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Research Paper

"Tell me what I'm doing wrong": Criticism of parenting choices and mental health during COVID-19

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ABSTRACT

During the COVID-19 pandemic, parents struggled with high levels of economic insecurity and mental health difficulties. Social cognitive theory suggests that receiving criticism from others contributes to psychological distress. This mixed-methods study explored longitudinal associations between receiving criticism about parenting choices and parental anxiety, depression, and financial worries during COVID-19. Survey data were collected at two time points in April 2020 from a national U.S. sample of 359 parents (70 % White, 67 % female, average age 34 years). Quantitative analyses were conducted using logistic and linear regression, and qualitative responses were coded to elucidate topics of criticism. Criticism at T1 was associated with increased parental anxiety, depression, and financial worries at T2 after controlling for these outcomes at T1. Content coding revealed parents were criticized for lenient parenting styles (20.63 %) or for being too strict with COVID-19 precautions (18.13 %). Being criticized about parenting choices may exacerbate mental health problems. Parents may benefit from receiving positive feedback about their parenting methods, either through social media or from family members.

1. Introduction

The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020 (WHO, 2020). Five days later, the U.S. White House administered guidelines to stop the spread of COVID-19, which included instructions to avoid social gatherings and travel, work and attend school from home, and stay home when sick (The White House, Office of the Press Secretary, 2020). Subsequent stay-at-home orders administered across the U.S. resulted in high levels of social isolation (McGinty, Presskreischer, Han, & Barry, 2020), abruptly disconnecting most American children from in-person education (Lee, Ward, Chang, & Downing, 2021). Furthermore, millions of individuals became suddenly unemployed, with 2.9 million people filing for unemployment in the week ending March 21, 2020 (U.S. Department of Labor, 2020).

Research has documented the adverse effects of COVID-19 on mental health (Twenge & Joiner, 2021; Wang et al., 2020). Some studies show that the burdens of caregiving were especially challenging during the pandemic. Especially during the early days of the pandemic, parents struggled with high levels of economic and food insecurity, decreased access to free and reduced lunch for their children, high levels of parenting stress, and difficulty adjusting to supporting their child's education at home during large-scale closures of in-person school (American Psychological Association [APA], 2020a; Freisthler, Gruenewald, Tebben, McCarthy, & Wolf, 2021; Kerr, Rasmussen, Fanning, & Braaten, 2021; Lee et al., 2021; Ward & Lee, 2022; Lee, Ward, Grogan-Kaylor, & Singh, 2022; O'Reilly, 2020; Patrick et al., 2020). An additional important, yet understudied factor that could contribute to parental mental health adjustment during COVID-19 is receiving feedback about parenting choices.

Receiving positive feedback about behaviors and decisions is associated with increased self-esteem, greater confidence, and higher levels of self-efficacy (Leary, Tambor, Terdal, & Downs, 1995). Positive feedback can also help individuals persevere in the face of challenging situations, which may be particularly important for parents during a pandemic. Although positive feedback can be beneficial to mental health, negative feedback can be detrimental to self-efficacy beliefs and well-being, in part because experiencing negative feedback contributes to increased anxiety, depression, and stress (Park & Crocker, 2008). Pajares, Prestin, Chen, and Nabi (2009) note that it is often "easier to weaken self-efficacy beliefs through criticism than to strengthen such beliefs through encouragement" (p. 287). Indeed, criticism from others

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not only emerged as an important factor contributing to mental health problems like anxiety and depression (Hagan & Joiner, 2017; Lord, Jacobson, Suvak, & Newman, 2020), but has also been found to be associated with greater recurrence of such mental health problems (Lex, Hautzinger, & Meyer, 2022). In this current study, we focus on one specific source of negative feedback: criticism of one's parenting choices. Specifically, we examined whether receiving such criticism from a spouse/partner or the child's other parent, parents, in-laws, friends, and social media commenters was associated with elevated risk for anxiety, depression, and financial worries in the first few months of the initial COVID-19 lockdown.

1.1. Social cognitive and appraisal theories

This study is grounded in social cognitive theory (Bandura, 1986) and appraisal theories of emotion (Arnold, 1960; Roseman, 2013). To understand the role that criticism of one's parenting choices might have on mental health during COVID-19, we examined one aspect of social cognitive theory: namely, receiving negative feedback or verbal judgment from others. Broadly speaking, social cognitive theory "emphasizes the role of human agency in understanding behavior" (Dahling & Ruppel, 2016, p. 297). Social cognitive theory suggests that transactional processes between an individual and their environment shape a wide variety of outcomes, including individual-level self-efficacy, motivation, and mental health. Further, individuals' self-perceptions and concomitant feelings of self-efficacy are influenced by personal beliefs and prior experiences, and are actively constructed through interactions with others in their environment (Bandura, 1986). One process that shapes self-perception is "verbal persuasion," meaning the feedback or judgment that comes from others (Pajares et al., 2009, p. 287). Verbal judgments can affect how an individual views themself, and can alter their motivation to carry out activities or persist in tasks. Applied to parenting, verbal judgments may shape how an individual perceives themself as a parent, and may affect their motivation in carrying out parenting tasks, for better or for worse.

Appraisal theories, on the other hand, posit that emotions form via specific forms of cognitions: appraisals (Moors, 2017). Appraisals refer to the interpretations and judgments an individual makes in response to their environment, where they determine the relative significance of the environment based on their values, needs, goals, and beliefs (Lazarus, 1991; Vanman & Miller, 1993). Lazarus (1991) states that the significance of the environment is determined based on goal relevance (i.e., determining whether an encounter will have an impact on a goal), goal congruence (i.e., whether an encounter is perceived as harmful or beneficial to a goal), and type of ego involvement (i.e., how an encounter is related to self-identity). For example, anger may develop when goal relevance, goal incongruence, and self-esteem ego involvement is present (Vanman & Miller, 1993). As applied to our study, feedback or judgment from others about one's parenting style may be particularly goal relevant (e.g., in the desire to appropriately attune to or provide for their child), goal incongruent, and involve self- or social-esteem, which could result in heightened feelings of anxiety and depression. Based on this theory, it's also possible that the source of the criticism may affect parents differently, as the person who provides the feedback may be differentially important to the parent. Criticism from a spouse or family members about parenting choices may impact parents' emotions more strongly than a commenter on social media, for example.

1.2. Gender and criticism of parenting choices

In addition to doing more childcare and household chores before and during the pandemic (Shafer, Scheibling, & Milkie, 2020), women do more of the emotional labor in households than do men (Baker, 2019; Bianchi, Sayer, Milkie, & Robinson, 2012; Ciciolla & Luthar, 2019; Elliott, Powell, & Brenton, 2015; Kroska, 2003; Lois, 2006). Emotional labor can be thought of as the unpaid—and often unnoticed—work that goes into keeping everyone in the household comfortable and happy, including one's children and partner or spouse; these activities are often referred to as the "second shift" in a woman's workday (Hochschild, 1989). In the context of motherhood and parenting, emotional labor includes household management, such as organizing routines, making appointments, planning family events and play dates, managing budgets and financial affairs, and supporting the well-being of family members (Ciciolla & Luthar, 2019) beyond general childcare and other chores.

One potential source of emotional labor in a household is managing the emotional reactions and responses of others to one's parenting choices. Parents must make complex decisions about their children's health, education, and development, often with little guidance or conflicting advice from professionals, other parents, relatives, and one's spouse or partner (Ammari, Schoenebeck, & Romero, 2019). Some of these decisions involve financial choices related to parenting, including the types of food to purchase, material items to buy (e.g., diapers and toys), and educational or cognitively stimulating books to supply to children (Kornrich & Furstenberg, 2013). In studies of pre-pandemic parenting, experiencing criticism of parenting decisions was a common experience for both mothers and fathers (C.S. Mott Children's Hospital, 2017; 2019). In a representative study of 475 U.S. mothers of children aged 0–5, 61 % reported being criticized for their parenting choices, such as their use of discipline, diet/nutrition, sleep, and other childcare decisions (C. S. Mott Children's Hospital, 2017). Discipline was the most common topic of criticism, followed by diet/nutrition and sleep for mothers of children aged 0–5. Mothers reported that they were most commonly criticized by their own family members. In another Mott poll (C. S. Mott Children's Hospital, 2019) that consisted of a national sample of 713 fathers of children aged 0–13 years, 52 % reported being criticized for their parenting. Fathers were most commonly criticized by their child's other parent (44 %). Similar to mothers, fathers reported that the most common source of criticism was related to child discipline (67 %) followed by diet/nutrition (43 %).

While criticism is a normal part of life, consistent with social cognitive theory, receiving criticism may undermine an individual's mental health and well-being. In addition, appraisal theory would suggest that receiving criticism about one's parenting may have more adverse mental health effects when parents find that criticism to be relevant to their parenting, harmful to their parenting goals, or related to their parental identity. Among mothers who were criticized, 42 % reported that the criticism made them feel unsure about their parenting choices (C. S. Mott Children's Hospital, 2019). Fathers who reported being criticized for their parenting style felt less confident, and one in five fathers reported that being criticized for their parenting made them want to be less involved as a parent (C. S. Mott Children's Hospital, 2019). These studies suggest that receiving negative "verbal persuasion" (e.g., criticism of parenting choices related to discipline, diet/nutrition, and sleep) may undermine parental self-efficacy and have downstream effects in terms of parents' mental health and motivation to be involved with their children.

