 group (30.9% and 69.1%, respectively). The post-COVID-19 group also had a significantly greater proportion of children in foster care (pre-COVID-19 36.9%; post-COVID-19 44.4%) and "other" placement types (including residential care, adoptions and restored) (pre-COVID-19 13.9%; post-COVID-19 19.3%) and lower proportions in relative/kinship care (pre-COVID-19 29.1%; post-COVID-19 24.7%) and guardianship (pre-COVID-19 20.1%; post-COVID-19 11.5%). The groups did not differ in the rate of Aboriginal participants (pre-COVID-19 38.8%; post-COVID-19 43.7%).

The two groups were also compared for prospective (Wave 4 to Wave 5) changes in socio-emotional well-being, measured by the CBCL as indicated in Figure 1.

There was no significant difference between pre-COVID-19 and post-COVID-19 mean changes (from Wave 4 to Wave 5) in age- and gender-standardised CBCL total problems scale T scores (pre-COVID-19 $M = 1.2$; post-COVID-19 $M = 0.4$, $p = .25$). The finding suggests that both groups had similar mean changes (very slight reductions) in socio-emotional well-being between Waves 4 and 5 and that they were similar in terms of socio-emotional well-being in Waves 4 and 5. In the post-COVID-19 cohort, 77.1 per cent of children who were in the clinical range at Wave 4 were in the clinical range at Wave 5. While the proportion of children who moved from the borderline range in Wave 4 to the clinical range in Wave 5 was higher for the post-COVID-19 cohort than the pre-COVID-19 cohort (44.4% vs 34.5%), the difference was not significant. The remainder of findings focuses on the children and carers in the post-COVID-19 subcohort ($n = 295$).

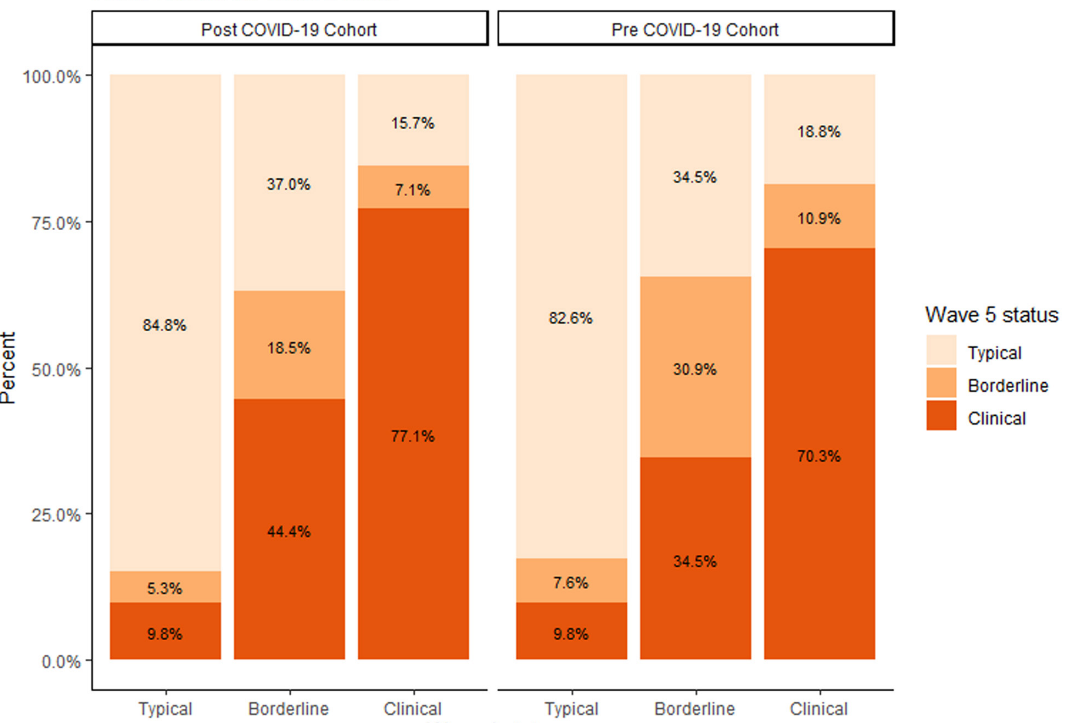


FIGURE 1 Percentage of children in each socio-emotional wellbeing category at Wave 5 based on their category at Wave 4

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## 3.2 | Perceived impacts of COVID-19

Table 2 summarises the distributions of participant scores on the impact questions for the aggregate post-COVID-19 sample, in two ways: first, the table lists means and standard deviations for responses measured on the 5-point scale and second, the table lists rates of scores indicating: negative impact ("much worse" or "a little worse," score = 1 or 2); no impact (score = 3); and positive impact ("much better" or "a little better," score = 4 or 5).

## 3.3 | Children's perspectives

Children were asked questions about their ability to continue with school work, frequency of social activities, frequency of physical games and activities such as sport and exercise, how they were

**TABLE 2** Distributions of COVID-19 survey question response scores for the aggregate post-COVID-19 subcohort ($n = 295$)

| | | Rate (%) of responses | | |
|---|---|---|---|---|
| | Mean (SD) | Negative impact (score = 1–2) | No impact (score = 3) | Positive impact (score = 4–5) |
| Children's perceptions of COVID-19's impact on themselves | | | | |
| Ability to continue school work | 2.61 (1.26) | 48.7% | 31.8% | 19.5% |
| Frequency of social activities (in person or social media) | 2.45 (1.00) | 51.5% | 38.2% | 10.3% |
| Frequency of physical games and activities such as sport and exercise | 2.59 (1.11) | 46.6% | 38.6% | 14.8% |
| Getting along with the people they live with | 3.23 (0.84) | 13.2% | 61.1% | 25.6% |
| Getting along with the people they do not live with who are special and important to them | 2.75 (0.90) | 33.3% | 54.8% | 11.8% |
| Carer's perceptions of COVID-19's impact on their child | | | | |
| Well-being (such as feeling down, depressed, anxious, tired and nervous) | 2.67 (0.81) | 34.1% | 59.1% | 6.8% |
| Level of difficult behaviours | 2.75 (0.76) | 25.2% | 67.1% | 7.7% |
| Ongoing learning (e.g. access to online schooling or home schooling or attending school) | 2.45 (1.05) | 48.7% | 40.1% | 11.2% |
| Amount of social activity (including face-to-face and social media) | 2.15 (0.93) | 63.0% | 32.3% | 4.7% |
| Amount of physical activity | 2.27 (0.98) | 59.0% | 34.6% | 6.4% |
| Amount of contact with his/her birth family | 2.29 (0.93) | 53.2% | 44.2% | 2.6% |
| Access to professional services (e.g. a psychologist, doctor and specialist) | 2.57 (0.69) | 34.8% | 63.1% | 2.1% |
| Amount of support received from caseworkers | 2.76 (0.73) | 26.8% | 68.2% | 5.1% |
| Carer's perceptions of COVID-19's impact on themselves | | | | |
| Well-being (such as feeling down, depressed, anxious, tired and nervous) | 2.47 (0.85) | 48.0% | 46.2% | 5.8% |
| Ability to manage financially and meet essential needs such as rent or mortgage payments utilities and groceries | 2.91 (0.65) | 14.2% | 77.3% | 8.4% |
| Capacity to care for their child | 2.95 (0.60) | 14.2% | 76.9% | 8.9% |
| Capacity to care for other children in their care | 2.89 (0.60) | 17.7% | 77.1% | 5.1% |
| Access to informal support network (family members, friends, neighbours, church, etc.) | 2.23 (0.81) | 57.4% | 40.4% | 2.2% |
| Amount of support from caseworkers | 2.72 (0.71) | 27.1% | 68.2% | 4.7% |

