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Inequalities in the distribution of COVID-19-related financial difficulties for Australian families with young children

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Abstract

Background: We examine (1) the frequency of financial difficulties in Australian families with young children (0–8 years) in the early and later phases of the pandemic; (2) the extent to which parents' pre-pandemic socio-economic disadvantage (SED) predicted financial difficulties; and (3) whether grandparent inter-generational SED further amplified this risk.

Method: *Data*: Australian Temperament Project (ATP; established 1983, $N = 2443$) and ATP Generation 3 study (ATPG3; established 2012; $N = 702$), of which 74% ($N = 553$) completed a COVID-specific module in the early (May–September 2020) and/or later (October–December 2021) phases of the pandemic. *Outcomes*: Parent-reported loss of employment/reduced income, difficulty paying for essentials, and financial strain. *Exposures*: Pre-pandemic parent and grandparent education and occupation. *Analysis*: Logistic regressions, estimated via generalized estimating equations, were used to examine associations between the pre-pandemic SED of parents and grandparents and their interaction with financial difficulties, adjusting for potential confounders.

Results: At both pandemic time points, a third of parents reported adverse financial impacts (early: 34%, 95% confidence interval [CI] = 30–38; later: 32%, 95% CI = 28–36). Each standard deviation increase in the parents' pre-pandemic SED was associated with a 36% increase in the odds of reporting multiple financial difficulties (odds ratio [OR] = 1.36, 95% CI = 1.04–1.78). There was little evidence of an interaction between the SED of parents and grandparents.

Conclusions: Financial impacts related to the COVID-19 pandemic were common and, irrespective of grandparent SED, disproportionately borne by parents with higher pre-pandemic SED. Given the well-established relationship between disadvantage and child health and development, sustained and well-targeted government supports will be critical to minimizing adverse impacts in years to come.

1 | INTRODUCTION

The global economy is estimated to have contracted 4.3% in 2020 as a result of the COVID-19 pandemic, making it the fourth most severe global recession of the past 150 years (World Bank, 2021). Lower status jobs in industries that require close contact with others, like retail or hospitality, have been most vulnerable to job loss (Coates et al., 2020; Melbourne Institute, 2020). Although 2021 saw signs of recovery, the pandemic continues to have a significant negative impact on global economic activity (OECD, 2021). The ramifications of this economic disruption for children's health and development are of significant concern, and it is critical to identify opportunities to disrupt potential adverse health impacts into the future (Cheng et al., 2020). In this paper, we examine pre-pandemic socio-economic disadvantage (SED) across generations and how this relates to families' experiences of financial adversity during the COVID-19 crisis, which has been a major target of government pandemic responses to date.

It is now well established that children growing up in families facing financial adversity experience poorer health and developmental outcomes (Council on Community Pediatrics, 2016; Goldfeld, O'Connor, et al., 2018). The Family Stress model, for example, suggests that economic pressures and stressors contribute to poor child outcomes primarily through parents' psychological distress, conflict in family relationships and disrupted parenting (Conger et al., 2010; Masarik & Conger, 2017). Surrounding risk (e.g., higher neighbourhood disadvantage) and protective (e.g., high levels of social support) factors can further exacerbate or mitigate these effects (Masarik & Conger, 2017). Poorer child outcomes across social, cognitive and physical domains associated with exposure to disadvantage lays a foundation for poorer health over the life course (Goldfeld, O'Connor, et al., 2018; Shonkoff & Boyce, 2009). Latent effects can also occur whereby there is a lag of many years, even decades, before early stressors are expressed in the form of disease or disorder (Shonkoff & Boyce, 2009). SED in childhood, for example, has been associated with risk for conditions such as cardiovascular disease, diabetes and cancer in mid and later adulthood (Cohen et al., 2010). This means that the full health ramifications of COVID-19 may only be apparent in years to come, and it is critical to identify opportunities to disrupt these pathways in the interim.

Evidence from previous recessions further demonstrates the potential for economic disruption to adversely impact children's health and well-being (Fanjul, 2014; Lundberg & Wuermli, 2012; Rajmil et al., 2014; Regan & Maître, 2020). Even in wealthy countries, adverse effects of the 2008 Global Financial Crisis were observed across child risk factors and health outcomes, such as exposure to maltreatment, poor diet, mental health problems and poor

Key Messages
- In both the early (2020) and later (2021) phases of the COVID-19 pandemic, one in three parents with young children reported experiencing some form of financial adversity.
- The burden of financial adversity was borne disproportionately by those families who were more disadvantaged prior to the pandemic.
- It is crucial that governments maintain strong financial supports for families and ensure that they reach those most in need.

management of chronic conditions (Rajmil et al., 2014). The 2008 recession was also found to have a disproportionately larger impact on children from families with lower levels of parental education, employment and income, exacerbating existing socio-economic disparities (Fanjul, 2014; Lundberg & Wuermli, 2012; Rajmil et al., 2014). Loss of employment, and the consequent reduction in disposable household income, represents a serious economic shock for any family. However, families with higher levels of SED leading into a financial crisis are likely to have fewer material resources to mobilize in response to income loss. This includes lower levels of liquid assets, like cash savings, that can be quickly converted and spent (Adler & Tan, 2017; Blakemore et al., 2009; Currie, 2009).