Scant empirical literature that examines the consequences of criticism of parenting choices exists. However, a recent qualitative study found that parents may appraise criticism of child-rearing differently–for example, some parents expressed receiving criticism from their spouses in negative ways, and others expressed receiving criticism in positive ways; they reported these differences in appraisal were due to personality differences, differences in opinions on parenting, and differences in the ways their spouses were raised (Shimizu, 2020). Though not focused on criticism of parenting choices specifically, previous studies have shown that spousal criticism is a strong predictor of divorce (Gottman, 1994), depressive episode relapse (Hooley & Teasdale, 1989), and decreased marital relationship quality (Birditt, Brown, Orbuch, & McIlvane, 2010). Further, a recent neuroimaging study suggests that different sources of criticism (e.g., partners, friends, parents) are associated with unique neural responses (Neoh, Azhari, Mulatti, Bornstein, & Esposito, 2020), suggesting that the source of criticism–and relative

importance of that source in a person's life–may influence parents' mental health differently.

1.3. Parenting during COVID-19

In the current study, we examined parental well-being—specifically anxiety, depression, and financial worries—as three outcomes that were particularly relevant during the early and uncertain days of COVID-19, and that may be associated with criticism of one's parenting style. Social cognitive theory would predict that negative verbal judgments in the form of criticism of parental choices and decisions would undermine parental well-being. Appraisal theory would further predict that receiving parenting criticism would be particularly detrimental among individuals who appraise such criticism as relevant to their parenting, harmful to their parenting goals, or tied to their parental identity. Criticism from others about one's parenting choices may exacerbate the overall trends demonstrating declines in mental health and well-being during the COVID-19 pandemic (Rossi et al., 2020; Twenge & Joiner, 2021; Wang et al., 2020). In the early days of the pandemic in the U.S., rates of mental health problems such as anxiety and depression tripled when compared to pre-COVID-19 data (Twenge & Joiner, 2021). Research suggests that social isolation and quarantine efforts amplified the negative effects of the pandemic (Lee et al., 2022; McGinty et al., 2020; Rossi et al., 2020).

In addition to overall decreases in mental health, parents faced additional stressors during the early days of the pandemic (Freisthler et al., 2021; Kerr et al., 2021; Patrick et al., 2020; Rodriguez, Lee, Ward, & Pu, 2021). For example, in March 2020, parents reported a lack of preparation and a lack of support for providing at-home education for their child (Lee et al., 2021). In June 2020, parents reported experiencing challenges with lack of childcare and loss of medical insurance (Patrick et al., 2020), as well as heightened levels of food insecurity and economic worries (Patrick et al., 2020; Rodriguez et al., 2021). One source of emotional labor that many parents reported was worries about their children's mental health and well-being. A report from the American Psychological Association released three months after US stay-at-home orders (APA, 2020b) reported that 71 % of parents were worried about the impact of the pandemic on their child's social development, and 55 % percent of parents reported that their child had been acting out more since the pandemic began. Another study conducted in early 2020 showed that one-third of parents reported that their child's behavior had changed since the pandemic, including acting out more and being worried, anxious, or depressed (Lee et al., 2021). Thus, many parents were not only managing their own economic concerns and elevated levels of anxiety and depression, but also dealing with their children's development and mental health needs.

In this study, we specifically focus on parents of children age 12 and under. Researchers and global organizations have long identified the first five years of life as "formative years" that are crucial to a child's brain development, self-regulation, health, and overall life trajectory (Cao, Huang, & He, 2017; Montroy, Bowles, Skibbe, McClelland, & Morrison, 2016; Thompson, 2001). However, middle childhood, or child ages 6–12, is another important developmental stage where children's cognitive, social, and physical functioning rapidly changes, thus having ripe potential developmental improvements (Ahmed, Ellis, Ward, Chaku, & Davis-Kean, 2022; Mah & Ford-Jones, 2012). Parenting and family functioning are some of the most direct sources of influence of children's functioning during these developmental periods (Bronfenbrenner & Morris, 2006). Therefore, better understanding predictors of parents' mental health during widespread times of stress, such as the COVID-19 pandemic, helps researchers, policymakers, and practitioners learn how to better serve parents' mental health, which can directly impact the outcomes of their children during critical moments of development (Conger & Conger, 2002).

The early days of the COVID-19 pandemic are an important topic of study, as research suggests that pandemic experiences have long-term consequences for children and parents alike. For example, longitudinal research shows that the COVID-19 pandemic and lockdown periods of 2020 resulted in sustained increased levels of child anxiety and depression one year later (Pustake et al., 2022). Additionally, researchers have shown that early pandemic school and home disruptions were associated with poorer child and adolescent management of schoolwork load, lower test scores, and increased social isolation and behavioral issues in the long term (i.e., one year after the onset of the pandemic) (Morse et al., 2022). Similarly, among a sample of adults, researchers found long-term increased depression and social isolation, and decreased life satisfaction, one year after spring 2020 (Benke, Autenrieth, Asselmann & Pané-Farré, 2023).

Particularly in the early days of the pandemic, much of this strain was occurring in the context of high levels of social isolation and lack of social support. Social distancing mandates and concerns about the spread of the coronavirus made direct social contact with loved ones difficult, if not altogether impossible. Professionals that parents might typically go to in order to seek parenting advice, such as doctors and nurses, were largely unavailable in the early days of lockdown. Beyond the U.S. Government's social distancing and mask guidelines, there was limited evidence-based guidance available to parents on how to manage their children's health, safety, and education. Indeed, in the early months of the pandemic, there were reports of exacerbated parental mental health concerns and parenting stress (Lee, Ward, Lee, & Rodriguez, 2022; Lee et al., 2022; McGinty et al., 2020), domestic violence (Leigh, Peña, Anurudran, & Pai, 2023), and children's mental health problems (Browne, Wade, May, Jenkins, & Prime, 2021), reflecting how stressful and uncertain this time period was for many.

1.4. The current study

This current study examined criticism of parenting during the COVID-19 pandemic and associations with parental mental health outcomes using a convenience sample of parents who participated in a multi-wave online survey in April 2020 – a time that was particularly uncertain and stressful for parents and children. Our research questions were as follows: 1) Did a higher prevalence of mothers vs. fathers report receiving criticism of their parenting choices during the early days of COVID-19? 2) Was receiving criticism of parenting choices during the early days of COVID-19 associated with parental mental health outcomes? 3) Does parent gender moderate the effect of receiving criticism about parenting choices and mental health outcomes during the early days of COVID-19? 4) When provided with an open-ended question, what themes of parental criticism did parents report during the early days of COVID-19? Based on prior research, we hypothesized that mothers would report receiving more criticism of their parenting choices than would fathers. Second, we hypothesized that receiving criticism would be associated with poorer mental health outcomes even net of important other stressors during COVID-19, such as employment changes and social distancing requirements. Third, we hypothesized a significant interaction between sex and receiving criticism, whereby the relationship between receiving criticism and poorer mental health outcomes would be stronger for mothers than fathers. In addition to analyses to test these hypotheses, we examined parents' open-ended responses to a question that assessed their most common sources of parenting criticism as well as the most common reasons that parents experienced criticism of parenting, thus providing helpful context for the most common sources of parental criticism and topics of criticism that parents experienced in the early days of the COVID-19 pandemic.

2. Methods

2.1. Participants and procedure

Participants were recruited from Prolific, an online survey research company (Palan & Schitter, 2018). Prolific has a proprietary and verified

participant pool that is used for recruiting. To be eligible to participate, participants had to be age 18 or older and living in the United States. Participants who met eligibility criteria were sent an email from Prolific inviting them to participate in the study. If eligible individuals chose to participate in the survey, they were linked through the Prolific platform to a Qualtrics survey designed and managed by the research team. Prolific organized participant compensation, allowing responses to remain anonymous, and the survey automatically closed when a predetermined sample size was reached. We do not have information regarding individuals who received an email but decided not to participate; we also do not have information about individuals who met eligibility criteria and wished to participate after the study was closed. Once participants agreed to participate, they responded to an online survey designed in Qualtrics, managed by the research team, and distributed via Prolific, which kept survey responses de-identified. To monitor data quality, three attention checks were embedded in the survey; none of the participants failed more than one. The analyses of these de-identified data were deemed exempt from IRB oversight.

Participants provided informed consent to complete the survey and received $6 in payment upon completion. The first wave of the survey (T1) was distributed on April 14, 2020, about one month after the White House administered social distancing guidelines to slow the COVID-19 spread. The second wave (T2) was distributed approximately two weeks later, on April 30, 2020. A total of 654 participants responded to the T1 survey, and 619 responded to the T2 survey. On average, participants took approximately 40 min to complete the survey at both time points (*SD* = approximately 30 min). The analytic sample for the current study was restricted to individuals who were parents of children age 12 or younger and responded at both time points ($N = 359$).

