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Evaluating child maltreatment and family violence risk during the COVID-19 Pandemic: Using a telehealth home visiting program as a conduit to families

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Abstract

The COVID-19 pandemic has affected many child maltreatment risk factors and may have affected maltreatment among vulnerable families. We surveyed 258 certified providers of an evidence-based home visiting program, SafeCare, about their perception of the impact of the pandemic on the families they serve. We examined if the providers perceived an overall change in child maltreatment and family violence risk among the families with young children they served and factors that may have contributed to changes. Regressions estimated the relationship between providers' assessment of families' ability to social distance, emotional struggles, and access to public resources/services with providers' perception of child maltreatment and family violence risk in the home. Findings indicate that 87% of providers believed maltreatment risk had increased during the pandemic. Providers serving families who were unable to social distance due to employment were more likely to report increased supervisory neglect and material neglect among the families they serve. Providers reporting that families were struggling with elevated frustration levels also reported more family conflict and material neglect among the families they serve. Results from this research can inform strategic decision-making for policies and programs that address the challenges low-income families with young children face in emergency situations.

KEYWORDS
child abuse, child neglect, COVID-19, family violence, home visiting, SafeCare, telehealth

1 | INTRODUCTION

Child maltreatment is a major public health concern that affects many families in the United States (Hammond et al., 2006). In 2019, 656,000 children were victims of at least one substantiated maltreatment event (Administration for Children & Families, 2020). Children under age 5 were more likely to be the victim of maltreatment than older children, with the most common victims reported being infants under age 1 (ACF, 2020). Maltreatment carries with it long-term impacts on mental and physical health (Brown et al., 2010; Corso et al., 2008; Dong et al., 2003, 2004; Dube et al., 2009; Gilbert et al., 2009) and social and behavioral problems (Lansford et al., 2002). Adults who suffered from maltreatment during childhood have lower lifetime earnings and educational attainment (Currie & Widom, 2010), and are more likely to commit crimes in adulthood (Currie & Tekin, 2012).

Research supports that child maltreatment is the result of complex intersections of risk across ecological levels that include societal and cultural context, neighborhood and communities, and individual and interpersonal interactions (Bronfenbrenner, 1977). The COVID-19 pandemic has presented unique challenges that impact each of these ecological levels in ways that can increase child maltreatment perpetration and reduce the responsivity of child protection, increasing the risk and danger to children during this vulnerable time (Katz et al., 2021). Government mandates, stay-at-home orders, and lockdown recommendations were put in place to reduce community spread of the virus. Social distancing guidelines limited social interaction outside of the household and required people to only leave their homes for essential purposes. Business operations plummeted due to operational restrictions and reduced demand, and the unemployment rate hit an unprecedented peak of 14.8% in April 2020, a level not observed since unemployment tracking began in the 1940s (Bureau of Labor Statistics, 2020). In May 2020, nearly 50 million people reported that they had been unable to work at some point during the previous 4 weeks (Bureau of Labor Statistics, 2020). Additionally, many of those who did not lose their jobs began working from home (Brynjolfsson et al., 2020). Across the country, daycares temporarily closed, and schools transitioned from in-person instruction to distance learning. These changes immediately caused great concern for child maltreatment advocates as they all impact child maltreatment risk factors.

Most research on child abuse and neglect focuses on ecological risk factors at the individual or family level (Mulder et al., 2018; Stith et al., 2009), however there has been some recent attention to macro-level and environmental factors (Bullinger et al., 2019; Feely et al., 2020). For example, natural disasters have been shown to exacerbate known maltreatment stressors (Self-Brown et al., 2013), and violence against children increases after these emergencies (Seddighi et al., 2021). Macro-economic changes—which typically accompany natural disasters—such as unemployment are also associated with greater risks for maltreatment (Brown & De Cao, 2020; Frioux et al., 2014; Lindo et al., 2018; Schenck-Fontaine et al., 2017; Schneider et al., 2017).

Research has documented elevated rates of known risk factors for child maltreatment during the COVID-19 pandemic and resulting lockdown. First, many parents became unemployed or were furloughed. These parents likely had more time to spend with children and managing new childcare and education responsibilities, but they also faced new financial pressures. Provisions of the CARES act such as the advanced tax rebates (popularly referred to as stimulus checks) and expanded unemployment insurance helped to some degree to alleviate these pressures (Han et al., 2020), but there remains evidence that families with children experienced elevated food insecurity, suggesting many still faced significant hardship (Bitler et al., 2020). Additionally, many parents voluntarily dropped out of the labor force to tend to children out of school or daycare (Heggeness, 2020). This widespread unemployment has been shown to affect maltreatment. For example, a recent study by Lee et al. (2021) found that parents of children aged 0 to 12 years self-reported more physical and emotional neglect and verbal aggression with their child if they had recent employment loss. Connell and Stambler (2021) found that pandemic-related stressors were associated with increased likelihood of engaging in neglectful and harsh parenting (note that the study also found that pandemic-stressors were related to positive parenting practices). More time spent between parents and children may also lead to increased tension and maltreatment risk if vulnerable parents can no longer physically distance themselves from conflicts. Constant presence in the home may also increase children's exposure to intimate partner violence or other violence in the home, which is both a risk factor for child maltreatment and can contribute to post-traumatic symptoms (Katz et al., 2021).