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getting along with people they live with and how they were getting along with people they do not live who are special and important to them. Table 2 confirms that, on all but one of their well-being domains, mean scores were below the neutral value of 3, such that the number of children who perceived COVID-19 as having a negative impact was higher than the number of children who perceived COVID-19 as having a positive impact. The exception was that more children reported an improvement in how they get along with the people they live with than did those reporting deterioration in those relationships ($M = 3.23$). There were no significant differences between children of different ages, by Aboriginal status or care type. This is the only positive impact of COVID-19 that children reported. Overall, children's perceptions of the impact of COVID-19 on their well-being appeared to be less negative than that of their carers, although the questions were slightly different.

## 3.4 | Carers' perspectives on children

Carers were asked eight questions about the various dimensions of the extent of the impact of COVID-19 on aspects of their child's well-being (Table 2). The mean scores for all questions were below the neutral value of 3, such that the rate of carers who perceived COVID-19 as having a negative impact on their children's well-being was higher than the rate who perceived COVID-19 as having a positive impact. Carers perceived that COVID-19 had greatest adverse impact on the amount of children's physical ($M = 2.27$) and social activity ($M = 2.15$), and the amount of contact with the child's birth family ($M = 2.76$). Carers' were also asked questions regarding children's access to computers and study facilities, reporting a very high provision of suitable study conditions for children during the first lockdown. The proportions of child participants reported to have access to a computer, the Internet and a quiet study place were 94.2 per cent, 95 per cent and 97.8 per cent, respectively.

## 3.5 | Carers' well-being

In all six questions about their well-being, carers' responses indicated that COVID-19 had a slightly negative impact on all these dimensions (Table 2). The most significant impacts were on access to informal support networks ($M = 2.23$) and overall well-being ($M = 2.47$), with only minimal impacts on carers' capacity to care for the POCLS child ($M = 2.95$) and ability to manage financially ($M = 2.91$).

Further analyses examined how closely related were the different dimensions of well-being among carers. Significant positive correlations were found between carers' well-being and ability to manage financially (0.32, $p < .000$), capacity to care for their child (0.39, $p < .000$) and access to informal networks (0.36, $p < .000$). However, the amount of support from caseworkers was not significantly correlated with any of the other questions, except for the ability to manage financially (0.15, $p < .009$).

## 3.6 | Differences in perceived impacts of COVID-19 by Aboriginal status, carer type and age

Further analyses investigated whether children's or carers' perceptions, as reported in Table 2, differed by age, Aboriginal status or placement type. Mean COVID-19 impact on children's item scores (child self-report = 5 items; carer report = 8 items) were tested for equivalence (T-tests) for groups stratified by children's age range (ages 7–11, $n = 120$–163; ages 12–17, $n = 98$–128),

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placement type (foster care, $n$ = 103–129; relative/kin care, $n$ = 59–72) and child Aboriginality (Aboriginal, $n$ = 99–127; non-Aboriginal, $n$ = 126–164). Mean "impact on carer" item scores (six items) were tested for equivalence using T-tests for groups stratified by placement type (foster care, $n$ = 81–98; relative/kin care, $n$ = 42–52), household Aboriginality (Aboriginal household, $n$ = 49–64; non-Aboriginal household, $n$ = 121–162) and using ANOVA for groups stratified by carer's age range (≤40 years, $n$ = 25–35; 41–50 years, $n$ = 46–56; 51–60 years, $n$ = 61–81; ≥61 years, $n$ = 21–37). Post hoc comparisons were undertaken for the ANOVAs with Bonferroni adjustment applied. The analyses had sufficient statistical power to detect significant differences for effect sizes (Cohen's $d$) of around 0.25 and higher. By and large, the stratified groups had similar mean item scores, most of which had an effect size of $d = 0.1$ or less (i.e. they diverged by less than 0.1 of the aggregate standard deviation). This suggests that, apart from three exceptions described below, the perceptions of children and carers of COVID-19's impact on their lives did not vary by age, placement type or Aboriginality.

Only three of the 57 comparisons revealed statistically significant differences in group mean scores. First, foster carers had a significantly lower mean score for children's reported "level of difficult behaviours" than relative/kin carers ($M$ = 2.70 and 2.96 respectively, $p = .023$), with a small-to-medium effect size ($d = 0.34$). This is accounted for by differences in the relative rates of children reported with "worse" versus "better" levels of difficult behaviour. Rates of children reported with "a little worse" or "much worse" difficult behaviour were 28.1 per cent for foster care versus 19.4 per cent for relative/kin care. Conversely, the rates of children reported with "a little better" or "much better" difficult behaviour were 5.5 per cent for foster care versus 15.3 per cent for relative/kin care.

Second, foster carers had a significantly lower mean score for their reported "access to informal support network" than did relative/kin carers ($M$ = 2.08 and 2.44 respectively, $p = .01$), with medium effect size ($d = 0.44$). Similarly, carers residing in a non-Aboriginal household had a significantly lower mean score on their reported "access to informal support network" than did carers residing in an Aboriginal household ($M$ = 2.16 and 2.42 respectively, $p = .03$), with small-to-medium effect size ($d = 0.33$). These two results suggest that, while COVID-19 had a mean adverse impact on access to support networks for each of these carer groups, the impact was a little less on relative/kin carers, and those residing in Aboriginal households.

