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Child Maltreatment during the COVID-19 Pandemic: Consequences of Parental Job Loss on Psychological and Physical Abuse Towards Children

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A B S T R A C T

Background: Job loss resulting from the COVID-19 pandemic presents significant risk for child abuse. Protective factors, such as reframing coping, may mitigate the risk of job loss on child maltreatment.
Objective: The current study investigated factors associated with child maltreatment during the COVID-19 pandemic, including parental job loss, and whether cognitive reframing moderated associations between job loss and child maltreatment.
Method: A community sample of 342 parents (62% mothers) of 4- to 10-year-olds ($M = 7.38$, $SD = 2.01$; 57.3% male) living in the United States completed online questionnaires regarding experiences with COVID-19, the Parent-Child Conflict Tactics Scale, and the Family Crisis Oriented Personal Evaluation Scales.
Results: Two logistic regression analyses evaluated predictors of whether parents psychologically maltreated or physically abused their children during the pandemic controlling for maltreating history, parental depressive symptoms, financial stability, parent age, parent gender, child age, and child gender. Parents who lost their jobs ($OR = 4.86$, 95% CI [1.19, 19.91], $p = .03$), were more depressed ($OR = 1.05$, 95% CI [1.02, 1.08], $p < .01$), and previously psychologically maltreated their children ($OR = 111.94$, 95% CI [28.54, 439.01], $p < .001$) were more likely to psychologically maltreat during the pandemic. Regarding physical abuse, a significant interaction between job loss and reframing coping emerged ($OR = 0.76$, 95% CI [0.59, 0.99], $p = .04$). Among parents who lost their jobs, the probability of physical abuse decreased as reframing coping increased.
Conclusions: Job loss during the COVID-19 pandemic is a significant risk factor for child maltreatment. Reframing coping may be an important buffer of this association on physical abuse and presents implications for maltreatment prevention.

1. Introduction

With mounting unemployment rates, nationwide school district closures, and stay at home orders, the novel coronavirus (COVID-19) pandemic abruptly and significantly upheaved the daily lives of young children and families across the globe. In particular, the

disruption and stress caused by the COVID-19 pandemic presents significant risk for increased family violence, including child abuse. Although rates of reported child abuse appear to be decreasing during the pandemic as families shelter in place and reduce contact with mandated reporters (Campbell, 2020), public health organizations emphasize the increased risk for child abuse, especially among families that were abusive prior to the pandemic and families experiencing stress and economic instability, such as unanticipated job loss, resulting from COVID-19 related economic downturns (Substance Abuse & Mental Health Services Administration, 2020; The Alliance for Child Protection in Humanitarian Action, 2020; WHO Global, 2020). Protective factors, however, such as cognitive reframing where stressors are redefined and made more manageable, may mitigate the threat of preexisting and COVID-19 related risk factors on child maltreatment. The current investigation examines associations among parental job loss resulting from the COVID-19 pandemic, cognitive reframing, and self-reported psychological maltreatment and physical abuse towards children among a sample of parents living in the United States.

Current estimates indicate that community transmission of COVID-19 began in the United States in late January, 2020 (CDC COVID-19 Response Team et al., 2020). Once declared a pandemic by the World Health Organization in March, many states and local governments issued stay at home orders which mandated individuals only leave their homes for necessities, such as grocery shopping, medical care, and essential work (Mervosh, Lu, & Swales, 2020). While critical to mitigating infections and mortalities (CDC COVID-19 Response Team et al., 2020), such mandates resulted in an economic downturn as businesses closed or operated in reduced capacity and consumer spending decreased (Department of Labor, 2020a; Dunn, Hood, & Driessen, 2020). Unemployment rates in the United States accelerated from 3.5% (5.7 million individuals) in the months preceding the pandemic to 4.4% (7.1 million), 14.7% (23.1 million), and 13.1% (21.0 million) in March, April, and May, respectively (Department of Labor, 2020a, 2020b, 2020c). The April 2020 unemployment rate represents the largest 1-month increase and highest rate of unemployment in the United States since 1948, when official records were first maintained (Department of Labor, 2020a). As organizations and leaders grapple with the short- and long-term public health and economic challenges resulting from the COVID-19 pandemic, empirical data illuminating the consequences of COVID-19 on family functioning, including child maltreatment, will be critical for informing empirically-based interventions, policies, and practices to support children and families.

Child maltreatment is a significant public health concern associated with impairments in psychological, behavioral, and physiological functioning across the lifespan (Cicchetti & Toth, 2005; Cicchetti, 2016). In 2018, approximately 3.5 million children were involved in child maltreatment investigations in the United States, with nearly 700,000 children determined to be substantiated victims of maltreatment (U.S. Department of Health & Human Services, 2020). As the majority of maltreated children are victimized by a parent (U.S. Department of Health & Human Services, 2020), child maltreatment represents a pathological relationship occurring within the family that significantly deviates from expected and accepted child rearing standards (Cicchetti & Toth, 2005). Ecological models elucidating the etiology of child maltreatment underscore the multiplicity of pathways leading to child maltreatment and the necessity of examining risk and protective factors, including their interaction, at multiple levels of ecology on abusive behaviors (Belsky, 1993; Cicchetti & Lynch, 1993; Cicchetti & Toth, 2005).

Economic adversity has been observed as a precursor to harsh parenting (Conger & Elder, 1994; Evans, 2004) and as a risk factor for psychological maltreatment and physical abuse (Belsky, 1993; Cicchetti & Lynch, 1993; Conrad-Hiebner & Byram, 2020). The family stress model (Conger & Elder, 1994) emphasizes that economic instability, including job loss, unemployment, debt, and receipt of income transfers (e.g., food stamps), places considerable strain on family relationships. Risk for child abuse significantly increases as stress accumulates. There is substantial empirical evidence supporting this model (Barnett, 2008; Warren & Font, 2015, for reviews). Although not equivalent with the COVID-19 global pandemic, indicators of poor economic health during prior economic crises such as the Great Depression (Elder, Nguyen, & Caspi, 1985) and the Great Recession have been associated with increased child abuse (Schneider, Waldfogel, & Brooks-Gunn, 2017; Brooks-Gunn, Schneider, & Waldfogel, 2013; Schenck-Fontaine & Gassman-Pines, 2020; Schenck-Fontaine, Gassman-Pines, Gibson-Davis, & Ananat, 2017), but this association can be complex (Millett, Lanier, & Drake, 2011). These historical data support concerns of increased child abuse during the COVID-19 pandemic.