Second, parents who retained their jobs either (a) shifted to working from home while balancing childcare and education responsibilities or (b) were deemed as "essential workers" or "frontline workers" and needed to create emergency childcare plans to continue working in person. This sudden lack of childcare while having to maintain employment may have put children at a greater risk for lack of supervision. Indeed, Bullinger, Boy, et al. et al. (2021) documents increases in injuries and abuse resulting from inadequate adult supervision presenting to the emergency department (Bullinger, Boy, et al., 2021). Working from home also does not seem to be protective of supervisory neglect, as recent studies show that more time at home has been associated with more reports of supervisory neglect (Bullinger, Boy, et al., 2020; Bullinger, Raissian, et al., 2020). Furthermore, in some cases, replacement childcare arrangements may have been expensive, worsening financial burden for vulnerable families, or may not have been appropriate or safe (Katz et al., 2021).

Third, all parents also likely faced difficulties adjusting to the changing routines and social life brought on by the pandemic, particularly parents with young children (Gassman-Pines et al., 2020; Patrick et al., 2020). These changes in parenting responsibilities and the reduced ability of parents to seek social support from family and friends contribute to a high risk of parental burnout (Griffith, 2020) and heightened psychological distress (Gassman-Pines et al., 2020; Kalil et al., 2020; Patrick et al., 2020; Zamarro & Prados, 2021). This documented mental health

deterioration has been worse for mothers (Patrick et al., 2020; Zamarro & Prados, 2021). Parental stress is known to be an important risk factor for child maltreatment and family violence (Rodriguez-JenKins & Marcenko, 2014; Whipple & Webster-Stratton, 1991), and a body of quickly growing literature has shown increases in domestic violence (Agüero, 2021; Bullinger, Carr, et al., 2021; Leslie & Wilson, 2020). A recent study of parental stress during COVID-19 with a large sample of parents of children 0 to 18 years found that as household stressors increased, the likelihood of neglectful and harsh parenting practices also increased (Connell & Strambler, 2021). Further, parent-reported isolation during the early phases of the pandemic has also been found to be associated with increased use of discipline and spanking (Lee et al., 2021).

Finally, increased stress and dysfunction at a neighborhood or community level can increase maltreatment risk within families. Regardless of parent income, neighborhood poverty increases the risk of neglect. This is thought to be in part because of a lack of structures and supports in place to encourage positive parenting and parents' investment in their children (Maguire-Jack & Font, 2017). Therefore, even if an individual family is not negatively financially affected by COVID-19, their risk of child maltreatment may increase if their surrounding neighborhood experiences increased financial difficulties. Social cohesion is a possible protective factor, but recommendations to stay at home may simultaneously increase the importance of neighborhood traits and disrupt social bonds between neighbors. Racial/ethnic minorities are disproportionately impacted by poverty, COVID-19, and child maltreatment, and these factors may interact at family, neighborhood, and community levels (Katz et al., 2021).

In sum, a variety of risk factors on the family and community level give reason to believe children are at a greater risk for maltreatment. However, one challenge with documenting whether children are in fact at a greater risk for child maltreatment during the COVID-19 pandemic is measurement. Child maltreatment victims are often reported to child protective services agencies by teachers, social workers, law enforcement, and medical personnel. Quarantine and social distancing protocols have sharply diminished victims' opportunity to report abuse safely and discreetly. Indeed, there is reason to suspect that a substantial number of children at risk for child maltreatment are being unidentified, overlooked, or unobserved. For example, children between the ages of 0 and 5 are disproportionately likely to have maltreatment reported by medical sources such as pediatricians or nurses (Palusci, 2011). Both pediatric healthcare use (Chaiyachati et al., 2020), and child maltreatment presenting to emergency departments (Holland et al., 2021; Kaiser et al., 2021; Swedo et al., 2020) have fallen dramatically following the introduction of stay-at-home orders New York City's Administration for Children's Services saw a reduction in new case openings versus past year (Whaling et al., 2020). Following Georgia's emergency declaration in March 2020, child maltreatment allegations fell by 58% relative to the number made in 2018 and 2019 during the same time-period (Bullinger, Boy, et al., 2020), likely due to the closure of schools (Baron et al., 2020). Observations of how the COVID-19 pandemic has affected families would suggest these findings are not indicative of a true drop in maltreatment but rather are due to children's reduced access to mandated reporters.

Much public attention has focused on how working parents have struggled to balance working from home with the additional responsibilities of childcare and virtual schooling during this pandemic. There has been less focus on low-income families with young children (under 5 years of age) who do not have the ability to provide such care because they are more likely to have continued to work outside of the home or lost their jobs altogether (Blau et al., 2020). Those who became unemployed began balancing the search for a new job with these hardships, and they additionally faced diminished access to education and childcare support, public benefits due to office closures, essential services such as grocery stores, and social support due to stay at home orders and social distancing guidelines.

In this study, we aim to examine how families with young children—in particular, low-income families known to have a high risk of maltreatment—are affected by these many confounding hardships introduced by the COVID-19 pandemic and to evaluate changes in professionals' perceptions of maltreatment risk due to these unusual circumstances. We also endeavor to gain a better understanding of what public services and supports these at-risk families have been able to access and how access to these programs is related to perceived maltreatment risk.

We used a novel approach to gain information on how various changes in household circumstances may be affecting the maltreatment risk among young children in vulnerable families. Specifically, we used the infrastructure of an existing, nationally disseminated, evidence-based home visiting parenting program that adapted to providing their services virtually. We surveyed the providers working with typically hard-to-reach families with young children—those involved with child protection and high-risk prevention settings—as a conduit to these families to examine their perceptions on how families have been coping with the challenges of the pandemic. This strategy allowed for a rapid approach to collecting information that can inform intervention and policy for vulnerable families without adding research burdens to this population.

We hypothesized provider perceptions that families with limited ability to social distance, higher levels of emotional struggles, and greater difficulties accessing public

resources would be associated with increased perceptions of child maltreatment and family violence risk.

