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Maternal and Paternal Overcontrol: Relationships with Child Anxiety

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by

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Under the Direction of Erin B. Tone, Ph.D.

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ABSTRACT

Anxiety is a highly prevalent childhood condition. Multiple factors contribute to the onset and maintenance of anxiety among children; *parenting behaviors* constitute one such factor, and research has yielded evidence linking parenting strategies to the development of childhood anxiety. Understanding these relationships is important, given that many parenting behaviors are modifiable; targeting these behaviors through intervention may help to alleviate and prevent anxiety. A focus of research has been on a strategy termed "Parental Overcontrol" (PO). PO is defined as an excessive amount of involvement in, and control over, a child's environment and experiences, and has been shown to relate to child anxiety.

Most of the evidence for an association between overcontrolling behaviors and anxiety comes from studies with samples composed primarily—or entirely—of mothers. Studies including fathers have typically neglected to discuss potential differences between the implications of paternal and maternal overcontrol. Consequently, the nature of the relationship between *paternal* overcontrol behaviors and childhood anxiety is not well-understood. Some theories of fathers' roles suggest that effects of parenting behaviors may differ by parent gender. Specifically, some models suggest that fathers' influence on their children is weaker. If this is the case, then the association between PO and child anxiety may be stronger for mothers, which could hold implications for prevention and treatment.

The goal of this study was to compare relationships between child anxiety and PO behaviors in mothers and fathers. Using data gathered from a large sample of parents recruited online, I used structural equation modeling to test a model of PO and child anxiety, as reported by both fathers and mothers on a well-validated set of measures. Structural equation models displayed good fit across samples. There was not a statistically significant difference between

models for mothers and fathers. These findings suggest that mothers' and fathers' overcontrolling behaviors have similar associations with child anxiety, which adds important information to a body of literature that has historically de-emphasized the role of fathers. These results have the potential to inform recommendations regarding caregiver involvement in treatment. Limitations of the study and directions for future research are discussed.

INDEX WORDS: Parental overcontrol, Child anxiety, Parent gender, Parenting, Fathers, Mothers

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DEDICATION

I dedicate this dissertation to my devoted, caring, and loving parents. Thank you for your words of encouragement and constant support throughout my life's endeavors.

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1 INTRODUCTION

By adolescence, an estimated 31.9% of youth in the United States have experienced an anxiety disorder, making anxiety disorders the most prevalent class of mental illness in young Americans (Merikangas et al., 2010). Research has shown that childhood anxiety can have serious negative consequences in a variety of domains, including cognitive functioning, academic achievement, family functioning, and social relationships (de Lijster et al., 2018; Essau, Conradt, & Petermann, 2000). Additionally, youth anxiety is associated with increased risk for the development of mood and substance use disorders later in life, as well as an elevated risk of suicide (Hill, Castellanos, & Pettit, 2011; Kendall, Safford, Flannery-Schroeder, & Webb, 2004; Langley, Bergman, McCracken, & Piacentini, 2004; Woodward & Fergusson, 2001). If left untreated, childhood anxiety is likely to persist into adulthood (Costello, Egger, & Angold, 2005; Essau, Lewinsohn, Lim, Moon-ho, & Rohde, 2018). Given the significant burden that anxiety confers, it is important to identify factors associated with its development early in life. Knowledge about these factors will allow for more successful intervention and prevention efforts. If anxiety can more effectively be prevented and treated during childhood, the prevalence and impact of adult mental illness might decrease.

1.1 Parenting Behaviors and Child Anxiety

Although multiple factors likely contribute to the onset and maintenance of anxiety among children, a substantial body of research has yielded evidence of links between *parenting behaviors* and the development of childhood anxiety. Understanding these relationships is important, given that many parenting behaviors are modifiable. Targeting these behaviors through intervention may help to alleviate and prevent child anxiety. In the developmental literature, parenting is typically defined as parental *behaviors* directed toward a child, as reported

by children, parents, or observers (McLeod, Wood, & Weisz, 2007). However, it is important to note that there is considerable heterogeneity in the manner in which researchers operationalize this construct, in part due to measurement inconsistencies (Muris & Merckelbach, 1998).

Traditionally, models of effects of parenting on child anxiety have focused on two broad dimensions: acceptance/rejection and autonomy/control (see Gerlsma, Emmelkamp, & Arrindell, 1990; McLeod et al., 2007; Rapee, 1997; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Factor analyses have consistently indicated that these dimensions are distinct, but related (see Rapee, 1997 for a review of this literature). Factor analyses have also identified a third dimension, firm/lax control, which refers to parental use of disciplinary behaviors/punishment and firmness; this dimension appears to be of less relevance to child anxiety than are the other two dimensions (Rapee, 1997).

The acceptance/rejection and autonomy/control dimensions are often referred to simply as "rejection" and "control" (McLeod et al., 2007); thus, for simplicity and consistency, I will use this terminology, except when I am citing work that uses another term. Both have been conceptualized as continuous dimensions on which all parenting practices fall and that are relevant to the development of anxiety specifically. Researchers consider each to range from positive parenting behaviors on one end (e.g., granting age-appropriate autonomy), to negative parenting behaviors on the other (e.g., high levels of control, often described as "overcontrol"). Per Rapee (1997), "control" is often conceptualized as behaviors aimed at protecting a child from perceived harm. These behaviors often manifest as parent direction of a child's actions, which thus has the consequence—often unintended—of limiting that child's autonomy and individuality. In contrast, "autonomy" is operationalized as behaviors that promote the development of a child's independence. In the same paper, Rapee (1997) suggested that

"rejection" may be operationalized as parental negative or hostile feelings toward the child, which in turn affect the parent's behaviors toward the child. Conversely, acceptance comprises behaviors indicative of positive feelings and warmth toward the child.

1.1.1. Parental Overcontrol. The focus of much work on parenting behaviors and anxiety has been on a class labeled "Parental Overcontrol." Parental overcontrol encompasses a broad range of behaviors that are marked by an excessive amount of involvement in, and control over, a child's life and his/her experiences (Barber, 1996); in this manuscript, I use the term "parental overcontrol" to refer to this class of behaviors. Although the term "control" may be operationalized as behaviors inconsistent with or in opposition to "autonomy," Bögels and Brechman-Toussaint (2016) recently defined PO more precisely as parental behavior that is characterized by high levels of vigilance and *excessive* regulation of the child's behaviors. They suggested that, in turn, this regulation limits children's capacity to make their own choices and constrains their thoughts and feelings, thereby limiting their ability to explore the world independently. Without a developmentally appropriate level of freedom, the child is less able to learn how to solve problems independently.

A substantial body of research, using a wide variety of methods, including behavioral observation, experimental tasks, parent-report, and child-report, as well as both cross-sectional and longitudinal designs, supports a link between parental overcontrol and higher levels of anxiety in children (e.g., Bögels & Brechman-Toussaint, 2016; Chorpita & Barlow, 1998; van der Bruggen, Stams, & Bögels, 2008; Wood et al., 2003). Specifically, studies show that parental overcontrol may increase child anxiety and that parents may, in turn, engage in more controlling behaviors in anticipation of their children's distress.

Parental overcontrol may contribute to the development of anxiety in children via a number of pathways. One particularly important pathway is through the reinforcement of avoidance behaviors in children and, conversely, a lack of reinforcement for healthy exploration (Borelli, Margolin, & Rasmussen, 2015; Brook & Schmidt, 2008). For example, a child who expresses fear of spending time with peers may have a parent who discourages the child from activities like sleepovers and extracurricular activities in order to protect the child from the possibility that he or she might feel fearful.

Such parental behavior can have at least two types of effects on child behavior. First, it decreases opportunities for the child to learn that he/she can tolerate anxiety; thereby reinforcing avoidance, which provides momentary relief. Second, children with an overcontrolling parent may develop a belief that they are not equipped to handle challenges in their environments. This cognition might subsequently lead children to avoid situations that they perceive as frightening; therefore, they miss opportunities to learn that they have (or can acquire) adequate skills to cope with fear (Affrunti & Ginsburg, 2012).

The links among overcontrolling behaviors, anxiety, and avoidance are especially important to be aware of, because treatments for children with anxiety disorders often target children's avoidance of anxiety-provoking experiences (Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008). Specifically, clinicians commonly expose the child, either directly or via imagination, to feared objects or situations in order to weaken learned associations between those objects/situations and negative outcomes and to decrease avoidance of feared contexts. In addition, clinicians often address parenting behaviors, guiding parents to encourage children to approach (rather than avoid) feared experiences (Ginsburg & Schlossberg, 2002).

1.2 Parent Gender and Overcontrol

Although there is evidence for an association between overcontrolling behaviors and the development of childhood anxiety, the majority of studies examining parental overcontrol have used samples composed primarily, or entirely, of mothers. Moreover, of the studies that have included fathers, few have included a discussion of possible differences in implications of paternal and maternal overcontrol for the development of child anxiety. Reviews of the extant literature on parental overcontrol and child anxiety provide only limited insight into potential differences and similarities between mothers and fathers. One large meta-analysis found that parent gender *did not* moderate the association between parenting behaviors and child anxiety (McLeod et al., 2007). This review included research from 1990 to 2002 and addressed associations between child anxiety and two broadly defined parenting constructs: rejection and control.

In a 2008 meta-analysis focused specifically on parental control, van der Bruggen et al. (2008) found a substantial association between parental control behaviors and child anxiety, with a medium effect size (d=.58). However, the authors noted that almost all of the studies included in the meta-analysis neglected to examine father-child relationships and recommended that future studies of parental control and child anxiety include fathers. Although it has been 13 years since this review was published, recent studies of "parental" overcontrol still focus almost exclusively on maternal overcontrol, and the relationship between paternal overcontrol and childhood anxiety continues to be poorly understood.

1.2.1 Fathers and Child Development

Many studies in the field of child psychopathology include inadequate numbers of fathers in their samples (Parent, Forehand, Pomerantz, Peisch, & Seehuus, 2017). This practice is

especially striking, given that we expect our research to generalize to the real-world population and, according to the U.S. Census Bureau (2016), approximately three of every four children in America live with a father in the home.[1] The underrepresentation of fathers persists, despite significant calls that date back nearly 30 years to include more fathers in research (Phares and Compas, 1992). In 1992, Phares and Compas reviewed 577 studies about parents and child/adolescent psychopathology that were published in clinical and developmental psychology journals between 1984 and 1991. They found that only approximately one-fourth of the studies addressed the role of fathers in their offspring's mental health. In an updated search about the same topic and in the same journals, Phares, Fields, Kamboukos, and Lopez (2005) found that from 1992 to 2004, only about 30% of identified studies addressed the role of fathers, indicating that there had not, at that point, been a major shift in sample demographics with regard to parent gender.

There are several reasons why fathers have been either intentionally excluded or grossly underrepresented in many studies (Cabrera, Volling, & Barr, 2018; Parent et al., 2017). Practically, recruitment of fathers as participants is often difficult due to work-related barriers. Fathers have historically been more likely than mothers to have full-time employment and to encounter difficulty scheduling research participation (Mitchell, See, Tarkow, Cabrera, McFadden, & Shannon, 2007). Although the demographics of employment have shifted markedly, discrepancies may persist due to cultural norms. Specifically, both explicit and implicit expectations that women will assume primary responsibility for caregiving may lead mothers, regardless of whether they work outside the home, to be more inclined than fathers to

[1] In this survey, children were considered to live with a father if they lived with a biological, step, or adoptive father.

participate in research opportunities related to parenting (Macfayden, Swallow, Santacroce, & Lambert, 2011).

These expectations may also affect researchers' recruitment targets, as those who do not expect fathers to participate might make little effort to recruit them (Sherr, Davé, Lucas, Senior, & Nazareth, 2006). In a meta-analysis, Fabiano and Caserta (2018) noted that few studies used specific strategies for promoting father engagement. Similarly, researchers may be influenced by outdated, but deeply rooted, societal norms that identify parenting children as a mother's domain (Cassano, Adrian, Veits, & Zeman, 2006).

Prior to the past several decades, the idea that fathers played a significant role in their children's development was controversial. However, ample theoretical and empirical literature now supports the idea that fathers do indeed have an important influence on their children's development and that they may play distinctive roles (Bögels & Phares, 2008; Phares and Compas, 1992). Differences between mothers and fathers may be particularly pronounced for behaviors on the autonomy/control spectrum. Some researchers, for example, have proposed that fathers typically grant more autonomy to children than do mothers, by encouraging them to be independent and adventurous and to take age-appropriate risks (van der Bruggen et al., 2008). In addition, Leidy, Schofield, and Parke (2013) hypothesized that fathers are more likely than mothers to serve as "play partners," which may contribute positively to their child's social development, in turn promoting healthy friendships with peers.