Losing a job is a significant life stressor that can take several years to psychologically recover (Infurna & Luthar, 2016). In addition to experiencing reduced income and access to benefits, such as health insurance, individuals who lose their jobs may also experience decrease social support among colleagues, self-efficacy, and sense of purpose, especially among individuals living in the United States where occupation status is a paramount self-defining characteristic (Garrett-Peters, 2009). Although there may be positive aspects of job loss, such as the ability to explore new opportunities, such prospects may be dampened by the poor economic conditions during the COVID-19 pandemic. Associations between unemployment and increased child abuse have been reported even when the national economy is relatively healthy. In a recent systematic review of prospective longitudinal studies, Conrad-Hiebner and Byram (2020) identified parental job loss as a primary factor contributing to future psychological maltreatment and physical abuse. Prenatal unemployment has additionally been linked with later child welfare involvement during the elementary school years (Baldwin, Biehal, Allgar, Cusworth, & Pickett, 2020). In a 2010 report to the U.S. Congress based on the Fourth National Incident Study of Child Abuse and Neglect, children of unemployed parents were reported to be twice as likely to experience abuse compared with children of employed parents (Sedlak et al., 2010).

Despite strong theoretical and empirical support, however, not all investigations have found significant positive associations between parental unemployment and child abuse (e.g., Nguyen, 2013). In addition, the impact of job loss on child abuse may be moderated by ecological and individual characteristic factors, such as regional income inequality (Schenck-Fontaine & Gassman-Pines, 2020), the gender of the unemployed parent (Lindo, Schaller, & Hansen, 2018), and parental mental health (Conrad-Hiebner & Byram, 2020). Given ecological models of child maltreatment and the unique manner in which the COVID-19 pandemic has impacted individual families, it is critical to evaluate whether the anticipated association between job loss and child maltreatment during the COVID-19 pandemic is qualified by characteristics of the family.

The stress and coping model of child maltreatment indicates that the impact of life stressors on a parents' propensity for committing child abuse depends on their dispositional coping strategies (Hillson & Kuiper, 1994). Coping has been defined as the cognitive and behavioral strategies used to manage external or internal demands caused by stressors (Lazarus & Folkman, 1984). Emotion-focused coping strategies, which aim to regulate emotional responses and reactivity to stressors, may be especially beneficial when individuals encounter stressors that are out of their control to objectively change (Hillson & Kuiper, 1994; Lazarus & Folkman, 1984). Emotion-focused coping strategies may be effective in mitigating negative emotions and stress caused by job loss resulting from the COVID-19 pandemic given that individual families cannot objectively change the economic consequences of the pandemic.

One particular form of emotion-focused coping that may be specifically helpful in alleviating negative emotions caused by stressors and bolstering well-being during the COVID-19 pandemic is positive reframing. Positive reframing is a cognitive emotion-focused coping strategy where individuals emphasize their strengths and reappraise and redefine the implications of stressors as being less critical than initially conceptualized (Hillson & Kuiper, 1994; Lazarus & Folkman, 1984). Positive cognitive reframing has been observed to buffer the negative psychological consequences of job loss (Garrett-Peters, 2009) and the negative impact of economic adversity and stress on family relationships (Gomel, Tinesly, Parke, & Clark, 1998; McKelvey, Fitzgerald, Schiffman, & Von Eye, 2002). In addition, positive cognitive reframing enhances parental mental health and parenting quality among families experiencing significant stressors, such as a child being diagnosed with a chronic illness or a developmental disability (Benson, 2010; Martin et al., 2012). Although the evaluation of associations among job loss, cognitive reframing, and parental abusive behaviors is unique to the current investigation, maladaptive coping strategies have been observed among maltreating parents (Cicchetti & Lynch, 1993; Cicchetti & Toth, 2005), suggesting that ineffective coping strategies may importantly contribute to the etiology of child maltreatment.

Within the context of the COVID-19 pandemic, negative coping strategies are anticipated to exacerbate the impact of economic stressors on child abuse (Usher, Navjot, Durkin, Gyamfi, & Debra, 2020). Positive coping strategies may buffer such risk (Cuartas, 2020). Guided by an ecological approach and the family stress and stress and coping models of child maltreatment, the potential buffering role of parental positive cognitive reframing on the association between parental job loss and psychological maltreatment and physical abuse was evaluated among parents of 4- to 10-year-olds living in the United States. Examining factors associated with child maltreatment among families with young children is critical because younger children are significantly more at-risk for child abuse (U.S. Department of Health and Human Services, 2020) and may be especially vulnerable to family stress. Parental job loss during the COVID-19 pandemic was anticipated to be positively associated with psychological maltreatment and physical abuse. Among parents who lost their jobs because of COVID-19 related economic downturns, the probability of psychologically maltreating and physically abusing their children was anticipated to decrease as positive reframing increased. This association was anticipated to emerge even when controlling for parental maltreating history, parental depression, and family financial stability.

2. Method

2.1. Participants

Participants included a community sample of parents of 4- to 10-year-olds recruited from Facebook ads and from Amazon Mechanical Turk (MTurk) to participate in an online study regarding the impact of the COVID-19 pandemic on family interactions. Inclusion criteria included being a parent of a child between the ages of 4- to 10-years-old, being English speaking, and living in the United States. In addition, given the larger focus of the study on family interactions, all participating parents had to be in a committed romantic relationship. Facebook ads were created and purchased to recruit families. The ads were targeted to only appear in newsfeeds of parents of preschool and elementary aged children that were in a romantic relationship and living in the United States. An invitation to participate in this project was also posted to the laboratory's Facebook page, which resulted in minimal snowball sampling. Similarly, the survey was only made available to MTurk workers that previously qualified as meeting the inclusion criteria to increase recruitment of participants that met requirements. MTurk is an online platform where workers are recruited to complete a variety of tasks and has been used extensively in the behavioral sciences for administration of online studies (Buhrmester, Talaifar, & Gosling, 2018; Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2012 for reviews). Although there are concerns regarding the representativeness of data collected through crowd sourcing methods, MTurk samples have been observed as representative of the general U.S. population (Buhrmester et al., 2011; Mason & Suri, 2012). The advantage of providing quick data collection is especially important given the urgency of understanding behavior during the COVID-19 pandemic and the restrictions on conducting face to face human subjects research imposed by social distancing guidelines and Institutional Review Boards in the United States.

Data were extensively screened following recommendations for cleaning data from crowd sourcing platforms (Buhrmester et al., 2011, 2018). Participants were dismissed from the survey if they failed: (1) CAPTCHA bot detection questions, (2) questions regarding inclusion criteria, and (3) one of the seven attention checks. Ballot stuffing was prevented in that users could only access the survey once and would not be able to access the survey a second time if dismissed. Participants were forwarded that they would be dismissed from the survey if they failed an attention check, a practice shown to increase data quality (Mason & Suri, 2012). Participants were excluded from analyses if any of the following occurred: (1) the majority of the survey was not completed, (2) the survey was completed in under 25 minutes, (3) outlandish or duplicate responses were provided to open-ended questions, or (4) response patterns such as straightlining and consistently alternating between low and high value responses were detected.