2 | MATERIALS AND METHODS

2.1 | Safe care

SafeCare is a home visiting program that provides evidence-based training for parents of young children aged 0–5 who have either been reported for child maltreatment or exhibit risk factors for abuse and neglect (Self-Brown et al., 2014). This program is typically delivered to more than 6000 families per year at the family's home over 18 sessions led by a trained SafeCare provider. These sessions cover three modules: Child Health, Home Safety, and Parent-Child Interaction. The SafeCare program has been found to be effective at reducing several maltreatment-related outcomes, including parenting stress, child maltreatment recidivism, and out-of-home placements (Beachy-Quick et al., 2018; Chaffin et al., 2012; Whitaker, Self-Brown, et al., 2020). SafeCare is implemented in family-serving agencies in more than 20 US states, and Australia, Canada, Spain, Israel, and several other international settings.

The COVID-19 pandemic forced many home visiting programs, including SafeCare, to transition from in-home program delivery to a virtual program delivery system. Previous work has demonstrated that while SafeCare providers' personal lives and work responsibilities were significantly impacted by the pandemic, they were able to adapt to virtual delivery well and have, for the most part, maintained progress with the families they serve (Self-Brown et al., 2020).

2.2 | Survey

Survey participants were active SafeCare providers, including active coaches and trainers who support providers during the certification and post-certification process, who were registered and had an email address listed in the National SafeCare Training and Research Center's training portal. SafeCare providers in the European Union were excluded due to General Data Protection Regulation compliance. Invitations were sent via email to 1039 active providers between June 3rd and 16th of 2020. These invitations resulted in 390 individuals at least opening the consent form, of which 303 completed at least part of each section of the survey (final participants completed on June 16, 2020; survey open for 13 days total). The number of respondents was capped due to limited funding to incentivize participation. The median amount of time it took to complete the survey was 37 min. The average time for survey completion was quite varied as some participants left the survey open overnight before completing. Because we are primarily interested in examining how SafeCare clients are faring during the pandemic, we have excluded SafeCare coaches and trainers from our main analysis (SafeCare coaches and trainers engage in training and fidelity monitoring of SafeCare Providers, but they often do not have active caseloads of families for service delivery). After dropping coaches, trainers, and people who did not respond to the sections we are interested in for this study, we are left with a sample of 258 SafeCare provider participants.

Participants who completed the survey primarily reside in the United States ($n = 241$, 93.4%). Those who do not reside in the United States live in either Australia ($n = 9$) or Canada ($n = 1$). Nearly half ($n = 121$, 46.9%) of respondents serve parents in urban clusters/suburbs, while 25% ($n = 63$) and 26% ($n = 65$) serve urban and rural areas, respectively. About a third ($n = 82$, 32.7%) of respondents had less than 1 year of SafeCare training, 29.1% ($n = 73$) had between 1 and 2 years of training, and the remaining 38% had 2 or more years. No questions about age or gender were asked in the survey, but prior research conducted with SafeCare providers indicates that upwards of 90% are female, and their average age is in the mid- to late-30′s (Self-Brown et al., 2017; Whitaker, Lyons, et al., 2020).

The email sent to registered and active SafeCare providers included a link to the Qualtrics survey platform. Those who clicked the link were first presented the study's consent form, approved by the Institutional Review Boards at both sponsoring institutions, which explained our purpose for conducting the survey and informed respondents of the opportunity to receive a $15 Amazon gift card upon completion of the survey. Individuals who consented then continued to the main survey which included a range of questions concerned with how program delivery, the providers, and clients were being affected by the COVID-19 pandemic. No identifying information was collected by the survey, and the results of the survey were anonymous. Following completion of the survey, participants were provided with a link to request the gift card and asked to provide their names, phone numbers, and email addresses. These responses were not linked with the responses in the main survey.

2.3 | Measures

We report on two sections of the SafeCare provider survey. The first section includes demographic questions which asked the providers about their experience with SafeCare, where they deliver the program, their role with Safe-Care, and how they have delivered the SafeCare program

TABLE 1 Items from the client-related questions in the SafeCare Provider survey

Item Number	Item	Response Options
28	Are any of the families you serve unable to social distance for reasons below?	Select all that apply from list of options such as: caretaking; employment; healthcare; other, open-ended.
30	Have the caregivers or children you serve reported or appear to have new or increased struggles with any of the below?	Select all that apply from list of options such as: anxiety or nervousness; loneliness; boredom; loss of motivation; frustration, anger, or aggression; other, open-ended.
33	How is the pandemic and social distancing impacting the parenting of those you serve?	Open-ended response
36	Have your clients reported or have you noticed signs of new or increased family dysfunction or violence in the families that you serve?	Select all that apply from list of options such as: Child emotional/verbal abuse; child physical abuse; child sexual abuse; child physical or medical neglect; child being left unsupervised; intimate partner violence; other, open-ended.
41	What services/resources are the parents you serve accessing to help them during this time?	Select all that apply from list of options such as: unemployment insurance; SNAP benefits; meals from public school for their child; distance learning from their child's school; other, open-ended.

during the COVID-19 pandemic (i.e., have they switched to remote delivery). The second section of the survey asks providers questions about how the families they serve have been impacted by the pandemic. These questions inquire how the providers believe the risk of maltreatment and family violence has been impacted, how their clients perceive the pandemic, how the clients' routines and habits have changed, what services and resources are available to the clients, and other questions pertaining to how family dynamics may have changed due to the pandemic. Many of these questions give the participants the option to provide an open-ended response. These questions are described in Table 1.

