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Family Stress Processes Underlying COVID-19–Related Economic Insecurity for Mothers and Fathers and Children’s Internalizing Behaviour Problems

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ABSTRACT

COVID-19 and its economic fallout have resulted in unprecedented financial insecurity and material hardship for many American families, with a disproportionately negative impact on children and families from socioeconomically disadvantaged contexts. The current study applied the family stress model to examine the family processes underlying pandemic-related economic insecurity and children’s internalizing behaviours. Online survey data from an economically diverse sample of mothers and fathers, who experienced at least one type of pandemic-related economic insecurity in the United States ($N = 259$), were collected across two longitudinal time points in the early weeks of COVID-19: (1) 14 April and (2) 30 April of 2020. Parental depressive symptoms, negative partner relationship quality and harsh parenting were tested as mediators. Results from the path model showed that pandemic-related economic insecurity was associated with higher levels of parental depressive symptoms, which were then associated with higher levels of negative partner relationship quality. Negative partner relationship quality was subsequently associated with more harsh parenting, which was then associated with increased child internalizing behaviours. Indirect effects were found for all hypothesized mediators. The family stress model can be applied and extended to the early COVID-19 period. Child and family social work implications include targeting parents’ mental health, relationship quality and parenting behaviours, as well as directly addressing financial and material hardship, to mitigate the adverse effects of pandemic-related economic insecurity on children’s mental health.

1 | Introduction

The COVID-19 pandemic and its impact on the economy brought unprecedented financial insecurity and material hardship to many Americans (Center on Budget and Policy Priorities 2020). In the early months of the pandemic between 23 April and 5 May 2020, more than 116 million individuals experienced employment loss, leading to high rates of unemployment (US Census Bureau 2020). The official poverty rate increased from 10.5% in 2019 to 11.4% in 2020, which is notable as an indicator of hardship

given that it reflects an increase after consistent declines in poverty across the previous five years (Shrider et al. 2021). Although the government’s economic relief measures reduced economic insecurity, such relief was short-lived and temporary (US Census Bureau 2023a, 2023b).

Relative to prepandemic levels, US adults experienced an alarming three-fold increase in depression and anxiety symptoms during the pandemic (Twenge and Joiner 2020). COVID-19 negatively impacted children as well (Ann and Robert H. Lurie Children’s

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Hospital of Chicago 2021; Leeb et al. 2020). Relatedly, by October 2021, the American Academy of Pediatrics (2021) and others declared a national emergency in child mental health, with the US Surgeon General releasing a public statement only a few months later about youth mental health problems being an urgent public health matter to address. Despite evidence of the adverse effects of the pandemic on family functioning, the mechanism by which pandemic-related economic stressors are linked with children's mental health has not been fully considered. Understanding such a mechanism is critically important because it allows for identifying targets of intervention to mitigate the negative effects of pandemic-induced economic hardship on children's mental health. This study examined family stress processes between pandemic-related economic insecurity and children's internalizing behaviours in an economically diverse sample of parents, who experienced at least one type of pandemic-related hardship.

2 | Early COVID-19 as the Context for Parental Mental Health, Interparental Conflict, Harsh Parenting and Child Behaviour Problems

The early weeks and months of the pandemic, including the weeks in April of 2020, brought about unprecedented economic changes in the lives of US children and families (CDC 2023; S. J. Lee et al. 2021). For example, more than 26 million people in the United States had filed for unemployment, increasing the number of individuals without health insurance in the pandemic, putting their lives at risk and driving up economic insecurity in American families (CDC 2023). Relatedly, evidence is robust that the mental health of many Americans suffered during COVID-19. As noted earlier, anxiety and depression exponentially increased among US adults, including parents, during COVID-19 (S. J. Lee et al. 2022; Twenge and Joiner 2020). Parents of young children faced unique stressors related to the well-being and care of their children: lack of childcare and major disruptions in educational activities (Collins et al. 2021; S. J. Lee et al. 2021), elevated levels of social isolation (S. J. Lee et al. 2021) and heightened levels of food insecurity, in part due to school closures (Ward and Lee 2022). In addition to overall increased symptoms of depression and anxiety, parents showed elevated levels of stress and parental burnout (Freisthler et al. 2022; Kerr, Fanning, et al. 2021; Kerr, Rasmussen, et al. 2021; S. J. Lee and Ward 2020).

Economic strain and job loss are well established as factors that increase relationship conflict and interpersonal violence. Indeed, another factor during the pandemic was stay-at-home and lockdown orders. Bullinger, Carr, and Packham (2020) documented a 7.5% increase in domestic violence-related calls to the police during stay-at-home orders in one state. One meta-analysis indicated that 'the evidence is strong that incidents of domestic violence increased in response to stay-at-home/lockdown orders' (Piquero et al. 2021), a premise that is supported by other comprehensive review studies (Kourti et al. 2023; McNeil et al. 2023). While the research is not entirely conclusive given the limitations of study designs, it appears that domestic violence and interparental conflict increased during COVID-19 due to a complex interplay of stressors.

Similarly, there is some evidence—again with limitations due to study design—that suggests increased harsh

parenting during the pandemic (Cassinat et al. 2021; Connell and Strambler 2021; Feinberg et al. 2022; S. J. Lee et al. 2021; S. J. Lee and Ward 2020; Rodriguez et al. 2021; Sari et al. 2022). In the early weeks of COVID-19, parents reported high levels of harsh parenting: 61% shouted, yelled or screamed at their children, and 20% spanked or slapped their children at least once in the last 2 weeks (Lee and Ward 2020). Parents also reported that this was an increase in harsh punishment compared to prepandemic behaviour: 19% of parents said they yelled or screamed more often, and 15% said they increased harsh discipline toward their children since COVID-19 (Lee and Ward 2020). In one of the few studies that compared prepandemic parenting to postpandemic parenting behaviours, there was evidence of an increased risk for child maltreatment due to pandemic-era stressors like unemployment and food insecurity (Rodriguez et al. 2021).

It is perhaps not surprising given the overall elevated risk for adult mental health problems, as well as the many unforeseen strains that children experienced due to disruptions in their education and daily activities, that research documents heightened child behaviour problems during the pandemic (Feinberg et al. 2022; Gassman-Pines, Ananat, and Fitz-Henley 2020; Hanno et al. 2022; Kerr et al. 2021; Marques de Miranda et al. 2020). Parents were four times more likely to report clinical levels of child internalizing behaviour problems after the COVID-19 onset compared to pre-COVID (Feinberg et al. 2022). As reported by parents, children of all ages experienced symptoms of anxiety and internalizing behaviours during COVID-19, with younger children exhibiting clinginess and fear and older children displaying depressive symptoms (Marques de Miranda et al. 2020). Worse behavioural symptoms, including internalizing behaviours, were reported for children from more socioeconomically disadvantaged contexts, including children of colour and those from families with low income (Centers for Disease Control and Prevention [CDC] 2023).