## 3.7 | COVID-19 interview perspectives

Interviewed children were asked an open-ended question *"Are there any other areas of your life where COVID-19 has had an impact?"* and responded to by children aged 7–11 years (Aboriginal $n$ = 10; CALD $n < 3$; other Australian children $n$ = 17). The responses were similar across the three cultural groups. Children said it impacted on their relationships and social activities, for example having to cancel celebrations such as their birthday party, friends' birthday parties and Christmas gatherings. They reported they could not go out or missed playing sport or going to classes such as swimming or dancing.

> It stops us giving hugs.
>
> (child aged 7–11 years, exited OOHC to guardianship)

> Usually just playing in back yard and sometimes went to a park.
>
> (child aged 7–11 years in foster care)

Children also said COVID-19 impacted on their school life, for example they missed going to school, a school camp was cancelled and they found completing school work difficult.

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> Found it hard to understand some of my school work.
>
> (child aged 7–11 years, exited OOHC to adoption)

Some children said they felt scared, or missed their friends or family because they could not see them as much as usual, or were worried that people in their family may get sick.

> Not seeing my family as much as usual and I miss them.
>
> (child aged 7–11 years, exited OOHC to guardianship)

> I felt really upset and I thought we would all get sick.
>
> (child aged 7–11 years in relative/kinship care)

Responses of young people aged 12–17 years (Aboriginal $n$ = 10; CALD $n$ = 3; other Australian children $n$ = 4) were similar to those of 7- to 11-year-olds, and these included how COVID-19 impacted on sporting activities, going out and holidays. Others said they would have preferred to be at school, they could not concentrate on school work or that their school work suffered. One young person said they were unable to continue with employment. A number of young people said COVID-19 impacted on them by not being able to see their parent(s) or relatives.

> During the lockdown I was not able to see my birth family and after the restrictions this was not lifted and I could not see them as much as I did before the lockdown.
>
> (young person aged 12–17 years in foster care)

> I would have preferred to attend school.
>
> (young person aged 12–17 years, restored to their birth family)

Carers provided responses to the open-ended question "*Can you please tell me about what impact COVID-19 has had on [study child]'s life*" (Aboriginal $n$ = 37; CALD $n$ = 7; other Australian children $n$ = 44). Carers' responses were similar for children from different cultural backgrounds and placement types. They reported that children were frustrated by not being able to go to places they used to go to, there was less recreation time, fewer opportunities for extracurricular activities and exercise (such as sport, dancing, swimming, horse riding and the skate park), and they were disappointed that birthday parties and holidays had to be cancelled. Boredom was also an issue raised. Children missed face-to-face time with their friends, boyfriends/girlfriends and family. There was less birth family contact and more uncertainty regarding family time.

> She was upset that she could not have her friends over or go to their place, could not travel to see family, their mum was ill, we had to be extra cautious, she could not cuddle her.
>
> (child aged 7–11 years in foster care)

> [Lock-down impacted on] Face to face contact with extended family and biological family.
>
> (child aged 7–11 years in foster care)

Carers reported that COVID-19 disrupted school and children's learning patterns—such as face-to-face lessons being replaced with home schooling—as well as children's social interactions with peers and contact with friends. Some carers reported young people preferred homeschooling, while others found homeschooling challenging; some children did not want to do the work, and others missed going to school. Some children continued to go to school during the lockdown.

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> He went to school, and because there were less children he got more one on one support.
>
> (child aged 7–11 years in foster care)

> Affected his social interactions at school now they have gone back.
>
> (child aged 7–11 years in foster care)

> Loved being at home and not in boarding school.
>
> (child aged 12–17 years in relative kinship care)

Several carers said their child's mental health was impacted, given the restricted access to community groups, support, medical appointments or therapy. Carers reported that some children experienced more anxiety when socialising or shopping and were nervous they were going to catch COVID-19. A few children experienced situations in which carers were away from home for work or could not get back home after travelling due to border restrictions.

> When we go visiting or shopping he is nervous if anyone has virus.
>
> (child aged 7–11 years restored to birth parents)

> He could not have his therapies that has made an impact—he could not have his teacher come to visit.
>
> (child aged 12–17 years restored to birth parents)

Carers were then asked to respond to the open-ended question: *"Can you please tell me about what impact COVID-19 has had on your life?"* A total of 128 carers responded to this question. Carers said COVID-19 impacted on them socially in various ways: by not being able to see family members on special occasions, less or no socialising, not being able to attend funerals and having to cope with homeschooling and changes in their work life, personal life and health, with appointments being cancelled or pushed back. Several reported not being able to see their grandchildren. Some carers found caring for children stressful during COVID-19, and there was less opportunity to access respite. Others mentioned it created a space to spend time together as a family.

> Trying to look after them whilst I was working, they need one on one teaching so very difficult.
>
> (relative kinship carer for 12–17-year-old)

> Forced us to slow down and spend more time together as a family.
>
> (foster carer for 7–11-year-old)

> I got to the point of possibly giving up the child and siblings due to the acceleration of bad behaviour and confinement with no chance of respite or a break.
>
> (foster carer for 12–17-year-old)

> Telehealth saved me hours of time driving to OT and psychologist appointments.
>
> (foster carer for 7–11-year-old)

COVID-19 affected carers' work and studies, for example finding employment, losing employment, missing face-to-face contact with colleagues and adjusting to online courses. On a personal level, carers reported COVID-19 restrictions meant they were not able to go out or reduced the number of things to do, such as play sport, visit family in Australia or overseas, visit parents in

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aged care or go to church. They missed their friends and celebrations such as birthdays or Easter. Others said they enjoyed the slower life and that COVID-19 helped them to slow down. Some carers reported their health suffered, they gained weight, missed out on medical treatment or had anxiety around catching COVID-19, with one carer reporting panic attacks. Another reported telehealth provided access to services and saved time.

> Work life was 10 times busier as we had so many Zoom meetings. My stress level increased. It showed a lot of people can work from home.
>
> (relative kinship carer for 12–17-year-old)

> Our businesses took a financial hit which was very stressful.
>
> (foster carer for 12–17-year-old)

> Could not see my grandchildren, missed out on birthday parties, missed getting medical treatment that I need.
>
> (relative kinship carer for 12–17-year-old)

## 4 | DISCUSSION

The COVID-19 pandemic disrupted lives across the globe, but there is still limited evidence on the impact on children in OOHC and their carers. Given the present longitudinal study was carried out before and after the pandemic restrictions in 2020, it provided the conditions for a natural experiment to enable an estimation of the effects of the pandemic on this cohort. Two research questions were examined: What were the early impacts on children's well-being and experiences due to COVID-19, and what were the early impacts on carer mental health and satisfaction with being a carer during COVID-19.