2.2. Measures

2.2.1. Criticism of parenting

This question was adapted from the C.S. Mott Children's Hospital National Poll on Children's Health (2017). At both time points, parents were asked, "In the past 2 weeks, during the Coronavirus/COVID-19 global health crisis, have you been criticized about your parenting choices by…" and were given the following eight options: Your spouse/partner or child's other parent; your mother or father; your in-laws; friends; health care provider; babysitter/daycare or childcare provider/teacher; commenters on social media; other parents. For each option, parents could respond "No," "Yes," or "Not Applicable." Parents who chose "Not Applicable" were coded as missing for that particular item. Parents who endorsed any of the eight forms of criticism were coded as one, and parents who said "No" to the eight forms of criticism were coded as zero (0 = *received no form of criticism*, 1 = *received criticism*). Parents were also asked the following open-ended question: "If applicable, please describe the criticism that you received about your parenting choices in the past 2 weeks, during the Coronavirus/COVID-19 global health crisis."

2.2.2. Anxiety

At both time points, the Generalized Anxiety Disorder, 7-item (GAD-7) scale was used to measure anxiety symptoms (Spitzer, Kroenke, Williams, & Lowe, 2006). The GAD-7 is a validated scale that can be administered as a diagnostic tool to obtain estimates of generalized anxiety in the general population. Participants were asked, "Over the last 2 weeks, how often have you been bothered by any of the following problems?" Sample items include, "Trouble relaxing," "Worrying too much about different things," and "Feeling nervous, anxious, or on edge" (0 = *not at all*, 1 = *several days*, 2 = *more than half the days*, 3 = *nearly every day*). Summing the seven items results in a score ranging from 0–21. A score of 9 or under indicates probable minimal or mild anxiety, and a score of 10 or greater indicates probable moderate to severe anxiety. A dichotomous variable was created that indicated whether a participant met GAD-7 criteria for probable moderate to severe anxiety (0 = *minimal or mild anxiety*, 1 = *moderate or severe anxiety*). The scale reliability was good at T1 ($\alpha = 0.93$) and T2 ($\alpha = 0.93$).

2.2.3. Depression

At both time points, the Patient Health Questionnaire 8-item (PHQ-8) scale, was used to measure depressive symptoms (Kroenke et al., 2009). The PHQ-8 is a validated scale that can be administered as a diagnostic tool to obtain estimates of major depression disorder in the general population. Participants were asked, "Over the last 2 weeks, how often have you been bothered by any of the following problems?" Sample items include "Little interest or pleasure in doing things," "Feeling down, depressed, or hopeless," and "Feeling tired or having little energy" (0 = *not at all*, 1 = *several days*, 2 = *more than half the days*, 3 = *nearly every day*). Summing the eight items results in a score range of 0–24. A score of 9 or under indicates a participant is not depressed, while a score of 10 or greater indicates a participant has probable major depression. A dichotomous variable was created that indicated whether a participant met PHQ-8 criteria for probable major depression (0 = *not depressed*, 1 = *probable major depression*). The scale reliability was good at T1 ($\alpha = 0.91$) and T2 ($\alpha = 0.91$).

2.2.4. Financial worries

At both time points, the Worry Domains Questionnaire (WDQ) 5-item financial subscale was used to measure financial worries (Tallis et al., 1994). The items were prefaced with, "The following statements refer to how you have felt in the last 2 weeks during the Coronavirus/COVID-19 global health crisis." Sample items include "I worry that money will run out," "I worry that I can't afford to pay bills," and "I worry that I am not able to afford things." The scale reliability was good at T1 ($\alpha = 0.91$) and T2 ($\alpha = 0.90$).

2.2.5. Sociodemographic controls

Control variables, measured at T1, included the number of days participants had spent social distancing; the number of days participants had spent in lockdown; whether the participant had experienced an employment status change (e.g., laid off, furloughed, etc.) due to the COVID-19 pandemic (0 = *no*, 1 = *yes*); participant age in years; participant sex (0 = *male*, 1 = *female*); household income in the past year before taxes (1 = *$10–20k*, 2 = *$20–30k*, 3 = *$30–40k*, 4 = *$40–50k*, 5 = *$50–70k*, 6 = *$70–90k*, 7 = *$90k or more*); whether the participant was cohabitating with a spouse or romantic partner (0 = *not cohabitating*, 1 = *cohabitating*); participant educational attainment (1 = *high school graduate or less* [comparison], 2 = *some college*, 3 = *Bachelor's degree or higher*); and participant race (1 = *White* [comparison], 2 = *Black*, 3 = *Hispanic*, 4 = *Other*).

2.3. Analytic plan

Data were cleaned in Stata version 15.1 and analyzed in Mplus version 8 (Muthén & Muthén, 1998–2017). Analyses with dichotomous dependent variables—anxiety and depression—were conducted using logistic regression with Maximum Likelihood estimation and Monte Carlo integration (1000 iterations), which produced odds ratio (OR) coefficients. An OR of one suggests there is no association between a predictor and the odds of an outcome occurring; an OR greater than one indicates increased odds of an outcome occurring; an OR less than one indicates decreased odds of an outcome occurring. Analyses with continuous dependent variables (i.e., financial worries) were conducted using linear regression with Maximum Likelihood estimation. Variables involved in the interaction coefficients (i.e., sex and criticism) were centered so that the main effects and interaction effects could be interpreted in one model. For all analyses, we examined 95 % confidence intervals to determine whether coefficients were statistically significant. All analyses accounted for our sociodemographic control variables. The first set of analyses involved criticism of parenting at T1, predicting the

dependent variables—anxiety, depression, and financial worries—at T2. We then introduced the interaction coefficient (sex by criticism) into the model. As a robustness check, we re-ran the models and controlled for the dependent variables at T1.

Missing data on our sociodemographic controls and dependent variables were extremely few (< 3 %). Because participants who chose "not applicable" for the criticism variable were coded as missing, criticism of parenting had 21 % missing data. We conducted a missing data analysis, examining whether our sociodemographic controls predicted missingness on the criticism variable. Results of the missing data analysis showed that no sociodemographic controls were related to whether participants had missingness on the criticism variable, suggesting there was not a systematic pattern of missingness on the criticism variable based on the variables included in our data. Therefore, data were handled in Mplus using full-information maximum likelihood estimation (FIML).

Content coding of qualitative responses was conducted by two of the study's co-authors. Of the 359 participants, 87 (24.23 %) described a criticism in the open-ended question at T1, and 73 (20.33 %) described a criticism at T2. The rest of the responses were either missing (T1: 42.34 %, T2: 43.18 %) or responded "Not Applicable" (T1: 33.33 %, T2: 36.49 %). The coders independently read the open-ended responses to identify major themes. Then, the research team (including all authors of this study) mutually agreed upon themes and developed a codebook for participants' responses. Criticism themes in the codebook included: food-related or housework, general parenting, too-strict parenting, too-lenient parenting, too-strict about COVID-19, too-lenient about COVID-19, homeschooling, and technology. The two coders independently coded participants' responses using the codebook developed by the research team. Coders applied all themes that applied to criticism shared by the parent. To establish inter-rater reliability, 20 responses were selected, and the coders were consistent in 18/20 of those responses, indicating a coder inter-rater reliability of 90 %.

3. Results

3.1. Descriptive statistics

Tables 1 and 2 show descriptive statistics and correlations for study variables respectively. On average, participants were 34 years old (SD = 7.11) and had an average household income between $40K–$50K. The majority of participants were female (67.51 %) and were cohabitating with a partner (79.33 %). Nearly one in four participants had experienced an employment status change due to COVID-19 (23.40 %). Approximately 39.27 % and 32.10 % of participants met criteria for moderate or severe anxiety at T1 and T2, respectively. Similarly, approximately 38.11 % and 36.03 % of participants met criteria for major depression at T1 and T2, respectively. At T1, women were more likely to be anxious ($\chi^2[1] = 22.62, p < .001$), depressed ($\chi^2[1] = 9.45, p = .002$), and had greater financial worries (t[355] = -4.38, $p < .001$). At T2, women were still more likely to be anxious ($\chi^2[1] = 8.46, p = .004$), depressed ($\chi^2[1] = 14.91, p < .001$), and had greater financial worries (t[355] = -3.17, $p = .002$).

At Time 1, 37.59 % of participants (mothers: 42.16 %; fathers: 28.42 %) reported that they received criticism of their parenting choices. Mothers were more likely to receive criticism than fathers at Time 1 ($\chi^2[1] = 5.06$, $p = .025$). At Time 2, 31.94 % of participants (mothers: 34.21 %; fathers: 27.08 %) reported that they received criticism of their parenting choices. At Time 2, mothers were not statistically significantly more likely than fathers to receive criticism ($\chi^2[1] = 1.49, p = .222$). Table 3 shows percentage and mean changes from T1 to T2 on repeated measures. Mothers (but not fathers) experienced a statistically significant decrease in anxiety (mothers: McNemer $\chi^2[1] = 15.24$, $p < .001$; fathers: McNemer $\chi^2(1) = 0.11$, $p = .739$) from T1 to T2; both mothers (paired t[240] = 7.11, $p < .001$) and fathers (paired t[115] = 2.14, $p = .035$) reported a statistically significant decrease in financial worries from T1 to T2.