After cleaning the dataset for these criteria, data from 363 parents (62% mothers; *M*age = 37.52, *SD* = 6.20) recruited from Facebook (*n* = 47) and MTurk (*n* = 316) were retained. The majority of parents were Caucasian (80.4%), followed by African American (6.3%), Hispanic (5.8%), Asian American (5.0%), and multiracial/other (2.5%). The majority of parents reported on male children (56.5%). Children were evenly represented across the seven age groups (*M*age = 7.37, *SD* = 2.01; 11-19% of children for each age

group). The majority of families (54.4%) had an annual income of $75,000 or higher. Families represented the geographical regions of the United States (18.5% Northeast, 22.9% Southeast, 25.6% Midwest, 20.9% West, and 12.1% Southwest).

2.2. Procedure

The survey design and administration procedures followed best-practice methods for data collection using participants recruited online (Buhrmester et al., 2011, 2018). After providing informed consent, participants answered questions concerning the eligibility criteria, followed by demographic questions, questions regarding their experiences with COVID-19, and several additional questionnaires about family interactions. The questionnaire measuring psychological maltreatment and physical abuse was administered at the end of the assessment to not bias earlier responses by asking about violence towards children. The survey was designed to take approximately 30-45 minutes to complete. Participants were compensated with a $5 payment in the form of a MTurk transaction or an electronic Amazon Gift Card for Facebook users. All recruitment and study procedures were approved by the Institutional Review Board at the University of Texas at San Antonio. Data were collected from mid-April to mid-May, 2020, during the peak of unemployment in the United States due to the COVID-19 pandemic (as of August, 2020).

2.3. Measures

2.3.1. Demographic Questionnaire
Participants completed a questionnaire regarding background information of themselves and their partner, such as age, ethnicity, employment status, education, and household income. Parents also provided information about their children's age, ethnicity, and gender.

2.3.2. Experiences with COVID-19 Questionnaire
Participants completed a questionnaire regarding their experiences with the COVID-19 pandemic, including the economic impact of COVID-19 on their family. Of specific interest in the current study, participants reported whether they lost their jobs due to COVID-19 related economic consequences and the number of months their family would be able to continue living at their current address and at their current standard of living if the COVID-19 pandemic were to last for several months without considering government stimulation packages and eviction freezes. Responses to the latter question served as the financial stability variable and were scored on the following scale: 1 (less than 1 month), 2 (1- to 2-months), 3 (3- to 6-months), 4 (7- to 12-months), 5 (more than 1 year). For the job loss variable, parents who worked prior to the pandemic and lost their jobs because of COVID-19 related economic disruptions were scored as 1 (job loss) and parents who did not lose their jobs or did not work prior to and during the pandemic were scored as 0 (no job loss).

2.3.3. Psychological Maltreatment and Physical Abuse
The Conflict Tactics Scale Parent-Child version (CTSPC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998) was used to determine whether parents psychologically maltreated and physically abused their children within the past year (i.e., maltreating history) and within the past week during the COVID-19 pandemic. The past week time frame was selected to standardize the number of days reflected on while answering the questions. This was important given the sporadic manner in which COVID-19 infiltrated and impact different states and cities during the early weeks of the pandemic.

The psychological maltreatment subscale consisted of five items capturing verbal and symbolic acts intended to cause psychological pain or fear (e.g., "I swore or cursed at my child." and "I threatened to spank or hit but did not actually do it."). The physical abuse subscale included 13 items regarding acts of corporal punishment (e.g., "I hit him/her on the bottom with something like a belt, hairbrush, a stick, or some other hard object."), severe assault (e.g., "I slapped him/her on the face or head or ears."), and very severe assault (e.g., "I burned or scalded him/her on purpose."). Following coding conventions, participants reported the frequency in which these actions occurred within the past year and the past week on a 7-point scale: 0 (never), 1 (once), 2 (twice), 4 (3- to 5-times), 8 (6- to 10-times), 15 (11- to 20-times), 25 (20+ times).

The CTSPC has adequate psychometric properties (Straus et al., 1998; Tonmyr, Draca, Crain, & MacMillan, 2011) and has been used in previous research as a self-report measure of parental psychological maltreatment and physical abuse towards children (Grych, Wachsmuth-Schlaefer, & Klockow, 2002; Tonmyr et al., 2011). Internal consistency was adequate in the current study (mean $\alpha = .71$). Following recommendations for scoring the CTSPC for a general population without known histories of maltreatment (Straus et al., 1998), psychological maltreatment and physical abuse were coded dichotomously. Parents were scored as '0' if they did not endorse any of the items and as '1' if they endorsed at least one item, regardless of frequency. Separate dichotomous variables were created for psychological maltreatment and physical abuse within the last year and the past week.

2.3.4. Cognitive Reframing
The Family Crisis Oriented Personal Evaluation Scales (F-COPES; McCubbin, Olson, & Larsen, 1981) measures problem solving and coping strategies employed by families when encountering hardship and difficult situations. The F-COPES contains 30 items and five subscales (i.e., reframing, passive appraisal, acquiring social support, seeking spiritual support, and mobilizing the family to acquire and accept help). The reframing subscale was used in the current study and consist of eight items assessing the degree to which families respond to problems and difficulties by redefining stressors to make them more manageable (e.g., When encountering stressors, we respond by "believing we can handle our own problems" and "defining the family problem in a more positive way so that we do not become too discouraged."). Parents rated the extent to which they agreed with each item on a 4-point scale, with higher values

indicating more agreement. The F-COPES has demonstrated adequate psychometric properties (McCubbin et al., 1981) and has been used as a measure of coping among families encountering significant challenges (McKelvey et al., 2002). Internal consistency for the reframing subscale was adequate in the current study ($\alpha = .81$).

2.3.5. Parental Depression

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) is a commonly used 20-item, self-report measure assessing depressive symptoms among the general population. Respondents rated the frequency in which they experienced depressive symptoms within the past week on a 4-point scale: 1 (not at all or less than 1 day), 2 (1- to 2-days), 3 (3- to 4-days), 4 (5- to 7-days). The CES-D had adequate internal consistency in the present study ($\alpha = .80$) and was included as a covariate in all substantive analyses given robust associations between parental depression and child maltreatment (Cicchetti, 2016).

3. Results

3.1. Descriptive Analyses

Data from five parents were excluded from the following analyses because the parents did not have custody of their children. Sixteen additional participants were excluded from the analyses due to missing data ($n = 7$) or being an outlier on at least one continuous variable ($n = 9$). In total, the following analyses were conducted with data from 342 parents ($n = 42$ recruited from Facebook; $n = 300$ recruited from Murk). Parents recruited from MTurk were significantly older ($M = 37.71, SD = 6.12$) than parents recruited from Facebook ($M = 35.26, SD = 4.39$), $t(65.68) = 3.21, p < .01, d = 0.46$. Significantly fewer fathers were recruited from Facebook (21.4% fathers) and fewer mothers were recruited from MTurk (59.7% mothers), $\chi (1) = 5.59, p = .02$. All other demographic characteristics did not significantly differ by recruitment source. Significantly more parents recruited from Facebook (38.1%) and significantly fewer parents recruited from MTurk (15.0%) physically abused their children within the past week, $\chi (1) = 13.41, p < .001$. Whether parents psychologically maltreated their children in the past week did not significantly differ by recruitment source, $\chi(1) = 1.73, p = .19$. Recruitment source was included as a covariate in the main analyses. Parent ethnicity was not significantly associated with whether parents psychologically maltreated, $\chi (4) = 3.53, p = .47$, or physically abused, $\chi (4) = 8.35, p = .08$, their children within the past week and was not considered further.