2.1 | Mothers' and Fathers' Parenting During the Pandemic

Emerging literature shows other interesting patterns of family relationships and dynamics during the early weeks and months of the pandemic. With regard to differences between mothers and fathers, research demonstrates that men engaged in more childcare during the pandemic than pre-pandemic periods (Shafer, Scheibling, and Milkie 2020). Specifically, Shafer, Scheibling, and Milkie (2020) showed, using data from 1234 Canadian parents, that perceived childcare tasks in the areas of physical care of child, listening to child, monitoring child, reading to child and organizing schedules and routines for child significantly increased for fathers (but significantly decreased for mothers) before and after the COVID-19 onset. Despite fathers' increased pandemic caregiving, mothers also increased their domestic responsibilities due to the unique demands of COVID-19 (Carlson, Petts, and Pepin 2022; Kerr et al. 2021). Since the onset of the pandemic, more mothers suffered job losses than fathers, and mothers of young children reduced work hours up to five times more than fathers (Collins et al. 2021). Such evidence points to the disproportionately negative impact of COVID-19 on women than men

(Kerr et al. 2021). That said, others have found stronger associations between pandemic-related caregiving burden, parental mental health problems and poor parent–child relationship quality for fathers than mothers, suggesting men’s difficulty in adjusting to shifts in roles and responsibilities during early months of the pandemic (Russell et al. 2020). Overall, the evidence concerning gender differences is mixed, warranting a better understanding of similarities and differences in pandemic-induced family processes for mothers and fathers.

2.2 | Theoretical Framework: The Family Stress Model (FSM)

The FSM (Conger, Rueter, and Conger 2000; Elder and Caspi 1988; Liker and Elder 1983; Masarik and Conger 2017) was developed to understand the economic impact of the Great Farm Crisis in the 1980s on family functioning and child adjustment. The earliest FSM studies focused on majority White rural families and showed that negative economic events were linked with poor child adjustment as mediated by deteriorated parental mental health, partner relationship quality and parenting quality. More specifically, the FSM posits that economic hardship, such as low income and employment loss, can lead to higher levels of parental depressive symptoms, which then contribute to interparental conflict. Interparental conflict is subsequently associated with harsh parenting behaviours that ultimately contribute to child maladjustment. Since its inception, the FSM has been replicated with and generalized to urban and racially and ethnically diverse samples (see Masarik and Conger [2017] for a review).

Parallels can be drawn in relation to the economic stress that families experienced because of the pandemic. For example, research demonstrated that families with children were disproportionately impacted by job loss; one in every four children had at least one unemployed parent (Parolin 2020). In response, the US government reduced the economic burden of families with children through expanded Child Tax Credits in late 2020 and throughout 2021. Even so, through mid-2022, between 33% and 45% of adults living with children have consistently reported difficulties paying for household expenses (e.g., food, rent or mortgage and medical expenses) (Drake and Williams 2022), and 14.8% of US households with children—disproportionately represented by female-headed and Black households—experienced food insecurity in 2020 (Coleman-Jensen et al. 2021).

Although prior research documents numerous associations that would seem to support the applicability of the FSM, relatively few studies have applied the FSM using data collected from parents during the early weeks and months of COVID-19 (Boyer et al. 2023; Browne et al. 2021; Shelleby et al. 2022; Singletary et al. 2022). For example, Shelleby et al. (2022) recruited a sample of majority middle-income, US white mothers of school-age children to complete an online survey at four waves between 20 April and 6 May 2020. Their structural equation modelling (SEM) results showed that pandemic-related financial stress at Wave 1 was linked with subsequent higher maternal psychological distress at Wave 2, which in turn predicted higher maternal negative parenting at Wave

3. Maternal negative parenting was subsequently associated with higher child behaviour problems (i.e., externalizing, opposite defiant disorder) at Wave 4. The researchers also examined the role of child behaviour problems at Wave 1 and found that it was associated with higher levels of maternal psychological distress at Wave 2.

Another study recruited a sample of majority middle-income white mothers and fathers from the United Kingdom, raising children between the ages of 5 and 18 years (Browne et al. 2021). Parents completed an online survey across two waves between May and June 2020. Their path model results showed that pandemic-related disruptions (i.e., which broadly covered disruptions across multiple family aspects, including finances, basic needs, family relationships, education and household responsibilities) were cross-sectionally linked with higher levels of parental psychological distress (i.e., depression and anxiety symptoms) at Wave 1. Pandemic-related disruptions were also cross-sectionally linked with higher levels of child mental health problems (i.e., depression and anxiety symptoms, anger) at Wave 1, which subsequently predicted higher levels of parental psychological distress at Wave 2 and lower levels of positive parenting quality at Wave 2.

Both Shelleby et al. (2022) and Browne et al. (2021) studies are limited in their diversity. To address these gaps, others have used more diverse samples in testing the FSM (Boyer et al. 2023; Singletary et al. 2022). For example, between 20 March 2020 and 31 January 2021, Boyer et al. (2023) surveyed a sample of Mexican-heritage Latina mothers living with low income in Yolo County, California, and raising children under the age of 7 years. Path model results showed that pandemic-related financial cutbacks (e.g., buy less food, shut down heat or air conditioning) were linked with higher levels of maternal stress, which was then associated with higher levels of children’s externalizing behaviours. A study by Singletary et al. (2022) recruited an economically diverse sample of mothers raising children under the age of 9 years in Columbus or Cleveland, Ohio. Mothers completed an online survey between May and June 2020. Linear regression results showed that total pandemic-related stressors (e.g., working in health-care settings, having hours reduced by employer) were cross-sectionally linked with children’s anxious/withdrawn, fearful and acting-out behaviours.

Overall, despite their contributions to literature, these prior studies have several gaps: (1) lacking diversity in samples in terms of gender and socioeconomic status as most studies focused on middle-income, majority white mothers and their reports concerning COVID-19-related challenges; (2) for some studies, failing to disaggregate pandemic-related economic hardship from other types of COVID-19 stressors (e.g., losing contact with family and friends, feeling stuck at home and taking on more childcare or education of children), which makes it difficult to parse out the specific role of financial difficulties and pressures in family functioning as proposed by the FSM; and (3) not testing the full FSM as proposed by the FSM, with most studies omitting to examine partner relationship quality and parenting quality as key mediators between COVID-19-related economic hardship and child behaviours.