Table 4 shows the sources of criticism among criticized mothers and fathers. The most frequent source of criticism was their spouse/partner or child's other parent, followed by mother or father, and then in-laws. Among both mothers and fathers who were criticized at least once at Time 1 (not shown in table), 69.01 % reported one source of parenting

Table 1
Descriptive statistics of study variables by sex (N = 359).

	Total sample		Fathers (n = 116)		Mothers (n = 241)		t/χ^2(df)	p-value
	M/N	SD/%	M/N	SD/%	M/N	SD/%		
Time 1 Variables								
Anxiety *(N, %)*	139	39.27	25	21.55	113	47.88	22.62(1)	<0.001
Depression *(N, %)*	133	38.11	30	26.32	101	43.35	9.45(1)	.002
Financial Worries *(M, SD)*	1.67	1.26	1.26	1.13	1.86	1.27	-4.38(355)	<0.001
Received Criticism *(N, %)*	106	37.59	27	28.42	78	42.16	5.06(1)	.025
SD Days *(M, SD)*	26.12	10.53	24.25	8.38	26.98	11.36	-2.31(355)	.022
Lockdown Days *(M, SD)*	19.74	10.71	18.45	10.13	20.26	10.95	-1.48(348)	.140
Employment Change *(N, %)*	84	23.40	25	21.55	59	24.48	0.37(1)	.541
Age *(M, SD)*	34.44	7.11	35.85	6.88	33.79	7.15	2.58(355)	.010
Income *(M, SD)*	3.88	2.09	4.87	1.89	3.41	2.02	6.51(353)	<0.001
Cohabitating *(N, %)*	284	79.33	102	87.93	180	75.00	7.94(1)	.005
High School or Less *(N, %)*	48	13.37	8	6.90	40	16.60	6.33(1)	.012
Some College *(N, %)*	151	42.06	26	22.41	125	51.87	27.83(1)	<0.001
Bachelor's Degree *(N, %)*	160	44.57	82	70.69	76	31.54	48.66(1)	<0.001
White *(N, %)*	249	69.55	83	71.55	165	68.75	0.29(1)	.590
Black *(N, %)*	43	12.01	8	6.90	34	14.17	3.97(1)	.046
Hispanic *(N, %)*	37	10.34	17	14.66	20	8.33	3.56(1)	.067
Other *(N, %)*	29	8.10	8	6.90	21	8.75	.359(1)	.549
Time 2 Variables								
Anxiety *(N, %)*	113	32.10	24	21.41	88	36.97	8.46(1)	.004
Depression *(N, %)*	129	36.03	25	21.74	103	42.74	14.91(1)	<0.001
Financial Worries *(M, SD*	1.38	1.16	1.10	1.15	1.51	1.15	-3.17(355)	.002
Received Criticism *(N, %)*	92	31.94	26	27.08	65	34.21	1.49(1)	.222

Note: SD = social distancing. T1 = time 1 (April 14, 2020); T2 = time 2 (April 30, 2020). Income categories (1 = *$10–20k*, 2 = *$20–30k*, 3 = *$30–40k*, 4 = *$40–50k*, 5 = *$50–70k*, 6 = *$70–90k*, 7 = *$90k or more*).

Table 2
Pearson correlation table of key study variables ($N = 359$).

	Anxiety, T1	Anxiety, T2	Depression, T1	Depression, T2	Financial Worries, T1	Financial Worries, T2	Criticism, T1
Anxiety, T1	1						
Anxiety, T2	0.70	1					
Depression, T1	0.63	0.58	1				
Depression, T2	0.56	0.66	0.72	1			
Financial Worries, T1	0.47	0.45	0.45	0.42	1		
Financial Worries, T2	0.46	0.52	0.47	0.48	0.80	1	
Criticism, T1	0.25	0.33	0.28	0.32	0.28	0.29	1
Criticism, T2	0.18	0.29	0.26	0.32	0.20	0.29	0.57

Note: All coefficients are $p < .01$. T1 = Time 1, T2 = Time 2.

Table 3
Bivariate statistics of repeated study variables ($N = 359$).

	Percentage / Mean Change from T1 to T2	McNemar χ^2 / Paired t value	p-value
Overall Sample			
Anxiety, %	-7.17	13.52(1)	< 0.001
Depression, %	-2.08	4.09(1)	.043
Financial Worries, *M*	-0.29	7.00(358)	< 0.001
Received Criticism, %	-5.65	2.47(1)	.116
Mothers			
Anxiety, %	-10.91	15.24(1)	< 0.001
Depression, %	-0.61	0.03(1)	.862
Financial Worries, *M*	-0.35	7.11(240)	< 0.001
Received Criticism, %	-7.95	1.48(1)	.223
Fathers			
Anxiety, %	-0.14	0.11(1)	.739
Depression, %	-4.58	2.27(1)	.132
Financial Worries, *M*	-0.16	2.14(115)	.035
Received Criticism, %	-1.34	1.00(1)	.317

Note: degrees of freedom shown in parentheses.

Table 4
Sources of criticism of parenting among criticized parents.

	N	%
Time 1 ($N = 106$)		
Spouse/other parent	69	67.65
Mother or father	32	30.77
In-laws	21	23.60
Commenters on social media	17	19.54
Other parents	16	16.84
Friends	11	10.89
Health care provider	4	4.04
Babysitter/daycare or childcare provider/teacher	1	1.18
Time 2 ($N = 92$)		
Spouse/other parent	65	73.86
Mother or father	29	33.33
In-laws	19	25.00
Friends	8	10.53
Commenters on social media	10	14.08
Other parents	8	2.48
Health care provider	3	3.33
Babysitter/daycare or childcare provider/teacher	0	0.00

Note: Percentages do not add to 100 because parents could select more than one form of criticism.

criticism; 19.72 % reported two sources of parenting criticism; 11.27 % reported three or more sources of criticism. Among both mothers and fathers who were criticized at least once at Time 2, 61.82 % reported one source of parenting criticism; 25.45 % reported two sources of parenting criticism; 12.73 % reported three or more sources of criticism. There was no gender difference in the number of sources of criticism for mothers and fathers at T1 (t[68] = -1.31, $p = .193$) or T2 (t[53] = 0.14, $p = .891$).

3.2. Regression results

Multivariate regression results can be found in Table 5. Receiving criticism of parenting at T1 was associated with a 379 % increase in the odds of meeting GAD-7 criteria for moderate or severe anxiety at T2 (OR = 4.79, 95 % CI [2.62, 8.73]). Similarly, receiving criticism of parenting at T1 was associated with a 341 % increase in the odds of meeting PHQ-8 criteria for major depression at T2 (OR = 4.41, 95 % CI [2.44, 7.96]). Finally, receiving criticism of parenting at T1 was associated with a 0.23 standard deviation increase in financial worries at T2 ($\beta = 0.23$, 95 % CI [0.13, 0.33]). Interaction effects suggested that the relationship between receiving criticism and meeting GAD-7 criteria for moderate or severe anxiety was stronger for men than for women (OR = 0.15, 95 % CI [0.04, 0.61]). However, interaction effects were non-significant when predicting PHQ-8 criteria for major depression (OR = 0.29, 95 % CI

Table 5
Multivariate regression results of receiving criticism of parenting predicting anxiety, depression, and financial worries ($N = 359$).

Variable	Moderate to severe anxiety		Major depression		Financial worries	
	OR	95 % CI	OR	95 % CI	ß	95 % CI
Received Criticism	**4.79**	[2.62, 8.73]	**4.41**	[2.44, 7.96]	**.23**	[.13, 0.33]
Female	1.87	[0.94, 3.74]	1.69	[0.89, 3.22]	-0.01	[-0.11, 0.09]
Criticism x Female	**0.15**	[0.04, 0.61]	0.29	[0.08, 1.11]	-0.08	[-0.18, 0.03]
SD Days	1.01	[0.98, 1.04]	0.99	[0.97, 1.02]	.05	[-0.05, 0.15]
Lockdown Days	1.02	[1.00, 1.05]	1.02	[0.99, 1.05]	.06	[-0.04, 0.16]
Employment Change	1.16	[0.63, 2.13]	0.76	[0.42, 1.38]	**.13**	[.04, 0.22]
Age	0.96	[0.93, 1.00]	0.99	[0.95, 1.02]	.04	[-0.06, 0.13]
Income	0.91	[0.78, 1.06]	**0.83**	[0.71, 0.97]	**-0.35**	[-0.46, -0.23]
Cohabitating	0.90	[0.46, 1.75]	0.56	[0.30, 1.07]	-0.02	[-0.11, 0.08]
Some College	0.50	[0.23, 1.09]	0.67	[0.32, 1.42]	-0.10	[-0.24, 0.04]
Bachelor's Degree	0.58	[0.24, 1.20]	0.46	[0.20, 1.08]	-0.10	[-0.26, 0.05]
Black	0.54	[0.23, 1.31]	0.61	[0.27, 1.39]	-0.07	[-0.16, 0.03]
Hispanic	1.27	[0.53, 3.00]	0.94	[0.40, 2.25]	-0.09	[-0.18, 0.01]
Other	**0.36**	[0.13, 1.03]	0.71	[0.28, 1.80]	-0.02	[-0.11, 0.08]

Note: SD = social distancing. Comparison category for educational attainment is "high school degree or less." Comparison category for race is "White.".