Taking lessons from such previous periods of economic crisis, many countries have implemented policies aimed at mitigating the potential adverse financial consequences of the COVID-19 pandemic for families (Gentilini et al., 2020). In Australia, several new welfare policies emerged in the first 6 months of the crisis (Figure 1). This included an almost doubling of weekly income for those unemployed or unable to work through a coronavirus supplement to the unemployment benefit (Cassells & Duncan, 2020). Businesses experiencing a significant decrease in turnover were provided with supplements to retain full time or part time workers (Cassells & Duncan, 2020). Families were also given a period of free childcare, which would otherwise carry substantial out-of-pocket expenses (OECD, 2020). The immediate impacts of these policies were significant. For example, the proportion of single parents on unemployment benefits living below the poverty line reduced by 20 percentage points (Phillips et al., 2020). However, despite ongoing restrictions, policies were largely rolled back by 2021, removing the coronavirus supplement to unemployment benefits, resuming regular childcare rebates, and no longer subsidizing businesses to retain workers.
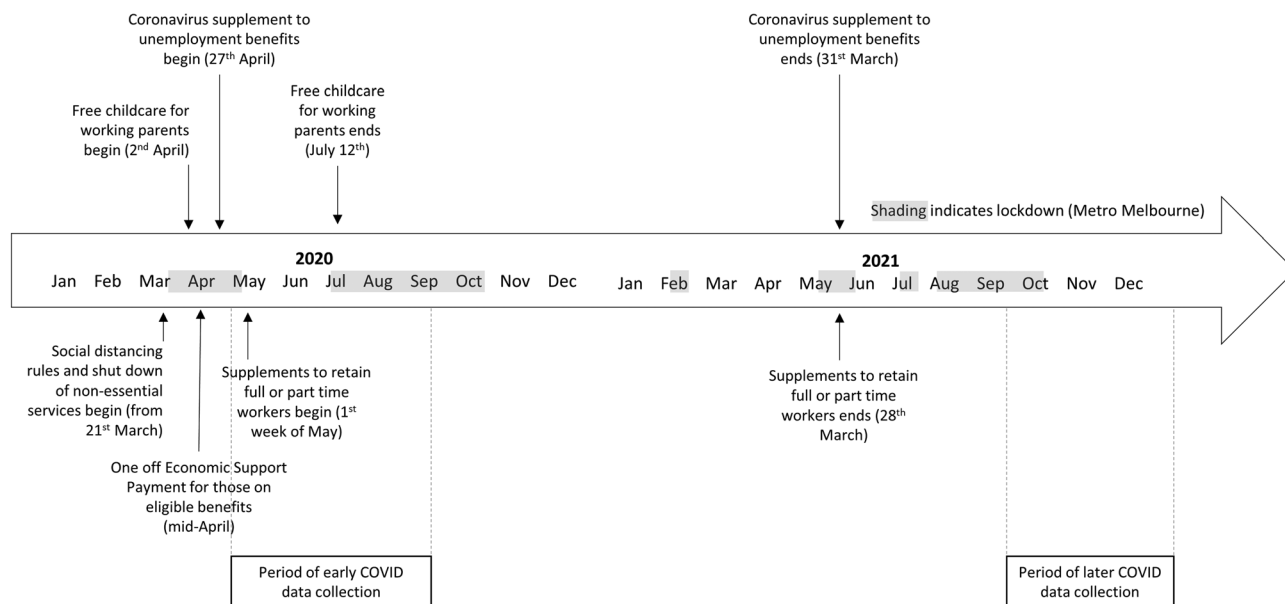
FIGURE 1 Timeline of major Australian policy responses to COVID-19 from 2020 to 2022. Periods of lockdown in Metropolitan Melbourne (where the majority of sample resided) shown via shading

Beyond the fiscal resources of parents, the extended family may also offer an important source of financial assistance (Deindl & Tieben, 2017). Pre-pandemic, up to 60% of Australian families with young children reported receiving some financial assistance from grandparents (Baxter & Warren, 2016), reflecting a continuation of financial supports for their adult children even prior to the birth of a grandchild (Vassallo et al., 2009). In addition to childcare, financial help with expenses such as housing and education is thought to be one of the key ways in which grandparents promote the health and development of their grandchildren (Coall et al., 2018; Sadruddin et al., 2019). However, this investment requires surplus wealth and assets, derived from the socio-economic resources of grandparents themselves (Coall & Hertwig, 2010). Where both parents and grandparents have high levels of disadvantage, families may have fewer financial resources to draw on and reduced access to grandparent financial assistance as a buffer (Deindl & Tieben, 2017).