2.3 | The Current Study

In addressing the gaps in prior work, the current study aimed to apply and test the FSM to test mechanisms between pandemic-related economic stressors and children's mental health, using a socioeconomically diverse sample of both mothers and fathers who experienced at least one pandemic-induced economic hardship in the early weeks (i.e., April 2020) of COVID-19. Understanding underlying mechanisms is critical to informing ongoing efforts to reduce the adverse effects of pandemic-induced economic challenges on children's mental health because it allows for identifying specific targets for intervention. The FSM and prior research informed our hypotheses. First, we hypothesized that pandemic-related economic insecurity would be associated with more negative partner relationship quality, as mediated by higher levels of parental depressive symptoms (H1). Second, we hypothesized that parental depressive symptoms would be associated with more harsh parenting, as mediated by higher negative partner relationship quality (H2). Third, we hypothesized that negative partner relationship quality would be associated with increased child internalizing behaviours, as mediated by more harsh parenting (H3). Finally, we also explored parents' gender as a potential moderator of the COVID-19 family process to identify differences between mothers and fathers. Given the relatively nascent and mixed literature on parental gender roles during the pandemic (Collins et al. 2021; Russell et al. 2020; Wang et al. 2021), we did not derive specific hypotheses for our moderation analyses.

Contributions to the literature include application of the FSM to a diverse (e.g., gender and socioeconomic status) sample of US parents during the early periods of the pandemic; examining pandemic-related economic hardship as a key predictor in accordance with the FSM without conflating it with other COVID-19 stressors; testing the full family stress process as proposed by the FSM through critically examining parental depressive symptoms, negative relationship quality and harsh parenting as key mediators linking pandemic-related economic hardship to children's internalizing behaviours; and by doing so informing intervention efforts.

3 | Methods

3.1 | Procedures

Data were from an online survey launched via Prolific (www.prolific.com), which is an online research panel. The survey was launched initially on 24 March 2020, approximately 2 weeks after the World Health Organization declared COVID-19 as a global pandemic (World Health Organization 2020). Eligibility criteria included being of US nationality and being at least 18 years and older. Although not a nationally representative sample, data were collected from participants across the United States. Prolific notified interested and potential participants of their eligibility to take the online survey. Eligible participants were then taken to a Qualtrics survey that the research team developed and managed.

A total of 654 participated in the baseline survey. All 654 participants were over the age of 18 years old. The original online

survey was not restricted to parents only. After the baseline survey, two longitudinal follow-up surveys were conducted: The first follow-up period was 14 April 2020 (Time 1), 3 weeks after the baseline survey launched. The second follow-up period was 30 April 2020 (Time 2), approximately 2 weeks after the Time 1 survey. Follow-up periods occurred within less than a month to adequately capture how participants were coping with the rapid COVID-19 related changes that were occurring across sectors (e.g., school closures, high COVID-19 death tolls, massive layoffs and furloughs) (CDC 2023; S. J. Lee et al. 2021). For these two follow-up periods, individuals with low income—defined as having an annual household income of less than \$37 000—were oversampled given that the baseline survey yielded mostly middle and middle-upper-income participants. Three attention checks were included in the survey, which allowed for ensuring data quality. No participant failed more than one attention check. After completing each survey, participants received \$6 through Prolific. On average, participants took 40 minutes to complete the surveys. The Institutional Review Board (IRB) at the University of Michigan considered the current study exempted from IRB oversight.

3.2 | Participants

Participants for the current study included individuals who identified as parents. Being a parent was defined as caring for one or more biological, step, adopted, foster children, or any other children for whom the participant was in a significant parenting role and living with at least one child whose age is 12 years or younger. The sample also focused on those who completed the two follow-up period surveys—Time 1 and Time 2 in which parents from low-income backgrounds were oversampled—and those with at least one pandemic-related economic hardship. This was based on our research interests in examining the family stress processes in a sample that faced or experienced socioeconomic disadvantages during COVID-19. Finally, we limited our sample to those who were currently in a romantic relationship and thus provided valid data on the partner relationship quality questions. Our total analytic sample for the current study was $N = 259$ parents.

3.3 | Measures

3.3.1 | Pandemic-Related Economic Insecurity

Pandemic-related economic insecurity at Time 1 was captured using the following: five items modified from the Worry Domains Questionnaire-Financial Subscale (WDQ; Tallis, Davey, and Bond 1994) that captured financial worries parents had since the COVID-19 pandemic (e.g., 'I worry that money will run out' and 'I worry that I can't afford to pay bills'), that were rated on a 4-point Likert scale ranging from 0 = *Not at all* to 4 = *Extremely*; four items capturing pandemic-related food insecurity (e.g., 'The food that I bought just didn't last, and I didn't have money to get more' and 'I relied on only a few kinds of low-cost food because I was running out of money to buy food'), that were rated on a 3-point Likert scale ranging from 0 = *Never true* to 2 = *Often true*; and seven items pertaining to purchasing material resources to meet children's needs (e.g., diapers, formula,

food, clothes, milk and water) using a 3-point Likert scale ranging from 1 = *I have not needed this item or it is not applicable to my child* to 3 = *I have needed this item and I haven't had enough money to buy*. Because these measures capturing financial worries, food insecurity, and lack of material resources to meet children's needs all had different scales, individual items within measures were dichotomized (yes/no) to represent whether participants reported any financial worries, food insecurity and lack of material resources to meet their children's needs. Next, these three dichotomized measures were summed to create a pandemic-related economic insecurity composite, which was a count variable indicating the total number of pandemic-related economic insecurities participants experienced.

3.3.2 | Parental Depressive Symptoms

Parental depressive symptoms at Time 1 were assessed using a modified Patient Health Questionnaire (PHQ9; Kroenke, Spitzer, and Williams 2001), which included eight items that captured parental depressive symptoms in the past 2 weeks (e.g., 'feeling down, depressed, or hopeless', 'feeling tired or having little energy' and 'feeling bad about yourself or that you are a failure or have let yourself or your family down'), that were rated on a 3-point Likert scale ranging from 0 = *Not at all* to 3 = *Nearly every day*. A parental depressive symptoms total score was created by averaging across items and showed good reliability with a Cronbach's $\alpha = 0.91$.

3.3.3 | Negative Partner Relationship Quality

Negative partner relationship quality at Time 2 was assessed using six items that capture poor relationship quality between spouses or partners since the COVID-19 pandemic started (e.g., 'My spouse or partner and I have had disagreements related to COVID-19'). These items were rated on a 5-point Likert scale, ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. A negative partner relationship quality total score was created by averaging across items and demonstrated acceptable reliability with a Cronbach's $\alpha = 0.74$.