[0.08, 1.11]) or financial worries (β = -0.08, 95 %CI [-0.18, 0.03]).

3.2.1. Robustness checks

All main effects were robust to the inclusion of our dependent variables being controlled for at T1, although the strength of the associations decreased for the depression and financial worries models. Specifically, receiving parenting criticism at T1 was associated with a 365 % increase in the odds of meeting GAD-7 criteria for moderate or severe anxiety at T2, even after controlling for anxiety status at T1 (OR = 4.65, 95 % CI [2.05, 10.52]). Receiving parental criticism at T1 was associated with a 246 % increase in the odds of meeting PHQ-8 criteria for major depression at T2, even after controlling for depression status at T1 (OR = 3.46, 95 % CI [1.52, 7.89]). Lastly, receiving criticism of parenting at T1 was associated with a 0.08 standard deviation increase in financial worries at T2, even after controlling for financial worries at T1 (β = 0.08, 95 % CI [.01, 0.15]). The interaction effect predicting anxiety was not robust to the inclusion of controlling for anxiety at T1 (OR = 0.25, 95 % CI [0.04, 1.65], and the interaction effect predicting depression remained non-significant when controlling for depression at T1 (OR = 0.44, 95 % CI [0.07, 2.71]). However, the interaction effect predicting financial worries became statistically significant once financial worries at T1 was included—suggesting the relationship between receiving criticism and financial worries was stronger for men than for women (β = -0.09, 95 % CI [-0.16, -0.02]).

3.2.2. Post-Hoc analyses

We also ran post-hoc analyses to determine whether the *sources* of criticism had a statistically significant association with our outcomes of interest. For this analysis, we created five dummy variables: "no criticism" (participants answered "no" to all forms of criticism, $n = 176$), "Spouse criticism" (participants answered "yes" to receiving criticism from their spouse, $n = 69$), "Family criticism" (participants answered "yes" to receiving criticism from their own parents or in-laws, $n = 48$), "Media criticism" (participants answered "yes" to receiving criticism on social media, $n = 17$), "Criticism from other parents" (participants answered "yes" to receiving criticism from other parents, $n = 16$), and "Friend criticism" (participants answered "yes" to receiving criticism from friends, $n = 11$).

Compared to receiving no criticism, criticism from a spouse was associated with higher odds of meeting GAD-7 criteria for moderate or severe anxiety (OR = 3.83, 95 % CI [2.01, 7.30]), higher odds of meeting PHQ-8 criteria for major depression (OR = 3.42, 95 % CI [1.80, 6.48]), and higher financial worries (β = 0.18, 95 % CI [0.08, 0.8]) at T2. Further, receiving criticism from a spouse was associated with higher financial worries when compared to receiving criticism from family (β = 0.17, 95 % CI [0.03, 0.32]), friends (β = 0.20, 95 % CI [0.05, 0.35]), social media (β = 0.19, 95 % CI [0.11, 0.97]), and other parents (β = 0.20, 95 % CI [0.05, 0.35]).

3.3. Qualitative results

The most common topic of criticism was *too lenient parenting*, with 20.63 % of participants indicating that someone had criticized them for being too lenient in their parenting style (e.g., not disciplining their children enough). The next most common topic of criticism was *too strict COVID-19 practices*, with 18.13 % of participants indicating that they had been criticized by others for following COVID-19 guidelines too stringently (e.g., not allowing children to visit their friends). However, other participants (8.75 %) were criticized for being *too lenient with COVID-19 guidelines* (e.g., allowing children to be in public spaces). Many participants (15.63 %) discussed receiving *criticisms about their parenting in general*, which could not be categorized as either too strict or too lenient (e.g., disagreements in parenting styles). Some participants (6.25 %) were criticized about *how they were managing homeschooling their children*; these criticisms were typically related to the quality or quantity of the in-home schooling provided. Other participants (6.88 %) received criticisms associated with *feeding their children* (e.g., not feeding them enough of a particular food group) or *housework* (e.g., not cleaning the home often enough). Some participants (5.63 %) received criticism related to their *children's technology use*, with most participants being criticized for allowing their children too much access to technology. Finally, 5.00 % of participants had responses that were categorized as *miscellaneous*, as they did not seem to fall into any particular category (e.g., "being too selfish," "vague and generalized criticisms," "just general bickering"). Results from content codingcan be found in Table 6.

Many participants provided responses that illuminated a no-win situation for parents. For example, one mother reported being criticized for being too strict with COVID-19 guidelines but too lenient with her parenting: *"I was criticized for being too over-protective of my 1.5-year-old from the COVID-19. I was also told that I am too easy on my son and he is going to be spoiled."* Another mother described being criticized for not balancing homeschooling and cleaning: *"I was told I'm not cleaning well enough since I'm trying to do school, but if I clean, then I'm neglecting my children's schoolwork."* Additionally, a father described receiving criticism for being both too strict and too lenient with COVID-19 guidelines: "*My wife wants me to give less info and be more optimistic on giving my children an idea when COVID-19 will be over. [I was also criticized for] allowing my daughter and son to walk the neighborhood."* Another father shared a similar paradox about COVID-19 guidelines: *"I was criticized about being outside for a walk with the baby. [I also received] criticism from my parents for staying in NYC (they live in Georgia and invited us to come down there)."* Some parents specifically discussed criticism they received

Table 6
Analysis of open-ended question: Criticism received about parenting choices in the past 2 weeks, during COVID-19 ($n = 160$).

Type of criticism	Frequency	Examples
Too-Lenient Parenting	20.63 %	"My significant other blames all of [the kids'] acting out on me; [telling me] they need more discipline." "My mom criticizes me for the independence I allow my daughter to have."
Too-Strict COVID-19	18.13 %	"I was told by local religious groups that this is a conspiracy and that I am damaging my child by practicing lockdown and not sending them out to play with other children and families." "My in-laws believe I am too paranoid about my child getting sick."
General Parenting	15.63 %	"Disagreements over rearing practices with spouse" "Someone shaded me about my son's bedtime and how it's not good for him."
Too-Lenient COVID-19	8.75 %	"Not showering immediately when coming home; allowing children in a gas station once to use the bathroom." "Taking my baby to the store."
Food-related or Housework	6.88 %	"[I was told] that feeding [child] more meat options would calm him down." "My spouse has told me [my children] eat out of boredom instead of hunger and I just let them."
Homeschooling	6.25 %	"They said I should spend more time teaching them things about school." "Criticized for letting my oldest wait until later in the night to do homework instead of during the day."
Too-Strict Parenting	5.63 %	"My wife tells me I am too strict and expect the children to act like soldiers." "My mom says I am too short and impatient with the kids."
Technology	5.00 %	"That I should restrict access to social media and YouTube and monitor their usage on the video games." "That I have been letting my son have too much screen time in the afternoon."

Note: n reflects the number of participants who responded to the open-ended question. Participants who answered "not applicable" or did not respond are not included in frequency calculations.

from social media commenters; one father shared, *"The few times I have opened up about parenthood on social media, I have had others tell me what I'm doing wrong,"* and a mother stated, *"I was attacked on social media for talking about my in-laws not keeping with social distancing guidelines."*

4. Discussion

The COVID-19 pandemic has impacted the physical and mental health of individuals throughout the world (Twenge & Joiner, 2021; Wang et al., 2020), and has introduced unique stressors to the lives of parents (APA, 2020a; Freisthler et al., 2021; Kerr et al., 2021; Lee et al., 2021; Lee et al., 2022; O'Reilly, 2021; Patrick et al., 2020). In the early days of the pandemic, parents were left with little evidence-based guidance on how to best protect and stimulate their children while adhering to social distancing and shelter-in-place guidelines. Many parents navigated these uncertainties in the face of economic strain and heightened mental health distress (Patrick et al., 2020; Rodriguez et al., 2021). Social cognitive theory suggests that one salient predictor of mental health is verbal judgments, or the feedback received from others (Pajares et al., 2009); appraisal theory suggests that receiving negative feedback from others that is goal relevant, goal incongruent, and involves social- and self-esteem, which then can lead to negative emotions and eventually, negative mental health outcomes (Moors, 2017). While there are clear benefits to receiving positive feedback, receiving negative feedback can undermine individuals' performance and well-being (Park & Crocker, 2008). The results of this current study suggest that those to whom parents were closest—such as one's spouse or partner, parents, or in-laws—were perceived by many to be the most common source of negative feedback early on in the pandemic.