SafeCare Provider participants were instructed to answer questions regarding the COVID-19 pandemic from its (at the time) known international onset to the time of the study, which included March 2020 through the date of survey completion (between June 3, 2020 and June 16, 2020). Our primary outcomes of interest are the responses to the question: "Have your clients reported or have you noticed signs of new or increased family dysfunction or violence in the families that you serve?" (Item 36 in Table 1). Participants were prompted to choose from any combination of seven items, all of which are types of family violence or child maltreatment: (1) aggressive conflict between adult members of the household, (2) child emotional/verbal abuse, (3) children being left unsupervised, (4) intimate partner violence, (5) child physical or medical neglect, (6) child physical abuse, and (7) child sexual abuse. New violence or maltreatment was considered an increase from the previous baseline level. Provider responses were coded as binary, equaling one if providers reported an increase in each of these individual forms of family violence and maltreatment and zero if not. Therefore, there are seven outcomes of interest.

We examine how several family experiences relate to these changes in family violence and maltreatment. First, we measure families' ability to social distance by whether providers documented that the families they serve are unable to social distance. Specifically, providers were asked "Are any of the families you serve unable to social distance for reasons below? Select all that apply from list of options: Caretaking; employment; healthcare; or other, open-ended" (Item 28 in Table 1). Second, we explore whether providers perceive various emotional struggles among their clients. Specifically, providers were asked "Have the caregivers or children you serve reported or appear to have new or increased struggles with any of the below? Select all that apply from list of options: anxiety or nervousness; loneliness; boredom; loss of motivation; frustration, anger, or aggression; other, open-ended" (Item 30 in Table 1). Lastly, we examine whether providers report that the families they serve are accessing public resources. The survey respondents were asked, "What services/resources are the parents you serve accessing to help them during this time? Select all that apply from list of options: unemployment insurance; SNAP benefits; meals from public school for their child; distance learning from their child's school; other, open-ended" (Item 41 in Table 1). For each response option within each of these three questions, we created binary variables representing one if the provider responded affirmatively and zero if not.

2.4 | Analytical approach

Our primary analysis relies on multivariate linear regressions using ordinary least squares (OLS) to identify relationships between the providers' perception of family violence and maltreatment and the provider's perception

of their clients' (1) ability to social distance, (2) emotional struggles, and (3) accessing public resources and services, each as described above. We ran three multivariate regressions for each of the seven family violence and maltreatment outcomes, where each regression regressed one of the outcomes on all possible responses within each survey question. We adjusted the regression analysis using binary variables for geographic region (Midwest, Pacific West, Plains, and Southeast; Northeast & non-US = omitted group), metropolitan status (suburban and rural; urban = omitted group), and respondents' years of training (1–2 years, 3–4 years, 5+ years; <1 year = omitted group). The geographic and metropolitan status covariates account for the pandemic affecting areas of the country and more densely populated areas differently. The years of training accounts for the possibility that more experienced trainers are better able to detect child maltreatment risk. If a respondent was missing any of these variables, they were omitted from the regression analysis (i.e., we employed listwise deletion). As a result, sample sizes for the regression analysis are substantially smaller than the full sample.

Each outcome is binary, and linear models (linear probability models (LPM) via OLS estimation) can be run on binary outcomes. The limits to this approach are that LPM estimates are not constrained to the unit interval (i.e., predicted probabilities that fall between 0 and 1), and that OLS estimation imposes heteroskedasticity for a binary response. The second problem is easy to fix by using heteroskedasticity-consistent robust standard error estimates, which we have done. The first concern, however, is often regarded as the primary reason to employ a non-linear model such as probit or logit. However, according to Wooldridge (2002, p. 455) "…If the main purpose is to estimate the partial effect of [the independent variable] on the response probability, averaged across the distribution of [the independent variable], then the fact that some predicted values are outside the unit interval may not be very important." In other words, we are not putting a great deal of stock into the exact coefficient estimated. Rather, we are primarily focused on the direction of the relationship, which can be seen in our results and discussion sections. Nonetheless, we performed the regression using a probit model as a robustness check.

3 | RESULTS

3.1 | Descriptive statistics

We first present summary statistics of the survey responses in Table 2. A substantial majority of the SafeCare providers who responded ($n = 218$, 87%) indicated that they believed maltreatment risk for young children is higher due to the pandemic, social distancing, and stay at home orders. This perception was consistent across providers working in rural, urban, and suburban communities. The responses to this question suggest that continuing the delivery of these prevention programs like SafeCare has been important during the pandemic.

Providers were also asked whether their clients have reported, or if they have noticed signs of, increasing family violence and maltreatment since the start of the pandemic and social distancing/stay at home orders. Respondents noted increases in aggressive conflict between adult members of the household (49%, $n = 54$), verbal or emotional abuse directed at a child (45%, $n = 50$), children left unsupervised (35%, $n = 39$), intimate partner violence (20%, $n = 22$), child physical or medical neglect (16%, $n = 18$), child physical abuse (12%, $n = 13$), and child sexual abuse (4%, $n = 4$).

Many providers reported that the families they serve had difficulty social distancing for several reasons. For example, 86% ($n = 177$) of respondents reported that their clients' employment situation prevented them from social distancing, which suggests many of the caregivers receiving SafeCare services were unable to work from home. Approximately 30% ($n = 62$) indicated that caretaking responsibilities prevented their clients from social distancing, and 23% ($n = 48$) indicated healthcare was a hindrance for social distancing.

Understanding how the emotional well-being of vulnerable families with young children has been affected by the pandemic has implications for public policy and program delivery. A large majority of providers reported that the families they serve increasingly struggled with boredom (77%, $n = 180$) as well as anxiety or nervousness (75%, $n = 175$). Many respondents also indicated that their clients have shown signs of increasing isolation or social disengagement (59%, $n = 139$), feelings of depression (53%, $n = 125$), loneliness (52%, $n = 122$), loss of motivation (44%, $n = 103$), frustration (36%, $n = 86$), and restlessness (32%, $n = 76$).