1.1 | The current study

The purpose of this study was to determine the extent to which Australian families with young children experienced adverse financial impacts during the COVID-19 pandemic and how these impacts relate to pre-pandemic levels of disadvantage. Specific aims are threefold: to (1) describe the extent and nature of financial difficulties in families with young children (0–8 years) in the early (May–September 2020) and later (October–December 2021) periods of the pandemic; (2) determine the relationship between parents' level of SED prior to the pandemic and these financial difficulties; and (3) examine whether grandparent SED further amplified this risk.

2 | METHODS

2.1 | Data source

The Australian Temperament Project (ATP) is a 39-year-old, 15-wave, population-based cohort. $N = 2443$ infants and their parents were recruited through maternal and child health centres in 20 urban and 47 rural local government areas in the state of Victoria, Australia, in 1983. The sample paralleled population characteristics at the time (Prior et al., 2000). Mail surveys were conducted every 1–2 years until the ATP participant reached 19–20 years of age, after which surveys occurred every 4 years.

In 2012, the Generation 3 (ATPG3) study commenced, recruiting offspring born to original ATP participants and their partners (N parent $= 703$; N offspring $= 1167$). Identification of pregnancies and infant offspring occurred via participant email or phone every 6 months between 2012 and 2018, representing the peak period of first births in Australia when participants were aged 29–36 years. Study participants were re-consented into the G3 component of the study. Telephone or web surveys were conducted in trimester 3 of pregnancy, 2-month postpartum, and 1- and 4-year postpartum, with the ATP parent or their partner as the primary informant.

In 2020, a distinct data collection module was deployed to capture impacts of the COVID-19 pandemic, with an online survey completed by 515 ATPG3 parents of G3 children. This survey was repeated in 2021, completed by 488 ATPG3 parents. Here, we analyse data from the 553 families participating in at least one of the COVID-19 focused data collections, living in Australia during that time ($n = 16$ overseas excluded), and with at least one living ATP grandparent ($n = 4$ excluded).
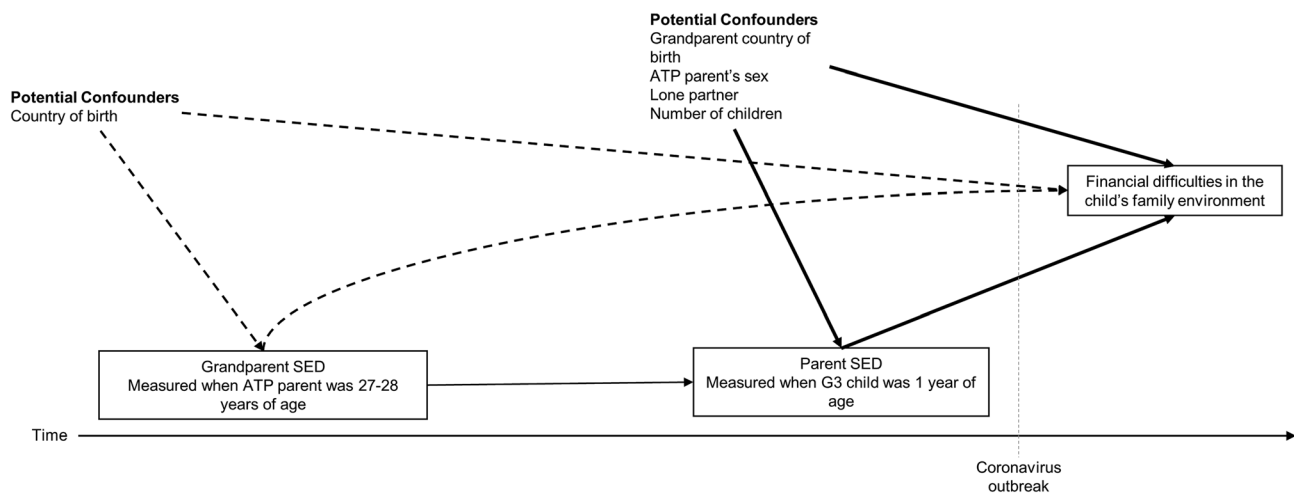
Potential Confounders
Grandparent country of
birth
ATP parent's sex
Lone partner
Number of children