Descriptive statistics, including means and standard deviations, and bivariate correlations among the study variables are presented in Table 1. Parental job loss was positively and significantly associated with psychological maltreatment ($r = .19, p < .001$) and physical abuse ($r = .19, p < .001$) towards children in the past week. Parents who lost their jobs during the pandemic additionally engaged in more historical physical abuse ($r = .15, p < .01$). Parents who reported using more reframing coping strategies were less likely to have a history of physical abuse ($r = -.11, p = .04$) and to psychologically maltreat ($r = -.17, p = .001$) and physically abuse their children in the past week ($r = -.15, p < .01$). Younger parents were more likely to have a history of psychologically maltreating ($r = -.11, p = .04$) and physically abusing their children ($r = -.16, p < .01$) and were more likely to engage in such behaviors during the pandemic ($r = -.18, p < .01; r = -.20, p < .001$, respectively). Younger children were more likely to be physically abused ($r = -.17, p < .01$ past year, $r = -.16, p < .01$, past week) and psychologically maltreated during the past week ($r = -.19, p = .001$). Parents from families with more financial stability were less likely to physically abuse their children during the pandemic ($r = -.20, p < .001$). Parents reporting more depressive symptoms were more likely to psychologically maltreat ($r = .23, p < .001$ past year; $r = .34, p < .001$

Table 1
Sample Characteristics and Bivariate Correlations

Variable	M(SD)	1	2	3	4	5	6	7	8	9	10	11
1. Parent Age	37.41(5.98)	—										
2. Child Age	7.38(2.01)	.36***	—									
3. Financial stability	4.20(1.10)	.16**	.01	—								
4. Depression	14.09(11.50)	-.19**	-.14*	-.24***	—							
5. Coping	32.44(4.24)	.08	.06	.08	-.37***	—						
	n(%)											
6. Parent gender	130(38.0)	.06	-.06	.03	-.09†	.01	—					
7. Child gender	196(57.3)	-.14*	-.03	-.16**	.12*	-.16**	.03	—				
8. Job Loss	43(12.6)	-.08	-.09†	-.25***	.17**	-.13*	-.04	.08	—			
9. Year Psych	229(67.0)	-.11*	-.09†	.06	.23***	-.09	-.01	.12*	.06	—		
10. Year Physical	112(32.7)	-.16**	-.17**	-.09†	.24***	-.11*	.01	.10†	.15**	.41***	—	
11. Week Psych	163(47.7)	-.18**	-.19**	-.04	.34***	-.17**	-.10†	.20***	.19***	.63***	.38***	—
12. Week Physical	61(17.8)	-.20***	-.16**	-.20***	.29***	-.15*	.01	.09†	.19***	.25***	.55***	.38***

Note. $N = 342$. Psych = Psychological maltreatment, Physical = Physical abuse.
† $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$

past week) and physically abuse their children ($r = .24, p < .001$ past year; $r = .29, p < .001$ past week). Male children were more likely to be psychologically maltreated ($r = .12, p = .02$ past year, $r = .20, p < .001$ past week). All significant correlations were small to medium in size.

Consistent with the national unemployment rates in the United States during the time of the assessment (Department of Labor, 2020a, 2020b), approximately 13% of parents in the current investigation reported losing their jobs during the COVID-19 pandemic. Whether parents lost their jobs during the pandemic was a significant predictor of whether parents psychologically maltreated, $\chi(1) = 11.77, p = .001$, or physically abused their children during the pandemic, $\chi(1) = 12.60, p < .001$. Significantly more parents who lost their jobs psychologically maltreated and physically abused their children during the pandemic than expected. Of parents who lost their jobs ($n = 43$), 72.09% psychologically maltreated their child during the pandemic. Whereas, for parents who did not lose their jobs ($n = 299$), 44.15% psychologically maltreated their children during the pandemic. Regarding physical abuse, of parents who lost their jobs, 37.21% physically abused their children. A minority of parents (15.05%) who did not lose their jobs physically abused their children during the pandemic.

In addition, having a history of psychologically maltreating and physically abusing children during the year before the COVID-19 pandemic was a significant predictor of whether parents psychologically maltreated, $\chi(1) = 137.03, p < .001$, and physically abused their children during the pandemic, $\chi(1) = 104.87, p < .001$. Of parents with a history of psychologically maltreating their children ($n = 229$), 70.00% psychologically maltreated their children during the pandemic. Whereas, for parents that did not psychologically maltreat their children in the past year before the COVID-19 pandemic ($n = 113$), the majority (97.35%) did not engage in such acts during the pandemic. Similar results were found for physical abuse. Of parents with a history of being physically abusive ($n = 112$), approximately half (48.21%) physically abused their children during the pandemic. For parents without a history of being physically abusive ($n = 230$), the majority (96.96%) did not physically abuse their children during the pandemic.

3.2. Main Analyses

The main analyses consisted of two binary logistic regressions to examine predictors of whether parents psychologically maltreated or physically abused their children during the COVID-19 pandemic. The following covariates were included in both models based on the results from the descriptive analyses: recruitment source (0 = Facebook, 1 = MTurk), parent age, parent gender (0 = female, 1 = male), child age, child gender (0 = female, 1 = male), financial stability, parental depressive symptoms, prior psychological maltreatment (0 = no history, 1 = history), and prior physical abuse (0 = no history, 1 = history). Parental job loss (0 = no job loss, 1 = job loss) and reframing coping were entered as separate variables along with their interaction. All continuous covariates were mean centered. Results from both analyses are presented in Table 2.