This perspective is supported by findings that fathers are more likely to engage in "challenging behaviors," which are defined as behaviors that playfully encourage a child to test their limits and promote autonomy development (Majdandžić, de Vente, & Bögels, 2016; Majdandžić, Möller, de Vente, Bögels, & van den Boom, 2014). Similarly, fathers may

encourage children to engage in behaviors that mothers may be more likely to consider "dangerous" or risky (Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheurerer-Englisch, & Zimmermann, 2002). Mothers, in contrast, may play, on average, a larger role than fathers in helping children to feel emotionally supported, cared for, and safe (Fliek, Daemen, Roelofs, & Muris 2015; McBride and Mills, 1993). If mothers do indeed tend toward a protective, nurturing stance, they may be more inclined than fathers to engage in behaviors typically classified as controlling.

Despite this small but growing literature, some debate continues regarding the nature of the role or roles that fathers play in their children's development, and the extent to which their influence can be considered distinct from the influence of mothers (Lamb, 2010). Fagan, Day, Lamb, and Cabrera (2014), for example, argued that the constructs of maternal and paternal parenting overlap conceptually, and that effects of paternal parenting behaviors on child behavior and experience are similar to effects of maternal parenting behaviors. However, Fagan and colleagues suggested that *effect sizes* of associations between parenting variables and child behavior may vary by parent gender, with effect sizes often larger for mothers than fathers. They suggest that differences in effect size may occur because, although parenting constructs appear to be consistent regardless of parent gender, on average, mothers and fathers *do* behave differently.

For example, differences in effect size could be due to time spent with their parents. There is research indicating that fathers, on average, spend less time with their children than do mothers, particularly during the early developmental period (Lamb, 2010). Notably, this gap is steadily narrowing, particularly in North American (Raley, Bianchi, & Wang, 2012). Nonetheless, data from 2012 suggest that mothers, relative to fathers, spend approximately twice as much time on physical care of their children and 1.63 times as much on developmental care

tasks (Sayer, 2016). If mothers and fathers indeed differ in terms of amount of exposure to their children—on average—it may be that children experience overcontrolling behaviors from their mothers at a higher frequency than they do from their fathers, whom they see or interact with less often. As a result, the effects of mothers' overcontrolling behaviors may be amplified.

Fagan et al. (2014) noted several limitations of the body of research comparing maternal and paternal parenting. In particular, they expressed concern that researchers often do not assess how frequently their participants engage in particular parenting behaviors (i.e., the "quantity" of these behaviors) and often neglect assessment of the quality of parent-child relationships. In addition, they identified the limited attention paid to the measurement equivalence of parenting instruments used in this literature as a weakness. In order to address the latter concern, they suggested that future research include the same measures for both mothers and fathers, a practice that has been surprisingly uncommon.

1.3 COVID-19 Pandemic and Anxiety

It is important to note that data were collected in the midst of the COVID-19 global pandemic[2]. The pandemic had a notable impact on children and their caregivers' daily routines. For example, there were widespread school closures in the United States at the start of the pandemic (i.e., March and April 2020), and the majority of students were transitioned virtual (i.e., remote) instruction (Christakis, Van Cleve, Zimmerman; 2020). This change, in addition to economic factors, led to an increase in unemployment rates (U.S. Department of Labor, 2020). Changes in school also had substantial effects on childhood hunger; some families reliant on the school system for providing their children with adequate nutrition struggled to feed their

[2] Data were collected in February of 2021.

children, creating an additional physical and emotional stressor for these families (Poole, Fleischhacker, & Bleich, 2021).

Despite the recency and ongoing nature of the pandemic, a growing body of research has begun to evaluate the impact of the pandemic on psychosocial functioning in adults and children (e.g., Choi, Hui, & Wan, 2020; Shevlin et al., 2020). Research specific to families indicates that parents have experienced increased rates of parenting stress, anxiety, and depression during the pandemic (Brown, Doom, Lechuga-Pena, Watamura, & Koppels, 2020; Calvano, Engelke, Di Bella, Kindermann, Rennenberg, & Winter, 2021). There is evidence, however, that COVID-related stress is closely related to self-reports of pre-pandemic functioning, suggesting that most COVID-related stress reflects an exacerbation of preexisting characteristics (Taylor, 2021). As with their parents, there is evidence of an increase in symptoms of anxiety and depression for children and adolescents (Chen, Zheng, Liu, Gong, Guan, & Lou, 2020; Racine et al., 2020 However, some symptoms of anxiety (e.g., social) may have been alleviated or accommodated by the significant changes in social interaction, such as more limited contact with peers.

1.4 The Present Study

The goal of the present study was to address some of the shortcomings of the literature to date by comparing the relationship between child anxiety and parental overcontrolling behaviors between mothers and fathers. Using data gathered from a large sample of mothers and fathers of children recruited online using Amazon's Mechanical Turk service, I used structural equation modeling (SEM) to extract a latent parental overcontrol variable and test a model of associations between parental overcontrol and child anxiety, as reported by both fathers and mothers. As indicators in this model, I chose the best-validated measures available that were designed to capture facets of the constructs under study. See Figure 2.2 for a representation of the conceptual

model. I hypothesized that the model would display good fit for mothers and fathers but would exhibit better fit for mothers.

Although I chose to include measures of both parent anxiety and pandemic-related stress, and both warrant important consideration, I did not include these variables in my model. Structural equation modeling relies heavily on developing models informed by sound theory and extant empirical findings (Wang & Wang, 2019). Given the recency and unprecedented nature of the COVID-19 pandemic, the body of literature regarding its effects on child anxiety is new and with minimal replication. Additionally, in a search conducted in July 2021, I was unable to locate any published manuscripts addressing the association between pandemic-related variables and PO. As such, I chose to omit pandemic-related stress variables from my model due to a lack of theory/evidence that may inform how it may affect, or be affected by, other variables in the model. I chose not to include parent anxiety in my model given a lack of evidence that parental anxiety and engagement in overcontrolling behaviors are related (see meta-analysis by van der Bruggen et al., 2008). Additionally, this construct may be best modeled using multiple indicators of adult anxiety, which fell outside the scope of the present study.

The study focused on parents of 8 to 12-year-old children. This age range was selected for several reasons. First, there is evidence that the onset of anxiety disorders is quite early (median onset = 6 years; Merikangas et al., 2010), and thus the lower bound of the age range aims to permit sampling of families at emerging risk for childhood disorders. Second, in a meta-analysis, Möller, Nikolić, Majdandžić, & Bögels (2016) noted that the construct of overcontrol may be less relevant to very young children (i.e., infants and toddlers), as they are not yet expected to become autonomous, than it is to children who have reached school age. Finally, I elected to exclude adolescents over the age of 12 years because the concept of "overcontrol" may

be qualitatively different at this age, given that expectations for autonomy and independence are different from those for pre-adolescents. During adolescence, youths typically begin to develop a sense of self that is individuated from their parents (Silverberg & Steinberg, 1987), which could affect the impact of overcontrolling behaviors.

Limiting the sample to school-aged children has additional advantages. In particular, it facilitates the use of a group of measures that have been validated and normed on school-aged youths. Limiting the sample to parents of children in a circumscribed age group also helps minimize error that could result from inclusion of those with children currently in vastly different periods of development.

Consistent with the approach that the U.S. Census Bureau takes, I defined fathers as male biological, step-, or adoptive parents; similarly, mothers constituted women in any of these parenting roles. Fathers, like mothers, were eligible to participate regardless of the gender of their partner and/or whether they were raising their child in a two-parent household. In the majority of studies of parenting and child anxiety to date, living in a two-parent household with both parents, presumably a mother and father, has been a criterion for participation. Although the majority of American children live in two-parent households according to the most recently published census data, a substantial minority (31%) of children do not. More precisely, approximately 4% of children live only with their father, and of the more than 8 million opposite-sex couples who live together without being married, approximately 38% have at least one child (U.S. Census Bureau, 2016). As such, in the study I aimed to be as inclusive as possible in order to facilitate wider generalizability of findings.

2 METHOD

2.1 Participants

A total of 470 caregivers completed the study. After data cleaning, the final sample comprised 339 individuals. See Figure 2.1 for a flowchart of screening procedures. Initially, I aimed to recruit a total of 400 caregivers of children ages 8 to 12, including approximately 200 fathers and 200 mothers. I chose this sample size based on guidelines that recommend approximately 10 participants for each observed variable (i.e., indicator); for the proposed model; according to this guideline, the recommended sample size would be 150 participants (see Kline, 2016). However, Kline (2016), referencing a study by MacCallum and Austin (2000), reports that in the psychological literature, the median sample used in SEM is $\geq$ 200 participants.

The sample (N = 339) comprised nearly equal numbers of mothers (N = 162; 47.8%) and fathers (N = 177; 52.2%). Parent age ranged from 22 to 62 years (M = 36.58, SD = 7.22)[3] and child age ranged from 8 to 12 years (M = 9.34, SD = 1.25)[4]. Caregivers reported spending an average of 5.85 days per week with their child (SD = 1.55)[5], with responses ranging from 1 day to 7 days per week.

Caregivers in the sample were more likely to select a male child (N = 216; 63.7%) than a female child (N = 123; 36.3%) to provide responses about. Notably, fathers were significantly more likely to report on their sons than their daughters (X^2 (1) = 50.99, p < .01), while mothers reported on their sons and daughters with equal frequency (X^2 (1) = .03, p = .88).

[3] Separately, mother age ranged from 23 to 55 years (M = 36.63, SD = 7.05) and father age ranged from 22 to 62 years (M = 36.54, SD = 7.41). A total of 3 participants (.88%), including 2 mothers and 1 father, elected not to report their age.

[4] For children reported on by mothers, the average age was 9.37 (SD = 1.28); for children reported on by fathers, the average age was 9.32 (SD = 1.24).

[5] Mothers reported spending an average of 5.84 days per week with their child (SD = 1.54), and fathers reported spending an average of 5.85 days per week with their child (SD = 1.56).

See Appendix K for descriptive data for additional demographic variables. I conducted statistical tests for all characteristics to compare responses by parent identity; only socioeconomic status differed significantly between groups, with fathers endorsing higher socioeconomic statuses more frequently than mothers, $\chi 2\ (4, N = 339) = 15.46, p < .01$.

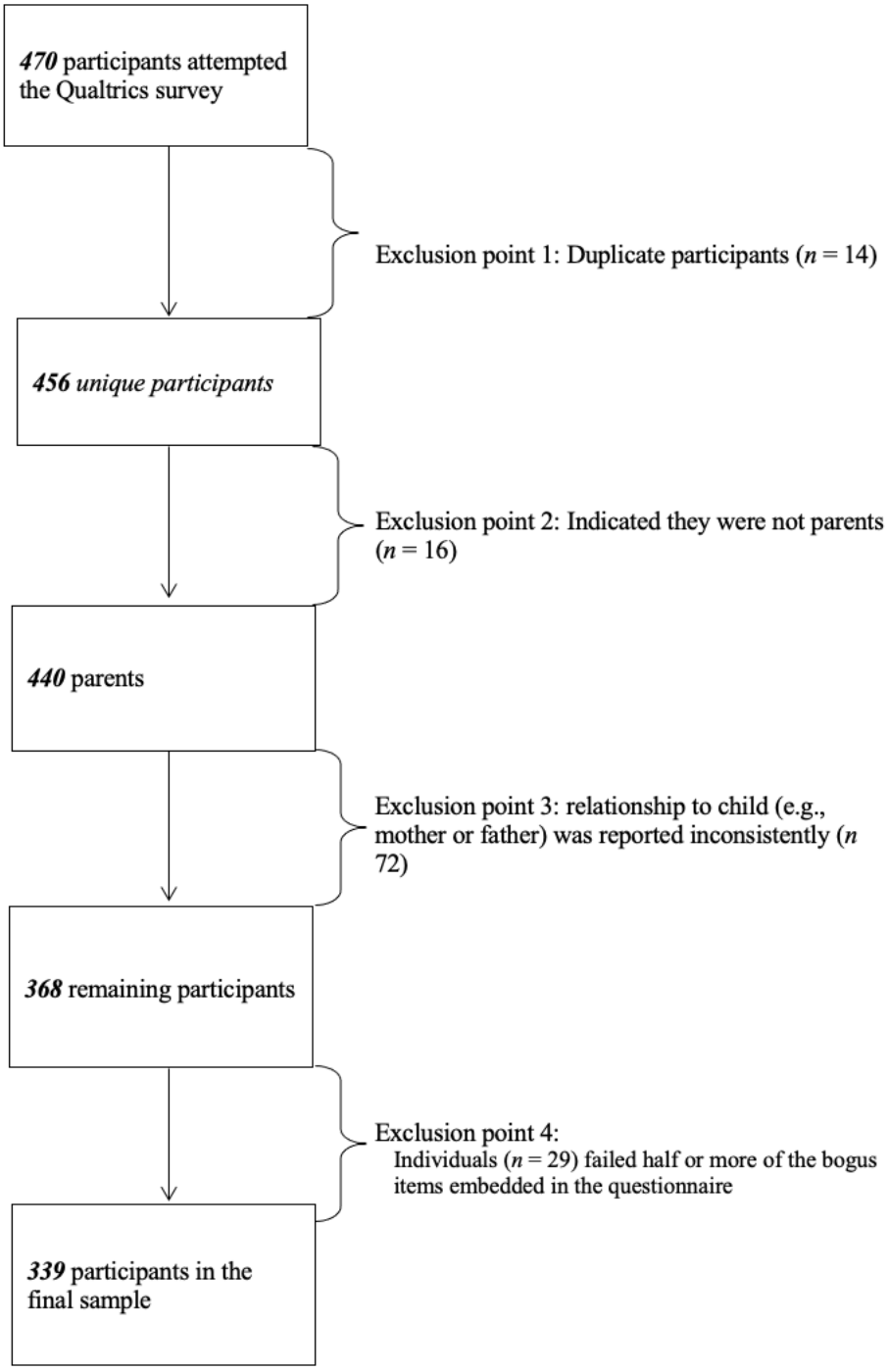

Figure 2.1 Flowchart of Data Screening Procedures

2.2 Measures

Researchers have measured parental overcontrol in a variety of ways, and there does not appear to be consensus about which instruments have the soundest psychometric properties or best capture the construct. This absence of a standard set of measures of parental overcontrol makes it challenging to compare findings across studies in order to draw conclusions about parental overcontrol and its association with child anxiety based on the current literature. Therefore, I used structural equation modeling (SEM) methodology to extract a latent parental overcontrol variable and to test a model of associations between parental overcontrol and child anxiety (see Figure 2.2), as reported by both fathers and mothers on a well-validated set of measures. I aimed to select measures that have adequate psychometric properties, that assess the constructs of interest broadly, that are appropriate for parents of school-aged children, and that have been validated with samples of both mothers and fathers. I was able to identify measures that each meet at least some of these criteria; each, however, also has limitations, which I outline below.