Potential Confounders
Country of birth

Financial difficulties in the
child's family environment

Grandparent SED
Measured when ATP parent was 27-28
years of age

Parent SED
Measured when G3 child was 1 year of
age

Time

Coronavirus
outbreak

FIGURE 2 Conceptual model of the pathways between socio-economic disadvantage (SED) across generations and child's exposure to financial difficulties during the COVID-19 pandemic (simplified for clarity). Two key pathways are shown: The effect of grandparent SED on families pandemic-related financial difficulties (dashed arrows), and the effect of parent SED on pandemic-related financial difficulties (bold arrows)

To assess bias due to attrition, ATP participants were compared on characteristics collected at baseline (1983, at 4–8 months), including the ATP participant's sex, difficult temperament, and behaviour problems, as well as their parent's education and country of birth. Compared with all ATP participants, those who were screened for the G3 study had marginally lower rates of parents born overseas and parents with less education. Those eligible for the G3 study were similar to the recruited G3 sample. Those who participated in the COVID-19 surveys were representative of the G3 sample.

Dependent on the wave of data collection, study protocols were approved by human research ethics committees at the University of Melbourne, the Australian Institute of Family Studies and the Royal Children's Hospital, Melbourne.

2.2 | Measures

The conceptual model is shown in Figure 2 and was used to inform the selection of measures, including potential confounders.

2.2.1 | Pre-pandemic SED across generations

SED of parents was based on the educational attainment and occupational status of the ATP parent (mother or father) when their youngest child was 1 year of age, which was the most proximal time point prior to the pandemic at which this data was consistently available (Table 1). Given the high correlation between parents education and occupational status (Schwartz, 2013), where data were not provided by the ATP parent, the education and occupation of their partner were used if available ($n = 67$).

Intergenerational influence of SED through grandparents was assessed via the educational attainment and occupational status of

the ATP parent's mother and father. As for parents, we sought to define the SED of grandparents at the most proximal time point prior to the pandemic. For grandparents, the most recent SED assessment was at Wave 15 when they were on average 56 years of age. The socio-economic circumstances of grandparents were highly stable over time (e.g., $r = 0.8$ with prior wave).

To derive continuous SED scores for the ATP parent and grandparents, we followed the approach of Blakemore et al. (2009). The ordinal education and occupation variables were standardized and averaged. This continuous score was then re-standardized to provide an indicator of relative position across the full spectrum of socio-economic circumstances in the study sample. For ease of interpretation, scores were reversed such that higher scores indicate higher levels of disadvantage.

2.2.2 | Financial difficulties during COVID-19

In both the early (May–September 2020) and later (October–December 2021) COVID-19 data collection waves, ATP parents reported on whether they had experienced job loss/reduced income or difficulty paying for essentials, and rated their perceived financial status (Table 1). We also generated an indicator of multiple financial difficulties, summing dichotomized responses to the three indicators above and categorizing scores as 0–1 versus 2–3 financial difficulties to ensure sufficient numbers in each category.

2.2.3 | Potential confounders

Following our conceptual model (Figure 2), country of birth was used to account for the potential impact of migration stressors and racial discrimination on the SED of parents and grandparents and family

TABLE 1 Details of study measures indicating socio-economic disadvantage (SED) and pandemic-related financial difficulties

Measure	Time point	Item/s and source	Coding
Pre-pandemic socio-economic disadvantage (SED)			
SED of parent	Measured when youngest child was 1 year of age, prior to COVID-19 outbreak	Measurement of occupational prestige was taken from free-text responses, categorized according to prestige criteria developed by the Australian Bureau of Statistics. Highest educational level achieved was rated on an 8-point scale, ranging from elementary schooling to postgraduate degree.	Following (Blakemore et al., 2009), a standardization approach was used to create a continuous score: values for education and occupation were standardized to have a mean of zero and a standard deviation of one (i.e., converted to a z-score). An unweighted mean score was created by averaging the standardized scores, which was then restandardized to have a mean of zero and a standard deviation of one.
SED of grandparents	When ATP child was aged 27–28 years (M age of grandparent = 56 years)	As above.	As above.
Financial difficulties during COVID-19			
Job loss or reduced income	May–September, 2020, and October–December 2021	Items adapted from the CoRonavIruS Health Impact Survey (CRISIS) parent/caregiver version (Nikolaidis et al., 2021): "Have any of the following happened to you because of COVID-19? Reduced ability to earn money; Lost job"	Coded as 1 if participant reported yes to either job loss and/or reduced earning.
Perceived financial difficulties	As above	Scale adapted from the household, income and labour dynamics in Australia (HILDA) study: "Over the past 2 weeks, which one of the following best describes your financial situation at this point in the outbreak? 1 = living comfortably, 2 = doing alright, 3 = just getting by, 4 = finding it quite difficult, 5 = finding it very difficult"	Dichotomized as 1/2 = 0 and 3/5 = 1
Difficulty paying for essential amenities	As above	Scale adapted from the household, income and labour dynamics in Australia (HILDA) survey wave 18 household questionnaire material deprivation module: "Over the past 2 weeks, have you had difficulties paying: Mortgage or rent or other loan re-payments; household bills (utilities/phone/internet); food; healthcare/prescription medications; home, car or other insurance; other financial difficulties; no difficulties"	Dichotomized as 0 = no difficulties; 1 = any of the difficulties listed
Multiple financial impacts	As above	Derived from above financial difficulties	Sum of the three dichotomized indicators described above, dichotomized at 0–1, and 2+