3.2.1. Psychological Maltreatment

The model examining psychological maltreatment was a significantly better fit for the data compared to the null model, $\chi(12) = 218.90, p < .001$. The model accounted for 63.1% (Nagelkerke R Square) of the variance in whether parents psychologically maltreated their children during the pandemic. The model correctly classified 82.7% of the cases, with 77.1% correct classification for parents that did not engage in psychological maltreatment and 89.0% correct classification for parents that psychologically maltreated their children in the past week during the COVID-19 pandemic. Parental job loss ($B = 1.58, SE = 0.72, p = .03$), parental depressive symptomology ($B = 0.05, SE = 0.02, p < .01$), parental psychological maltreating history ($B = 4.72, SE = 0.70, p < .001$), and

Table 2
Binary Logistic Regressions Predicting Psychological Maltreatment and Physical Abuse During the COVID-19 Pandemic

Variable	Psychological Maltreatment				Physical Abuse			
		95% CI for Odds Ratio				95% CI for Odds Ratio		
	B(SE)	Lower	Odds Ratio	Higher	B(SE)	Lower	Odds Ratio	Higher
Recruitment	−0.97(0.71)	0.10	0.38	1.51	−0.81(0.53)	0.16	0.45	1.27
Parent gender	−0.45(0.32)	0.34	0.64	1.20	0.11(0.40)	0.51	1.11	2.44
Parent age	−0.03(0.03)	0.92	0.97	1.03	−0.05(0.04)	0.89	0.96	1.03
Child age	−0.14†(0.09)	0.73	0.87	1.02	−0.08(0.10)	0.76	0.93	1.14
Child gender	0.74*(0.32)	1.12	2.09	3.93	−0.18(0.40)	0.38	0.84	1.85
Financial Stability	0.08(0.17)	0.77	1.08	1.52	−0.18(0.19)	0.58	0.84	1.22
Depression	0.05**(0.02)	1.02	1.05	1.08	0.04*(0.02)	1.00	1.04	1.07
Year Physical	0.39(0.34)	0.76	1.47	2.84	3.00***(0.50)	7.60	20.10	53.18
Year Psychological	4.72***(0.70)	28.54	111.94	439.01	0.34(0.63)	0.41	1.40	4.83
Job Loss	1.58*(0.72)	1.19	4.86	19.91	−0.09(0.60)	0.28	0.91	2.98
Reframing Coping	−0.03(0.04)	0.89	0.97	1.06	0.04(0.05)	0.94	1.04	1.15
Job Loss*Coping	0.04(0.15)	0.78	1.04	1.40	−0.27*(0.13)	0.59	0.76	0.99

Note. $N = 342$. Psychological = Psychological maltreatment, Physical = Physical abuse.

† $p < .10$
* $p < .05$
** $p < .01$
*** $p < .001$

children's gender ($B = 0.74$, $SE = 0.32$, $p = .02$) were uniquely predictive of whether parents psychologically maltreated their children during the COVID-19 pandemic.

The odds that parents who lost their jobs during COVID-19 would also psychologically maltreat their children were 4.86 times higher than those of parents who did not lose their jobs. As parental depressive symptoms increased by one unit, the odds of psychologically maltreating children during the pandemic increased by 1.05. The odds that male children would be psychologically maltreated were 2.09 times higher than those of female children. The odds that parents with a history of psychologically maltreating their children would psychologically maltreat their children during the pandemic was 111.94 times higher than those of parents that did not have a history psychologically maltreating their children prior to the pandemic.

3.2.2. Physical Abuse

The model examining physical abuse was a significantly better fit for the data compared to the null model, $\chi(12) = 130.62$, $p < .001$. The model accounted for 52.2% (Nagelkerke R Square) of the variance in whether parents physically abused their children during the pandemic. The model correctly classified 88.3% of the cases, with 95.7% correct classification for parents that did not physically abuse their children and 54.1% correct classification for parents that physically abused their children during the pandemic. Parental depression ($B = 0.04$ $SE = 0.02$, $p = .04$) and being physically abusive before the pandemic ($B = 3.00$ $SE = 0.50$, $p < .001$) were significant predictors of whether parents physically abused their children during the pandemic. As depressive symptoms increased by one unit, parents were 1.04 times more likely to physically abuse their children. The odds that parents with a history of being physically abusive would physically abuse their children during the pandemic was 20.10 times higher than those of parents without a history of being physically abusive in the past year.

Importantly, although parental job loss and cognitive reframing coping strategies were not significant unique predictors of physical abuse ($B = -0.09$, $SE = 0.60$, $p = .88$; $B = 0.04$ $SE = 0.05$, $p = .49$, respectively), a significant interaction between parental job loss and cognitive reframing coping emerged, $B = -0.27$, $SE = 0.13$, $p = .04$. See Fig. 1. For parents who lost their jobs due to COVID-19 related economic downturns, the probability of physically abusing their children decreased as reframing coping strategies increased. Reframing coping was not associated with physical abuse among parents who did not lose their jobs.

4. Discussion

There is immense concern that the COVID-19 pandemic will have unforeseen consequences for children's safety and well-being. Numerous public health organizations point to the economic downturn in the United States, and parental job loss specifically, as amplifying risk for child abuse (Substance Abuse & Mental Health Services Administration, 2020; The Alliance for Child Protection in Humanitarian Action, 2020; WHO Global, 2020). Consistent with the study hypotheses and prior observations of increased rates of child abuse during economic crises (Brooks-Gunn et al., 2013; Schenck-Fontaine et al., 2017), the current investigation identified parental job loss during the COVID-19 pandemic as a robust predictor of psychological maltreatment and physical abuse towards children during the pandemic. However, among parents who lost their jobs, positive cognitive reframing was a significant buffer of this association on physical abuse. The findings support growing concerns that the economic conditions caused by the COVID-19 pandemic will impact children's well-being and are consistent with ecological theories regarding the etiology of child maltreatment.

Children of parents who experienced job loss related to the COVID-19 pandemic were nearly five times as likely to be psychologically maltreated during the pandemic compared with children of parents who did not lose their jobs. Psychological maltreatment includes behaviors such as verbally threating to harm children, belittling, and ridiculing children. Children that have been psychologically maltreated exhibit higher rates of aggression, hyperactivity, conduct problems, anxiety, and depression across the lifespan (Cicchetti, 2016), even when considering whether children were also physically or sexually abused (Spinazzola et al., 2014). Thus, parental job loss during the COVID-19 pandemic presents significant risk for children's concurrent development and long-term adjustment through increased psychological maltreatment. Parental job loss was additionally associated with an increased probability of physical abuse during the pandemic. This association, however, depended on the manner in which parents reported habitually coping with stressful experiences. Among parents who lost their jobs due to the COVID-19 pandemic, the probability of physical abuse decreased as parental positive cognitive reframing increased. Positive cognitive reframing was not associated with the probability of
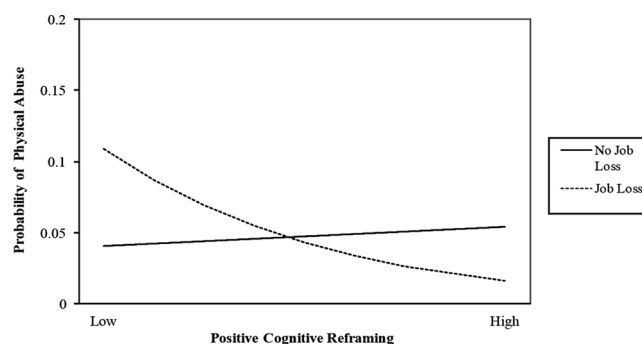
Fig. 1. Interaction of job loss and positive cognitive reframing on the probability of physical abuse during the COVID-19 pandemic.

physical abuse among parents who did not lose their jobs. Physical abuse, as measured in the current study, represents behaviors ranging in severity from corporal punishment (e.g., spanking, slapping, hitting with an object) to assault (e.g., kicking, hitting body parts other than the bottom) and very severe assault (e.g., hitting as hard as possible). The negative sequelae of physical abuse in multiple developmental domains has been extensively observed (Cicchetti, 2016 for review). The findings of the current study suggest that positive cognitive reframing among parents who lost their jobs due to the COVID-19 pandemic protects children against physical abuse and could potentially mitigate the effects of parental job loss on children's development and maladaptation during and after the COVID-19 pandemic.