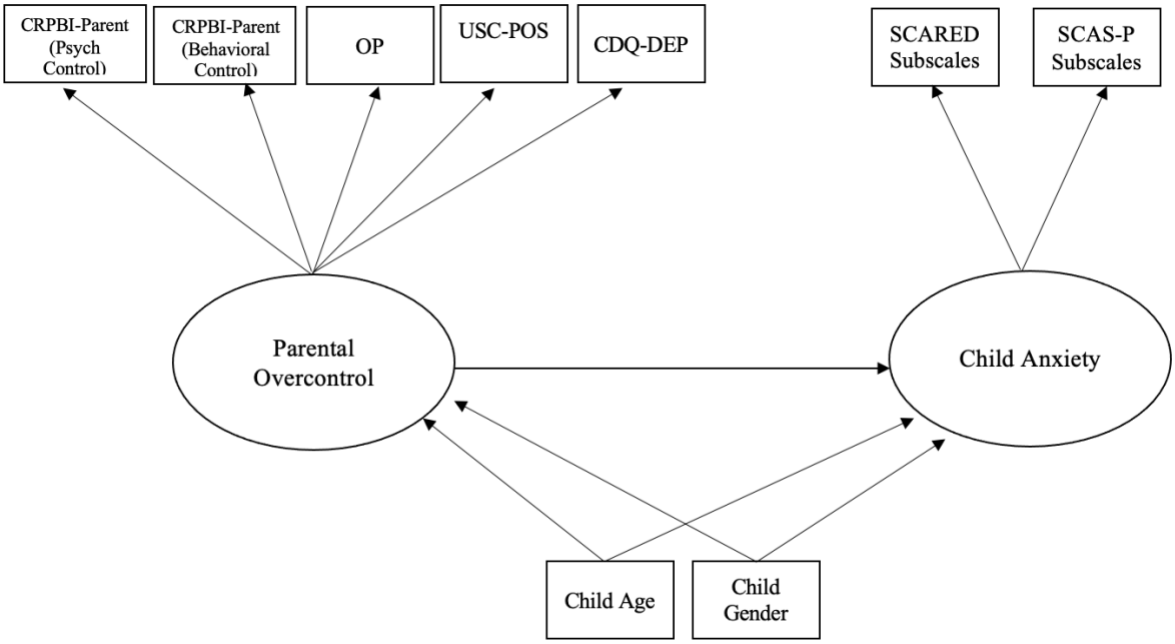

Figure 2.2 Conceptual Diagram Representing the Structural Model of the Association between Parental Overcontrolling Behaviors and Anxiety

2.2.1 Parental Overcontrol

Parental Overprotection Scale (OP; Edwards, Rapee, & Kennedy, 2008; Edwards, Rapee, & Kennedy, 2010). The OP scale (see Appendix A) is used to measure parenting behaviors characterized by restrictions of a child's exposure to situations in which the parent perceives threat or harm. The scale comprises 19 items that describe overprotecting behaviors (e.g., "I protect my child from his/her fears" and "I accompany my child on all outings"). Parents are asked to rate the extent to which an item describes their behaviors on a 5-point Likert-type scale ranging from "not at all" to "very much." Ratings are summed across all 19 items to yield a total score. Edwards et al. (2008) found the scale to have high internal consistency for both mothers and fathers (combined Cronbach's alpha = .87), good construct and predictive validity, and strong test-retest reliability over a period of one year. Clarke, Cooper, and Creswell (2013) also found high levels of internal consistency (Cronbach's alpha = .89). The initial OP validation

sample included children as young as three (Edwards et al., 2008), and Clarke et al.'s (2013) sample included children up to 12 years of age. Given that this measure is relatively new, it is important to note that it has not been validated across as many samples as older measures such as the CRPBI-30-Parent Report (described below). The OP demonstrated excellent reliability in the current sample, with Cronbach's alphas of .93 and .92 for mothers and fathers, respectively.

Children's Report of Parent Behavior Inventory – Parent Report (CRPBI-30 —Parent Report; Schwarz, Barton-Henry, & Pruzinsky, 1985; Siqueland, Kendall, & Steinberg, 1996). The CRPBI-30-Parent Report scale (see Appendix B) is used to measure a broad range of parenting behaviors and is one of the most widely used instruments of its type (Korelitz & Garber, 2016). The CRPBI was originally developed as a 260-item child-report measure (Schaefer, 1965), and has since been both abbreviated (via factor analyses) to 30 items and adapted for parent-report (Siqueland et al., 1996). Items describe a variety of parenting behaviors and parents are asked to rate the degree to which items are consistent with their own behaviors on a 3-point Likert-type scale ranging from "not like" to "something like." Items are summed to yield scores on three subscales, each of which reflects a domain of parenting behaviors: Acceptance, Psychological Control, and Behavioral Control. Only the Psychological Control and Behavioral Control subscales were used in this study, since acceptance was not part of the construct of interest.

Internal consistency of the measure varies across studies, but is generally described as "adequate," (e.g., Reitman & Asseff, 2010; Siqueland et al., 1996). Within the present sample, the Psychological Control subscale demonstrated excellent reliability for both mothers and fathers (Cronbach's alphas = .91 and .90, respectively), while the Behavioral Control subscale demonstrated good reliability, with an alpha of .84 for mothers and .82 for fathers.

The CRPBI has been used in research on parents of children who range in age from early childhood through emerging adulthood (e.g., Sim, Jorm, Lawrence, & Yap, 2019). In a meta-analysis of 85 studies that administered the CRPBI to both children and their parents, Korelitz and Garber (2016) found significant levels of agreement between mother-child reports, as well as father-child reports (i.e., parents' gender did not moderate agreement between parent and child reports). Given these findings, this measure was especially appropriate for use in the study.

USC-Parental Overprotection Scale (USC-POS; Borelli & Margolin, 2013). The USC-POS (see Appendix C) was designed to measure overcontrol/autonomy restriction, including behavioral, affective, and cognitive aspects of control. The scale comprises 10 items that describe overcontrolling behaviors (e.g., "I believe that talking with my child about his/her worries will only make him/her more upset" and "I expect my child to tell me everything that happens when he/she is away from home."). Parents are asked to rate the extent to which an item describes them or their child's behaviors on a 5-point Likert-type scale ranging from "not at all descriptive" to "extremely descriptive." Item scores are summed to yield a total score.

In their validation sample, Borelli and Margolin (2013) found the scale to have good internal consistency (Cronbach's alpha = .81) and good convergence with similar measures. When Borelli et al. (2015) used the measure subsequently, internal consistency was acceptable for both mothers (Cronbach's alpha = .76) and fathers (Cronbach's alpha = .74). Within the current sample, internal consistency ranged from good to excellent (Cronbach's alpha = .90 for mothers; Cronbach's alpha = .89 for fathers).

This measure is relatively new and has not yet been widely used in the literature. It was validated on a sample of children 8 to 12 years old (Borelli & Margolin, 2013), which is consistent with the ages of the children in my study.

Child Development Questionnaire (CDQ; Zabin & Melamed, 1980). The CDQ (see Appendix D) was developed to measure parents' behaviors in response to their children's anxiety. The measure consists of 15 vignettes describing children experiencing anxiety (e.g., a child refusing to get back on a bicycle after falling off while learning to ride). Respondents are asked to indicate how they would react to their child were he/she in each hypothetical situation. Each item includes five possible reactions and an "other" option, which parents can use to describe their hypothetical reactions if they believe they would not react in any of the ways described. For each item, there is a response option that reflects a parent behavior consistent with each of the following categories: modeling and reassurance, positive reinforcement, reinforcement of dependency, punishment, and use of force. When parents elect to describe their own response, the researcher codes the behavior described to match one of the five categories parent reactions. The measure is scored by counting the frequency with which parents endorse use of each parenting behavior. For this study, I chose to use the "reinforcement of dependency" scale as an indicator since it most closely reflects behaviors associated with parental overcontrol.

In their validation sample, which included parents of children ages 4 to 12, Zabin and Melamed (1980) reported correlations between their scales and both state and trait measures of child anxiety. They also found no significant differences in the ways that mothers and fathers responded to their questionnaire. Similarly, they did not find differences based on child gender. They did not report on the internal consistency of their measure.

Within the current study, qualitative responses were coded by a graduate student and a doctoral-level psychologist. Kappa was 0.811, which falls into the "almost perfect" range. A third coder, with a Ph.D. in psychology, coded the discrepant items, which resolved all

inconsistencies. Internal consistency was fair for mothers (Cronbach's alpha = .68) and acceptable for fathers (Cronbach's alpha = .72)

2.2.2 Child Anxiety

Screen for Child Anxiety Related Disorders – Parent Version (SCARED—Parent Version; Birmaher, Khetarpal, Cully, Brent, & McKenzie, 1995; Birmaher, Brent, Chiappetta, Bridge, Monga, & Baugher, 1999). The SCARED (see Appendix E) is a 41-item measure that is used to screen for child anxiety in clinical and community settings and has been used for children ages 6-19 years. The 41 items were developed to parallel the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV; American Psychiatric Association, 1994) classification of anxiety disorders. The measure comprises five subscales: Panic Disorder/Significant Somatic Symptoms, Generalized Anxiety Disorder, Separation Anxiety, Social Phobic Disorder, and Significant School Avoidance. Scores on the subscales can be summed to yield a total score. Parents are asked to rate the degree to which items are true for their child on a 3-point Likert-type scale ranging from "not true or hardly ever true" to "very true or often true." Cutoff scores for the SCARED-P, as published by Birmaher and colleagues (1999), are presented in Table 2.1 below. Notably, the SCARED-P cutoffs are used to identify children who *may* have a disorder (i.e., it is best classified as a screening measure rather than a diagnostic measure*;* Birmaher et al., 1995; Birmaher et al., 1999*)*. For example, a parent reported score of '30' for all items would indicate that an anxiety disorder may be present.

Table 2.1 SCARED-Parent Report Cutoff Scores

Scale/Subscale	**Cutoff Score**
Total Score	≥ 25
Panic Disorder/Significant Somatic Symptoms	≥ 7
Generalized Anxiety Disorder	≥ 9
Separation Anxiety Disorder	≥ 5
Social Anxiety Disorder	≥ 8
Significant School Avoidance	≥ 3

SCARED scores are positively related to levels of trait anxiety as measured with the State-Trait Anxiety Inventory for Children (Muris, Merckelbach, van Braker, Mayer, & van Dongen, 1998). In addition to the Parent Version of the SCARED, there is also a child version, which was not used in this study, given that children were not participants. A 2018 meta-analysis of research on the SCARED (Runyon, Chesnut, & Burley, 2018) found that both the child and parent versions of the SCARED have strong psychometric properties, including excellent internal consistencies and moderate to large test-retest abilities, and perform well across settings. The same meta-analysis reported that, across studies, parent-child agreement rates are moderate to large. Internal consistency in the current sample was found to be excellent, with Cronbach's alphas of .98 for both mothers and fathers.