With regard to children's well-being, the findings appear to indicate that the pandemic restrictions had little impact on the overall well-being of the children in this cohort, at least at this early stage. The interviewed children nevertheless reported a range of deleterious effects, with close to half reporting COVID-19 impacted negatively on their social activities, education and physical activity. Children reported a mean negative impact on their relationships with those they do not live with. Nevertheless, about twice as many children reported that COVID-19 had a positive impact on their relationships with the people they lived with, as those who reported a negative impact. This confirms that some children perceived benefits of COVID-19 restrictions regarding their placements, and interestingly, there was no difference by placement type. This is consistent with other research, which has suggested that young people with complex needs, particularly those in residential care, found that lockdown provided a mechanism for improved staff and child relationships that offered emotional support, a sense of security and increased well-being (Cameron, 2020). It may also be that the restrictions provided some children with an opportunity to develop stronger relational ties with their carers. Yet for some Australian young people in residential care and those preparing to leave OOHC, COVID-19 was likely to have contributed to increased social isolation and less support from family and community networks (Mendes & Purtell, 2021). COVID-19 may pose ongoing implications on children's social connectedness and development of social capital (Thornton et al., 2020), particularly for those who have left OOHC during the pandemic (Collins & Augsberger, 2021; Kelly et al., 2021).

Carers reported that COVID-19 had a mean negative impact on children's social relationships, physical activity, family contact and well-being and that the negative impact was similar across the cohort. Between carers and children, there was consensus about the negative impacts on education, social relationships, physical activity and family contact, although carers were more likely to report a negative impact of COVID-19 on their children than children themselves.

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In regard to our second research question (impacts of COVID-19 on carer mental health and satisfaction), almost half of the carers in the post-COVID-19 group reported a negative impact on their own well-being, which included anxiety, feeling down, tired and worried. This finding is supported by other studies of foster carers (Miller et al., 2020) and parents (Freisthler et al., 2021) during the pandemic, who reported increased stress and poorer well-being. A US study also found up to half of all carers experienced significant anxiety and concerns (Langley et al., 2021). The carers in the present study reported that the negative impact on their well-being was broader than the impact on the children they care for. This finding appears to hold across placement types and cultural background. Foster carers and carers of non-Aboriginal background reported significantly lower scores on access to informal support networks. These feelings of having less access to support may contribute to those carers' perceptions of poorer well-being, as previous studies have suggested support networks can buffer foster carers' parenting stress (Richardson et al., 2018), and act as a protective factor in regard to child behaviours (Cooley et al., 2019). Another contributing factor may be that carers, particularly foster carers, were significantly more likely to report that COVID-19 had a negative effect on their child's difficult behaviours. Delfabbro (2017) earlier reported that POCLS kinship carers, particularly grandparents, are more likely to tolerate and manage difficult behaviours in the children they care for. However, Delfabbro also proposes that foster carers may be more likely to support children who do experience difficult behaviours, which could account for the present finding. These findings appear to indicate that the COVID-19 responses were more challenging for carers than they were for children and that this may have affected carer's perceptions of their children's well-being. However, it may also reflect more broadly on children's willingness to report negative well-being.

In terms of education, almost half of the children and carers in the post-COVID-19 group reported the pandemic restrictions had a negative effect on schooling, while around a fifth of children and a tenth of carers reported a positive effect. Most children in the study reported having access to a computer, the Internet and a quiet place to study to support their education, reflecting the Department of Communities and Justice policy of ensuring that all children in OOHC had access to appropriate technology during the pandemic (Office of the Senior Practitioner, 2020). The evidence to date suggests that many parents and carers found supporting online education stressful (Sonnenschein et al., 2021; Westrupp et al., 2021), and they were concerned that their child would fall behind academically, particularly those from lower socio-economic backgrounds (Horowitz, 2020). It is still too early to assess the longer-term effects from the pandemic on children's educational engagement and outcomes. However, to avoid widening disparities, many academics are calling for additional focus to be placed on children who are already educationally vulnerable (Drane et al., 2020; Van Lancker & Parolin, 2020).

Children and carers in this study highlight reduced or halted family contact occurred during the COVID-19 restrictions. Other international studies have reported similar results (Langley et al., 2021; Singer & Brodzinsky, 2020); however, the longer-term effects of this disruption on these relationships are currently unknown. Australian parents with children in OOHC have also reported the distressing nature of reduced or no contact (Fogarty et al., 2022). Yet there is also evidence of efforts being made by service providers to implement supportive practices and increase communication to vulnerable families and children (Seay & McRell, 2021; Wilke et al., 2020). An exploratory study exploring birth family contact found virtual visits can be effective when well-supported by caseworkers and may offer important ongoing opportunities for family connections post the COVID-19 restrictions, to support connections when distance, incarceration or transport issues are present (Langley et al., 2021).

As expected, COVID-19 had a negative impact on various areas of well-being on children in OOHC and their carers. However, at the time of the first COVID-19 restrictions, the impact seems to have been fairly minor, and there was no measurable impact on children's socio-emotional well-being when compared with children who were tested on the CBCL pre-COVID-19. This finding was unexpected as children in OOHC are one of the most vulnerable groups of children

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(Galvin & Kaltner, 2020; Jones et al., 2020), and they would be expected to have a strong adverse reaction to the restrictions imposed by COVID-19, particularly given vulnerable Australian families during COVID-19 were more likely to experience poorer child and parent mental health and poorer family functioning (Westrupp et al., 2021). There may be a number of reasons for our finding. First, the restrictions may have provided a number of positive benefits to some children, including stronger household relationships and less pressure on children academically and socially. Several studies have now reported that children often initially felt their lives were the same or better, which improved their sense of well-being (Patra et al., 2020; Tang et al., 2021). A qualitative study with Australian parents has also suggested some families report positive benefits including strengthened relationships (Evans et al., 2020). In the UK, Soneson et al. (2022) reported a third of children experienced increased well-being during their first national lockdown. Likewise, in the present study, these data were collected in the first year of the COVID-19 pandemic, where the effects of the lockdown restrictions may have been less than if data collection was undertaken following the second lockdown (June to October 2021), which, as Soneson et al. (2022) argue, was quantitatively different to the original lockdown. A second reason for this finding may be that the measures put in place to support children in OOHC in NSW, including increased caseworker support and provision of practical assistance, may have been effective in mitigating the impact on these children. In the next wave of POCLS, the longer-term impact of COVID-19 on the whole cohort will be examined, and this will provide important context to these findings.