Losing a job is a salient life-stressor (Infurna & Luthar, 2016), even during times when the national economy is relatively healthy. The economic and public health uncertainty caused by the COVID-19 pandemic likely exacerbates the stress and strain caused by job loss. The destructive role of stress on parenting quality is noted throughout the child maltreatment literature and etiology theories, such as the family stress model (Conger & Elder, 1994). The family stress model postulates that accumulating stress caused by economic adversity, including job loss, increases risk for child maltreatment. The finding that the risk for psychological maltreatment increased among parents who lost their job during the pandemic is consistent with the family stress model. The stress and coping model of child maltreatment similarly emphasizes the risk of stress on child maltreatment, but also states that the manner in which life-stressors infiltrate parent-child relationships depends on the dispositional coping skills and strategies of the family (Hillson & Kuiper, 1994). Positive coping strategies are postulated to mitigate the effects of stress on parenting and child abuse. In the current study, positive cognitive reframing represented coping strategies where strength to overcome obstacles is emphasized and stressors are reappraised, redefined, and made more manageable (Lazarus & Folkman, 1984; McCubbin et al., 1981). The finding that positive cognitive reframing served as a protective buffer against the effect of job loss on physical abuse during the COVID-19 pandemic is consistent with our hypothesis and the stress and coping model of child maltreatment. Positively reframing job loss likely reduces negative affect and associated stress, which, in turn, reduces risk for physical abuse.

Positive cognitive reframing protected against the effect of job loss on physical abuse, but was not significantly associated with psychological maltreatment. Physically abusive parents are likely to also engage in psychological maltreatment, but not all psychologically maltreating parents are also physically abusive (Cicchetti, 2016). In the current investigation, many more parents reported psychologically maltreating than physically abusing their children. Perhaps the threshold for which stress spills over to the parent-child relationship in the form of psychological maltreatment is lower compared to the threshold for committing physical abuse. Coping strategies may be inactivated, and thus ineffective in altering behaviors, if the stress threshold for spill over to the parent-child relationship is low. Positive cognitive reframing may be more potent in mitigating risk of ecological stressors, including job loss, on more severe forms of child maltreatment, such as physical abuse.

Parental depressive symptoms and maltreating history were significant predictors of psychological maltreatment and physical abuse during the pandemic. Parental depression is a robust predictor of harsh parenting and has been emphasized in etiological models as a key risk factor for child maltreatment (Belsky, 1993; Cicchetti & Lynch, 1993; Cicchetti & Toth, 2005). In addition, as anticipated, parents were more likely to psychological maltreat and physically abuse their children during the pandemic if they had a history of maltreating their children. The odds of being psychologically maltreated and physically abused during the pandemic were 112 and 20 times higher, respectively, among children that were maltreated in the year prior to the pandemic. These results indicate that parental depressive symptoms and maltreating history are important risk factors for child maltreatment during the COVID-19 pandemic. These results additionally strengthen the findings regarding associations among job loss, positive cognitive reframing, and maltreatment during COVID-19, which emerged when statistically controlling for parental depressive symptoms and maltreating histories.

The current study has several strengths, including the examination of risk and protective factors at multiple levels of ecology on child maltreatment and the timely manner of data collection, which occurred during the peak of unemployment rates in the United States resulting from the COVID-19 pandemic (as of August, 2020; Department of Labor, 2020a, 2020b, 2020c). In addition, given that the vast majority of studies evaluating the impact of job loss on child maltreatment have been conducted with state and county aggregate data, the family-level analysis approach of the current investigation importantly contributes to the extant work. There are several limitations of the current investigation despite these strengths. Participants were recruited through online social media and crowd sourcing platforms. Although such methods are popular in behavioral research and the current study adhered to best-practice guidelines for conducting online studies, data collected from online convenience samples may not be representative of the general population. The sample size was also somewhat small for online studies. Future research with a larger sample size will be necessary to confirm the current findings. In addition, data were cross-sectional and collected via parental report. Longitudinal studies are needed to ascertain the directionality of the observed associations and the long-term implications of the COVID-19 pandemic on children's health and safety. Studies that incorporate a mixed-method approach and reports from multiple informants such as Child Protective Service records and observations of family interactions will further corroborate observations from the current study. Lastly, future research identifying additional factors contributing to physical abuse during the COVID-19 pandemic will be necessary given the current logistic regression model correctly classified physically abusive parents 54% of the time. Studies that uncover additional factors contributing to physical abuse during the pandemic will further inform interventions and policies.

4.1. Implications

Findings from the current investigation suggest that the economic consequences of the COVID-19 pandemic on employment in the United States has impacted family relationships, in particular whether parents were likely to physically or psychologically abuse their children. Although whether parents lost their jobs was an important predictor of child maltreatment during the COVID-19 pandemic, so was the manner in which families coped with stressors. These findings offer important implications for practice and policy.

Identification of families at-risk, and particularly those experiencing job loss resulting from the pandemic, parental depressive symptoms, and with histories of child maltreatment in the past year, allows for targeted intervention and prevention strategies. Although children and families are currently less connected to systems with mandated reporters due to social distancing protocols during the COVID-19 pandemic, there remains an opportunity for outreach from educators, child welfare workers, and other professionals involved in supporting the well-being of children and families. Even if virtual contact is the primary method for health and safety reasons during the pandemic (Usher et al., 2020), connecting and visually checking in with children and families is critical to providing support as well as intervention.

The intentional outreach and connection with parents may also support their mental health and promote positive coping strategies. Training for parents and professionals should focus on teaching and enhancing coping skills such as positive cognitive reframing, which can provide additional support to buffer the evolving consequences of COVID-19, and in particular the ecological consequences of job loss, on families and children. Emphasizing strengths and redefining the implications of stressors is consistent with a family-centered approach and empowers parents to develop positive coping strategies amidst the economic and public health uncertainties caused by the global pandemic. Child maltreatment prevention programs often incorporate elements of cognitive reframing training and have supporting evidence indicating that such training reduces harsh parenting and child welfare involvement (Bugental et al., 2020).