Finally, providers indicated that families were accessing public benefits. About 80% of providers indicated the families they served were accessing services from their public schools such as meals for their child ($n = 199$, 82.2%) and distance learning ($n = 197$, 81.4%). A total of 80% of respondents reported that their clients were obtaining SNAP benefits and 68% reported take-up of unemployment insurance.

3.2 | Regression results

Beyond descriptive statistics, we examine the relationships between provider perceptions of COVID-19

TABLE 2 Descriptive statistics

	# of responses	# Affirmative	Mean
Providers deliver SafeCare program in...			
United States	258	241	.934
Australia	258	9	.035
Canada	258	1	.004
Northeast	209	13	.062
Midwest	209	27	.129
Pacific West	209	52	.249
Plains	209	102	.488
Southeast	209	15	.072
Urban area (pop. > 50,000)	249	63	.253
Rural area (pop. < 2,500)	249	65	.261
Suburban area (pop, 2,500-50,000)	249	121	.486
Length of provider training in SafeCare			
Less than 1 year	251	82	.327
1–2 years	251	73	.291
2–4 years	251	48	.191
5+ years	251	48	.191
Provider's mode of delivering the program during the pandemic:			
All sessions remote	252	162	.643
Some sessions remote	252	67	.266
All sessions in-person	252	16	.063
Stopped delivering program temporarily	252	7	.028
Providers think pandemic caused maltreatment risk for young children to...			
Increase	251	218	.869
Decrease	251	8	.032
Stay the Same	251	25	.100
Clients have reported or providers have noticed new or increased signs of...			
Aggressive conflict between adults	110	54	.491
Child emotional/verbal abuse	110	50	.455
Children being left unsupervised	110	39	.355
Intimate partner violence	110	22	.200
Child physical or medical neglect	110	18	.164
Child physical abuse	110	13	.118
Child sexual abuse	110	4	.036
Share of providers who indicated families were unable to social distance due to...			
Employment	205	177	.863
Caretaking	205	62	.302
Healthcare	205	48	.234
Caregivers/children have reported, or providers have noticed new or increased struggles with...			
Boredom	235	180	.766
Anxiety or nervousness	235	175	.745
Social disengagement or isolation	235	139	.591
Feelings of depression	235	125	.532
Loneliness	235	122	.519
Loss of motivation	235	103	.438
Frustration, anger, or aggression	235	86	.366
Restlessness	235	76	.323

(Continues)

TABLE 2 (Continued)

	# of responses	# Affirmative	Mean
Share of providers who indicated families were accessing the following resources…			
Meals from public school for their child	242	199	.822
Distance learning from their child's school	242	197	.814
SNAP benefits	242	191	.789
Unemployment Insurance	242	165	.682

challenges and increases in family violence and maltreatment. We first examine whether perceptions of caregivers' ability to socially distance relates to perceptions of increased child maltreatment risk in regression models. Table 3 reports these results. We found that providers who reported serving families with a caregiver who struggled to social distance due to their employment—indicating they continued to work outside of the home—were also more likely to report increases in children being left unsupervised ($p < .05$) and child physical or medical neglect ($p < .01$). We find no significant relationships between providers' reports of difficulties social distancing due to healthcare or caregiving and their reports of increased family violence and child maltreatment risk. Thus, across the outcomes, providers' perceptions of struggles with social distancing because of employment challenges were most strongly related to their perceptions of increased child maltreatment risk.

Next, we examined whether providers' perceptions of personal struggles caregivers and children were facing were predictive of their perceptions of maltreatment risk (Table 4). SafeCare providers who indicated that members of the family were struggling with heightened anxiety or nervousness were also more likely to report increased child emotional or verbal abuse ($p < .01$). Providers who reported that children or caregivers seemed more frustrated than usual were more likely to report increased signs of aggressive conflict between adults ($p < .01$) and child physical or medical neglect ($p < .05$). Providers' perception of aggressive conflict between adults was also positively associated with their reporting of families feeling depressed ($p < .05$). Although about one-half or more providers reported increases in boredom, social disengagement or isolation, loneliness, and loss of motivation, none of these challenges was associated with providers perception of heightened family violence and maltreatment. Of the many psychological struggles caregivers and children have faced, these results show that perceived anxiety/depression and frustration were most strongly associated with perceptions of increased maltreatment risk during the pandemic.

We additionally examined whether perceptions of access to public services and benefits related to providers' perceptions of increased maltreatment risk. These results are shown in Table 5. Generally, providers' reports of families accessing public benefits such as meals from school, distance learning for school, SNAP benefits, and unemployment insurance were not consistently related to providers' perception of heightened family violence and maltreatment.

Finally, we note that estimating a non-linear, probit model does not substantively change the interpretation of any of these results.

4 | DISCUSSION

The COVID-19 pandemic has dramatically affected families' daily routines, social lives, and psychological and economic well-being, and parents with young children have been especially impacted (Gassman-Pines et al., 2020; Patrick et al., 2020). People have not been able to interact with family and friends in the same way they had in the past, children have been attending school virtually, childcare and daycare closures have been prominent, and many parents and caregivers lost their jobs. Because of this conflux of risk factors, there has been significant concern that the COVID-19 pandemic could result in increased child maltreatment (Agrawal, 2020). However, the widespread closure of schools, businesses, and places of worship and reduced interaction with the healthcare system present a challenge to researchers since these places are the source for most child maltreatment reports. Indeed, in the months following the beginning of the pandemic, allegations of maltreatment were substantially lower than expected, likely because of the reduced access to frequent reporters (Baron et al., 2020; Bullinger, Boy, et al., 2020).