## 4.1 | Policy and practice implications

Evidence from the present study suggests that children and carers were negatively impacted in various aspects of their well-being during the initial stages of the pandemic but that the pandemic also supported some children's well-being. Findings indicate a need to continue to monitor the potential impact on the well-being of children and their carers as some impacts may be felt over the longer term. Special consideration should be given to facilitating connections to culture and country to increase social and emotional well-being and resilience for Aboriginal children. This is in line with recommendations made by the Family Matters report (Liddle et al., 2021) calling for comprehensive actions to be taken connecting Aboriginal children to their family, culture and country. A survey of Aboriginal professionals in NSW found although most participants reported being well-supported and able to manage their stress during the COVID-19 pandemic, the majority felt more government support was required for the Aboriginal sector (AbSec, 2021). The child welfare service system has evolved as a result of the response to COVID-19 (Bryce, 2020), and it will be important to take time to reflect what practices supported well-being and what are the areas where ongoing focus is required.

Continued monitoring of education outcomes for children in OOHC will likely require additional focus to ensure that any gaps in learning from at-home study are addressed. Children's relationships with their family and peers will require careful attention to ensure the re-establishment of connections negatively influenced by the pandemic. While the reconnecting with peers may take less time once children have returned to school, where family connections were disrupted significant actions will be required to support the rebuilding of important relationships. Ensuring that adequate support takes into account the influences of the pandemic for children exiting care is also essential. Carers' awareness of the need to increase children's physical activity should be facilitated so that any long-term reductions in physical activity are avoided. Caseworkers also need to ensure that strategies to support physical and recreational activities which enhance social networks are included in case planning with children. COVID-19 has presented unique benefits and challenges to children in OOHC, some of which may not be known until the medium to long term. Formalising the addition of

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COVID-19 considerations in care planning may assist in informing case plan strategies and active responses in the future.

Carers reported that homeschooling and the lack of respite were challenging. Careful monitoring of carers' well-being after the pandemic requires caseworkers to explore the impacts in individual households of COVID-19 and examine ways that carers can be supported in their role via formal and informal support. The findings of this study suggest that Aboriginal carers appeared to be less negatively impacted because they had the benefit of continual networks of support; however, foster carers appeared to lose connections and thus experience greater impact. The training and support of carers should consider how and if professional networks could compensate for the loss in informal and/or familial networks that carers experienced. In addition, alternate ways to maintain these networks should be considered for continual avenues for connection and support.

This study has a number of limitations. First, these findings may be due to data collection issues or the timing of the data collection. There was a much longer lockdown in 2021, which is not captured in this wave of POCLS. At the time of data collection in 2020, the incidence of COVID-19 in the NSW population was very low. A second limitation was that it was unclear how a number of factors may have influenced carer well-being, including combining work and caregiving, also the age of the child, given young children are likely to require more support with online learning, or require supervised care which can impact carers' ability to work (Langley et al., 2021). A third limitation is that the children in this POCLS cohort have been in OOHC for several years, and many are in stable placements. These findings may not be generalisable to all children in OOHC, particularly those entering OOHC for the first time during the pandemic, children in non-home-based care and children with a disability. Future analyses should explore these factors. Further research should examine the cumulative effects of lockdown restrictions on the well-being of children and carers in OOHC and in particular the context of the whole family unit functioning and mental well-being (Westrupp et al., 2021). Currently, children in metropolitan NSW have spent up to 29 weeks living with public health restrictions, while children living in regional and rural areas have spent considerably less time living with restrictions. Children in other jurisdictions such as Victoria spent considerable more time living with restrictions, so the impacts may be greater for this group of children and require further research.

Anecdotal evidence suggests the changes in residential care practices, including staffing consistency, have been supportive of children's well-being, providing a more "home-like" placement. Further examination of this is required. For Aboriginal children in OOHC, this new evidence provides further opportunities to inform the policy and practice enhancements needed to improve outcomes for Aboriginal children's well-being through connection to family, community, country and culture as the COVID-19 pandemic particularly impacted across all of these areas (Liddle et al., 2021). Furthermore, empowering Aboriginal voices and working collaboratively with Aboriginal families, leaders and communities are essential in reducing the over representation and improving outcomes of Aboriginal children in OOHC. As the Aboriginal community responds to the challenges of COVID-19, they call for targeted comprehensive policy and prioritised investments in Aboriginal community-controlled organisations to address the needs of Aboriginal children and their families (Liddle et al., 2021).

## 5 | CONCLUSION

This exploratory study provides some insights into the COVID-19 impacts on the well-being of children in OOHC and their carers. We found that a sizable proportion of children and carers experienced negative effects on their well-being; for children, their education, social relationships, physical activity and family contact, but that there were some positive impacts, particularly in their relationships with people they live with. Brown et al. (2020) estimated that up to 46 per cent of Australian children and young people are vulnerable to the adverse effects of COVID-19

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on their educational outcomes, physical activity and social and emotional well-being. It is likely that children in OOHC may be part of this group, making it essential for policy and practice actions to support these children and for ongoing research to monitor their outcomes.

## AUTHOR CONTRIBUTIONS

**Michelle L Townsend:** Conceptualization; writing – original draft; writing – review and editing. **Michael Tarren-Sweeney:** Conceptualization; formal analysis; writing – original draft; writing – review and editing. **Joanna Hopkins:** Data curation; formal analysis. **Marina Paxman:** Conceptualization; data curation; formal analysis; project administration; writing – review and editing. **Proshanta Dey:** Formal analysis. **Ilan Katz:** Conceptualization; formal analysis; methodology; writing – original draft; writing – review and editing.

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## CONFLICT OF INTERESTS

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## REFERENCES

AbSec. (2021) *How is the Aboriginal sector faring during lockdown?*. Marrickville NSW: NSW Child, Family and Community Peak Aboriginal Corporation. Retrieved 21/09/2022 from https://absec.org.au/2021/09/20/how-is-the-aboriginal-sector-faring-during-lockdown/

Achenbach, T. & Rescorla, L. (2001) Manual for ASEBA school-age forms and profiles. University of Vermont, Research Center for Children, Youth, & Families.