3.3.4 | Harsh Parenting

Harsh parenting was assessed at Time 2 using the following: seven items from the Parent-Child Conflict Tactics Scale's Neglect Subscale (CTSPC; Straus et al. 1998) that captured parents' neglectful behaviours toward their children in the past 2 weeks (e.g., 'Had to leave your child or children home alone, even when you thought some adult should be with him or her' and 'Were so caught up with your own problems that you were not able to show or tell your child that you loved him or her'), that were rated on a 5-point Likert scale ranging from 0 = *Never* to 4 = *Four or more times*; three items from the CTSPC's Psychological Aggression Subscale (Straus et al. 1998) that captured parents' psychologically aggressive behaviours toward their children in the past 2 weeks (e.g., 'Threatened to spank or hit child but did not actually do so' and 'Shouted, yelled, or screamed at child'), that were rated on a 6-point Likert scale ranging from 0 = *Never* to 5 = *Everyday*; and six items

pertaining to parental discipline since the COVID-19 pandemic (e.g., 'I have increased the use of discipline with my children' and 'I have spanked or hit my child more often than usual'), that were rated using binary responses of 0 = *No* or 1 = *Yes*. A harsh parenting composite variable was created by dichotomizing the first two measures so that all three measures were binary. Next, we summed across all three measures, yielding a count variable indicating the total number of harsh parenting behaviours in which parents engaged.

3.3.5 | Child Internalizing Behaviours

Child internalizing behaviours at both Time 1 and Time 2 were assessed using 14 items from the Child Behavior Checklist's Depression and Anxiety Subscale (CBCL; Achenbach 1999) that captured parents' reports of their children's internalizing behaviours in the past 2 weeks since the COVID-19 pandemic (e.g., 'Complains of loneliness' and 'Cries a lot'). These items were rated on a 3-point Likert scale, ranging from 0 = *Not true* to 2 = *Very often true*. Child internalizing behaviour total scores were created for Time 1 and Time 2 by averaging across the items. Measures at the two time points demonstrated good reliability, with Cronbach's $\alpha = 0.87$ for Time 1 and Cronbach's $\alpha = 0.86$ for Time 2.

3.3.6 | Sociodemographic Variables

Sociodemographic variables at Time 1 were included as control variables in the main models. These variables were selected by examining prior literature in this area (Browne et al. 2021; Shelleby et al. 2022). For example, Shelleby et al. (2022) included maternal race and ethnicity, marital status and child age, and Browne et al. (2021) included parents' gender, parents' age and annual household income in their models testing the FSM during the early weeks and months of COVID-19. The sociodemographic control variables included parents' age as a continuous variable. Parents' gender was initially a categorical variable with multiple options (i.e., male, female, transgender, gender nonconforming and other gender), but the variable was dichotomized into 1 = *Male* and 2 = *Female* for the current study, given that all participants' responses reflected solely these two answers and no other gender identity. Parents' race and ethnicity were entered as individual dummy variables (1 = *Yes*, 0 = *No*) for Black, white, Latine/Hispanic and other (which included Asian, biracial and any other race categories), and Black served as the reference group. Parents' education levels were entered as individual dummy variables (1 = *Yes*, 0 = *No*) for high school only, some college or associate's degree, bachelor's degree and graduate degree, with high school only serving as the reference group. Parents' income levels were entered as individual dummy variables (1 = *Yes*, 0 = *No*) for \$10 000–\$29 999, \$30 000–\$49 999 and \$50 000 and up, with \$10 000–\$29 999 serving as the reference group. Parents' employment status was a binary variable indicating whether parents were employed for pay either full-time or part-time (1 = *Employed*, 0 = *Unemployed*). Parents' marital status was also a binary variable indicating whether parents were married (1 = *Married*, 0 = *Not married*). The age of the first child was initially captured as a categorical variable (1 = 0–1 year,

2 = 2–5 years, 3 = 6–8 years, 4 = 9–12 years), which we dichotomized so that each category could be entered as dummy variables in the model with 0–1 year serving as the reference group. We also included the gender of the first child as a dichotomous variable (1 = *Male*, 2 = *Female*). The total number of children was entered into the model as a continuous variable. In our moderation analysis, parents' gender from Time 1 as described above was used as a moderator.

3.4 | Analysis Plan

Data management and preliminary analyses were conducted in Stata Version 17 (StataCorp 2021). These included calculating descriptive statistics and conducting bivariate analyses, including correlations. Path analysis was conducted using the lavaan package (Rosseel 2012) in R Version 4.1.1 (R Core Team 2021). We acknowledge up front that although our data are not completely cross-sectional, there are only two time points (Time 1 and Time 2), which does not allow for clear temporal precedence for testing mediation. Furthermore, several of the associations we test are cross-sectional (e.g., relations between pandemic-related economic insecurity at Time 1 and parental depressive symptoms at Time 1). Path analysis model fit was assessed using the following fit indices based on best practices (Kline 2016): root mean square error approximation (RMSEA < 0.06 for good fit; Steiger 1990); 90% confidence intervals (CIs) of RMSEA; comparative fit index (CFI > 0.95 for good fit; Bentler 1990); and standardized root mean square residuals (SRMR < 0.05 for good fit; Hu and Bentler 1999).

We tested indirect effects by estimating Monte Carlo confidence intervals, which entails repeating thousands of random draws from the joint distribution of parameter estimates of interest to produce a sampling distribution of an indirect effect (Preacher and Selig 2012). The information is used to estimate confidence intervals for the indirect effect. Through simulation studies, Monte Carlo confidence intervals have shown to yield results comparable to those of bootstrapped confidence intervals (Preacher and Selig 2012). The null hypothesis of no indirect effect is tested by examining whether the Monte Carlo confidence interval contains zero. If the confidence interval does not include zero, the indirect effect is statistically significant.

Parents' gender was examined as a moderator, given preliminary evidence on the potentially different impact of COVID-19 on mothers and fathers (Collins et al. 2021; Kerr et al. 2021; Shafer, Scheibling, and Milkie 2020). Specifically, parents' gender was used as individual group variables in our model. As part of multiple group analysis, we first conducted omnibus tests where constrained models (i.e., all regression paths constrained to be equal across groups: mothers vs. fathers) were compared to their respective unconstrained models (i.e., all regression paths allowed to freely vary across groups). A statistically significant omnibus test signals differences between constrained and unconstrained models and, thus, permits researchers to test moderation of individual pathways, with theory typically guiding the selection of specific pathways to test for moderation (Kline 2016). Testing the full model first using an omnibus test and then testing individual pathways is considered a robust approach to test moderation in path analysis modelling (Kline 2016). In comparing

the constrained and unconstrained models, we used a chi-square difference test. A nonsignificant test signals no significant differences between the models (i.e., unconstrained model performs just as well as constrained model) and suggests that pandemic-induced family stress processes are likely equal across groups of interest (i.e., mothers vs. fathers).

Missing data were minimal across study variables. All main study variables had 0% missing data. Across sociodemographic control variables, all had missing data of < 1% with the exception of first child age (1.54% missing), first child sex (5.41% missing) and total number of children (1.54% missing). We used full information maximum likelihood (FIML) to account for missing data. FIML estimates parameters by maximizing the sample and thus uses all available data (Kline 2016).