Embracing the complexity of child maltreatment requires an understanding of the ecological considerations and attention to various levels of intervention. Job loss is expected to impact economic stability as a factor increasing risk for child maltreatment. However, because financial stability was statistically controlled in the present analyses, our model suggests it is not the financial instability resulting from job loss that increases incidences of maltreatment, but rather the job loss itself. Losing a job can result in decreased social contact and emotional support from colleagues and friends, benefits, and even potentially a sense of purpose. Job loss can be damaging to individual's self-concept, which seems to be especially important in the United States as many adults associate their job or profession with their identity (Garrett-Peters, 2009). Although losing a job could have positive effects, like providing opportunities to explore new interests, such positive outcomes of job loss are likely diminished by the national economic crisis caused by the COVID-19 pandemic. The stress of losing a job further exacerbates stress of parenting and general health and safety concerns related to the COVID-19 pandemic.

Given evidence that COVID-19 is transmitted through interactions with others in the community, there is a complex balance among supporting the economy, keeping people employed, and maintaining public health. Understanding the health pandemic as trauma and the consequences of job loss exacerbating stress and likelihood of child maltreatment requires programs and policies that address trauma and child protection. More than ever, agencies need to be trained in trauma informed practice and understanding of the cumulative impact of traumatic experiences and ecological factors impacting child maltreatment. In addition, shifting focus from addressing primarily risk factors, to identifying factors of resilience, may help to address the complexity of parental stress and child maltreatment prevention during and after the pandemic.

Service delivery models for child welfare agencies and professionals have and must continue to shift to support children and families during the unique circumstances of the COVID-19 pandemic. Many organizations have altered their traditional delivery of services to overcome obstacles related to social distancing, such as providing virtual services (Usher et al., 2020). Beyond increasing access and funding for professionals and mandated reporters to continue providing services in a safe manner during the pandemic, creating community accountability for child and family well-being is critical. Increasing community awareness and commitment to child protection, and developing and enhancing supports for families to utilize when encountering stressful situations, can increase positive parenting and promote child well-being, which is especially critical during the pandemic.

As the COVID-19 pandemic is an ongoing global crisis (as of August, 2020), our understanding of the economic and public health impact and best practices for promoting health and safety, including reducing risk for child maltreatment, during the COVID-19 pandemic is developing. Findings from the current investigation identify that parental job loss during the pandemic can be detrimental to children's safety by increasing risk for psychological maltreatment and physical abuse during the COVID-19 pandemic, which likely have long-term implications given the negative sequelae of child maltreatment. Efforts to maintain jobs and to bolster families' mental health and effective coping strategies are paramount during this time of uncertainty, especially among families known to be at-risk and with prior histories of child maltreatment. Organizations must adapt service delivery models to address the unique challenges of COVID-19. Providing targeted strategies that are trauma-informed and address the ecological considerations of job loss through cognitive reframing may promote the resilience and support needed to effectively intervene and prevent future child maltreatment during the pandemic.

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Declaration of Competing Interest

None.

References

Baldwin, H., Biehal, N., Allgar, V., Cusworth, L., & Pickett, K. (2020). Antenatal risk factors for child maltreatment: Linkage of data from a birth cohort study to child welfare records. *Child Abuse and Neglect, 107*. https://doi.org/10.1016/j.chiabu.2020.104605. Advance online publication.

Barnett, M. A. (2008). Economic disadvantage in complex family systems: Expansion of family stress model. *Clinical Child and Family Psychology Review, 11*(3), 145–161. https://doi.org/10.1007/s10567-008-0034-z.

Belsky, J. (1993). Etiology of child maltreatment: A developmental-ecological analysis. *Psychological Bulletin, 114*(3), 413–434. https://doi.org/10.1037/0033-2909.114.3.413.

Benson, P. R. (2010). Coping, distress, and well-being in mothers of children with autism. *Research in Autism Spectrum Disorders, 4*(2), 217–228. https://doi.org/10.1016/j.rasd.2009.09.008.

Brooks-Gunn, J., Schneider, W., & Waldfogel, J. (2013). The Great Recession and the risk for child maltreatment. *Child Abuse and Neglect, 37*(10), 721–729. https://doi.org/10.1016/j.chiabu.2013.08.004.

Bugental, D. B., Ellerson, P. C., Lin, E. K., Rainey, B., Kokotovic, A., & O'Hara, N. (2020). A cognitive approach to child abuse prevention. *Journal of Family Psychology, 16*(3), 243–258. https://doi.org/10.1037//0893-3200.16.3.243.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*(1), 3–5. https://doi.org/10.1177%2F1745691610393980.

Buhrmester, M., Talaifar, S., & Gosling, S. D. (2018). An evaluation of Amazon's Mechanical Turk, its rapid rise, and its effective use. *Perspectives on Psychological Science, 13*(2), 149–154. https://doi.org/10.1177/1745691617706516.

Campbell, A. M. (2020). An increasing risk of family violence during the COVID-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports, 2*. https://doi.org/10.1016/j.fsir.2020.100089. Advance online publication.

CDC COVID-19 Response Team, Jorden, M. A., Rudman, S. L., Villarino, E., Hoferka, S., Patel, M. T., Bemis, K., Simmons, C. R., Jespersen, M., Iberg Johnson, J., Mytty, E., Arends, K. D., Henderson, J. J., Mathes, R. W., Weng, C. X., Duchin, J., Lenahan, J., Close, N., Bedford, T., Boeckh, M., … Chung, J. R. (2020). Evidence for limited early spread of COVID-19 within the United States, January-February 2020. *Morbidity and Mortality Weekly Report, 69*(22), 680–684. https://doi.org/10.15585/mmwr.mm6922e1.

Cicchetti, D. (2016). Socioemotional, personality, and biological development: Illustrations from a multilevel developmental psychopathology perspective on child maltreatment. *Annual Review of Psychology, 67*(1), 187–211. https://doi.org/10.1146/annurev-psych-122414-033259.

Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: Consequences for children's development. *Psychiatry, 56*(1), 96–118. https://doi.org/10.1080/00332747.1993.11024624.

Cicchetti, D., & Toth, S. L. (2005). Child maltreatment. *Annual Review of Clinical Psychology, 1*(1), 409–438. https://doi.org/10.1146/annurev.clinpsy.1.102803.144029.

Conger, R. D., & Elder, G. H. (1994). *Families in troubled times*. Aldine de Gruyter.

Conrad-Hiebner, A., & Byram, E. (2020). The temporal impact of economic insecurity on child maltreatment: A systematic review. *Trauma, Violence, & Abuse, 21*(1), 157–178. https://doi.org/10.1177/1524838018756122.

Cuartas, J. (2020). Heightened risk of child maltreatment amid the COVID-19 pandemic can exacerbate mental health problems for the next generation. *Psychological Trauma: Theory, Research, Practice, and Policy*. https://doi.org/10.1037/tra0000597. Advance online publication.

Department of Labor. (2020a). *The Employment Situation—April 2020*. U.S. Department of Labor: Bureau of Labor Statistics.

Department of Labor. (2020b). *The Employment Situation—March 2020*. U.S. Department of Labor: Bureau of Labor Statistics.