Achenback, T. & Rescorla, L.A. (2001) Manual for the ASEBA school-age forms & profiles. *Burling: University of Vermont (Research center for children, youth and families)*.

Australian Institute of Health and Welfare. (2021) Child protection Australia 2020–21. Available from: https://www.aihw.gov.au/reports/child-protection/child-protection-australia-2020-21/data

Batchelor, S., Stoyanov, S., Pirkis, J. & Kõlves, K. (2021) Use of kids helpline by children and young people in australia during the COVID-19 pandemic. *Journal of Adolescent Health*, 68(6), 1067–1074. Available from: https://doi.org/10.1016/j.jadohealth.2021.03.015

Bessell, S. (2021) The impacts of COVID-19 on children in Australia: deepening poverty and inequality. *Children's Geographies*, 20, 448–458. Available from: https://doi.org/10.1080/14733285.2021.1902943

Brown, N., Te Riele, K., Shelley, B. & Woodroffe, J. (2020) *Learning at home during COVID-19: Effects on vulnerable young Australians*. Tasmania: Peter Underwood Centre for Educational Attainment.

Bryce, I. (2020) Responding to the accumulation of adverse childhood experiences in the wake of the COVID-19 pandemic: implications for practice. *Children Australia*, 45, 1–8. Available from: http://europepmc.org/abstract/PMC/PMC7298091

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Cameron, C. (2020) Young people in care: How lockdown provides a haven of security and belonging. *Graham Connelly*, 19(3), 116.

Collins, M.E. & Augsberger, A. (2021) Impacts of policy changes on care-leaving workers in a time of coronavirus: Comparative analysis of discretion and constraints. *Journal of Comparative Policy Analysis: Research and Practice*, 23(1), 51–62. Available from: https://doi.org/10.1080/13876988.2020.1841560

Collins, M.E. & Baldiga, S. (2020) Normalcy for children in foster care in the time of coronavirus. *Journal of Children's Services*, 15(4), 215–219. Available from: https://doi.org/10.1108/jcs-06-2020-0023

Cooley, M.E., Thompson, H.M. & Newell, E. (2019) Examining the influence of social support on the relationship between child behavior problems and foster parent satisfaction and challenges. *Child & Youth Care Forum*, 48(3), 289–303. Available from: https://doi.org/10.1007/s10566-018-9478-6

Cornell, S., Nickel, B., Cvejic, E., Bonner, C., McCaffery, K.J., Ayre, J. et al. (2022) Positive outcomes associated with the COVID-19 pandemic in Australia. *Health Promotion Journal of Australia*, 33(2), 311–319. Available from: https://doi.org/10.1002/hpja.494

Delfabbro, P. (2017) Relative/kinship and foster care: A comparison of carer and child characteristics. *Pathways of care longitudinal study: Outcomes of children and young people in out-of-home care (Research Report Number 7)*. NSW Department of Family and Community Services.

Drane, C., Vernon, L. & O'Shea, S. (2020) The impact of 'learning at home'on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic. Literature Review Prepared by the National Centre for Student Equity in Higher Education. Curtin University, Australia.

Evans, S., Mikocka-Walus, A., Klas, A., Olive, L., Sciberras, E., Karantzas, G. et al. (2020) From "it has stopped our lives" to "spending more time together has strengthened bonds": the varied experiences of australian families during COVID-19 [Original Research]. *Frontiers in Psychology*, 11, 1-13. Available from: https://doi.org/10.3389/fpsyg.2020.588667

Finlay, S. & Wenitong, M. (2020) Aboriginal community controlled health organisations are taking a leading role in COVID-19 health communication. *Australian and New Zealand Journal of Public Health*, 44(4), 251–252. Available from: https://doi.org/10.1111/1753-6405.13010

Fisher, J.R., Tran, T.D., Hammarberg, K., Sastry, J., Nguyen, H., Rowe, H. et al. (2020) Mental health of people in Australia in the first month of COVID-19 restrictions: a national survey. *Medical Journal of Australia*, 213(10), 458–464.

Fogarty, A., Jones, A., Evans, K., O'Brien, J. & Giallo, R. (2022) The experience of the COVID-19 pandemic for families of infants involved with child protection services for maltreatment concerns. *Health & Social Care in the Community*, 30(5), 1754–1762. Available from: https://doi.org/10.1111/hsc.13555

Freisthler, B., Gruenewald, P.J., Tebben, E., Shockley McCarthy, K. & Price Wolf, J. (2021) Understanding at-the-moment stress for parents during COVID-19 stay-at-home restrictions. *Social Science & Medicine*, 279, 114025. Available from: https://doi.org/10.1016/j.socscimed.2021.114025

Galvin, M. & Kaltner, M. (2020) *Understanding the impact of covid-19 on out-of-home care in Australia*. London, Ernest & Young: Better Care Network.

Goldfeld, S., O'Connor, E., Sung, V., Roberts, G., Wake, M., West, S. et al. (2022) Potential indirect impacts of the COVID-19 pandemic on children: a narrative review using a community child health lens. *Medical Journal of Australia*, 216(7), 364–372. Available from: https://doi.org/10.5694/mja2.51368

Herbert, J.S., Mitchell, A., Brentnall, S.J. & Bird, A.L. (2020) Identifying rewards over difficulties buffers the impact of time in COVID-19 lockdown for parents in Australia. *Frontiers in Psychology*, 11, 606507.

Horowitz, J.M. (2020) *Lower-income parents most concerned about their children falling behind amid COVID-19 school closures*. Washington, D.C.: Pew Research Center.

Jentsch, B. & Schnock, B. (2020) Child welfare in the midst of the coronavirus pandemic—Emerging evidence from Germany. *Child Abuse & Neglect*, 110, 104716. Available from: https://doi.org/10.1016/j.chiabu.2020.104716

Johnson, E. (2020) Responding to Covid-19: some personal reflections. *Adoption & Fostering*, 44(2), 208–211. Available from: https://doi.org/10.1177/0308575920934035

Jones, B., Woolfenden, S., Pengilly, S., Breen, C., Cohn, R., Biviano, L. et al. (2020) COVID -19 pandemic: The impact on vulnerable children and young people in Australia. *Journal of Paediatrics and Child Health*, 56(12), 1851–1855. Available from: https://doi.org/10.1111/jpc.15169

Katz, C., & Fallon, B. (2020). Protecting children from maltreatment during COVID-19. *Child Abuse & Neglect*, 110, 104753. https://doi.org/10.1016/j.chiabu.2020.104753