4 | Results

4.1 | Preliminary Results

Descriptive statistics of the main study variables and analytic sample characteristics can be found in Table 1. On average, parents were 34.13 years old. About two-thirds of the parents identified as females (67.57%). The majority of the parents identified as white (71.81%), followed by Black (10.81%), Latine/Hispanic (8.88%) and Other (8.49%). Most parents had an education level of some college or less (54.55%), were married (67.57%) and reported having an annual household income of less than \$50 000 (56.98%). Most parents (60%) had first children between the ages of 6 and 12 years old. Participants had on average 1.78 children in their care.

In terms of main study variables, participants had on average close to two types of pandemic-related economic hardships at Time 1 ($M = 1.81$, $SD = 0.77$, range: 1–3). For other main study variables, parents generally reported low mean or sum scores: parental depressive symptoms at Time 1 ($M = 1.08$, $SD = 0.76$, range: 0–3), negative partner relationship quality at Time 2 ($M = 2.31$, $SD = 0.81$, range: 1–4.5), harsh parenting at Time 2 ($M = 1.31$, $SD = 1.00$, range: 0–3) and child internalizing behaviours at both Time 1 and Time 2 (Time 1: $M = 3.29$, $SD = 3.90$, range: 0–19; Time 2: $M = 3.18$, $SD = 3.80$, range: 0–19). The correlation results between the main study variables are shown in Table 2. Overall, all main study variables were significantly correlated with one another. All sociodemographic control variables were significantly correlated with at least one of the main study variables.

4.2 | Path Analysis Results

Path analysis results are shown in Figure 1. Again, it is important to be mindful that we were limited to only two time points and some of the associations tested were cross-sectional in nature. The hypothesized path model successfully converged, with good model fit to the data, $\chi^2(48) = 58.65$, $p = 0.139$, RMSEA = 0.03, 90% CI [0.00, 0.05], CFI = 0.98, SRMR = 0.02. Specifically, in accordance with the FSM and our first hypothesis (H1), pandemic-related economic insecurity at Time 1 was linked with more parental depressive symptoms at Time 1 ($\beta = 0.31$, 95% CI [0.10, 0.43], $p < 0.001$), which were then linked with higher levels of

TABLE 1 | Sample characteristics and descriptive statistics ($N=259$).

Variable	<i>M (SD)</i> or %
Parents' age (range: 19–51)	34.13 (7.02)
Parents' gender	
Male	32.43
Female	67.57
Parents' race and ethnicity	
White	71.81%
Black	10.81%
Latine/Hispanic	8.88%
Other	8.49%
Parents' education levels	
High school diploma	14.29%
Some college/associate degree	40.15%
Bachelor's degree	32.43%
Graduate degree	13.13%
Parents is employed (yes)	57.92%
Parents' income levels	
\$10000 to \$29999	31.40%
\$30000 to \$49000	25.58%
\$50000 and up	43.02%
Parent is married (yes)	67.57%
First child's age	
0–1 year	11.76%
2–5 years	28.24%
6–8 years	20.78%
9–12 years	39.22%
First child's sex (female)	51.43%
Number of children	1.78 (0.91)
Pandemic-related economic hardship at Time 1 (range: 1–3)	1.81 (0.77)
Parental depressive symptoms at Time 1 (range: 0–3)	1.08 (0.76)
Negative partner relationship quality at Time 2 (range: 1–4.5)	2.31 (0.81)
Harsh parenting at Time 2 (range: 0–3)	1.31 (1.00)
Child internalizing behaviours	
At Time 1 (range: 0–19)	3.29 (3.90)
At Time 2 (range: 0–18)	3.18 (3.81)

Note: Unless otherwise indicated, all variables are from Time 1.

negative partner relationship quality at Time 2 ($\beta=0.22$, 95% CI [0.08, 0.36], $p=0.002$). Test of indirect effects showed that parental depressive symptoms at Time 1 served as a mediator between pandemic-related economic hardship at Time 1 and negative partner relationship quality at Time 2 (indirect effect = 0.07, 95% CI [0.02, 0.13]).

Consistent with our second hypothesis (H2), parental depressive symptoms at Time 1 were linked with higher levels of

negative partner relationship quality at Time 2 ($\beta=0.22$, 95% CI [0.08, 0.36], $p=0.002$), which was then linked with higher levels of harsh parenting at Time 2 ($\beta=0.28$, 95% CI [0.16, 0.39], $p<0.001$). Again, test of indirect effects showed that negative partner relationship quality at Time 2 served as a mediator between parental depressive symptoms at Time 1 and harsh parenting at Time 2 (indirect effect = 0.06, 95% CI [0.02, 0.11]).

Supporting our third hypothesis (H3), negative partner relationship quality at Time 2 was associated with higher levels of harsh parenting at Time 2 ($\beta=0.28$, 95% CI [0.16, 0.39], $p<0.001$), which was then linked with higher levels of child internalizing behaviours at Time 2 ($\beta=0.25$, 95% CI [0.16, 0.35], $p<0.001$). Test of indirect effects showed that harsh parenting at Time 2 served as a mediator of negative partner relationship quality at Time 2 and child internalizing behaviours at Time 2 (indirect effect = 0.07, 95% CI [0.03, 0.12]). Sequential mediation test showed that the total indirect effect—the full series of pathways from pandemic-related economic insecurity to child internalizing behaviours through parental depressive symptoms, negative relationship quality and harsh parenting—was statistically significant (total indirect effect = 0.20, 95% CI [0.24, 0.72], $p<0.001$).

In terms of additionally significant paths, child internalizing behaviours at Time 1 were linked with higher levels of harsh parenting at Time 2 ($\beta=0.23$, 95% CI [0.10, 0.35], $p<0.001$) and child internalizing behaviours at Time 2 ($\beta=0.58$, 95% CI [0.49, 0.68], $p<0.001$). Compared to an annual household income of \$10000–\$29999, earning \$50000 or more was associated with lower levels of pandemic-related economic hardship at Time 1 ($\beta=-0.33$, 95% CI [-0.48, -0.19], $p<0.001$). The first child's age of 2–5 years compared to 0–1 year ($\beta=-0.18$, 95% CI [-0.36, -0.01], $p=0.044$) and the first child being a girl rather than a boy ($\beta=-0.12$, 95% CI [-0.23, -0.01], $p=0.041$) were also associated with lower levels of pandemic-related economic hardship at Time 1. Number of children was associated with lower levels of parental depressive symptoms at Time 1 ($\beta=-0.22$, 95% CI [-0.34, -0.09], $p=0.001$).