Spence Children's Anxiety Scale – Parent Report (SCAS-P; Nauta, Scholing, Rapee, Abbott, Spence, & Waters, 2004). The SCAS-P (see Appendix F) is a 38-item scale used to measure anxiety symptoms across a variety of domains. It was developed to cover a broader range of symptoms and to include a broader range of responses than the SCARED does. Items describe a variety of behaviors related to anxiety, and parents are asked to rate the degree to which items are true for their child on a 4-point Likert-type scale ranging from "never" to

"always." The measure comprises six subscales: Separation anxiety, Generalized anxiety, Social phobia, Panic/agoraphobia, Physical injury fears, and Obsessive-compulsive disorder. Subscale scores can be combined to yield a total score.

The SCAS-P was normed within a community setting and has been used for children ages 6-18 years old. Means and standard deviations from this study are presented in Table 2.2 below. Reliability of the subscales ranges from satisfactory to excellent, and the measure has been shown to have adequate convergent and divergent validity (Nauta et al., 2004). Within this sample, reliability was excellent for mothers (Cronbach's alpha = .99) and fathers (Cronbach's alpha = .99). There is a corresponding child version of the Spence Children's Anxiety Scale, which was not used in this study, given that children were not participants.

Table 2.2 Means and Standard Deviations for the Spence Children's Anxiety Scale--Parent Report

Scale/Subscale		**Anxious sample**	**Community sample**
Total Score	Boys	31.3 (12.0)	16.0 (11.6)
	Girls	33.0 (13.5)	15.9 (9.0)
Separation Anxiety	Boys	7.2 (4.0)	3.4 (3.5)
	Girls	7.8 (4.0)	3.7 (2.9)
Generalized Anxiety	Boys	6.5 (2.9)	2.9 (2.1)
	Girls	6.7 (3.3)	3.1 (1.9)
Social Phobia	Boys	7.3 (3.6)	4.3 (3.0)
	Girls	7.7 (4.0)	4.8 (3.2)
Panic/Agoraphobia	Boys	2.9 (2.9)	1.0 (1.6)
	Girls	3.3 (3.4)	0.9 (1.2)
Physical Injury Fears	Boys	4.4 (2.8)	3.2 (2.8)
	Girls	4.5 (2.9)	2.7 (1.8)
Obsessive-Compulsive	Boys	3.1 (2.9)	1.2 (1.7)
Disorder	Girls	3.1 (3.0)	1.1 (1.8)

2.2.3 Demographics

Study participants completed a comprehensive demographic measure (see Appendix G). In addition to traditional items about a respondent's cultural/ethnic/racial identities and socioeconomic status, the measure included items intended to help characterize participants' roles as caregivers. For example, participants were asked to answer questions about the amount of time they spend with their child. Additionally, there were items about the broader family composition (e.g., single-parent versus multiple-parent household).

2.2.4 Additional Descriptive Measures

Two additional measures were included in the study in order to further characterize the sample; scores on these measures were not included in study key analyses. Given that data were collected during the COVID-19 pandemic, respondents were asked to answer questions regarding their levels of pandemic-related distress. Data were also collected regarding levels of general anxiety in respondents. Descriptions of these measures follow.

COVID Stress Scales (CSS; Taylor et al., 2020). I added the Danger and Contamination Fears (DCF) scale from the COVID Stress Scales (CSS; Taylor et al., 2020), a newly created set of scales used to measure fears associated with the COVID-19 pandemic (see Appendix H). Taylor and colleagues (2020) created five scales: (1) Danger and contamination fears, (2) fears about economic consequences, (3) xenophobia, (4) compulsive checking and reassurance seeking, and (5) traumatic stress symptoms about COVID-19. The DCF scale, which I used in this study, included questions about participants' fears regarding becoming infected and coming into contact with potentially contaminated items or surfaces. The DCF scale comprises 12 items scored on a 5-point Likert-type scale ranging from "not at all" to "extremely."

In the validation study, Taylor and colleagues (2020) included large, demographically representative samples of both Americans and Canadians. They found excellent internal reliability for both samples, with a Cronbach's alpha of .94 in the Canadian Sample and .95 in the American sample. Within this sample, internal reliability was excellent for mothers and fathers, with Cronbach's alphas of .97 for both groups.

Given a lack of validated parent-report measures of child COVID-19-related stress at the time of the study, I adapted this scale to ask about the respondent's child's anxiety. The adapted scale is presented in Appendix H. Internal reliability for this adapted measure was also excellent; Cronbach's alpha was .97 for both mothers and fathers.

Generalized Anxiety Disorder-7 (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006). The GAD-7 (see Appendix I) is a 7-item measure of symptoms associated with generalized anxiety disorder (GAD) in adults. It was developed to be used as a brief screening tool for identifying potential cases of GAD. Items describe a variety of symptoms associated with anxiety, and respondents are asked to indicate how often, within the past two weeks, they have experienced the symptom. Response options are "not at all," "several days," "more than half the days," and "nearly every day;" responses are scored as 0, 1, 2, and 3, respectively. Spitzer and colleagues (2006) identified a total score of 10 as suggesting probable GAD, and cut points of 5, 10, and 15 representing mild, moderate, and severe levels of anxiety symptoms, respectively. Although the measure instructs participants to focus on the previous two weeks, many patients in the validation sample with high scores reported a history of chronic symptoms, with 67% of participants with scores over 10 indicating that symptoms had lasted for 6 or more months.

Although I did not test a model that included parent anxiety, respondents were asked to complete the GAD-7 so that I could characterize levels of parent anxiety in my sample. Internal

validity in this sample was excellent for mothers and fathers with Cronbach's alphas of .95 for both groups, which is on par with internal consistency in the validation sample (Cronbach's alpha = .92).

2.3 Procedure

All study procedures were approved by the Georgia State University Institutional Review Board. I recruited caregivers as a "requester" through Amazon's Mechanical Turk (MTurk) service. MTurk yields high-quality data (Buhrmester, Kwang, & Gosling, 2011; Jensen-Doss, Patel, Ringle, & Timpano, 2021); notably, researchers also recently posited that using MTurk may be an ideal recruitment strategy for increasing the representation of fathers in child psychopathology research (Parent et al., 2017; Schleider & Weisz, 2015). For the present study (posted to the MTurk website as a "Human Intelligence Task," or "HIT") the sample was limited to MTurk users, known as "workers," located in the United States. This decision represents an effort to decrease the potential effects of cultural differences in parenting and gender roles across national boundaries; I acknowledge, however, that there is likely to be cultural variability among parents in the United States as well. The demographic data I collected helps characterize the cultural background of participants, which provides context to my interpretation of the study results.

Parents were not eligible to participate if they were aware that another parent of the same child had already completed the study. This restriction was intended to ensure data regarding a single child were not overrepresented in the sample.

There are a few notable limitations of using MTurk as a recruitment strategy. However, despite these limitations, McCredie and Morey (2019) and Jensen-Doss and colleagues (2021) conclude that MTurk can be used as a source of high-quality data in studies of mental health.

Participants are expected to screen themselves for study eligibility (i.e., researchers cannot verify that a participant truly meets study inclusion criteria). Given the monetary incentive, participants may be motivated to complete the study even if they do not meet study eligibility criteria. A recent study of MTurk workers who participate in parenting research (Jensen-Doss et al., 2021) characterized participants as somewhat less racially/ethnically diverse and more educated than the general population. However, Casler and colleagues (2013), in a comparison of several online and in-person recruitment strategies, found that MTurk yielded more diverse samples than other online recruitment services. They also noted that MTurk samples appeared to be more diverse than samples identified through in-person methods, which often draw convenience samples from easily accessible pools of college students.

There are also concerns that MTurk workers may have levels of psychopathology that are not reasonably consistent with those for samples drawn randomly from the U.S. population. Recently, McCredie and Morey (2019) aimed to better characterize the workers and found that participants recruited through MTurk were generally representative of the general population with regard to personality and mental health constructs. However, they noted that MTurk workers showed somewhat higher levels of negative affect and lower social engagement, as measured by the Personality Assessment Inventory. Nevertheless, the use of MTurk represents a useful, and potentially fruitful, strategy for overcoming barriers to the recruitment of fathers, particularly for studies that use analytic approaches such as SEM, which requires a large sample size to achieve relatively stable results (Kline, 2016). It also proved to be an optimal strategy for recruitment during the COVID-19 pandemic, when public health risks limited in-person data collection.

Eligible parents were asked to complete online questionnaires anonymously through the secure online survey system Qualtrics (http://www.qualtrics.com) via a link to the Qualtrics survey at the Amazon MTurk website (https://www.mturk.com/mturk/). Before completing the survey, caregivers saw a consent form and were asked to check a box stating that they had read the consent form and agreed to its terms. The form stated that if the caregiver was not interested in participating, he or she should close the survey in the web browser. Participants were reminded that their participation was voluntary and that they were free to skip items or withdraw from the study at any time.

After the consent process, caregivers who choose to participate were asked to enter the age(s) of their child/ren. If a caregiver reported having more than one child in the target age range, they were prompted to think of only one while responding to study items. Finally, the demographics measure was always the last measure administered in order to avoid priming effects. All other measures were presented in random order. After study completion, the caregiver received compensation of $3.60. The compensation value was determined after pilot testing the measure and followed the GSU IRB's guideline that MTurk workers be compensated at a minimum rate of $0.12/minute.

2.3.1. Preliminary Data Screening During online data collection, respondents may answer items haphazardly. Such insufficient effort responding results in data that are not valid and therefore inappropriate to include in analyses (Huang, Curran, Keeney, Poposki, & DeShon, 2012). One way to address this concern is the infrequency approach (Beach, 1989; Huang et al., 2012), which entails including bogus items (e.g., "I was born on February 30th) to which most respondents who are attending to the measure will respond in the same manner. If a participant does not choose the correct response, it can be assumed that he/she was not attending to the

survey (Meade & Craig, 2012). In this study, bogus items included the same response options as the measures in which they were embedded so that they did not appear distinct, which could lead participants to spend more time on or pay greater attention to them (Huang et al., 2012). If a participant answered more than two of these questions incorrectly, his/her data were excluded. Inclusion of these items also serves to screen out participants who do not speak English fluently, as they are unlikely to have answered most bogus items correctly. Participants who indicated their parenting role inconsistently were also excluded (e.g., selected "mother" in eligibility screening, but described their relationship with their child as "father" in the demographics measure).

2.4 Data Analytic Plan

I tested hypotheses using structural equation modeling (SEM), an approach that can be used to model and examine relationships among variables, known as latent variables, which are not considered to be directly observable (Kline, 2016). Given that "parental overcontrol" or "child anxiety" are difficult constructs to observe, SEM is an appropriate approach. Another advantage of SEM is that it can account for random measurement errors and unreliability of scores, which traditional statistical techniques (such as multiple regression) that researchers use to examine how variables relate to each other do not.

Prior to conducting hypothesis tests, I screened the data to evaluate normality and outliers. Scores for all variables were approximately normally distributed, with skewness ranging from -.12 to .46 and kurtosis ranging from -1.19 to 1.32. Only one study variable, the CRPBI Behavioral Control subscale, had multiple outlier scores (four in the mother sample and three in the father sample; see Appendix J for boxplots of this variable). As these participants' scores were not outliers on any other measures, were not biased in a single direction, and were

distributed among both mother and father samples, I retained the participants in my analyses. Retaining these participants allowed me to maintain a greater sample size, which lends strength to my structural equation models.

I estimated the proposed model using two-step modeling (Kline, 2016). I estimated the models using a weighted least squares estimator, which is recommended for models using categorical variables, and necessary to produce all fit indices in these models (Muthén & Muthén, 1998-2017). Specifically, I used weighted least square mean and variance adjusted (WLSMV) estimation, which is recommended as the most ideal weighted least squares estimator for use with categorical data (Brown, 2015).

First, I tested a *measurement model*. A measurement model is used to test hypotheses about how well observed variables, also known as "indicators," measure the latent constructs of interest (Bowen & Guo, 2012). A model is considered to be "identified" when there is adequate observed data to estimate the parameters in the model (Kline, 2016). According to the two-step rule that Kline (2016) suggests, if a measurement model is not identified, it is not appropriate to proceed to a test of the structural model. I assessed fit of the measurement model for the sample as a whole, as well as separately for mothers and for fathers. Prior to proceeding to the structural model, it is important to test for measurement invariance to ensure the mother and father models are measuring the same theoretical constructs. If measurement invariance is not present, comparisons between groups for structural models are not meaningful, as the models may be comparing different constructs (Wang & Wang, 2019).

Using the strategy outlined by Wang and Wang (2019), I tested three kinds of invariance: configural, metric, and scalar. Configural invariance is present if the models have the same factors and patterns of free/fixed loading without restricting equality on other parameters. In

comparison, metric invariance is present if measures are on the same scale across groups. To test metric invariance, one compares models when factor loadings are held equal across groups. Finally, I tested for scalar invariance, which involves restricting equality of factor loadings and indicator intercepts. I used chi-square analyses for all tests of model invariance.