Katz, I., Katz, C., Andresen, S., Bérubé, A., Collin-Vezina, D., Fallon, B. et al. (2021) Child maltreatment reports and child protection service responses during COVID-19: Knowledge exchange among Australia, Brazil, Canada, Colombia, Germany, Israel, and South Africa. *Child Abuse & Neglect*, 116, 105078. Available from: https://doi.org/10.1016/j.chiabu.2021.105078

Kelly, B., Walsh, C., Pinkerton, J. & Toal, A. (2021) "I got into a very dark place": addressing the needs of young people leaving care during the Covid-19 pandemic. *Journal of Children's Services*, 16(4), 332–345. Available from: https://doi.org/10.1108/JCS-05-2021-0022

Langley, A.K., Ruderman, M.A., Waterman, J. & Franke, T. (2021) Impact of COVID-19 on resource families: Unique challenges and strengths. *Developmental Child Welfare*, 3(3), 185–202. Available from: https://doi.org/10.1177/25161032211020756

18394655, 2023, 1, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ajs4.244 by NHMRC National Cochrane Australia, Wiley Online Library on [26/04/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Larsen, L., Helland, M.S. & Holt, T. (2021) The impact of school closure and social isolation on children in vulnerable families during COVID-19: a focus on children's reactions. *European Child and Adolescent Psychiatry*, 31, 1–11. Available from: https://doi.org/10.1007/s00787-021-01758-x

Lee, J.Y., Chang, O.D. & Ammari, T. (2021) Using social media Reddit data to examine foster families' concerns and needs during COVID-19. *Child Abuse & Neglect*, 121, 105262. Available from: https://doi.org/10.1016/j.chiabu.2021.105262

Liddle, C., Gray, P., Burton, J., Prideaux, C., Solomon, N., Cackett, J. et al. (2021) The Family Matters report 2021.

McCrory, E. & Viding, E. (2015) The theory of latent vulnerability: reconceptualizing the link between childhood maltreatment and psychiatric disorder. *Development and Psychopathology*, 27, 493–505.

Meikamp, B., Joyce, J. & Kranzler, J. (2015) Test review of achenbach system of empirically based assessment. The twentieth mental measurements yearbook: EbscoHost mental measurements yearbook with tests. in Print.

Mendes, P. & Purtell, J. (2021) Relationship-based models for supporting young people transitioning from out-of-home care: two case studies from Victoria, Australia. *Institutionalised Children Explorations and Beyond*, 8(1), 120–132. Available from: https://doi.org/10.1177/2349300320967179

Miller, J.J., Cooley, M.E. & Mihalec-Adkins, B.P. (2020) Examining the impact of COVID-19 on parental stress: a study of foster parents. *Child and Adolescent Social Work Journal*, 39, 147–156. Available from: https://doi.org/10.1007/s10560-020-00725-w

Morse, A.R., Banfield, M., Batterham, P.J., Gulliver, A., McCallum, S., Cherbuin, N. et al. (2022) What could we do differently next time? Australian parents' experiences of the short-term and long-term impacts of home schooling during the COVID-19 pandemic. *BMC Public Health*, 22(1), 80. Available from: https://doi.org/10.1186/s12889-022-12495-4

OECD. (2020) *Combatting COVID-19's effect on children*. Available from: https://read.oecd-ilibrary.org/view/?ref=132_132643-m91j2scsyh&title=Combatting-COVID-19-s-effect-on-children

Office of the Senior Practitioner. (2020) *Practice Advice* Department of Communities and Justice.

Panchal, U., Salazar De Pablo, G., Franco, M., Moreno, C., Parellada, M., Arango, C. et al. (2021) The impact of COVID-19 lockdown on child and adolescent mental health: systematic review. *European Child and Adolescent Psychiatry*. Available from: https://doi.org/10.1007/s00787-021-01856-w

Patra, S., Patro, B.K. & Acharya, S.P. (2020) COVID-19 lockdown and school closure: Boon or bane for child mental health, results of a telephonic parent survey. *Asian Journal of Psychiatry*, 54, 102395. Available from: https://doi.org/10.1016/j.ajp.2020.102395

Pereda, N. & Díaz-Faes, D.A. (2020) Family violence against children in the wake of COVID-19 pandemic: a review of current perspectives and risk factors. *Child and Adolescent Psychiatry and Mental Health*, 14(1), 40. Available from: https://doi.org/10.1186/s13034-020-00347-1

Richardson, E.W., Futris, T.G., Mallette, J.K. & Campbell, A. (2018) Foster mothers' parenting stress and coparenting quality: An examination of the moderating role of support. *Children and Youth Services Review*, 89, 77–82. Available from: https://doi.org/10.1016/j.childyouth.2018.04.024

Seay, K.D. & McRell, A.S. (2021) Child welfare services response to COVID-19: addressing face-to-face contacts. *Journal of Child and Family Studies*, 30(8), 2055–2067. Available from: https://doi.org/10.1007/s10826-021-02000-7

Sicouri, G., March, S., Pellicano, E., De Young, A.C., Donovan, C.L., Cobham, V.E. et al. (2022) Mental health symptoms in children and adolescents during COVID-19 in Australia. *Australian & New Zealand Journal of Psychiatry*, 1–17. Available from: https://doi.org/10.1177/00048674221090174

Singer, J. & Brodzinsky, D. (2020) Virtual parent-child visitation in support of family reunification in the time of COVID-19. *Developmental Child Welfare*, 2(3), 153–171. Available from: https://doi.org/10.1177/2516103220960154

Soneson, E., Puntis, S., Chapman, N., Mansfield, K.L., Jones, P.B. & Fazel, M. (2022) Happier during lockdown: a descriptive analysis of self-reported well-being in 17,000 UK school students during COVID-19 lockdown. *European Child and Adolescent Psychiatry*. Available from: https://doi.org/10.1007/s00787-021-01934-z

Sonnemann, J. & Goss, P. (2020) *COVID catch-up: helping disadvantaged students close the equity gap*. Melbourne, Australia: Grattan Institute.

Sonnenschein, S., Grossman, E.R. & Grossman, J.A. (2021) U.S. Parents' Reports of Assisting Their Children with Distance Learning during COVID-19. *Education Sciences*, 11(9), 501 https://www.mdpi.com/2227-7102/11/9/501

Statistics Canada. (2020). Impacts of COVID-19 on Canadians. Available from: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&lang=en&Item_Id=1280572

Tang, S., Xiang, M., Cheung, T. & Xiang, Y.-T. (2021) Mental health and its correlates among children and adolescents during COVID-19 school closure: The importance of parent-child discussion. *Journal of Affective Disorders*, 279, 353–360. Available from: https://doi.org/10.1016/j.jad.2020.10.016

Tarren-Sweeney, M. (2016) The developmental case for adopting children from care. *Clinical Child Psychology and Psychiatry*, 21(4), 497–505.