Parents' education levels—especially having some college education ($\beta=0.19$, 95% CI [0.01, 0.38], $p=0.042$), a bachelor's degree ($\beta=0.30$, 95% CI [0.10, 0.49], $p=0.003$) and a graduate degree ($\beta=0.23$, 95% CI [0.06, 0.41], $p=0.008$) compared to having a high school education only—were associated with higher levels of child internalizing behaviours at Time 1. Compared to an annual household income of \$10000–\$29999, earning \$50000 or more was linked with lower levels of child internalizing behaviours at Time 1 ($\beta=-0.17$, 95% CI [-0.34, -0.01], $p=0.037$). Compared to the first child's age of 0–1 year, 6–8 years ($\beta=0.43$, 95% CI [0.25, 0.61], $p<0.001$) and 9–12 years ($\beta=0.35$, 95% CI [0.12, 0.58], $p=0.003$) were associated with higher levels of child internalizing behaviours at Time 1.

4.3 | Moderation Analysis Results

Moderation by parents' gender showed no significant difference across groups. The chi-square difference test comparing the constrained model, in which all regression paths were

TABLE 2 | Pairwise correlations between main study and control variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
1 Pandemic-related economic insecurity at Time 1	—																											
2 Parental depressive symptoms at Time 1	0.41***	—																										
3 Negative partner relationship quality at Time 2	0.16*	0.30***	—																									
4 Harsh parenting at Time 2	0.04	0.26***	0.34***	—																								
5 Child internalizing behaviours at Time 2	0.10	0.29***	0.23***	0.44***	—																							
6 Child internalizing behaviours at Time 2	0.16**	0.41***	0.19**	0.30***	0.64***	—																						
7 Parents' age	-0.22***	-0.23***	0.05	-0.02	0.07	0.01	—																					
8 Parents' sex (female)	0.19**	0.17**	-0.01	0.02	-0.03	0.00	-0.23***	—																				
Parents' race/ethnicity:																												
9 White	-0.10	-0.02	0.01	-0.01	0.16**	0.05	0.16*	-0.10	—																			
10 Black	0.05	0.04	0.01	-0.01	-0.13*	-0.03	-0.11	0.14*	-0.56***	—																		
11 Latine/Hispanic	0.08	0.05	-0.04	0.04	0.00	0.00	-0.08	0.01	-0.50***	-0.11	—																	
12 Other	0.02	-0.06	0.03	-0.01	-0.11	-0.05	-0.06	0.00	-0.49***	-0.11	-0.10	—																
Parents' education:																												
13 High school only	0.21***	0.14*	-0.08	-0.05	-0.07	-0.12*	-0.14*	0.17**	-0.09	0.00	0.11	0.03	—															
14 Some college	0.12	0.09	0.01	-0.02	0.02	0.01	-0.11	0.23***	0.02	0.07	-0.06	-0.05	-0.33***	—														

(Continues)

TABLE 2 | (Continued)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27					
15 Bachelor's degree	-0.22***	-0.12*	0.07	0.00	-0.05	0.07	0.08	-0.24***	0.03	-0.03	-0.04	0.03	-0.28***	-0.57***	—	—	—	—	—	—	—	—	—	—	—	—	—					
16 Graduate degree	-0.10	-0.11	-0.02	0.08	0.13*	0.02	0.20**	-0.17**	0.01	-0.06	0.04	0.00	-0.16*	-0.32***	-0.27***	—	—	—	—	—	—	—	—	—	—	—	—	—				
17 Parent employed (yes)	-0.22***	-0.19**	-0.12	0.00	0.04	0.00	0.20**	0.27**	0.04	-0.03	0.02	0.05	-0.12	-0.24***	0.17*	0.26***	—	—	—	—	—	—	—	—	—	—	—	—	—			
Parents' income:																																
18 \$10,000-\$29,999	0.32***	0.14**	0.02	-0.09	-0.14*	-0.02	-0.22***	0.22***	-0.19*	0.09	0.14*	0.06	0.25***	0.16**	-0.18**	-0.24***	-0.239***	—	—	—	—	—	—	—	—	—	—	—	—	—		
19 \$30,000-\$49,999	0.08	0.13*	-0.07	0.12*	0.13*	0.11	-0.07	-0.01	0.01	-0.00	-0.01	0.08	0.09	0.07	-0.05	-0.12*	0.03	-0.40***	—	—	—	—	—	—	—	—	—	—	—	—		
20 \$50,000 and up	-0.37***	-0.24***	0.04	-0.02	-0.02	-0.07	0.28***	-0.20**	0.16**	-0.08	-0.05	-0.13*	-0.31***	-0.21***	0.22	0.33***	0.25***	-0.59***	-0.50***	—	—	—	—	—	—	—	—	—	—	—		
21 Parent married (yes)	-0.30***	-0.24***	-0.08	-0.01	0.04	0.00	0.37***	-0.27***	0.06	-0.10	0.01	0.00	-0.24***	-0.26***	0.29***	0.22***	0.24***	-0.30***	-0.05	0.30***	—	—	—	—	—	—	—	—	—	—	—	
First child's age:																																
22 0-1 year	0.19**	0.09	0.05	-0.11	-0.17**	-0.16**	-0.33**	0.04	-0.12	0.03	0.01	0.15*	0.03	0.05	0.01	-0.11	-0.16*	0.26***	-0.07	-0.17**	-0.20**	—	—	—	—	—	—	—	—	—	—	
23 2-5 years	-0.06	0.02	-0.05	-0.06	-0.14*	-0.09	-0.21***	0.78	-0.03	0.10	0.02	-0.07	0.08	-0.07	0.07	-0.07	0.00	0.04	0.09	-0.11	-0.02	-0.23***	—	—	—	—	—	—	—	—	—	—
24 6-8 years	-0.09	0.02	0.02	0.09	0.09	0.23***	0.03	-0.02	0.04	-0.05	-0.03	0.01	-0.06	-0.01	0.04	0.03	-0.03	-0.01	-0.03	0.04	0.10	-0.19***	-0.32***	—	—	—	—	—	—	—	—	—
25 9-12 years	0.01	-0.09	0.00	0.06	0.16**	0.01	0.39***	-0.08	0.08	-0.07	0.00	-0.05	-0.04	0.04	-0.10	0.11	0.13*	-0.20**	-0.01	0.19**	0.07	-0.29***	-0.50***	-0.41***	—	—	—	—	—	—	—	—
26 First child's sex (female)	-0.09	0.00	-0.03	-0.09	-0.04	0.03	0.05	-0.08	0.00	0.00	0.08	-0.08	0.07	-0.14*	0.08	0.03	0.02	0.00	0.01	-0.01	-0.07	0.00	0.01	-0.01	0.00	—	—	—	—	—	—	
27 Number of children	-0.06	-0.20**	-0.07	0.07	0.09	0.00	0.17**	-0.05	0.06	-0.13*	0.09	-0.05	-0.03	0.00	-0.06	0.12	-0.04	-0.13*	0.01	0.11	0.18**	-0.29***	-0.29***	0.06	0.41***	-0.11	—	—	—	—	—	—

Note: Unless indicated, all variables are from Time 1.
* $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$.