We surveyed *providers* rather than the *families* directly as an opportunity to extend our learning from the studies that have collected self-report information from families. For example, traditional data sources that measure family well-being such as nationally representative surveys or administrative data on public programs can take over a year for researchers to obtain. Other sources such as in-home observation or self-administered surveys are also made less

TABLE 3 Reasons for difficulty social distancing predicting maltreatment risk and outcomes from multivariate regression models

	Aggressive conflict between adults	Child emotional/ verbal abuse	Children left un-supervised	Intimate partner violence	Child physical/ medical neglect	Child physical abuse	Child sexual abuse
Reason for difficulty social distancing:							
Employment	.07	.18	.28**	.07	.27***	.12	.02
	(.16)	(.15)	(.11)	(.13)	(.09)	(.07)	(.02)
Caretaking	.12	.15	.04	.02	.05	−.01	−.01
	(.15)	(.14)	(.12)	(.14)	(.12)	(.09)	(.01)
Healthcare	.16	.12	−.24	.05	.04	.07	−.03
	(.16)	(.15)	(.14)	(.16)	(.13)	(.11)	(.03)
Geographic region (Northeast & non-US = omitted group)							
Midwest	.25	−.20	.22	.06	−.44	−.22	−.00
	(.38)	(.32)	(.27)	(.35)	(.27)	(.27)	(.01)
Pacific West	.01	.05	.01	.00	−.49	−.18	.03
	(.36)	(.29)	(.23)	(.30)	(.25)	(.25)	(.04)
Plains	−.08	−.09	.09	.02	−.33	−.19	.05
	(.34)	(.27)	(.23)	(.29)	(.25)	(.24)	(.05)
Southeast	−.40	−.42	.02	−.02	−.48	−.29	−.02
	(.35)	(.30)	(.32)	(.37)	(.26)	(.26)	(.03)
Metropolitan status (Urban = omitted group)							
Suburban	−.02	−.02	.06	.13	−.15	.05	.03
	(.17)	(.15)	(.13)	(.14)	(.12)	(.10)	(.04)
Rural	.21	−.08	.38**	.05	−.08	.08	.00
	(.18)	(.17)	(.16)	(.14)	(.16)	(.13)	(.01)
Years of training (<1 year = omitted group)							
1–2 Years	.15	.26	.01	−.06	.06	.11	−.05
	(.15)	(.15)	(.14)	(.15)	(.11)	(.10)	(.05)
3–4 Years	.18	.36**	.36**	.01	.09	.16	−.06
	(.21)	(.17)	(.17)	(.20)	(.15)	(.15)	(.07)
5+ Years	.03	.40**	−.07	−.06	.20	.06	−.06
	(.20)	(.16)	(.17)	(.18)	(.14)	(.08)	(.07)
Mean Y	.49	.45	.35	.20	.16	.12	.04
N	72	72	72	72	72	72	72

First value is the beta coefficient, with standard errors reported in parentheses. Each column is its own regression.

**p < .05.

***p < .01.

accessible during the pandemic due to social distancing guidelines and closure of participant recruitment sites. For example, the Household Pulse Survey, administered by the US Census—arguably the agency most capable of conducting a large-scale survey in real-time—collected the first wave of data during the pandemic between April 23 and May 5, 2020, more than one month following the nationwide public health emergency declaration. The heightened stress of balancing work with new childcare responsibilities and greater demands on their time also means families may be less willing to participate in investigator-initiated surveys, potentially skewing participant represen-

tativeness more so than surveying providers. Because of these difficulties, assessing the factors presenting greatest risk to perceived maltreatment and family violence as quickly as possible required a more creative data collection strategy.

Using reports of professionals who are knowledgeable about family violence and maltreatment and who are regularly in contact with vulnerable families with young children, we first provide evidence that perceived child maltreatment risk has increased during the pandemic. Nearly 90% of SafeCare providers indicated that they believe the risk of maltreatment has increased for at least some of their

TABLE 4 Caregiver/child struggles predicting maltreatment risk and outcomes from multivariate regression models

	Aggressive conflict between adults	Child emotional/ verbal abuse	Children left un-supervised	Intimate partner violence	Child physical/ medical neglect	Child physical abuse	Child sexual abuse
Caregiver/Child feeling increased struggles with…							
Boredom	.07	−.21	−.03	.01	.01	.02	.03
	(.12)	(.12)	(.12)	(.12)	(.09)	(.07)	(.03)
Anxiety	−.05	.24**	.12	−.16	.08	.05	−.06
	(.17)	(.12)	(.15)	(.15)	(.10)	(.08)	(.05)
Isolation	−.12	.18	.13	.02	.05	−.06	−.07
	(.11)	(.11)	(.14)	(.11)	(.09)	(.10)	(.06)
Depression	.38**	.17	−.00	.22	.08	.11	.03
	(.15)	(.13)	(.18)	(.14)	(.11)	(.10)	(.03)
Loneliness	−.13	−.22	−.03	−.19	.12	−.06	−.00
	(.13)	(.11)	(.16)	(.13)	(.09)	(.09)	(.02)
No Motivation	−.04	.12	.19	−.13	.02	−.08	−.01
	(.12)	(.10)	(.12)	(.12)	(.08)	(.07)	(.03)
Frustration	.33***	.17	−.16	.12	.19**	−.04	.02
	(.12)	(.10)	(.12)	(.10)	(.08)	(.08)	(.03)
Restlessness	−.03	.06	−.02	.06	−.05	.12	.01
	(.12)	(.12)	(.13)	(.10)	(.11)	(.08)	(.03)
Geographic region (Northeast & non-US = omitted group)							
Midwest	−.16	−.10	.35	.05	−.36	−.17	.01
	(.21)	(.23)	(.25)	(.26)	(.19)	(.21)	(.03)
Pacific West	−.31	.04	−.10	.01	−.34**	−.18	.05
	(.22)	(.22)	(.19)	(.22)	(.15)	(.21)	(.04)
Plains	−.35	−.08	.11	.04	−.19	−.17	.02
	(.20)	(.20)	(.17)	(.22)	(.15)	(.20)	(.05)
Southeast	−.36	−.23	.11	−.04	−.24	−.24	−.01
	(.23)	(.20)	(.21)	(.30)	(.16)	(.20)	(.06)
Metropolitan status (Urban = omitted group)							
Suburban	−.19	.02	.09	.02	−.10	.02	.03
	(.14)	(.12)	(.13)	(.12)	(.10)	(.07)	(.03)
Rural	.21	.15	.41**	.00	−.09	.18	.05
	(.16)	(.15)	(.17)	(.13)	(.13)	(.14)	(.05)
Years of training (< 1 year = omitted group)							
1–2 Years	.14	.16	−.07	.00	.02	.20	−.04
	(.14)	(.13)	(.15)	(.12)	(.10)	(.10)	(.04)
3–4 Years	.10	.22	.40**	−.01	−.03	.14	−.04
	(.16)	(.16)	(.16)	(.14)	(.12)	(.12)	(.04)
5+ Years	−.08	.31**	.01	−.07	.18	.05	−.01
	(.14)	(.14)	(.15)	(.14)	(.12)	(.07)	(.05)
Mean Y	.49	.45	.35	.20	.16	.12	.04
N	88	88	88	88	88	88	88