Abbreviation: ATP, Australian Temperament Project.

experiences of financial difficulties (Kantamneni, 2020; Williams et al., 2010). Additional factors were examined that might confound the relationship between the SED of parents and pandemic-related financial difficulties. These included female gender of the ATP parent, potentially influencing pre-pandemic educational and occupational pathways as well as likelihood of job loss during COVID-19

(Batchelor, 2020). Single parent status and a larger number of children were also assumed to impact on educational and employment opportunities of the parent and financial difficulties during the crisis.

2.3 | Analytic approach

First, we calculated the proportion of parents reporting each type of financial difficulty (with 95% confidence interval [CI]) for the whole sample, and across levels of parent and grandparent SED, during each of the COVID-19 time points captured.

We then estimated associations between the ATP parent and grandparents' level of pre-pandemic SED (separately) and each indicator of financial difficulty (Figure 2). To do so, we used logistic regression analyses estimated using generalized estimating equations (GEEs) with an exchangeable working correlation structure, which assumes a constant correlation between any pair of measurements within the same participant (i.e., repeated outcome measures). Estimates of the effect of grandparent SED were adjusted for grandparent country of birth. Estimates of the effect of parent SED were additionally adjusted for the ATP parent's sex, marital status and number of offspring. All models included an indicator of outcome time point. We also conducted sensitivity analyses stratifying (1) by the sex of the ATP parent,

to understand potential differences for mothers and fathers and (2) by outcome time point, to examine potential differences between earlier and later periods of the pandemic. To examine whether higher levels of grandparent disadvantage added further risk in the context of high parent SED, an interaction term between parent and grandparent SED was entered into the adjusted model with all confounders.

Missing data across the study variables in the analysed sample were minimal (Table S1) and handled using multiple imputation based on a multivariate normal model (Lee & Carlin, 2010), under the missing at random assumption. Binary variables were imputed as continuous variables, then back transformed with adaptive rounding following imputation (Bernaards et al., 2007). The imputation model included all analysed variables, and 50 data sets were generated with results combined using Rubin's rules (Rubin, 1987). Analyses were conducted using Stata/SE V.17 for Windows.

3 | RESULTS

3.1 | Sample characteristics

Almost two thirds (59%) of the ATP parents were female. On average, parents had under two children, and most were partnered (Table 2).

TABLE 2 Descriptive data on key study measures (N = 553)

	N	%	95% CI
Sample characteristics			
Original ATP participant is female	326	59	(55, 63)
Either grandparent born overseas	157	28	(25, 32)
ATP participant is partnered	541	98	(96, 99)
Number of offspring (M, SD)	1.71	0.71	(1.65, 1.77)
SED across generations			
SED of parent (M, SD)	0.13	0.94	(0.04, 0.22)
SED of grandparent (M, SD)	−0.02	1.02	(−0.12, 0.08)
Financial difficulties			
Earlier COVID-19 period			
Reduced capacity to earn or job loss	137	25	(21, 28)
Perceived financial difficulties	81	15	(12, 18)
Difficulty paying for essential amenities	67	12	(9, 15)
Any financial difficulties	187	34	(30, 38)
Multiple financial difficulties	70	13	(10, 16)
Later COVID-19 period			
Reduced capacity to earn or job loss	115	21	(17, 24)
Perceived financial difficulties	76	14	(11, 17)
Difficulty paying for essential amenities	73	13	(10, 16)
Any financial difficulties	176	32	(28, 36)
Multiple financial difficulties	68	12	(9, 15)

Note: Descriptives were estimated using imputed data. Frequency estimates were calculated from imputed percentage estimates and total number of participants.
Abbreviations: ATP, Australian Temperament Project; CI, confidence interval; SED, socio-economic disadvantage.

Around a third of grandparents were born overseas (29%). The SED of parents and grandparents correlated at $r = 0.31$.