Department of Labor. (2020c). *The Employment Situation—May 2020*. U.S. Department of Labor: Bureau of Labor Statistics.

Dunn, A., Hood, K., & Driessen, A. (2020). *Measuring the effects of the COVID-19 pandemic on consumer spending using card transaction data*. U.S. Department of Commerce: Bureau of Economic Analysis.

Elder, G. H., Nguyen, T. V., & Caspi, A. (1985). Linking family hardship to children's lives. *Child Development, 56*(2), 361–375. https://doi.org/10.2307/1129726.

Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist, 59*(2), 77–92. https://doi.org/10.1037/0003-066X.59.2.77.

Garrett-Peters, R. (2009). "If I don't have to work anymore, who am I?": Job loss and collaboration self-concept repair. *Journal of Contemporary Ethnography, 38*(5), 547–583. https://doi.org/10.1177/0891241609342104.

Gomel, J. N., Tinesly, B. J., Parke, R. D., & Clark, K. M. (1998). The effects of economic hardship on family relationships among African-American, Latino, and Euro-American families. *Journal of Family Issues, 19*(4), 436–467. https://doi.org/10.1177/019251398019004004.

Grych, J. H., Wachsmuth-Schlaefer, T., & Klockow, L. L. (2002). Interparental aggression and young children's representations of family relationships. *Journal of Family Psychology, 16*(3), 259–272. https://doi.org/10.1037//0893-3200.16.3.259.

Hillson, J. M. C., & Kuiper, N. A. (1994). A stress and coping model of child maltreatment. *Clinical Psychology Review, 14*(4), 261–285. https://doi.org/10.1016/0272-7358(94)90025-6.

Infurna, F. J., & Luthar, S. S. (2016). Resilience to major life stressors is not as common as thought. *Perspectives on Psychological Science, 11*(2), 175–194. https://doi.org/10.1177/1745691615621271.

Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. Springer Publishing Company.

Lindo, J. M., Schaller, J., & Hansen, B. (2018). Caution! Men not at work: Gender-specific labor market conditions and child maltreatment. *Journal of Public Economics, 163*, 77–98. https://doi.org/10.1016/j.jpubeco.2018.04.007.

Martin, S., Calabrese, S. K., Wolters, P. L., Walker, K. A., Warren, K., & Hazra, R. (2012). Family functioning and coping styles in families of children with cancer and HIV disease. *Clinical Pediatrics, 51*(1), 58–64. https://doi.org/10.1177/0009922811417300.

Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods, 44*(1), 1–23. https://doi.org/10.3758/s13428-011-0124-6.

McCubbin, H. L., Olson, D., & Larsen, A. (1981). Family Crisis Oriented Personal Scales (F-COPES). In H. I. McCubbin, A. I. Thompson, & M. A. McCubbin (Eds.), *Family assessment: Resiliency, coping and adaptation-inventories for research and practice* (pp. 455–507). University of Wisconsin System.

McKelvey, L. M., Fitzgerald, H. E., Schiffman, R. F., & Von Eye, A. (2002). Family stress and parent-infant interaction: The mediation role of coping. *Infant Mental Health Journal, 23*(1-2), 164–181. https://doi.org/10.1002/imhj.10010.

Mervosh, S., Lu, D., & Swales, V. (2020). *See which states and cities have told residents to stay at home*. The New York Times. https://www.nytimes.com/interactive/2020/us/coronavirus-stay-at-home-order.html.

Millett, L., Lanier, P., & Drake, B. (2011). Are economic trends associated with childmaltreatment? Preliminary results from the recent recession using state level data. *Children and Youth Services Review, 33*(7), 1280–1287. https://doi.org/10.1016/j.childyouth.2011.03.001.

Nguyen, L. H. (2013). The relationship between unemployment and child maltreatment: A county-level perspective in California. *Children and Youth Services Review, 35*(9), 1543–1555. https://doi.org/10.1016/j.childyouth.2013.05.015.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*(3), 385–401. https://doi.org/10.1177/014662167700100306.

Schenck-Fontaine, A., & Gassman-Pines, A. (2020). Income inequality and child maltreatment risk during economic recession. *Children and Youth Services Review, 112*. https://doi.org/10.1016/j.childyouth.2020.104926. Advance online publication.

Schenck-Fontaine, A., Gassman-Pines, A., Gibson-Davis, C. M., & Ananat, E. O. (2017). Local job losses and child maltreatment: The importance of community context. *Social Service Review, 91*(2), 233–263. https://doi.org/10.1086/692075.

Schneider, W., Waldfogel, J., & Brooks-Gunn, J. (2017). The Great Recession and risk for child abuse and neglect. *Children and Youth Services Review, 72*, 71–81. https://doi.org/10.1016/j.childyouth.2016.10.016.

Sedlak, A. J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., … Li, S. (2010). *Fourth National Incidence Study of Child Abuse and Neglect (NIS-4): Report to Congress*. U.S. Department of Health and Human Services, Administration for Children and Families.

Spinazzola, J., Hogdon, H., Liang, L., Ford, J. D., Layne, C. M., Pynoos, R., … Stolbach, B. (2014). Unseen wounds: The contribution of psychological maltreatment to child and adolescent mental health and risk outcomes. *Psychological Trauma: Theory, Research, and Policy, 6*(1), S18–S28. https://doi.org/10.1037/a0037766.

Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. E. (1998). Identification of child maltreatment with the parent-child conflict tactics scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect, 22*(4), 249–270. https://doi.org/10.1016/S0145-2134(97)00174-9.

Substance Abuse and Mental Health Services Administration. (2020). *Intimate partner violence and child abuse considerations during COVID-19*.

The Alliance for Child Protection in Humanitarian Action. (2020). *Technical Note: Protection of Children during the Coronavirus Pandemic (v.2)*. United Nations International Children's Fund.

Tonmyr, L., Draca, J., Crain, J., & MacMillan, H. L. (2011). Measurement of emotional/psychological child maltreatment: A review. *Child Abuse & Neglect, 35*(10), 767–782. https://doi.org/10.1016/j.chiabu.2011.04.011.

U.S. Department of Health and Human Services. (2020). *Child Maltreatment 2018*. Washington, DC: U.S. Government Printing Office.

Usher, K., Navjot, B., Durkin, J., Gyamfi, N., & Debra, J. (2020). Family violence and COVID-19: Increased vulnerability and reduced options for support. *International Journal of Mental Health Nursing*. https://doi.org/10.1111/inm.12735. Advanced online publication.

Warren, E. J., & Font, S. A. (2015). Housing insecurity, maternal stress, and child maltreatment: An application of the family stress model. *Social Service Review, 89*(1), 9–39. https://doi.org/10.1086/680043.

WHO Global. (2020). *Addressing violence against children, women and older people during the COVID-19 Pandemic: Key actions*. World Health Organization. https://www.who.int/publications/i/item/WHO-2019-nCoV-Violence_actions-2020.1.