Furthermore, our findings indicate that, in the early days of the pandemic, mothers' parenting decisions were surveilled more critically than the fathers. Compared to fathers, a larger percentage of mothers reported receiving criticism of their parenting in the last two weeks. Specifically, at T1, about 42 % of mothers reported receiving at least one form of criticism of their parenting, while only 28 % of fathers reported receiving such criticism. While these discrepancies were not statistically significant at T2 (i.e., two weeks later), approximately 34 % of mothers reported receiving at least one form of criticism of their parenting, while only 27 % of fathers reported such criticism. This is consistent with prior research (C.S. Mott Children's Hospital, 2017; 2019) that demonstrated mothers were likelier than fathers to report being criticized for their parenting choices. However, it is also possible that, as fathers spent more time at home, mothers became subject to less criticism, given fathers' potential higher levels of involvement in parenting activities (Lee et al., 2021).

Furthermore, research suggests mothers use social media such as Facebook more often than fathers (Bartholomew, Schoppe-Sullivan, Glassman, Kamp Dush, & Sullivan, 2012) and that parents increased their social media use during COVID-19 (Drouin, McDaniel, Pater, & Toscos, 2020). Thus, mothers' greater role in caregiving of young children (Shafer et al., 2020) and mothers' more frequent use of social media (Bartholomew et al., 2012) may contribute to them receiving more criticism of their parenting choices. Some researchers note that mothers on social media can sometimes engage in "mommy wars," where mothers criticize one another's parenting in a competition to be the best mother (Abetz & Moore, 2018; Milkie, Pepin, & Denny, 2016). Receiving criticism may be yet another form of emotional labor that mothers have had to endure more so than fathers, even during the challenging time of a global health crisis.

Multivariate analyses suggested that receiving parental criticism was associated with a greater risk of meeting criteria for anxiety and depression and having more financial worries. Even after controlling for initial rates of anxiety, depression, and financial worries, receiving criticism was associated with increased mental health problems over a two-week period. These results align with social cognitive theory in that receiving negative feedback appeared to take a mental toll on parents. While the providers of such negative feedback and criticism may have had good intentions, our findings suggest such criticism may do more harm than good.

Although more mothers reported receiving criticism than fathers, our multivariate analyses indicate that receiving criticism may have a greater impact on fathers' mental health and well-being. Specifically, contrary to our hypothesis, the relationship between receiving criticism and anxiety and financial worries was *stronger* for fathers than mothers. Again, this is notable because fathers received significantly less criticism of their parenting choices than mothers. There are some possible explanations for this finding. Because mothers tend to receive criticism about their parenting choices more often than fathers (C.S. Mott Children's Hospital, 2017; 2019), it is possible that for mothers, the effects of such criticism may dampen over time. Similarly, because fathers tend to experience better mental health compared to mothers (Lee et al., 2022), fathers may have had more room to "drop" (i.e., regression to the mean), which could have influenced our findings. Additionally, because fathers have historically been less involved in child-rearing (McBride & Mills, 1993), they may not have had as many opportunities to receive criticism about their parenting choices and are therefore not accustomed to being criticized about their parenting style. Along a similar vein, the nature of the pandemic—which involved stay-at-home orders, lockdowns, and work-from-home scenarios—may have pushed fathers into greater caretaking roles (Shafer et al., 2020), opening them up to new sources of criticism.

To illustrate the paradoxes of parenting during this challenging time, respondents reported being criticized for both being too lenient and being too strict. While 20.63 % of parents were criticized for being too lenient, the next most common topic of criticism was being too strict, specifically about COVID-19 practices, with 18.13 % of participants indicating that they had been criticized by others for following COVID-19 guidelines too stringently. This pattern of findings may be especially problematic given that there were very few evidence-based guidelines for parents to follow, and professionals who are commonly called upon to provide parenting guidance were unavailable in the early days of the pandemic. It is possible that the "no-win" situation of parenting during this period, in which parents were criticized for being too lenient and too strict by family members and on social media, are factors that contribute to eroding mental health.

Our post-hoc analyses revealed that, compared to other sources of criticism, receiving criticism about parenting choices from a spouse was particularly detrimental to parental mental health early on in the COVID-19 pandemic. From a social cognitive perspective (Bandura, 1986), it is possible that spousal criticism holds more salience due to the sheer volume of verbal feedback that can come from a spouse (due to proximity and/or time spent together, for example), and due to the effect that spousal verbal feedback may have on self-perceptions or motivation to carry out parenting tasks. Consistent with appraisal theories, the salience of the spousal relationship itself–where two people have made a long-term commitment to one another–may mean that spousal criticism could be taken more seriously, or impact a person more emotionally, than relationships with looser ties, such as a social media commenter (Neoh et al., 2020). Also aligning with appraisal theories, the importance or closeness of the person providing the feedback may cause the parent to appraise this information as more goal-incongruent, which then leads to poorer mental health (Moors, 2017). Paralleling our results, and demonstrating how impactful criticism from one's spouse can be, a recent study found that criticism from one's spouse was associated with higher mortality risk, even after controlling for a host of sociodemographic controls (Bookwala & Gaugler, 2020). Our findings suggest that spousal criticism may play an important role in predicting parental mental health outcomes during stressful life events such as the COVID-19 pandemic.

4.1. Implications for parents, families, and practitioners

With the continuation of the pandemic well past the two-year mark, there are now many evidence-based educational resources for parents. Organizations like the American Academy of Pediatrics (healthychildren.org) and the American Psychological Association (apa.org/topics/covid-19) provide robust guidance to parents regarding the protection of their children's health, safety, and well-being. Healthcare providers and other professionals can use these existing resources to counsel parents directly or remotely as the conditions of the pandemic continue. Parents and caregivers have greater access to professionals now than was initially available early during the lockdown. Moving forward, educational campaigns that provide positive and reinforcing messages can help to ease parents' anxiety, distress, and responses to judgments and negative feedback. Our findings also speak to the potential need for implementation of universally accessible parenting education programs. Particularly during difficult times during COVID-19, but also during non-pandemic times, parents need support. Providing universally accessible programs that teach parenting skills (which are not innate) could potentially help parents and children adjust during times of crisis. Indeed, in England, implementing a universal parenting education program for all children aged 0–6 years increased both parenting efficacy and parent mental well-being (Lindsay & Totsika, 2017).

Another potential implication is the negative impact of social media. While family members were the most common source of parental criticism, nearly one in five (19.54 %) criticized respondents reported receiving criticism of parenting from commenters on social media. Both mothers and fathers use social media frequently in relation to parenting (Ammari, Schoenebeck, & Morris, 2014; Bartholomew et al., 2012). Criticism of parenting from social media is not unique to the pandemic (Ammari et al., 2014). While social media may be one way of staying connected to others during social distancing and homeschooling, there may be downsides to sharing parenting experiences on social networks. A practical implication is that decreasing social media use, especially to share experiences related to parenting during a stressful time, may help parents to reduce their anxiety, depression, and worries. Alternatively, finding social media sites or blogs where parents can count on receiving positive feedback and support may ease mental health challenges (Boyd, Price, Mogul, Yates, & Guevara, 2019).

4.2. Study limitations

The current study was limited to the use of an online survey, which was appropriate given the timing of the survey was early in the pandemic, in April 2020, at the peak of the coronavirus outbreak with social distancing and lockdown restrictions. Although parents responded anonymously via the Prolific survey website, this study is limited to the use of self-reported data. The results of this study may not be generalizable. Respondents included both mothers and fathers; however, the sample was not particularly racially or socioeconomically diverse. The sample was mainly White (69.55 %), well-educated, and middle-income, and had a low number of Black fathers ($n = 8$). As a result, findings may not generalize well to other populations or intersections (e.g., Black fathers with low income; Hispanic families with lower educational attainment). This study was conducted in the U.S. only and thus does not reflect the experiences and perceptions of parents experiencing the pandemic in other countries. Further, the qualitative analysis in this study was limited to content coding and quantification of major themes that were identified by study authors. It is possible that more in-depth qualitative approaches would reveal further nuance in parents' experiences with criticism and unveil different themes.

The sample size was relatively small, which may have resulted in a lack of statistical power in estimating effect sizes. Although the data used in this study were longitudinal and taken from two separate time points, the period reflects a snapshot–specifically a two-week period–of experiences early in the pandemic, during the first few months of the stay-at-home orders. Thus, the analyses herein do not capture long-term trends in parents' experiences with criticism or long-term linkages to anxiety, depression, and economic worries. Additionally, because of the close proximity of the two time points in the study, is it possible that changes from T1 to T2 could be attributable to rest-retest bias. However, the rates of anxiety and depression in our sample closely mirror national samples of parents conducted over a similar time period (Lee et al., 2022). Additionally, the measure used to assess criticism was limited to the sources included in the adapted from the measure (i.e., from C.S. Mott Children's Hospital National Poll on Children's Health), which did not include all possible sources of criticism, including criticism from strangers.