3.2 | Financial difficulties during COVID-19

About one in three ATP parents (34%) reported that they had experienced at least one area of financial difficulty in the early phase of the pandemic, and similarly 32% in the later phase (Table 2). Job loss or reduced capacity to earn was the most common financial impact at each time point, reported by close to one quarter of parents. Just over one in 10 parents reported experiencing two or more financial difficulties at each time point.

3.3 | Pre-pandemic SED of parents and financial difficulties

Across both Covid waves, ATP parents with higher levels of pre-pandemic SED reported a higher proportion of financial adversities during the pandemic, as compared with ATP parents who were more advantaged (Figure 3). For example, although 20% of those with the highest levels of pre-pandemic SED experienced multiple financial

difficulties, only 6% of those with the lowest levels of pre-pandemic SED did so.

There was a graded association between the pre-pandemic SED of parents and the odds of financial difficulties (Table 3). For example, each standard deviation increase in the SED of parents was associated with a 36% increase in the odds of reporting multiple financial difficulties (odds ratio [OR] = 1.36, 95% CI = 1.04–1.78), after adjustment for potential confounders. A similar pattern of results was observed for each measure of financial difficulties. Associations were of a similar strength across the earlier and later pandemic periods (Table S2).

3.4 | Pre-pandemic SED of grandparents and financial difficulties

The proportion of families reporting financial difficulties was higher with each increment of increasing grandparent SED (Figure 3). There was some evidence that higher levels of grandparent SED were associated with higher odds of parents reporting COVID-19-related financial difficulties in adjusted models, with all estimates in the expected direction (Table 3). However, associations were weaker than for the parent's own SED, and CIs were wider.
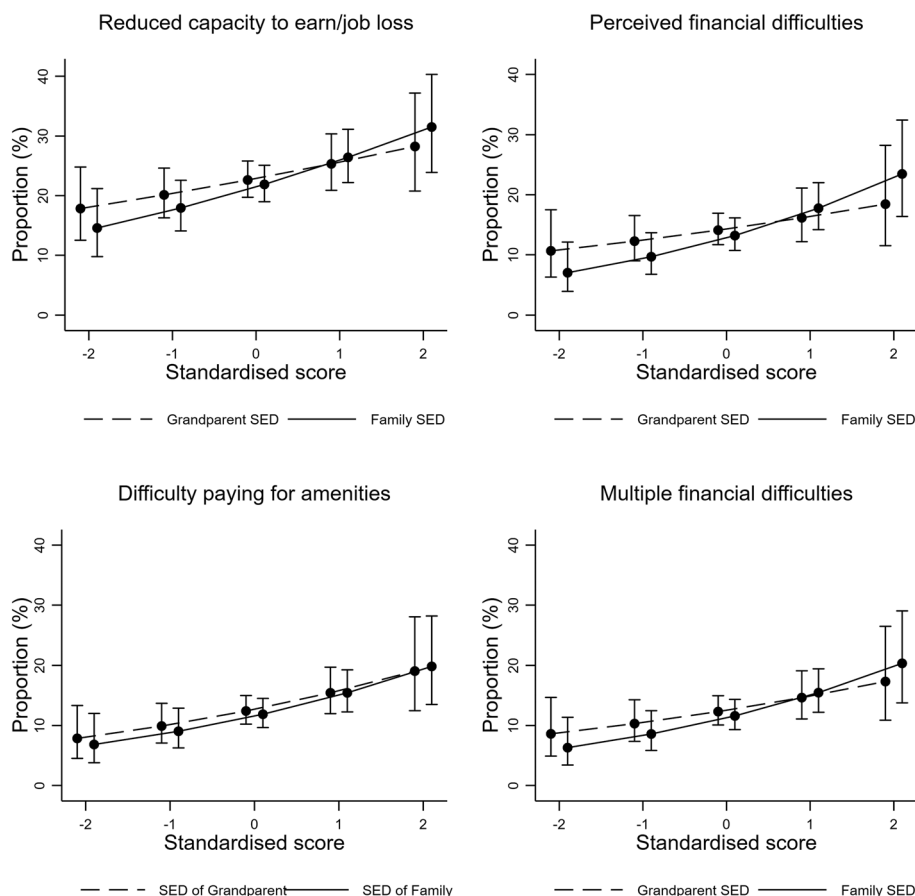

FIGURE 3 Percentage of families reporting financial difficulties during the COVID-19 pandemic according to the pre-pandemic socio-economic disadvantage (SED) of parents and grandparents ($N = 553$). *Note*. Percentages estimated from logistic regression generalized estimating equation (GEE) models, accounting for outcome time point

	Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI
Reduced capacity to earn or job loss				
Parent level of SED[a]	1.28	(1.06, 1.55)	1.27	(1.04, 1.54)
Grandparent level of SED[b]	1.16	(0.96, 1.40)	1.14	(0.95, 1.39)
Perceived financial difficulties				
Parent level of SED[a]	1.42	(1.12, 1.80)	1.39	(1.08, 1.78)
Grandparent level of SED[b]	1.17	(0.90, 1.52)	1.14	(0.88, 1.48)
Difficulty paying for essential amenities				
Parent level of SED[a]	1.36	(1.06, 1.74)	1.33	(1.02, 1.72)
Grandparent level of SED[b]	1.29	(1.00, 1.66)	1.26	(0.98, 1.62)
Multiple financial difficulties				
Parent level of SED[a]	1.40	(1.08, 1.80)	1.36	(1.04, 1.78)
Grandparent level of SED[b]	1.22	(0.94, 1.59)	1.18	(0.90, 1.53)

TABLE 3 Logistic regression generalized estimating equation (GEE) model estimates of the association between pre-pandemic socio-economic disadvantage (SED) of parents and grandparents and financial difficulties across the early (May–September 2020) and later (October–December 2021) phases of the COVID-19 pandemic (N = 553)

[a]Estimates adjusted for grandparent country of birth, parent gender, and marital status and number of children when child was 1 year of age.
[b]Estimates adjusted for grandparent country of birth.
Abbreviations: CI, confidence interval; OR, odds ratio.

3.5 | Differential effects for ATP mothers and fathers

Sensitivity analyses showed that effects were similar, but slightly stronger for ATP mothers compared to fathers. For example, for mothers, a one standard deviation increase in parent SED was associated with 50% higher odds of multiple financial difficulties (OR = 1.50, 95% CI 1.07, 2.12), compared with 20% for fathers (OR = 1.20, 95% CI 0.82, 1.75).

3.6 | Interaction between the SED of parents and grandparents

We did not find evidence of an interaction between the SED of parents and grandparents. That is, the association between the pre-pandemic SED of parents and each measure of financial difficulties was similar at each level of grandparent SED (Figure S1).

4 | DISCUSSION

At each of the pandemic time points captured, a third of parents with young children in this sample reported some form of financial adversity. The burden of financial adversity was borne disproportionately by those families who were more disadvantaged prior to the pandemic. This increased risk appeared to occur irrespective of grandparent SED as measured via education and occupation. These results reinforce the importance of considering the financial needs of families with young children during the pandemic and its aftermath and ensuring that supports reach those most in need.

The high prevalence of financial adversity observed in this sample aligns with national surveillance data captured over the pandemic (Biddle et al., 2020; Coates et al., 2020; Melbourne Institute, 2020). For example, data from the Australian Bureau of Statistics showed that 8% of Australian adults reported being unable to pay one or more bills on time between mid-March and mid-April 2020 (ABS, 2020), similar to the 11% of families having difficulties paying for bills and other essentials during the early phase of the pandemic in this sample. Financial impacts remained high over the two time points examined (e.g., 34% and 32% reporting any financial impact earlier and later, respectively). This contrasts to national statistics, where financial stressors appear to have decreased from mid-2020 to mid-2021 (e.g., 5.1% vs. 2.4% reporting difficulty meeting mortgage repayments in April 2020 and 2021, respectively; ABS, 2021). This perhaps stems from the concentration of our sample in Victoria, which is one of the Australian jurisdictions that experienced the most extensive lockdowns including throughout 2021. It may also reflect the specific challenges faced by families with young children as compared with a general population sample, including opportunities to work during periods of school and childcare closures.

In line with findings from other countries (e.g., Wright et al., 2020), financial impacts were not uniformly experienced across the socio-economic spectrum. For all types of financial difficulties, those parents who were more socio-economically disadvantaged prior to the pandemic had increased odds of experiencing financial hardships during both the early and later phases of COVID-19. There was also some indication that this effect was stronger for mothers compared with fathers, in line with other reports (Kristal & Yaish, 2020). This socio-economic gradient was evident despite significant policy investments made particularly over the early pandemic period, including an unprecedented increase to

unemployment benefits, and persisted as special welfare supplements were rolled back. COVID-19 has been labelled a pandemic of inequality, with both health risks and economic burdens borne disproportionately by the most marginalized segments of society (Nassif-Pires et al., 2020).

There was also some evidence of an association between SED in the previous generation (grandparents) and family financial difficulties, though smaller in magnitude than that of parents SED. This aligns to life course theories emphasizing that the unequal distribution of resources and risks across socio-economic strata can have long lasting consequences and drive continuities in disadvantage across generations (Braveman & Barclay, 2009; McEwen & McEwen, 2017). Our primary focus was on whether the SED of grandparents further intensified the risk of financial difficulties for families who were disadvantaged. We did not find evidence to support this. One possibility is that grandparents provided financial support at a level that was disproportionate to their measured socio-economic resources, indicated by education and employment only. We were unable to test this because transfers from grandparents to parents were not directly captured in the data. In addition, financial outcomes included perceptions of financial hardship, which may be more sensitive to the parent's own resources over which they have more direct control.