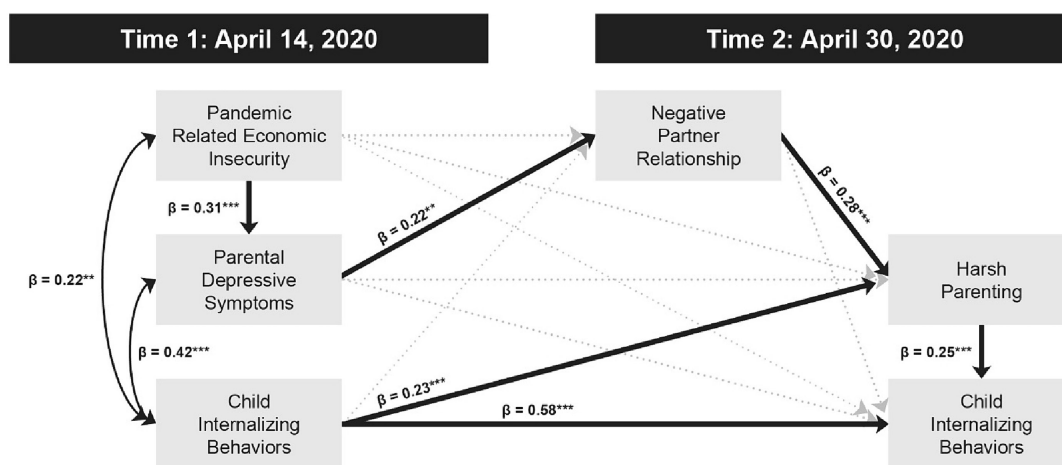


FIGURE 1 | Results of the structural equation model. $\chi^2(48) = 58.65$, $p = 0.139$, RMSEA = 0.03, 90% CI [0.00, 0.05], CFI = 0.98, SRMR = 0.02. Standardized regression coefficients are shown. Dotted lines indicate nonsignificant paths. ** $p < 0.01$, *** $p < 0.001$. Parental depressive symptoms $R^2 = 0.25$; negative relationship quality $R^2 = 0.01$; harsh parenting $R^2 = 0.18$; child internalizing behaviours $R^2 = 0.51$.

constrained across mothers and fathers to be equal, to the unconstrained model, in which all regression paths were allowed to freely vary across mothers and fathers, showed that the models were not significantly different from one another, $\Delta\chi^2(64) = 72.23$, $p = 0.225$.

5 | Discussion

The current study applied the FSM to examine the family processes underlying pandemic-related economic insecurity and children's internalizing behaviours, using a socioeconomically diverse sample of parents who experienced at least one pandemic-related economic hardship in the early weeks (i.e., April 2020) of COVID-19. All three of our primary hypotheses were supported. Specifically, our results supported the first hypothesis that pandemic-related economic insecurity was associated with more negative partner relationship quality, as mediated by higher levels of parental depressive symptoms (H1). Our results also supported the second hypothesis that parental depressive symptoms are associated with more harsh parenting, as mediated by higher negative partner relationship quality (H2). Finally, our results provide support for the third hypothesis that negative partner relationship quality would be associated with increased child internalizing behaviours, as mediated by more harsh parenting (H3). However, these findings did not differ based on parents' gender. Because we had only two time points only, temporal precedence is limited in our study and thus our findings should be interpreted with caution and with this limitation in mind.

Overall, the current study's results are consistent with those of studies based on FSM for families prior to the pandemic (for a review, see Masarik and Conger 2017) and with studies of the FSM during the early weeks and months of the COVID-19 pandemic (Boyer et al. 2023; Browne et al. 2021; Shelleby et al. 2022; Singletary et al. 2022). For example, as observed previously by Shelleby et al. (2022), pandemic-related financial stress was linked to later harsh parenting mediated by parental depressive symptoms, a finding consistent with what we found

in the current study. However, parental depressive symptoms were the only significant mediator in Shelleby et al. (2022), in part, because they did not include and test partner relationship quality as a mediator linking parental depressive symptoms to child behaviour problems. Others have similarly omitted the inclusion of partner relationship quality as a potential pathway explaining family stress processes as proposed by the FSM (Boyer et al. 2023; Browne et al. 2021; Singletary et al. 2022). Extending prior work, we added negative partner relationship and found that it served as a key mediator between parental depressive symptoms and harsh parenting—a finding consistent with evidence from the broader FSM literature (Masarik and Conger 2017).

In line with the extant pre-pandemic research (e.g., Maneta, White, and Mezzacappa 2017; Masarik and Conger 2017), we also found harsh parenting to be a significant mediator between negative partner relationship quality and children's internalizing behaviours, which is aligned theoretically with the FSM of contributors to child adjustment problems. These findings support evidence from family systems research on spillover effects within families; parental interpersonal functioning spills over to parenting to adversely impact the emotional adjustment of children (J. Y. Lee et al. 2023; McCoy et al. 2013; Pu and Rodriguez 2021). Our findings also support those from testing the FSM during early COVID-19, including Shelleby et al. (2022) who found that mothers' negative parenting (e.g., hostility and overactivity) was subsequently associated with higher levels of child behaviour problems. Specific to Browne et al. (2021) and their findings, the researchers included both parenting quality and child mental health problems in their FSM model testing bidirectional effects and showed that while parenting quality at Wave 1 was not linked with child mental health problems at Wave 2, child mental health problems at Wave 1 was associated with less positive parenting quality at Wave 2, suggesting the importance of not only examining parent to child effects but child to parent effects. Consistent with some of the findings of Browne et al. (2021), we found that child internalizing behaviours at Time 1 were linked with higher levels of harsh parenting at Time 2.

Some of our findings were unexpected, including the positive associations we saw between parental education and child internalizing behaviours at Time 1. More specifically, parents' higher education levels—including having some college education, a bachelor's degree, and a graduate degree compared to having only a high school education—were linked with higher levels of child internalizing behaviours. Reasons for this unexpected finding may be attributed to both the timing of data collection, mental health, and parental expectations during COVID-19. Data collection occurred shortly after emergency school closures and during a time when there was immense uncertainty about children's loss in learning and heightened debates about how children should finish out the school year. Mental health problems have been documented among parents and children during this period of transitioning to home-based education (S. J. Lee et al. 2021). In general, parents with higher education tend to have higher expectations for their children to perform academically well (Matar, Laletas, and Lubman 2023). Similar pressures, but specifically within the context of the pandemic, abrupt school closures, loss of access to peers, and transition to home-based or remote learning could have exacerbated such demands and thus show an association with more internalizing behaviours in children (S. J. Lee et al. 2021; Matar, Laletas, and Lubman 2023). An alternative explanation may be that parents with higher education levels, who were also more likely to be employed than those with lower education levels in our post-hoc analyses, may have experienced greater changes in work and childcare arrangements, which may have ultimately affected their perceived children's behaviours.