5. Conclusion

This study explored longitudinal associations between receiving criticism about parenting choices and parental anxiety, depression, and financial worries during the COVID-19 pandemic. Using a survey, we asked mothers and fathers whether they had received criticism about their parenting choices from various sources, including their spouse/partner, parents, in-laws, social media commenters, other parents, friends, healthcare providers, or childcare providers/teachers. From the qualitative and quantitative analysis of survey results, we found that receiving criticism of parenting choices was associated with poorer mental health and more financial worries. One practical implication of this study is the need for family members and others to reduce their use of criticism about parenting choices, especially during a time of limited evidence-based guidance for parents.

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CRediT authorship contribution statement

Kaitlin P. Ward: Writing – review & editing, Writing – original draft, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Olivia D. Chang:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Shawna J. Lee:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Data curation, Conceptualization.

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Data availability

Data will be made available on request.

References

Abetz, J., & Moore, J. (2018). Welcome to the mommy wars, ladies": Making sense of the ideology of combative mothering in mommy blogs. *Communication Culture & Critique, 11*, 265–281. https://doi.org/10.1093/ccc/tcy008

Ahmed, S. F., Ellis, A., Ward, K. P., Chaku, N., & Davis-Kean, P. (2022). Working memory development from early childhood to adolescence using two nationally

representative samples. *Developmental Psychology, 58*(10), 1962–1973. https://doi.org/10.1037/dev0001396
American Psychological Association. (2020a). *Stress in America 2020: A national mental health crisis*. https://www.apa.org/news/press/releases/stress/2020/sia-mental-health-crisis.pdf.
American Psychological Association. (2020b). *Stress in the time of COVID-19*. American Psychological Association. https://www.apa.org/news/press/releases/stress/2020/stress-in-america-covid-june.pdf.
Ammari, T., Schoenebeck, S., & Morris, M. (2014). Accessing social support and overcoming judgment on social media among parents of children with special needs. In , *8. Proceedings of the international aaai conference on web and social media*.
Ammari, T., Schoenebeck, S., & Romero, D. (2019). Self-declared throwaway accounts on Reddit: How platform affordances and shared norms enable parenting disclosure and support. *Proceedings of the ACM on Human-Computer Interaction, 3*, 1–30. https://doi.org/10.1145/3359237
Arnold, M. B. (1960). *Emotion and personality, 1.* , New York: Psychological aspects.
Baker, E. E. (2019). Motherhood, homeschooling, and mental health. *Sociology Compass, 13*, e12725. https://doi.org/10.1111/soc4.12725
Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
Bartholomew, M. K., Schoppe-Sullivan, S. J., Glassman, M., Kamp Dush, C. M., & Sullivan, J. M. (2012). New parents' Facebook use at the transition to parenthood. *Family Relations, 61*, 455–469. https://doi.org/10.1111/j.1741-3729.2012.00708.x
Benke, C., Autenrieth, L. K., Asselmann, E., & Pané-Farré, C. A. (2023). One year after the COVID-19 outbreak in Germany: Long-term changes in depression, anxiety, loneliness, distress and life satisfaction. *European Archives of Psychiatry and Clinical Neuroscience, 273*(2), 289–299. https://doi.org/10.1007/s00406-022-01400-0
Bianchi, S. M., Sayer, L. C., Milkie, M. A., & Robinson, J. P. (2012). Housework: Who did, does or will do it, and how much does it matter? *Social Forces, 91*, 55–63. https://doi.org/10.1093/sf/sos120
Birditt, K. S., Brown, E., Orbuch, T. L., & McIlvane, J. M. (2010). Marital conflict behaviors and implications for divorce over 16 years. *Journal of Marriage and the Family, 72*(5), 1188–1204. https://doi.org/10.1111/j.1741-3737.2010.00758.x
Bookwala, J., & Gaugler, T. (2020). Relationship quality and 5-year mortality risk. *HealthPsychology, 39*(8), 633–641. https://doi.org/10.1037/hea0000883
Boyd, R. C., Price, J., Mogul, M., Yates, T., & Guevara, J. P. (2019). Pilot RCT of a social media parenting intervention for postpartum mothers with depression symptoms. *Journal of Reproductive and Infant Psychology, 37*(3), 290–301. https://doi.org/10.1080/02646838.2018.1556788
Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. *Handbook of Child Psychology, 1*, 793–828.
Browne, D. T., Wade, M., May, S. S., Jenkins, J. M., & Prime, H. (2021). COVID-19 disruption gets inside the family: A two-month multilevel study of family stress during the pandemic. *Developmental Psychology, 57*(10), 1681–1692. https://doi.org/10.1037/dev0001237
Cao, M., Huang, H., & He, Y. (2017). Developmental connectomics from infancy through early childhood. *Trends in Neurosciences, 40*(8), 494–506. https://doi.org/10.1016/j.tins.2017.06.003
Ciciolla, L., & Luthar, S. S. (2019). Invisible household labor and ramifications for adjustment: Mothers as captains of households. *Sex Roles, 81*, 467–486. https://doi.org/10.1007/s11199-018-1001-x
Conger, R. D., & Conger, K. J. (2002). Resilience in midwestern families: Selected findings from the first decade of a prospective, longitudinal study. *Journal of Marriage and Family, 64*(2), 361–373. https://doi.org/10.1111/j.1741-3737.2002.00361.x
C. S. Mott Children's Hospital. (2017). Mom shaming or constructive criticism? Perspectives of mothers. *Mott poll report*. https://mottpoll.org/reports-surveys/mom-shaming-or-constructive-criticism-perspectives-mothers.
C. S. Mott Children's Hospital. (2019). Parenting put-downs: How criticism impacts fathers. *Mott poll report*. https://mottpoll.org/reports/parenting-put-downs-how-criticism-impacts-fathers.
Dahling, J. J., & Ruppel, C. L. (2016). Learning goal orientation buffers the effects of negative normative feedback on test self-efficacy and reattempt interest. *Learning and Individual Differences, 50*, 296–301. https://doi.org/10.1016/j.lindif.2016.08.022
Drouin, M., McDaniel, B. T., Pater, J., & Toscos, T. (2020). How parents and their children used social media and technology at the beginning of the COVID-19 pandemic and associations with anxiety. *Cyberpsychology, Behavior, and Social Networking, 23*(11), 727–736. https://doi.org/10.1089/cyber.2020.0284
Elliott, S., Powell, R., & Brenton, J. (2015). Being a good mom: Low-income, black single mothers negotiate intensive mothering. *Journal of Family Issues, 36*, 351–370. https://doi.org/10.1177/0192513X13490279
Freisthler, B., Gruenewald, P. J., Tebben, E., McCarthy, K. S., & Wolf, J. P. (2021). Understanding at-the-moment stress for parenting during COVID-19 stay-at-home restrictions. *Social Science & Medicine, 279*, Article 114025. https://doi.org/10.1016/j.socscimed.2021.114025
Gottman, J. M. (1994). What predicts divorce?. *The relationship between marital processes and marital outcomes*. Erlbaum.
Hagan, C. R., & Joiner, T. E. (2017). The indirect effect of perceived criticism on suicide ideation and attempts. *Archives of Suicide Research, 21*(3), 438–454. https://doi.org/10.1080/13811118.2016.1218398
Hochschild, A. R. (1989). *The second shift*. Viking Penguin.
Hooley, J. M., & Teasdale, J. D. (1989). Predictors of relapse in unipolar depressives: Expressed emotion, marital distress, and perceived criticism. *Journal of Abnormal Psychology, 98*(3), 229–235. https://doi.org/10.1037/0021-843X.98.3.229
Kerr, M. L., Rasmussen, H. F., Fanning, K. A., & Braaten, S. M. (2021). Parenting during COVID-19: A study of parents' experiences across gender and income levels. *Family Relations, 70*(5), 1327–1342. https://doi.org/10.1111/fare.12571
Kornrich, S., & Furstenberg, F. (2013). Investing in children: Changes in parental spending on children, 1972-2007. *Demography, 50*, 1–23. https://doi.org/10.1007/s13524-012-0146-4
Kroenke, K., Strine, T. W., Spitzer, R. L., Williams, J. B. W., Berry, J. T., & Mokdad, A. H. (2009). The PHQ-8 as a measure of current depression in the general population. *Journal of Affective Disorders, 114*, 163–173. https://doi.org/10.1016/j.jad.2008.06.026
Kroska, A. (2003). Investigating gender differences in the meaning of household chores and child care. *Journal of Marriage and the Family, 65*, 456–473. https://doi.org/10.1111/j.1741-3737.2003.00456.x
Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist, 46*(8), 819–834. https://doi.org/10.1037/0003-066X.46.8.819
Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 68*, 518–530. https://doi.org/10.1037/0022-3514.68.3.518
Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. (2021). Parenting activities and the transition to home-based education during the COVID-19 pandemic. *Children and Youth Services Review, 122*, Article 105585. https://doi.org/10.1016/j.childyouth.2020.105585
Lee, S. J., Ward, K. P., Grogan-Kaylor, A., & Singh, V. (2022). Anxiety and depression during COVID-19: Are adults in households with children faring worse? *Journal of General Internal Medicine*. https://doi.org/10.1007/s11606-021-07256-9
Lee, S. J., Ward, K. P., Lee, J. Y., & Rodriguez, C. M. (2022). Parental social isolation and child maltreatment risk during the COVID-19 pandemic. *Journal of Family Violence, 37*(5), 813–824. https://doi.org/10.1007/s10896-020-00244-3
Leigh, J. K., Peña, L. D., Anurudran, A., & Pai, A. (2023). Are you safe to talk?": Perspectives of service providers on experiences of domestic violence during the COVID-19 pandemic. *Journal of Family Violence, 38*(2), 215–225. https://doi.org/10.1007/s10896-022-00359-9
Lex, C., Hautzinger, M., & Meyer, T. D. (2022). Perceived criticism and family attitudes as predictors of recurrence in bipolar disorder. *Clinical Psychology in Europe, 4*(1), e4617. https://doi.org/10.32872/cpe.4617
Lindsay, G., & Totsika, V. (2017). The effectiveness of universal parenting programmes: The CANparent trial. *BMC Psychology, 5*(35), 5–35. https://doi.org/10.1186/s40359-017-0204-1
Lois, J. (2006). Role strain, emotion management, and burnout: Homeschooling mothers' adjustment to the teacher role. *Symbolic Interaction, 29*, 507–530. https://doi.org/10.1525/si.2006.29.4.507
Lord, K. A., Jacobson, N. C., Suvak, M. K., & Newman, M. G. (2020). Social criticism moderates the relationship between anxiety and depression 10 years later. *Journal of Affective Disorders, 274*, 15–22. https://doi.org/10.1016/j.jad.2020.05.030
Mah, V. K., & Ford-Jones, E. L. (2012). *Spotlight on middle childhood: Rejuvenating the 'forgotten years', 17* pp. 81–83). Paediatrics & child health. https://doi.org/10.1093/pch/17.2.81
McBride, B. A., & Mills, G. (1993). A comparison of mother and father involvement with their preschool age children. *Early Childhood Research Quarterly, 8*(4), 457–477. https://doi.org/10.1016/S0885-2006(05)80080-8
McGinty, E. E., Presskreischer, R., Han, H., & Barry, C. L. (2020). Psychological distress and loneliness reported by U.S. adults in 2018 and April 2020. *JAMA, 324*, 93–94. https://doi.org/10.1001/jama.2020.9740
Milkie, M. A., Pepin, J. R., & Denny, K. E. (2016). What kind of war? "Mommy wars" discourse in U.S. and Canadian news, 1989–2013. *Sociological Inquiry, 86*, 51–78. https://doi.org/10.1111/soin.12100
Montroy, . J., Bowles, . P., Skibbe, . E., McClelland, . M., & Morrison, . J. (2016). The development of self-regulation across early childhood. *Developmental Psychology, 52*(11), 1744–1762. https://doi.org/10.1037/dev0000159
... & Morse, A. R., Banfield, M., Batterham, P. J., Gulliver, A., McCallum, S., Cherbuin, N., & Calear, A. L. (2022). What could we do differently next time? Australian parents' experiences of the short-term and long-term impacts of home schooling during the COVID-19 pandemic. *BMC Public Health, 22*, 1–9. https://doi.org/10.1186/s12889-022-12495-4.
Muthén, L. K., & Muthén, B. O. (1998). *Mplus user's guide*. –2017 (8th ed). Muthén & Muthén.
Neoh, M. J. Y., Azhari, A., Mulatti, C., Bornstein, M. H., & Esposito, G. (2020). Disapproval from romantic partners, friends and parents: Source of criticism regulates prefrontal cortex activity. *Plos one, 15*(10), Article e0229316. https://doi.org/10.1371/journal.pone.0229316
O'Reilly, A. (2020). Trying to function in the unfunctionable": Mothers and COVID-19. *Journal of the Motherhood Initiative for Research and Community Involvement, 11*, 7–24.
Pajares, F., Prestin, A., Chen, J., & Nabi, R. L. (2009). Social cognitive theory and media effects. In R. L. Nabi, & M. B. Oliver (Eds.), *The sage handbook of media processes and effects* (pp. 283–297). SAGE.
Palan, S., & Schitter, C. (2018). Prolific. ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance, 17*, 22–27. https://doi.org/10.1016/j.jbef.2017.12.004
Park, L. E., & Crocker, J. (2008). Contingencies of self-worth and responses to negative interpersonal feedback. *Self and Identity, 7*, 184–203. https://doi.org/10.1080/15298860701398808
Patrick, S. W., Henkhaus, L. E., Zickafoose, J. S., Lovell, K., Halvorson, A., Loch, S., Letterie, M., & Davis, M. M. (2020). Well-being of parents and children during the COVID-19 pandemic: A national survey. *Pediatrics, 146*, Article e2020016824. https://doi.org/10.1542/peds.2020-016824