First value is the beta coefficient, with standard errors reported in parentheses. Each column is its own regression.

**-$p < .05$.

***-$p < .01$.

TABLE 5 Access to public benefits predicting maltreatment risk and outcomes from multivariate regression models

	Aggressive conflict between adults	Child emotional/ verbal abuse	Children left un-supervised	Intimate partner violence	Child physical/ medical neglect	Child physical abuse	Child sexual abuse
Services accessed to help…							
Meals from schools	−.00	.03	.13	.00	.15	−.10	−.05
	(.19)	(.19)	(.14)	(.16)	(.12)	(.10)	(.07)
Distance learning	−.01	−.01	−.04	.19	−.20	.16[**]	−.02
	(.16)	(.17)	(.15)	(.19)	(.14)	(.08)	(.03)
SNAP benefits	−.05	.18	.13	−.22	.15	−.12	−.06
	(.17)	(.19)	(.15)	(.16)	(.11)	(.12)	(.06)
Unemployment insurance	.12	.13	.07	.17	−.05	−.10	−.03
	(.14)	(.12)	(.13)	(.10)	(.10)	(.09)	(.05)
Geographic region (Northeast & non-US = omitted group)							
Midwest	.11	.02	.34	.11	−.21	−.24	−.00
	(.26)	(.27)	(.23)	(.22)	(.21)	(.19)	(.03)
Pacific West	−.10	.15	−.06	.08	−.24	−.19	.04
	(.26)	(.24)	(.18)	(.19)	(.20)	(.20)	(.05)
Plains	−.14	−.02	.08	.16	−.14	−.18	.02
	(.24)	(.23)	(.18)	(.19)	(.20)	(.19)	(.03)
Southeast	−.27	−0.33	.03	.11	−.32	−.25	−.01
	(.31)	(.22)	(.24)	(.26)	(.20)	(.20)	(.05)
Metropolitan status (Urban = omitted group)							
Suburban	−.14	.04	.10	.05	−.08	.01	.03
	(.15)	(.14)	(.13)	(.12)	(.11)	(.07)	(.02)
Rural	.26	.08	.34[**]	.03	−.10	.15	.07
	(.16)	(.16)	(.17)	(.13)	(.13)	(.12)	(.05)
Years of training (< 1 year = omitted group)							
1-2 Years	.16	.19	−.07	−.10	.04	.20[**]	−.02
	(.14)	(.15)	(.13)	(.13)	(.10)	(.09)	(.02)
3-4 Years	.12	.24	.33[**]	−.12	.05	.14	−.02
	(.18)	(.17)	(.15)	(.15)	(.12)	(.11)	(.02)
5+ Years	−.05	.32[**]	.01	−.16	.22	.03	.00
	(.16)	(.16)	(.15)	(.14)	(.13)	(.08)	(.05)
Mean Y	.49	.45	.35	.20	.16	.12	.04
N	88	88	88	88	88	88	88

First value is the beta coefficient, with standard errors reported in parentheses. Each column is its own regression.

[**]$p < .05$.

[***]$p < .01$.

families during the pandemic, and a non-trivial number reported signs of new or heightened family violence and child maltreatment among at least some of their clients. This is consistent with the findings from other recent parent-report studies, suggesting that stressors and isolation resulting from the pandemic are increasing the use of neglectful and harsh parenting behaviors (Connell & Strambler, 2021; Lee et al., 2021).

Importantly, provider perceptions of maltreatment risk varied according to several risk factors identified by providers. Approximately 70% of providers reported that some of the caregivers and parents they serve had difficulty social distancing because of their employment situation, suggesting that many were not able to work from home. With a large majority of young children having no to limited childcare options, and older siblings no longer

attending school in-person, these caregivers had to balance more household responsibilities than before the pandemic, while continuing to work outside the home. Indeed, providers who indicated that the families they serve had difficulty social distancing because of their job were more likely to also report increases in their perceptions that children were being left unsupervised and child physical or medical neglect.

On the other hand, two-thirds of providers also reported that at least one person in the families they serve were accessing unemployment benefits, implying substantial job loss in households with young children at a high risk for maltreatment. Together, these responses suggest that households that were already known to be at a high risk for child maltreatment were hit hard by the negative employment impacts of the pandemic, either by their continuing to work outside-the-home while maintaining childcare/schooling or through job loss, and that these negative economic consequences have put children and families at a greater risk for maltreatment.