Specific to parents' gender as a moderator, we note up front that our sample size was small and that there is a need to replicate our null finding with a larger group of parents. Our results possibly suggest similar family stress mechanisms for mothers and fathers in our sample. That is, when it comes to understanding family processes induced by pandemic-related economic hardship, mothers and fathers may not have been that different in how they responded to such hardship that eventually contribute to their children's maladjustment in the form of internalizing problems. However, given research on maternal and paternal duties shifting during the early part of the pandemic and researchers finding potentially differential impacts of COVID-19 by gender (Carlson, Petts, and Pepin 2022; Kerr et al. 2021; Russell et al. 2020), additional research is needed in this area.

5.1 | Limitations and Future Research Directions

There are several limitations to note. First, the data were obtained from a convenience sample recruited via online surveys, and thus our findings may not represent all US families' experiences during the COVID-19 pandemic. Considering the disproportionate economic impact of the pandemic on communities of colour (Artiga, Garfield, and Ortega 2020), our findings, involving majority white families, may not be readily applicable to families of other racial and ethnic backgrounds. Our sample was also limited to parents in romantic relationships and thus excludes single parents who may have been more adversely affected by economic and other work stressors (e.g., balancing work and childcare and schooling for children) following the onset of the pandemic.

Second, the lack of data from both parents or caregivers (for two-parent families) did not allow us to account for potential differences in the dyadic parent-child relationship by gender, and its impact on the child's internalizing behaviours. Future research is needed to better understand how the gender of parent(s) may differently impact family dynamics and child outcomes when families experience economic insecurity.

Third, given data constraints (i.e., families with low income missing at baseline), we were limited to using only Time 1 and Time 2 data for our analyses and thus conducted a cross-sectional mediation analysis despite longitudinal relations theorized by the FSM. Relatedly, given that we were not able to control for some of the Time 2 variables at Time 1, most of our results do not capture change over time or the effects of variables at Time 1 (e.g., parental depressive symptoms at Time 1) on a variable at Time 2 (e.g., negative partner relationship quality at Time 2), controlling for its Time 1 effects (e.g., negative partner relationship quality at Time 1). That is, we are limited in what we can say about temporality in our study. Future research would do well to not only collect COVID-19 parent data across multiple time points, but also engage in longitudinal modelling of such data to test the FSM.

Fourth, our findings are limited to child adjustment problems that are internalizing in nature and cannot address the nature of externalizing child behaviour problems. Future research could examine both child internalizing and externalizing behaviours as child mental health outcomes. Relatedly, for parents with more than one child, we did not limit the child internalizing questions to the focal child but allowed parents to either report on a focal child of their choice or their children as a whole. As such, analysis involving child age should be interpreted with caution, with the need for future COVID-19 research to be precise about who the focal children are. Fifth, our measure of harsh parenting primarily involved parents' psychological and physical aggression although a number of neglectful behaviours were also incorporated. Because our construct likely taps into a broader construct of negative parenting, future research may need to more narrowly focus on the aggression items to construct a harsh parenting measure.

Sixth, our sample size was small which may have contributed to the null moderation finding. Moderation effects are typically challenging to identify, and the current study may have been limited in its statistical power to detect these potentially nuanced conditional effects by parents' gender. Future research would do well to replicate our moderating finding with a sufficiently powered sample and thus further examine whether pandemic-induced FSM processes are similar for mothers and fathers. Relatedly, additional research is needed to better understand protective factors (e.g., parental warmth and involvement) that confer resilience and thus buffer the adverse economic effects of the pandemic on the functioning of families and children.

Finally, our follow-up surveys conducted 2 weeks apart do not necessarily capture the long-term or cumulative effects of COVID-19-related economic insecurity on family- and child-outcomes. Instead, our findings are likely to measure the acute effects of economic insecurity on the participating families

during a time when there was a tremendous amount of uncertainty about COVID-19 and related changes across ecological contexts (e.g., school, businesses, health systems and policies). Future research with data collected across multiple years of the pandemic should replicate our results.

5.2 | Implications for Child and Family Social Work Practice and Policy

Our study makes unique contributions to the literature through its application the FSM approach to a socioeconomically diverse sample of parents across the United States; examining the cascading effects of pandemic-related economic insecurity on family and child functioning; and identifying parental depressive symptoms, negative relationship quality and harsh parenting as key mechanisms that link pandemic-related economic insecurity to children's internalizing behaviours. Implications for social work practice with children and families include targeting mothers' and fathers' mental health, relationship quality and parenting practices to mitigate the adverse effects of pandemic-related economic insecurity on children's behavioural health. A number of family interventions has been developed or adapted to serve parents and children during COVID-19 (Giallo et al. 2023; Maguire-Jack et al. 2022; Sherr et al. 2022). For example, researchers have examined the effects of Family Foundations (FF)—a couple- and parent-based intervention that targets parental mental health, couple relationship quality, and coparenting relationships—during COVID-19 using video conferencing and found that maternal anxiety and stress decreased and their parental warmth increased as a result of participating in FF (Giallo et al. 2023).

At the policy level, our results showing that families on average experienced close to two types of pandemic-related economic insecurity possibly suggest the pervasiveness of pandemic-induced economic hardship irrespective of household income status. These results suggest the critical need for ongoing economic and material support for children and families even if the peak periods and darkest hours of the COVID-19 pandemic have passed. As part of the American Rescue Plan and other related policies implemented between 2020 and 2021, economic relief reassurances including monthly stimulus checks, expanded unemployment insurance, increased nutrition and housing programs, accessible health coverage, and improved tax credits (i.e., Child Tax Credit [CTC]) led to historic poverty reductions in the United States (Banerjee and Zipperer 2022; Trisi 2023). With policymakers allowing many of these measures to expire, poverty is now on the rise. For instance, evidence shows that child poverty rates have more than doubled from a historic low of 5.3% in 2021 to 12.4%, with all record gains to reduce child poverty in the past 2 years erased at this point (Parrott 2023). Making permanent the CTC expansion should be a top priority for policymakers given the apparent impact on child adjustment. Other key policy initiatives to address economic insecurity borne by the pandemic involve restoring the American Rescue Plan measures, including improving the Earned Income Tax Credit, modernizing unemployment insurance, and expanding the Supplemental Nutrition Assistance Program (Parrott 2023). These initiatives would serve as a means for substantially reducing poverty and promoting the well-being of children and families.

Ethics Statement

This study was approved by the Institutional Review Board at the University of Michigan (HUM00179279).

Consent

Participants were provided with a consent form via the online survey. All participants in the current study provided their written consent to participate.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data are stored at the University of Michigan School of Social Work and may be available upon request with the approval of Dr. Shawna J. Lee.

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