... & Pustake, M., Mane, S., Ganiyani, M. A., Mukherjee, S., Sayed, M., Mithbavkar, V., & Bhagwat, A. (2022). Have the COVID-19 pandemic and lockdown affected children's mental health in the long term? A repeated cross-sectional study. *BMJ Open, 12*(7), Article e058609. https://doi.org/10.1136/bmjopen-2021-058609.

Rodriguez, C. M., Lee, S. J., Ward, K. P., & Pu, D. F. (2021). The perfect storm: Hidden risk of child maltreatment during the COVID-19 pandemic. *Child Maltreatment, 26*, 139–151. https://doi.org/10.1177/1077559520982066

Rossi, R., Socci, V., Talevi, D., Mensi, S., Niolu, C., Pacitti, F., Di Marco, A., Rossi, A., Siracusano, A., & Di Lorenzo, G. (2020). COVID-19 pandemic and lockdown measures impact on mental health among the general population in Italy. *Frontiers in Psychiatry, 11*, 790. https://doi.org/10.3389/fpsyt.2020.00790

Roseman, I. J. (2013). Appraisal in the emotion system: Coherence in strategies for coping. *Emotion Review, 5*(2), 141. https://doi.org/10.1177/1754073912469591

Shafer, K., Scheibling, C., & Milkie, M. A. (2020). The division of domestic labor before and during the COVID-19 pandemic in Canada: Stagnation versus shifts in fathers' contributions. *Canadian Review of Sociology, 57*, 523–549. https://doi.org/10.1111/cars.12315

Shimizu, Y. (2020). Parenting together in the child-rearing stage: On mutual criticisms of each other's child-rearing. *Journal of Japan Academy of Midwifery, 34*(1), 103–113. https://doi.org/10.3418/jjam.JJAM-2019-0009

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Lowe, B. (2006). A brief measure for measuring generalized anxiety disorder. *Archives of Internal Medicine, 166*, 1092–1097. https://doi.org/10.1111/cars.12315

Tallis, F., & Bond, A. (1994). The worry domains questionnaire. In G. C. L. Davey, G. C. L. Davey, & F. Tallis (Eds.), *Worrying: Perspectives on theory, assessment and treatment* (pp. 285–297). John Wiley & Sons.

The White House, Office of the Press Secretary. (2020). *The president's coronavirus guidelines for America: 15 days to slow the spread.* March. Washington, D.C.: The White House.

Thompson, R. A. (2001). Development in the first years of life. *The Future of Children, 11* (1), 21–33. https://doi.org/10.2307/1602807

Twenge, J. M., & Joiner, T. E. (2021). U.S. Census Bureau-assessed prevalence of anxiety and depressive symptoms in 2019 and during the 2020 COVID-19 pandemic. *Depression & Anxiety, 37*, 954–956. https://doi.org/10.1002/da.23077

U.S. Department of Labor. (2020). *News release: Unemployment insurance weekly claims*. https://www.dol.gov/sites/dolgov/files/OPA/newsreleases/ui-claims/20200510.pdf.

Vanman, E. J., & Miller, N. (1993). Applications of emotion theory and research to stereotyping and intergroup relations. In D. M. Mackie, & D. L. Hamilton (Eds.), *Affect, Cognition, and Stereotyping: Interactive Processes in Group Perception* (pp. 213–238). Academic Press.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., Choo, F. N., Tran, B., Ho, R., Sharma, V. K., & Ho, C. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, Behavior, and Immunity, 87*, 40–48. https://doi.org/10.1016/j.bbi.2020.04.028

Ward, K. P., & Lee, S. J. (2022). Associations of food insecurity and material social support with parent and child mental health during COVID-19. *Children & Youth Services Review, 140*, 106562. https://doi.org/10.1016/j.childyouth.2022.106562

World Health Organization. (2020). *WHO Director-General's opening remarks at the mission briefing on COVID-19*—12 March 2020 [Press release]. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-mission-briefing-on-covid-19-12-march-2020.