The responses from SafeCare providers also indicate that many have noticed increased signs of parental boredom, loneliness, anxiety or nervousness, feelings of depression, lost motivation, frustration, and restlessness. This finding is consistent with recent research finding that parents and caregivers have been more prone to parental stress, burnout, and psychological distress (Gassman-Pines et al., 2020; Griffith, 2020; Kalil et al., 2020; Patrick et al., 2020; Zamarro & Prados, 2021). Some of these emotional challenges were correlated with increased provider perceptions of risk for maltreatment. Most notably, the results show that providers who noticed signs of increased anxiety or nervousness among family members were more likely to report increased signs of child emotional or verbal abuse among their families; providers who reported increased frustration, anger, or aggression in children or caregivers were more likely to report increased evidence of aggressive conflict between adults in the household, and child physical or medical neglect. While we do not know who in the family showed signs of increased anxiety, previous research has shown an association between emotional abuse and anxiety in children (Hamilton et al., 2013), and that young children who have experienced neglect or child abuse exhibit increased aggression and other emotional difficulties (Naughton et al., 2013). Other recent work indicates that high parental anxiety has been connected with child maltreatment risk during the COVID-19 pandemic (Brown & De Cao, 2020) and that parents who reported feeling lonely were more likely to have neglected their children (Rodriguez et al., 2020). In contrast, our results show no significant relationship between provider reported loneliness amongst family members and signs of child maltreatment. These findings are important to consider within the context of Lee et al. (2021) findings that parent-reported isolation was associated with increased use of harsh parenting practices. Collectively, our results indicate that providers perceive that the pandemic has increased the prevalence of child maltreatment risk factors in low-income families with young children previously at a high risk for maltreatment. Providers who noticed some of these risk factors in the families they serve were more likely to report signs of family violence and maltreatment occurring.

4.1 | Limitations

There are some limitations of the study. First, the outcomes we examine are based on the observations of a third party, SafeCare providers, not the families themselves. Further, provider reports were in reference to their entire caseload, not individual families. Thus, the estimated relationships between variables reflect this. For example, provider reports of increased anxiety among some families in their caseload and increased emotional abuse among some families represents a correlation in their perceptions, but there is no way to know if they are referring to the same families. Rather, this allows us to understand the community contexts in which child maltreatment risk may be increasing. That is, if a provider reported that the families that they serve have increased maltreatment and that the families have a high reliance on unemployment benefits and experience increased frustration, it may not mean that the same families experience all these risks, but this would indicate that the community with these traits has a worsened maltreatment risk. As the ecological systems approach highlights, neighborhood and community factors—captured here as provider-level reports—are important for predicting and understanding child maltreatment risk in vulnerable families. This approach highlights where more resources and support are needed. Finally, these perceptions of increased maltreatment risk and outcomes may not reflect what parents themselves would report; rather they describe the perception the providers have in the households to which they provide services.

Additionally, because 88.8% (*n* = 229) of providers said that they were delivering the SafeCare program at least partially remotely, their observations may have been different compared with typical in-person delivery. It could be the case that virtual delivery limits the providers' view of family dynamics, as indicated by one respondent who, when asked whether there is increased family violence and maltreatment, said "It is hard to tell over Zoom." Given this obstacle, the percentage of providers perceiving an increased risk of maltreatment (87%), for example,

might be an underestimate of the risk vulnerable children were experiencing early in the pandemic, during the most intense period of social distancing and stay at home order regulations. In addition, providers were asked to respond about the families they serve on their caseload in a general manner. There is certainly variability between families that is not captured in providers' global responses about family struggles and risk.

Finally, this study uses a cross-sectional design, with the results reflecting findings of a survey that was only administered once, in June 2020, with items that would benefit from more specificity. The providers who participated were not contacted again. Therefore, it is unknown whether the patterns of heightened risk persisted beyond the study period, and the results should be interpreted as examining the short-term risks associated with the pandemic and the governmental response to it. We also cannot be sure that the examined risk factors actually preceded the onset of the increased maltreatment risk reported by SafeCare providers. Additionally, it is unclear the extent to which these findings generalize to vulnerable families that are not in contact with SafeCare or other child maltreatment prevention services. It is possible that families that are more isolated or lack any evidence-based supports may have experienced worse outcomes from the COVID-19 pandemic. It is also possible that vulnerable families that keep their maltreatment risks well-hidden were impacted differently.

5 | CONCLUSION AND IMPLICATIONS

The results from this study suggest that the COVID-19 pandemic, social distancing, school and daycare closures, and subsequent economic downturn have heightened the risk of child maltreatment in already vulnerable- and predominantly low income- families with young children according to providers who deliver parenting services. This evidence is crucial for understanding how at-risk caregivers and children been affected by an unprecedented public health emergency and for considering policy and public health responses in the case of future pandemics and emergency situations. Additionally, this research has implications in informing policy and strategic decision making for programs and resources that directly address the specific challenges low-income families with young children are facing.

Our findings add to a growing body of literature indicating that despite the policy attempts to reduce financial hardships and create opportunities for families to continue with routine engagement of children in daycare and school settings, family violence, and maltreatment increased for some families. To prevent maltreatment in vulnerable populations, policymakers might consider providing targeted support for these families if future emergencies result in a similar magnitude of economic downturn and require social distancing that prevents these families from relying on key support systems that they normally access.

CONFLICTS OF INTEREST
No conflicts of interest to report. **IRB**: This study was approved by Georgia Tech and Georgia State University's IRB.

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

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