To evaluate model fit, I used the following goodness-of-fit indices: chi-square test, Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis Index (TLI), Standardized Root Mean Scare Residual (SRMR), and Comparative Fit Index (CFI), as recommended by Kline (2016). Nonsignificant results on the chi-square test indicate better model fit. RMSEA values less than or equal to .05 are indicative of good model fit, values between .10 and .08 indicate adequate fit, and values greater than .10 are indicative of poor fit. RMSEA is often considered a preferred goodness-of-fit index, as it accounts for parsimony by adjusting for the degrees of freedom in a model, which other measures do not (Brown, 2015). By adjusting for degrees of freedom, RMSEA accounts for the presence of parameters that may be unnecessary. RMSEA confidence intervals, which range from zero to positive infinity, may also be useful in understanding model fit. According to Wang and Wang (2019), it is ideal for the lower bound of a 90% confidence interval to be near zero, and the upper value should be no greater than .08. For the TFI and CFI, model fit is acceptable when values are greater than or equal to .90. SRMR values less than or equal to .08 indicate good model fit. If fit for measurement models is poor, it is recommended that one make changes to the model, informed by theory, to find a model for which there is better fit.

Subsequently, I conducted a multi-group structural regression analysis, which added to the measurement model a structural component to model the effect of parental control on child anxiety. I evaluated the structural model using the same goodness-of-fit indices that I used for

the measurement model. In multi-group structural analyses, group differences on parameters of interest (in this case, the association between the two latent variables) can be evaluated by simultaneously fitting a model to data from multiple samples (Kline, 2016). Equality constraints are fixed for one of the samples (i.e., the model specifies that the unstandardized estimates for the parameter are equal). Subsequently, fit of the constrained model is compared with fit of the model without equality constraints (i.e., the unstandardized parameter estimates are allowed to vary). One way of comparing fit is through use of a chi-square difference test. If this test shows that model fit of the constrained model is much worse, it can be concluded that there are likely significant group differences on the parameter. I completed descriptive analyses using IBM SPSS Statistics 25 and structural equation modeling using Mplus software (Version 8; Muthén & Muthén, 2017).

3 RESULTS

3.1 Preliminary Analyses

In order to characterize my sample, I provide descriptive statistics for main study variables (see Tables 3.1-3.4). I used t-tests to examine differences between mother and father report for all study measures. Only one t-test, for the USC-Parental Overprotection Scale, yielded significant results, with fathers (M = 31.67, SD = 9.11) reporting slightly higher levels of overprotection than mothers (M = 29.15, SD = 9.82), $t(337) = -2.47$, $p = .01$.

Additionally, I compared scores on study measures of anxiety to scores/norms published in the literature to better understand whether my participants more closely resembled clinical samples or community samples. When available, I compared scores in the present sample to scores from samples collected using MTurk. A description of these results follows.

Relative to published norms (see Table 2.1), the average score reported by both mothers and fathers on the SCARED-P fell above cutoffs for the total score and the Panic/Significant Somatic Symptoms and Separation Anxiety Disorder subscales. The average score on the Significant School Avoidance subscale was higher for only the father sample. All other scores were below cutoffs. The following percentages of participants fell above clinical cutoffs: Total Score: 54.9 (*n* = 185); Panic/Significant Somatic Symptoms: 54.9 (*n* = 185); Generalized Anxiety Disorder: 38.8 (*n* = 114); Separation Anxiety Disorder: 57.8 (*n* = 196); Social Anxiety Disorder: 57.8 (*n* = 118); Significant School Avoidance: 42.2 (*n* = 143). In addition, participants reported higher levels of anxiety than participants in a recent study—conducted, however, prior to the COVID-19 pandemic—of child anxiety that recruited caregivers through MTurk (Francis, Tone, Caporino, Tully, & Cohen, 2019); in this sample, the mean total score on the SCARED-P was 18.85 (*SD* = 13.47).

Participant's reports on the SCAS-P most closely resemble the anxiety-disordered sample, rather than the 'normal' sample, from Nauta and colleague (2004)'s validation study. This resemblance did not differ by whether or not the participant identified as a mother or father. These findings appear consistent with MTurk data collected by Jensen-Doss and colleagues (2021). Although exact scores were not published, which limited comparisons, they reported that scores on the SCAS-P were elevated relative to typical community samples. However, in contrast to Jensen-Doss and colleagues' (2021) MTurk sample of caregivers, *more* caregivers in the present sample reported experiencing elevated levels of anxiety. In fact, a minority of the sample (40.4%; *n* = 137) reported that they experienced minimal anxiety, defined as total scores lower than five. A total of 46 caregivers (13.5%) were in the mild anxiety range, while 98 were

in the moderate range (28.9%), and 58 (17.2%) reported scores falling into the severe anxiety range.

Table 3.1 Means and Standard Deviations of Key Study Variables

	Mothers		*Fathers*		*Full Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*
CRPBI Psychological Control	18.80	5.82	19.83	5.65	19.34	5.75
CRPBI Behavioral Control	19.81	2.47	19.93	2.44	19.88	2.45
USC-POS	29.15	9.83	31.69	9.11	30.48	9.53
OP	47.71	14.68	49.92	13.62	48.87	14.16
CDQ-Reinforcement of Dependency	3.81	1.72	4.11	1.91	3.97	1.83
SCARED Total	31.44	22.30	33.63	22.97	32.59	22.65
SCARED Panic Disorder/Somatic Symptoms	8.95	8.17	9.59	8.24	9.29	8.20
SCARED Generalized Anxiety Disorder	6.97	5.33	7.38	5.19	7.18	5.25
SCARED Separation Anxiety Disorder	6.41	4.49	7.08	4.47	6.76	4.48
SCARED Social Anxiety Disorder	6.50	3.74	6.53	3.82	6.52	3.78
SCARED School Avoidance	2.77	2.50	3.05	2.60	2.91	2.56
SCAS-P Total	43.07	33.05	46.72	32.99	44.97	33.02
SCAS-P Panic/Agoraphobia	9.41	9.08	10.19	8.94	9.81	9.00
SCAS-P Separation Anxiety	7.01	5.17	7.80	5.26	7.42	5.22
SCAS-P Physical Injury Fears	6.41	4.04	6.93	3.92	6.68	3.98
SCAS-P Social Phobia	7.19	5.30	7.73	5.48	7.47	5.40
SCAS-P Obsessive Compulsive	6.46	5.87	6.90	5.66	6.69	5.75
SCAS-P-Generalized Anxiety	6.61	5.27	7.16	5.31	6.90	5.23

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; SCARED = Screen for Child Anxiety Related Disorders – Parent Report; SCAS-P = Spence Children's Anxiety Scale – Parent Report; Mother Sample, n = 162; Father Sample, n = 177; Entire Sample, n = 339

Table 3.2 Correlation Matrix for Study Variables - Full Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. CRPBI Psychological Control	—																				
2. CRPBI Behavioral Control	-.31**	—																			
3. USC POS	.86**	-.25**	—																		
4. CDQ-Reinforcement of Dep	.08	-.09	.04	—																	
5. OP	.61**	-.19**	.60**	.02	—																
6. SCARED Total	.74**	-.24**	.78**	.04	.47**	—															
7. SCARED Panic/Somatic	.77**	-.29**	.80**	.04	.46**	.97**	—														
8. SCARED Generalized Anxiety	.66**	-.19**	.72**	.06	.40**	.94**	.88**	—													
9. SCARED Separation Anxiety	.70**	-.23**	.73**	.04	.49**	.93**	.87**	.84**	—												
10. SCARED Social Anxiety	.53**	-.15*	.60**	.01	.40**	.86**	.75**	.78**	.77**	—											
11. SCARED School Avoidance	.69**	-.23**	.74**	.00	.45**	.92**	.89**	.85**	.82**	.74**	—										
12. SCAS-P Total	.77**	-.26**	.84**	.05	.49**	.96**	.95**	.90**	.88**	.77**	.88**	—									
13. SCAS-P Panic/Agoraphobia	.78**	-.30**	.83**	.04	.47**	.92**	.93**	.86**	.84**	.71**	.86**	.97**	—								
14. SCAS-P Separation Anxiety	.71**	-.20**	.78**	.03	.46**	.92**	.89**	.86**	.88**	.76**	.83**	.96**	.90**	—							
15. SCAS-P Physical Injury Fears	.65**	-.19**	.71**	-.01	.48**	.84**	.82**	.79**	.80**	.72**	.76**	.89**	.82**	.85**	—						
16. SCAS-P Social Phobia	.70**	-.20**	.77**	.06	.42**	.91**	.87**	.89**	.83**	.77**	.83**	.94**	.89**	.90**	.82**	—					
17. SCAS- P Obsessive Compulsive	.79**	-.29**	.82**	.08	.48**	.92**	.92**	.86**	.85**	.71**	.84**	.96**	.94**	.89**	.83**	.88**	—				

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
18. SCAS- P Generalized Anxiety	.74**	-.24**	.81**	.06	.48**	.93**	.93**	.87**	.85**	.74**	.87**	.97**	.93**	.92**	.84**	.90**	.91**	—			
19. CSS Child	.75**	-.28**	.79**	.02	.54**	.82**	.82**	.77**	.76**	.65**	.77**	.87**	.85**	.82**	.77**	.81**	.84**	.84**	—		
20. CSS Parent	.61**	-.19**	.67**	.02	.48**	.71**	.69**	.67**	.66**	.57**	.65**	.75**	.72**	.72**	.68**	.71**	.71**	.73**	.87**	—	
21. GAD-7	.63**	-.18**	.71**	.07	.36**	.87**	.84**	.83**	.78**	.72**	.81**	.88**	.85**	.84**	.77**	.87**	.83**	.85**	.79**	.71**	—

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire Reinforcement of Dependency; SCARED = Screen for Child Anxiety Related Disorders – Parent Report; SCAS-P = Spence Children's Anxiety Scale – Parent Report; CSS = Danger & Contamination subscale of the Covid Stress Scales; GAD-7 = General Anxiety Disorder-7; * = p <.01; ** = p <.001; *n* = 339

Table 3.3 Correlation Matrix for Study Variables - Mothers

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. CRPBI Psychological Control	—																				
2. CRPBI Behavioral Control	-.28 **	—																			
3. USC POS	.86 **	-.24 **	—																		
4. CDQ-Reinforcement of Dep	-.01	.08	-.07	—																	
5. OP	.60 **	-.09	.61 **	.01	—																
6. SCARED Total	.71 **	-.22 **	.81 **	-.10	.45 **	—															
7. SCARED Panic/Somatic Symptoms	.76 **	-.26 **	.82 **	-.10	.44 **	.96 **	—														
8. SCARED Generalized Anxiety	.63 **	-.15	.75 **	.06	.40 **	.94 **	.88 **	—													
9. SCARED Separation Anxiety	.67 **	-.22 **	.76 **	-.07	.47 **	.93 **	.86 **	.82 **	—												
10. SCARED Social Anxiety	.44 **	-.12	.57 **	-.11	.33 **	.81 **	.67 **	.72 **	.73 **	—											
11. SCARED School Avoidance	.69 **	-.19 *	.77 **	-.17*	.44 **	.92 **	.89 **	.83 **	.82 **	.69 **	—										
12. SCAS-P Total	.76 **	-.25 **	.87 **	-.09	.47 **	.96 **	.95 **	.90 **	.88 **	.71 **	.88 **	—									
13. SCAS-P Panic/Agoraphobia	.78 **	-.29 **	.88 **	-.08	.45 **	.90 **	.92 **	.84 **	.82 **	.61 **	.84 **	.97 **	—								
14. SCAS-P Separation Anxiety	.70 **	-.23 **	.81 **	-.10	.44 **	.93 **	.89 **	.86 **	.87 **	.72 **	.86 **	.96 **	.90 **	—							
15. SCAS-P Physical Injury Fears	.61 **	-.15	.74 **	-.10	.46 **	.86 **	.83 **	.81 **	.80 **	.72 **	.76 **	.89 **	.80 **	.85 **	—						
16. SCAS-P Social Phobia	.68 **	-.18 *	.80 **	-.08	.43 **	.92 **	.86 **	.89 **	.83 **	.74 **	.84 **	.94 **	.88 **	.90 **	.83 **	—					
17. SCAS- P Obsessive Compulsive	.78 **	-.29 **	.86 **	-.07	.47 **	.91 **	.92 **	.85 **	.84 **	.64 **	.83 **	.96 **	.94 **	.90 **	.83 **	.87 **	—				

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
18. SCAS- P Generalized Anxiety	.72**	-.20**	.83**	-.07	.45**	.93**	.94**	.87**	.85**	.67**	.88**	.96**	.92**	.92**	.84**	.89**	.91**	—			
19. CSS Child	.75**	-.28**	.82**	-.08	.58**	.85**	.82**	.80**	.80**	.61**	.79**	.87**	.86**	.83**	.76**	.81**	.85**	.83**	—		
20. CSS Parent	.59**	-.18*	.67**	-.05	.53**	.69**	.65**	.67**	.65**	.52**	.61**	.71**	.69**	.68**	.64**	.68**	.67**	.68**	.84**	___	
21. GAD-7	.60**	-.15	.72**	-.05	.35**	.86**	.82**	.82**	.78**	.67**	.81**	.87**	.83**	.84**	.76**	.86**	.82**	.83**	.78**	.70**	_