4.1 | Limitations and future directions

A strength of this investigation is the perspective across generations, with pre-pandemic socio-economic circumstances prospectively collected. As with all longitudinal studies, however, certain groups have been disproportionately lost to follow up. The sample is predominantly White and Australian born (reflecting Victorian demographics in 1983), and more ethnic minority and high SED families have been lost over time. This means that we cannot capture differential impacts for families from ethnic minority backgrounds, including the added burden of discrimination (Kantamneni, 2020). Because of the study design, we had information on the child's ATP parent (i.e., original infant recruited in 1983), but not typically on the child's non-ATP parent, though high correlations are generally observed between couples' on socio-economic indicators like educational attainment (Schwartz, 2013). Similarly, we had data on the ATP grandparents, whose circumstances may differ from the child's non-ATP grandparents. Small sample size limited our ability to explore differential impacts of the pandemic on mothers and fathers.

Our goal was to describe the frequency and distribution of financial difficulties in families during COVID-19 across the socio-economic spectrum, in order to inform targeting of supports and to raise attention to equity issues. Exploring the role of the constituent components of SED (e.g., parent education), as well as other sources of advantage (e.g., income, home ownership and assets), and receipt of welfare benefits would further inform specific policy interventions. Ongoing research would benefit from an expanded set of items around financial difficulties that can capture the context (e.g., reasons for job loss) and additional challenges facing families (e.g., mortgage default). In addition, although we were able to capture financial disruptions during 2020 and 2021, monitoring families' financial well-being over the post-pandemic recovery period will also be important, as family resources are potentially exhausted and new welfare policies emerge.

4.2 | Implications

The detrimental impact of financial adversity on children's health and development is well established (Conger et al., 2010; Council on Community Pediatrics, 2016; Goldfeld, O'Connor, et al., 2018; Masarik & Conger, 2017). The high levels of financial difficulties experienced by parents with young children in this sample is therefore of significant concern. Because the impact of early disadvantage and financial adversity unfolds over time (Goldfeld, O'Connor, et al., 2018; Shonkoff & Boyce, 2009), the full extent of health consequences is not likely to be apparent for years to come. It will therefore be essential to continue to monitor the health and well-being of children and families as the crisis unfolds and during the long-term post-pandemic recovery. These investigations will require detailed data on pathways of health and financial stability prior to, during, and in the post-pandemic periods. The family stress model also suggests the importance of mediating factors such as parent psychological distress, family conflict and disrupted parenting (Conger et al., 2010; Masarik & Conger, 2017), which may present additional modifiable targets for intervention that could be tested and explored in future research. In the meantime, data from previous shocks, like the 2008 recession, suggest a number of critical policy avenues, including an explicit policy commitment to the well-being of children and families and direct provision of resources such as income support (Fanjul, 2014).

Our findings further suggest that adverse financial impacts were disproportionately borne by parents who were disadvantaged prior to the pandemic, despite intensive policy efforts particularly during the early phase of COVID-19. This disparity requires additional focus in the provision of support, as even the significant policy investments at the time of the earlier data collection appear to have been insufficient to close the equity gap for families with young children. Without sustained government support, there is potential for the COVID-19 pandemic to further widen and entrench socio-economic disparities in child health. As well as being unfair and unjust, rising inequality also has potential to undermine economic recovery in the post-COVID-19 period (Nassif-Pires et al., 2020).

5 | CONCLUSIONS

Most countries around the globe faced an economic crisis in the wake of the COVID-19 pandemic, including Australia (World Bank, 2020). Our results suggest that this has translated into increased levels of financial difficulties for Australian families with young children. This

burden has been greatest for parents with higher levels of SED prior to the crisis, regardless of grandparent resources and despite intensive policy efforts. This has the potential to exacerbate, and further entrench, existing socio-economic inequalities. Sustained and well-targeted government supports are critical to closing this gap and minimizing adverse consequences for children's health and development in the years and decades to come.

ETHICS STATEMENT

The current institutional body responsible for ethical approval of this study is The Royal Children's Hospital Human Research Ethics Committee.

CONFLICT OF INTEREST

There are no conflicts of interest to declare.

PATIENT CONSENT STATEMENT

Families consented to participation in this study via opt-in informed consent.

DATA AVAILABILITY STATEMENT

Ethics approvals do not permit these potentially re-identifiable data to be made publicly available, but access can be requested online (https://lifecourse.melbournechildrens.com/data-access/).

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