Thornton, D., Politanski, D., Borlagdan, J. & Mallett, S. (2020) Children on the edge of care, out of home and alone (COVID-19 Insights).

Toros, K. & Falch-Eriksen, A. (2020) A child's right to protection during the COVID-19 crisis: An exploratory study of the child protective services of Estonia. *Children and Youth Services Review*, 119, 105568. Available from: https://doi.org/10.1016/j.childyouth.2020.105568

18394655, 2023, 1, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ajs4.244 by NHMRC National Cochrane Australia, Wiley Online Library on [26/04/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Townsend, M.L., Robinson, L., Lewis, K., Wright, I., Cashmore, J. & Grenyer, B. (2020) *Educational outcomes of children and young people in out-of-home Care in NSW* (Research Report Number 14.). Available from: https://www.facs.nsw.gov.au/__data/assets/pdf_file/0007/808081/

Van Lancker, W. & Parolin, Z. (2020) COVID-19, school closures, and child poverty: a social crisis in the making. *The Lancet Public Health*, 5(5), e243–e244. Available from: https://doi.org/10.1016/S2468-2667(20)30084-0

Westrupp, E.M., Bennett, C., Berkowitz, T., Youssef, G.J., Toumbourou, J.W., Tucker, R. et al. (2021) Child, parent, and family mental health and functioning in Australia during COVID-19: comparison to pre-pandemic data. *European Child & Adolescent Psychiatry*. Available from: https://doi.org/10.1007/s00787-021-01861-z

Wilke, N.G., Howard, A.H. & Pop, D. (2020) Data-informed recommendations for services providers working with vulnerable children and families during the COVID-19 pandemic. *Child Abuse & Neglect*, 110, 104642. Available from: https://doi.org/10.1016/j.chiabu.2020.104642

Wong, C.A., Ming, D., Maslow, G. & Gifford, E.J. (2020) Mitigating the impacts of the COVID-19 pandemic response on at-risk children. *Pediatrics*, 146(1), 1–6. Available from: https://doi.org/10.1542/peds.2020-0973

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# APPENDIX A

## A.1 | NEW COVID-19 QUESTIONS ADDED TO THE CAREGIVER MODULE AT WAVE 5

The following questions are about how you have been personally impacted by COVID-19 in a number of areas of your life. This will help the researchers to understand your answers. Please answer the questions as accurately as you can about how your situation is now.

I am going to ask you about a few areas of [study child]'s life that COVID-19 (Coronavirus) may have impacted. We want to know whether it has made things better or worse for him/her.
To what extent has [study child] been personally impacted by the COVID-19 (Coronavirus) pandemic in the following areas of his/her life?
[PROGRAMMER: SET UP AS GRID]
Much worse/A little worse/No different
/A little better/Much better
/Not applicable /Pass

- Level of well-being (such as feeling down, depressed, anxious, tired and nervous)
- Level of difficult behaviours
- Ongoing learning (e.g. access to online schooling or home schooling or attending school)
- Amount of social activity (Including face-to-face and social media)
- Amount of physical activity
- Amount of contact with his/her birth family
- Access to professional services (e.g. a psychologist, doctor and specialist)
- Amount of support received from caseworkers

Does [study child] have access to a computer?

- Yes
- No
- Pass

Does [study child] have access to the Internet?

- Yes
- No
- Pass

Does [study child] have a quiet place to study?

- Yes
- No
- Pass

Are there any other areas of his/her life where COVID-19 has had an impact?

- [TEXT BOX]
- [TEXT BOX]
- [TEXT BOX]
- No

[PROGRAMMER: SET UP AS GRID DISPLAYING EACH ITEM LISTED IN CVD2J_NEW5]
Has the COVID-19 pandemic, the Coronavirus, made each of the following things better or worse for him/her
Much worse/A little worse/No different
/A little better/Much better
/Not applicable /Pass

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I am going to ask you about a few areas of your life that COVID-19 (Coronavirus) may have impacted. We want to know whether it has made things better or worse for you.
To what extent have you been personally impacted by the COVID-19 (Coronavirus) pandemic in the following areas of your life?
[PROGRAMMER: SET UP AS GRID]
Much worse/A little worse/No different
/A little better/Much better
/Not applicable /Pass
- Well-being (such as feeling down, depressed, anxious, tired and nervous)
- Ability to manage financially and meet essential needs such as rent or mortgage payments utilities and groceries
- Capacity to care for [study child]
- Capacity to care for other children in your care
- Access to your informal support network (family members, friends, neighbours, church, etc.)
- Amount of support from caseworkers

Are there any other areas of your life where COVID-19 has had an impact?
- [TEXT BOX]
- [TEXT BOX]
- [TEXT BOX]
- No

[PROGRAMMER: SET UP AS GRID DISPLAYING EACH ITEM LISTED IN CVD3G_NEW5]
Has the COVID-19 pandemic, the Coronavirus, made each of the following things better or worse for you?
Much worse/A little worse/No different
/A little better/Much better
/Not applicable /Pass

## A.2 | NEW QUESTIONS ADDED TO THE CHILD AND YOUNG PERSON MODULE AT WAVE 5

These next questions are about how things are going for you now. They ask about how you have been impacted by COVID-19 (coronavirus), to help the researchers to understand your answers.

I am going to ask you about a few areas of your life that COVID-19 (Coronavirus) may have impacted. We want to know whether it has made things better or worse for you.
Has the COVID-19 pandemic, the Coronavirus, made each of the following things better or worse for you
[IF NECESSARY: COVID-19 is the illness that has meant lots of people have had to stay at home so that it does not spread]
0–5 scale.
[PROGRAMMER: SET UP AS GRID]
*Much worse/A little worse/No different*
*/A little better/Much better*
*/Not applicable /Pass*
- Being able to continue your school work?
- How often you join in social activities (in person or social media)?
- How often you do physical games and activities such as sport and exercise?
- How you get along with the people you live with?
- How you get along with the people you do not live with that are special and important to you?

Are there any other areas of your life where COVID-19 has had an impact?
- [TEXT BOX]
- [TEXT BOX]
- [TEXT BOX]
- No

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