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire Reinforcement of Dependency; SCARED = Screen for Child Anxiety Related Disorders – Parent Report; SCAS-P = Spence Children's Anxiety Scale – Parent Report; CSS = Danger & Contamination subscale of the Covid Stress Scales; GAD-7 = General Anxiety Disorder-7; * = p <.01; ** = p <.001; *n* = 339

Table 3.4 Correlation Matrix for Study Variables - Fathers

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. CRPBI Psychological Control	—																				
2. CRPBI Behavioral Control	-.35**	—																			
3. USC POS	.85**	-.27**	—																		
4. CDQ-Reinforcement of Dep	.14	-.10	.12	—																	
5. OP	.61**	-.30**	.59**	.03	—																
6. SCARED Total	.76**	-.27**	.76**	.15	.48**	—															
7. SCARED Panic/Somatic	.78**	-.31**	.79**	.14	.48**	.97**	—														
8. SCARED Generalized Anxiety	.69**	-.22**	.70**	.17*	.40**	.95**	.90**	—													
9. SCARED Separation Anxiety	.73**	-.25**	.70**	.12	.49**	.93**	.89**	.86**	—												
10. SCARED Social Anxiety	.63**	-.18*	.64**	.11	.44**	.90**	.83**	.83**	.81**	—											
11. SCARED School Avoidance	.68**	-.27**	.71**	.13	.45**	.92**	.89**	.87**	.82**	.79**	—										
12. SCAS-P Total	.78**	-.27**	.80**	.15*	.50**	.95**	.95**	.90**	.89**	.82**	.88**	—									
13. SCAS-P Panic/Agoraphobia	.77**	-.32**	.79**	.14	.49**	.94**	.94**	.88**	.86**	.80**	.88**	.97**	—								
14. SCAS-P Separation Anxiety	.72**	-.18*	.75**	.12	.48**	.91**	.88**	.85**	.89**	.85**	.89**	.79**	.81**	—							
15. SCAS-P Physical Injury Fears	.67**	-.23**	.68**	.05	.49**	.82**	.80**	.76**	.79**	.72**	.76**	.89**	.83**	.85**	—						
16. SCAS-P Social Phobia	.71**	-.23**	.74**	.17*	.42**	.91**	.88**	.89**	.83**	.80**	.83**	.95**	.89**	.90**	.82**	—					
17. SCAS- P Obsessive Compulsive	.78**	-.30**	.79**	.19*	.49**	.92**	.92**	.86**	.86**	.77**	.85**	.96**	.94**	.89**	.83**	.90**	—				
18. SCAS- P Generalized Anxiety	.77**	-.27**	.80**	.15*	.50**	.93**	.93**	.87**	.85**	.80**	.86**	.97**	.94**	.91**	.83**	.91**	.92**	—			

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
19. CSS Child	.75**	-.28**	.77**	.11	.50**	.80**	.81**	.75**	.73**	.68**	.75**	.86**	.84**	.82**	.79**	.81**	.83**	.85**	—		
20. CSS Parent	.64**	-.20**	.68**	.08	.44**	.73**	.73**	.68**	.67**	.62**	.68**	.79**	.75**	.76**	.72**	.74**	.75**	.79**	.89**	—	
21. GAD-7	.67**	-.22**	.74**	.17*	.38**	.88**	.87**	.86**	.81**	.77**	.82**	.90**	.88**	.86**	.78**	.89**	.86**	.88**	.80**	.72**	—

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire Reinforcement of Dependency; SCARED = Screen for Child Anxiety Related Disorders – Parent Report; SCAS-P = Spence Children's Anxiety Scale – Parent Report; CSS = Danger & Contamination subscale of the Covid Stress Scales; GAD-7 = General Anxiety Disorder-7; * = p <.01; ** = p <.001; *n* = 339

Although I did not include parent anxiety or COVID-19 related stress for parents or children in my model, I examined them descriptively. These results are presented below (Table 5). There were no significant differences by parenting role (all *p*'s > .05). Anxiety scores on the GAD-7, SCARED, and SCAS-P were all significantly positively correlated with child and adult covid-related stress, as measured by the CSS Danger and Contamination (all *p*'s > .05).

Table 3.5 Means and Standard Deviations of Additional Variables

	Mothers		*Fathers*		*Full Sample*	
	M	*SD*	*M*	*SD*	*M*	*SD*
GAD-7	8.23	6.59	7.47	6.46	7.83	6.52
CSS Danger & Contamination (Adult)	23.27	14.24	22.90	14.02	23.08	14.10
CSS Danger & Contamination (Child)^	20.31	14.97	20.64	14.53	20.48	14.72

Note: GAD-7 = General Anxiety Disorder – 7; CSS = COVID Stress Scales; ^ = I modified the Adult form of this measure so that items focused on children's experiences.

3.2 Structural Equation Modeling

3.2.1. Measurement model. The measurement model showed good fit for the sample as a whole and for each parent sample individually. Model fit statistics are presented in Table 6. Notably, the $\chi 2$ value was significant for the omnibus sample that included both mothers and fathers. Given the limitations of this statistic, including a high probability of Type I error, however, I did not consider this result a reason to reject the model, following recommendations by both Wang and Wang (2019) and Kline (2016). Lastly, I found support for measurement invariance across the mother and father groups (configural versus metric, p = .22; configural versus scalar, p = .44; scalar versus metric, p = .64). Therefore, I proceeded to test the proposed structural models.

Table 3.6 Fit Indices for Measurement Models

Model	χ^2 (*df*)	*p*	RMSEA	CI RMSEA	*p* (RMSEA ≤.05)	CFI	TLI	SRMR
Mother Sample	148.49(133)	.17	.03	.00-.05	.95	.95	.95	.04
Father Sample	153.30(133)	.11	.03	.00-.05	.95	.95	.95	.03
Entire Sample	170.77(133)	.02	.03	.01-.04	.99	.95	.94	.03

Note. N = 316. RMSEA = Root Mean Square Error of Approximation; CI = confidence interval; CFI = Comparative Fit Index; TLI = Tucker Lewis index; SRMR = Standardized Root Mean Square Residual

3.2.2. Structural model. Structural equation models that included a path between PO and child anxiety displayed good fit across samples. There was not a statistically significant difference between the mother and father models. Associations were comparable in strength. Fit indices for both the unconstrained and constrained models are presented in Table 7. Results of chi-square difference testing were consistent with the null hypothesis, which stated that models did *not* differ: χ^2 (1, N =316) = 0.059, *p = .81*. The final structural model with standardized estimates is displayed in Figure 3.2.

Table 3.7 Fit Indices for Multiple-Group Structural Model

Model	χ^2 (*df*)	*p*	RMSEA	CI RMSEA	*p* (RMSEA ≤.05)	CFI	TLI	SRMR
Unconstrained	328.42(294)	.08	.03	.00-.04	.99	.95	.95	.05
Constrained	328.22(295)	.09	.03	.00-.04	.99	.95	.95	.05

Note. N = 316. RMSEA = Root Mean Square Error of Approximation; CI = confidence interval; CFI = Comparative Fit Index; TLI = Tucker Lewis index; SRMR = Standardized Root Mean Square Residual

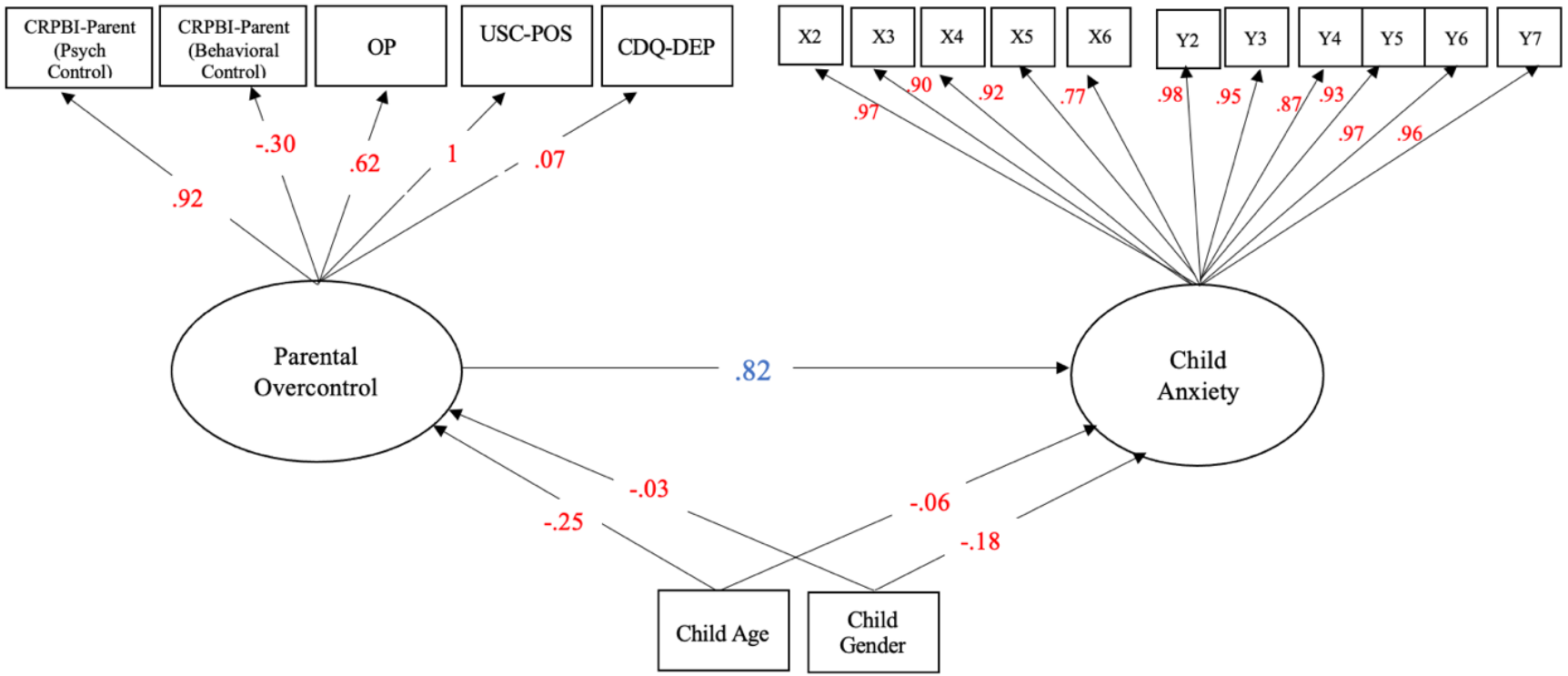

Figure 3.1 Final Structural Model with Standardized Estimates – Entire Sample

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; X2 = SCARED Panic/Somatic Symptoms; X3 = SCARED Generalized Anxiety; X4 = SCARED Separation Anxiety; X5 = SCARED Social Anxiety; X6 = SCARED School Avoidance; Y2 = SCAS-P Panic/Agoraphobia; Y3 = SCAS-P Separation Anxiety; Y4 = SCAS-P Physical Injury Fears; Y5 = SCAS-P Social Phobia; Y6= SCAS-P Obsessive-Compulsive; Y7=SCAS-P Generalized Anxiety

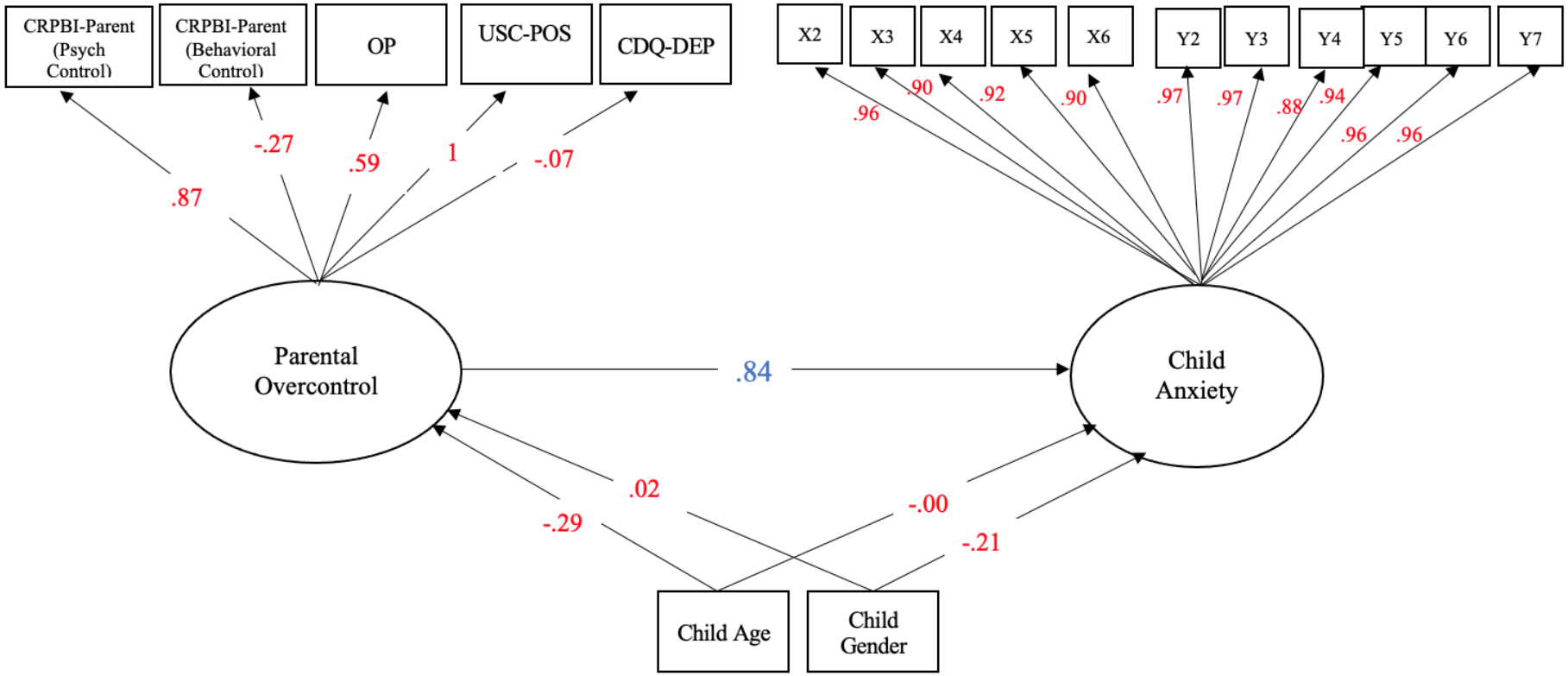

Figure 3.2 Final Structural Model with Standardized Estimates – Mother Sample

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; X2 = SCARED Panic/Somatic Symptoms; X3 = SCARED Generalized Anxiety; X4 = SCARED Separation Anxiety; X5 = SCARED Social Anxiety; X6 = SCARED School Avoidance; Y2 = SCAS-P Panic/Agoraphobia; Y3 = SCAS-P Separation Anxiety; Y4 = SCAS-P Physical Injury Fears; Y5 = SCAS-P Social Phobia; Y6= SCAS-P Obsessive-Compulsive; Y7=SCAS-P Generalized Anxiety

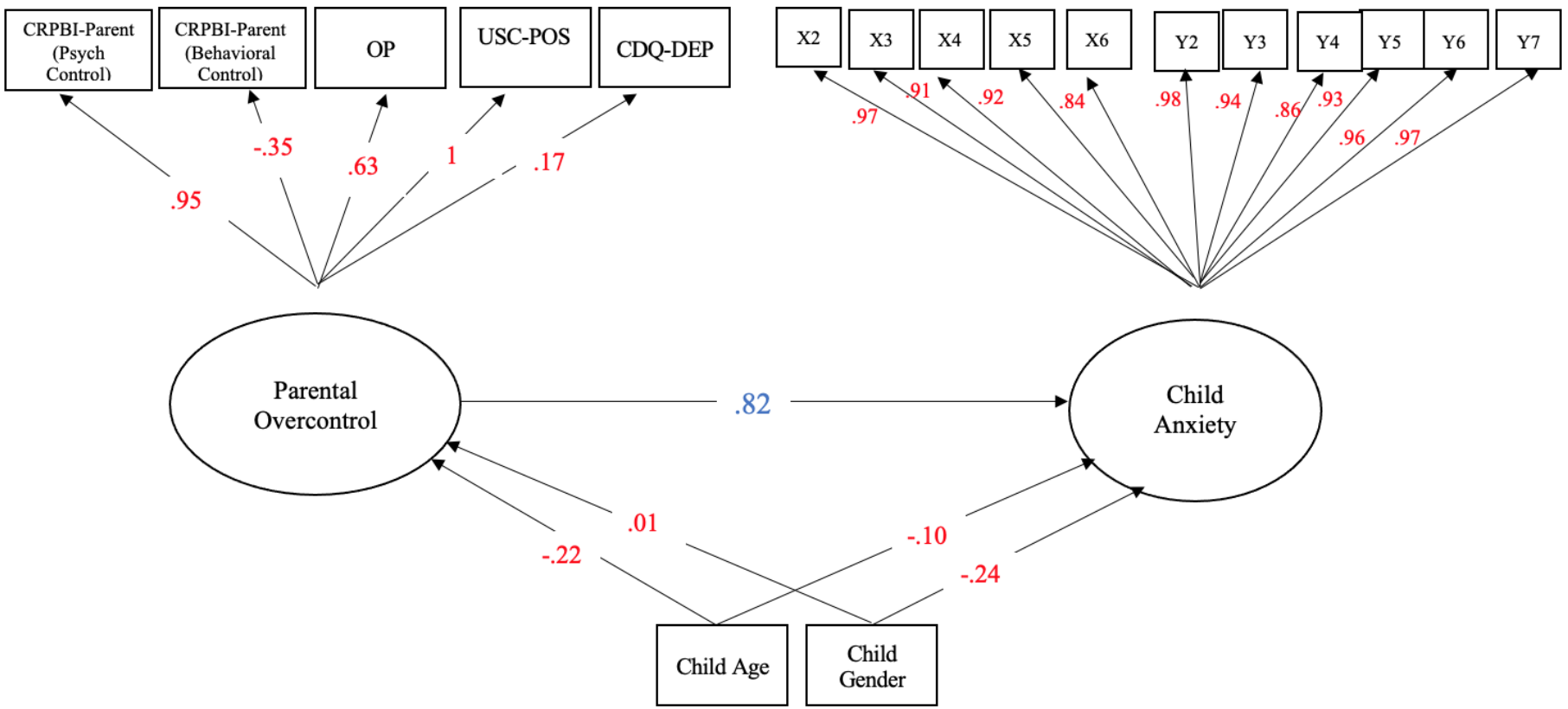

Figure 3.3 Final Structural Model with Standardized Estimates – Father Sample

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; X2 = SCARED Panic/Somatic Symptoms; X3 = SCARED Generalized Anxiety; X4 = SCARED Separation Anxiety; X5 = SCARED Social Anxiety; X6 = SCARED School Avoidance; Y2 = SCAS-P Panic/Agoraphobia; Y3 = SCAS-P Separation Anxiety; Y4 = SCAS-P Physical Injury Fears; Y5 = SCAS-P Social Phobia; Y6= SCAS-P Obsessive-Compulsive; Y7=SCAS-P Generalized Anxiety

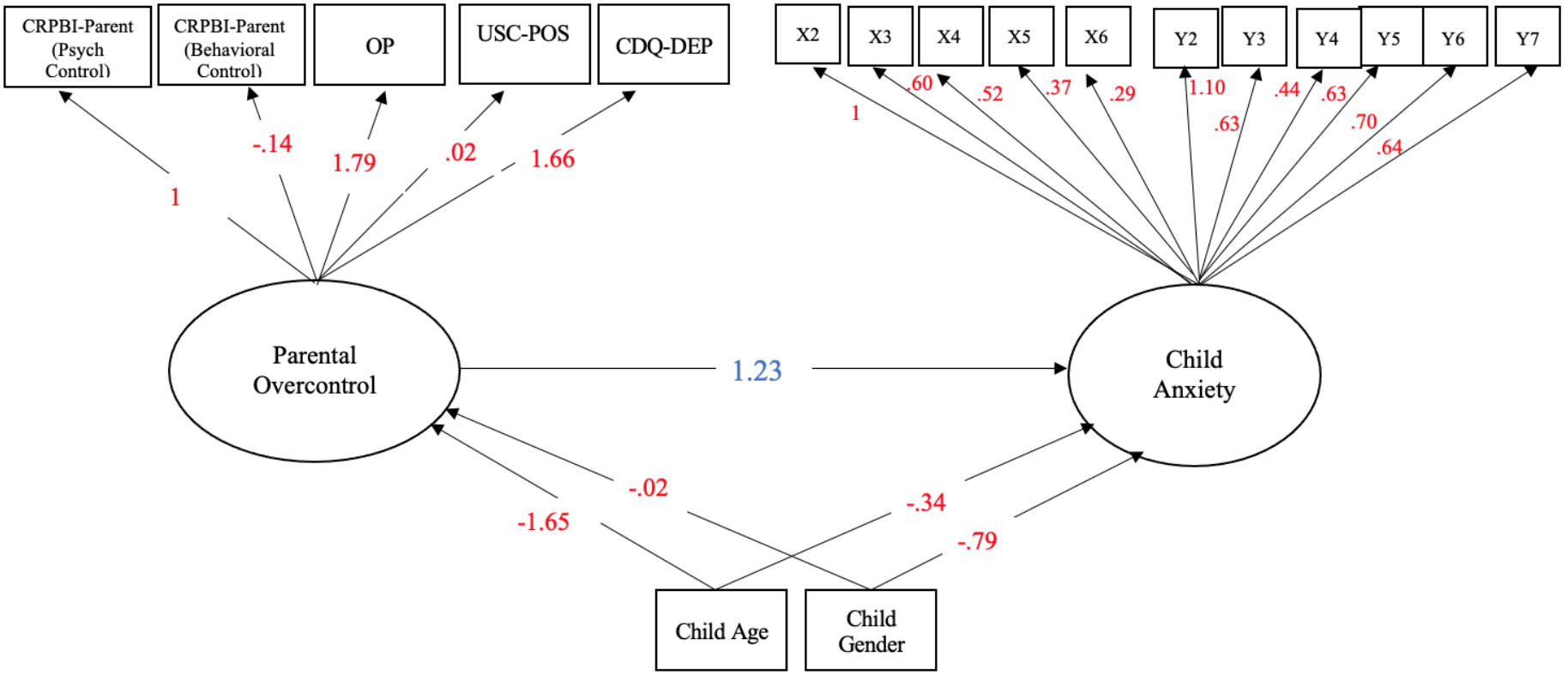

Figure 3.4 Final Structural Model with Unstandardized Estimates – Entire Sample

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; X2 = SCARED Panic/Somatic Symptoms; X3 = SCARED Generalized Anxiety; X4 = SCARED Separation Anxiety; X5 = SCARED Social Anxiety; X6 = SCARED School Avoidance; Y2 = SCAS-P Panic/Agoraphobia; Y3 = SCAS-P Separation Anxiety; Y4 = SCAS-P Physical Injury Fears; Y5 = SCAS-P Social Phobia; Y6= SCAS-P Obsessive-Compulsive; Y7=SCAS-P Generalized Anxiety

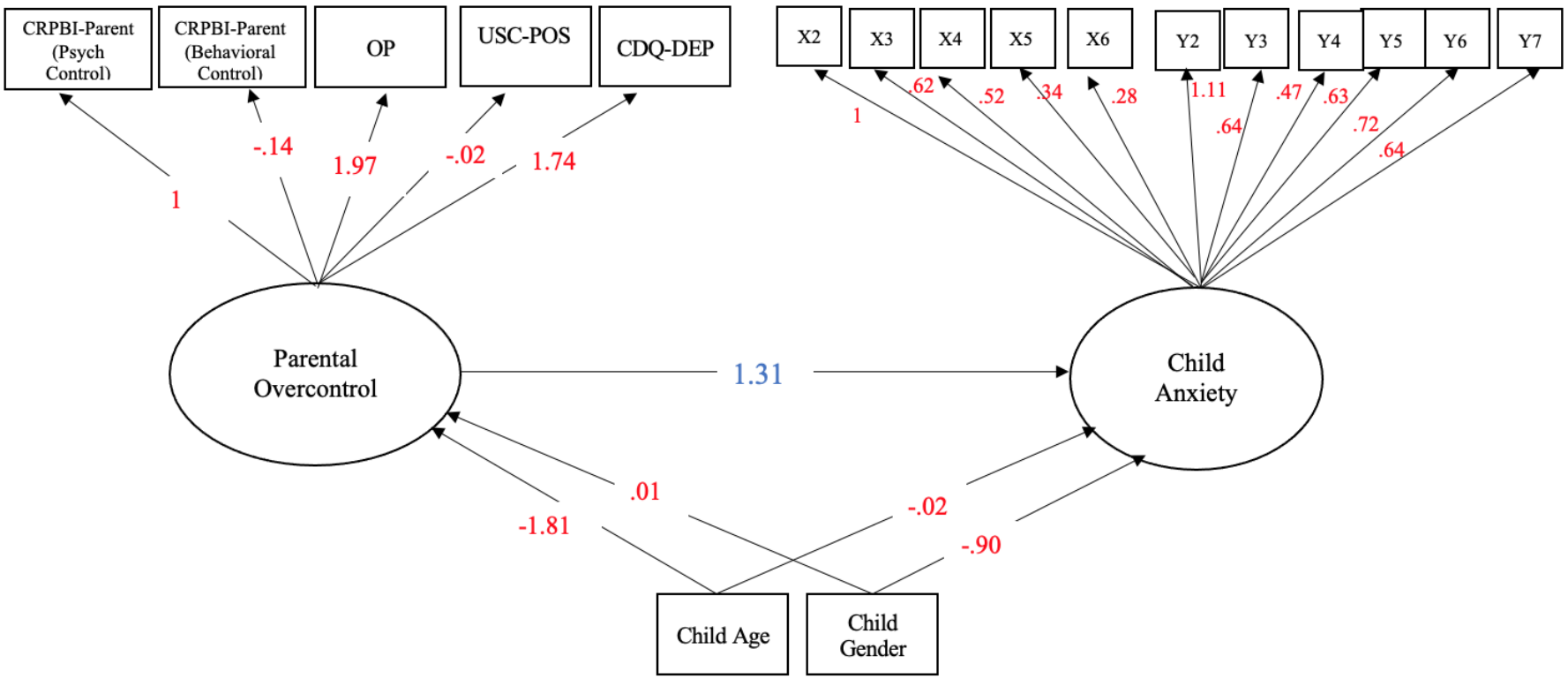

Figure 3.5 Final Structural Model with Unstandardized Estimates – Mother Sample

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; X2 = SCARED Panic/Somatic Symptoms; X3 = SCARED Generalized Anxiety; X4 = SCARED Separation Anxiety; X5 = SCARED Social Anxiety; X6 = SCARED School Avoidance; Y2 = SCAS-P Panic/Agoraphobia; Y3 = SCAS-P Separation Anxiety; Y4 = SCAS-P Physical Injury Fears; Y5 = SCAS-P Social Phobia; Y6= SCAS-P Obsessive-Compulsive; Y7=SCAS-P Generalized Anxiety

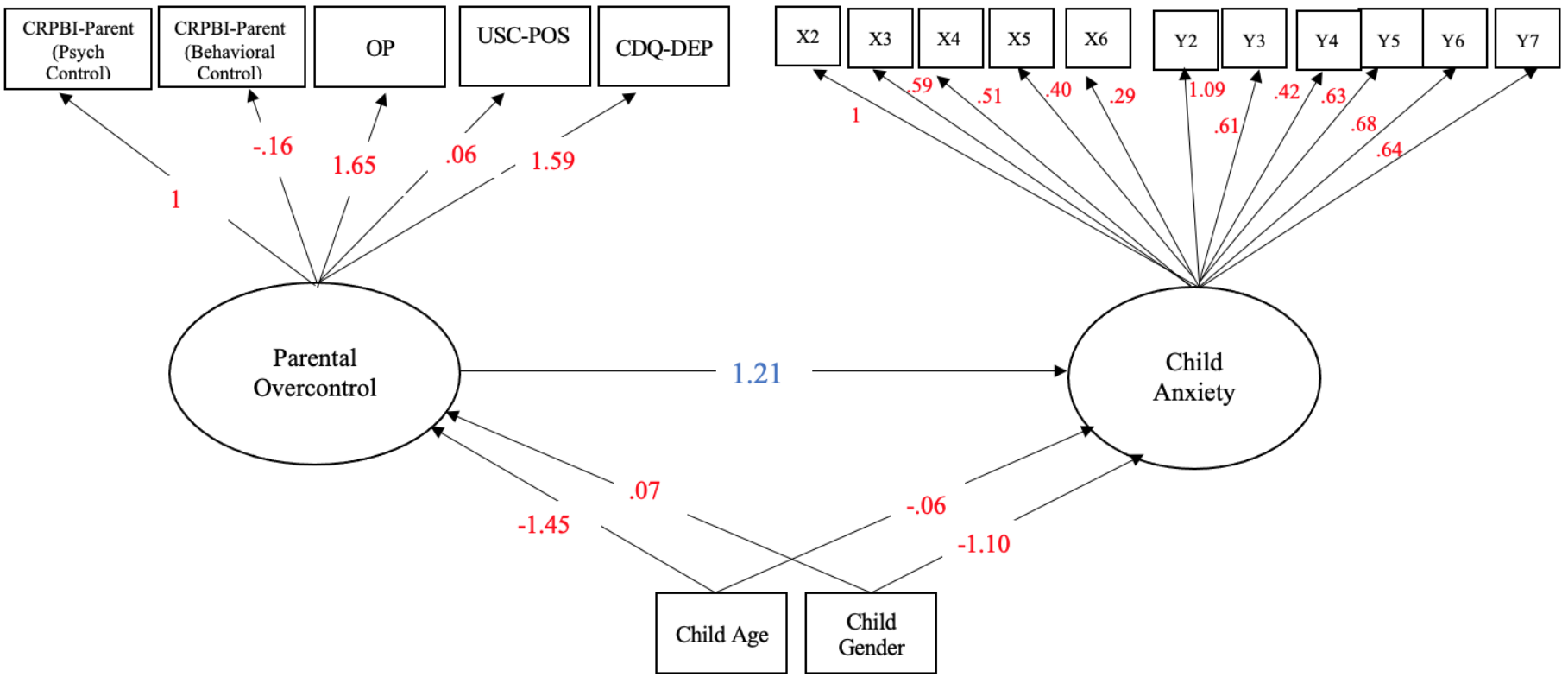

Figure 3.6 Final Structural Model with Unstandardized Estimates – Father Sample

Note: CRPBI = Children's Report of Parent Behavior Inventory – Parent Report; USC-POS = USC Parental Overprotection Scale; OP = Overprotection Scale; CDQ = Child Development Questionnaire; X2 = SCARED Panic/Somatic Symptoms; X3 = SCARED Generalized Anxiety; X4 = SCARED Separation Anxiety; X5 = SCARED Social Anxiety; X6 = SCARED School Avoidance; Y2 = SCAS-P Panic/Agoraphobia; Y3 = SCAS-P Separation Anxiety; Y4 = SCAS-P Physical Injury Fears; Y5 = SCAS-P Social Phobia; Y6= SCAS-P Obsessive-Compulsive; Y7=SCAS-P Generalized Anxiety

4 DISCUSSION

The aim of this study was to compare the relationship between child anxiety and maternal PO behaviors with that between child anxiety and paternal PO behaviors. Reviews of the extant literature on parental overcontrol and child anxiety provide only limited insight into potential differences and similarities between mothers and fathers. I therefore aimed to contribute to the literature with a study addressing this gap.

Specifically, I used multiple-group SEM to test the fit of a model of the association between child anxiety and PO, each represented by a latent variable to account for measurement error. I examined fit quality in data gathered from mothers and in data gathered from fathers, as well as in the sample as a whole. Based on theory and empirical evidence suggesting that mothers and fathers play similar roles, but that mothers' parenting has a relatively greater influence on children (e.g., Fagan et al., 2014; van der Bruggen et al., 2008), I hypothesized that the model would display good fit for both mothers and fathers but would exhibit better fit for mothers.

4.1 Measurement

Prior to conducting my multiple-group structural regression models, I examined measurement models to ensure my latent variables were measured as expected. First, I examined measurement models for each group, as well as the sample as a whole. Model fit was good across samples. Notably, the RMSEA values and its confidence intervals suggested close fit, indicating that the models were parsimonious in nature and minimized the inclusion of freely estimated parameters. Next, I established measurement invariance of the model. Conceptually, this measurement invariance suggested that the overall models functioned equally well for all

samples. In order to better understand the degree to which there may be differences by parent identity within models, I examined factor loadings. If factor loadings varied substantially, it would indicate that the magnitude of the relationship between specific indicators and the overall latent construct varied across parent identity. Factor loadings were fairly consistent across samples, with loadings for the PO factor ranging from -.27 to .87 for mothers and -.35 to .95 for fathers, and loadings for the child anxiety factor ranging from .88 to .97 for mothers and .84 to .98 for mothers. As a whole, this finding indicates that individual indicators made similar contributions to the overall model, regardless of parent gender. Comparatively, there was slightly more variability for the PO factor, which suggests that it may be marginally more impacted by parent gender than child anxiety. However, overall, factor loadings did not suggest that facets of each latent variable (i.e., the indicators) functioned differently across the samples.

4.2 Key Analyses

Consistent with my predictions, data from the present study indicated that parental overcontrolling behavior was substantively associated with levels of child anxiety, regardless of whether a child's mother or father provided data about themselves and their child (i.e., model fit was good for both groups). However, in contrast to my predictions, these effects do not appear to differ as a function of parent identity. These findings suggest that mothers' and fathers' overcontrolling behaviors have similar relationships with child anxiety, which provides an important step forward for a body of literature that has historically de-emphasized the role of fathers and excluded them, either actively or passively, from study.

These findings build upon the foundation of two important meta-analyses of research on child anxiety and overcontrolling behaviors (McLeod et al., 2007; van der Bruggen et al., 2008)[6], both of which found support for associations between PO behaviors and anxiety in general but provided more limited insight into the question of whether the gender of an overcontrolling parent matters. Van der Bruggen and colleagues noted that they were limited in their ability to generalize their findings confidently beyond mothers, given that the majority of studies that met their inclusion criteria only examined mother-child relationships. Although McLeod and colleagues (2007) examined parent gender as a moderator, they noted that only a minority of studies in their analyses included fathers in their samples. The findings of the current study are in line with their results, which did not support the hypothesis that parent gender would moderate the association between child anxiety and PO.

The present findings converge well with those emerging from distinct, but related lines of work. First, these findings are in line with a recent study by Rothenberg et al. (2020), which reported that child-driven effects of internalizing concerns on parental control were similar across mothers and fathers. My findings are also consistent with evidence that an array of parenting behaviors, when enacted by either fathers or mothers, have similar associations with children's internalizing symptoms. For example, in a study examining the effects of mindful parenting, the association between lower levels of maladaptive parenting practices (e.g., hostility, physical discipline, and permissiveness) and decreased youth internalizing symptoms was not moderated by mother and father identities (Parent, Dale, McKee, & Sullivan, 2021). Findings also converge with related evidence that, in medical contexts, paternal behavior around child

[6] I conducted a literature search in June of 2021 and did not identify any meta-analyses on this topic (i.e., associations between PO and child anxiety including discussions of parent gender) that were more up-to-date than the studies cited.

emotions has a similar impact to that of mothers. One study of children's responses to parental reassurance in the context of distress after surgeries found that children responded similarly to mothers' and fathers' reassurance (Martin, Chorney, Cohen, & Zain, 2013).

Of note, the present non-significant findings regarding hypothesized gender differences and OP behaviors are consistent with those from one meta-analysis (Pinquart, 2017) that examined associations between many facets of parenting behavior, including warmth, behavioral control, psychological control, and autonomy granting; and children's "internalizing symptoms" broadly defined to include symptoms of anxiety, depression, somatic complaints, and social withdrawal. In this study, Pinquart found that results were similar for both mothers and fathers across studies. They reported that finding a difference only for parental warmth, a facet of parenting not captured in my study. Parental warmth was defined as responsiveness to children, which was more negative when studies included fathers in addition to mothers (i.e., rather than just mothers). Notably, warmth showed a stronger association with symptoms of depression than with anxiety.

Of interest is evidence of differences by parent identity from some studies focused on developmental periods both preceding and following the period of development captured in my study. For example, research on preschool-age children (ages three to six) found that maternal overcontrolling behaviors were related to internalizing symptoms, but fathers' behaviors did not predict their children's internalizing symptoms (Otto, Kolmorgen, Sierau, Weis, von Klitzing, & Klein, 2016). In contrast, in a study including adolescents (ages 12 to 17), paternal psychological control was uniquely associated with increased child internalizing concerns (Lansford, Laird, Pettit, Bates, & Dodge, 2014).

4.3 Descriptive Analyses

In addition to comparing the fit of the proposed structural equation models between mothers and fathers, I compared mother and father reports for all variables included in the study. It was important to conduct these tests, because differences between parents of different identities might emerge in mean levels of variables, rather than in patterns of association among them. Were this to be the case, it would suggest that although children may be more likely to experience overcontrolling behaviors from parents in one role than the other, the impact of those behaviors would be comparable.

Tests for most measures yielded non-significant results; mother and father scores only differed significantly on one measure, the USC-Parental Overprotection Scale, which was designed to measure overcontrol/autonomy restriction, including behavioral, affective, and cognitive aspects of control. Specifically, fathers reported slightly higher levels of overprotection than mothers. These findings are consistent with results from the validation study, which noted that fathers endorsed higher levels of overprotection (Borelli et al., 2015).

4.4 Measurement of PO as a latent construct

This study also makes contributions to our understanding of the latent construct that measures of "parental overcontrol" aim to capture. Sound measurement of the construct, which has been elusive, may allow researchers to more precisely examine the impact of PO and thus resolve inconsistencies in the literature (McLeod et al., 2007). Although overall model fit was good when scores on all PO measures were included as indicators, there was variability in the contribution of each indicator that warrants further elaboration.

First, although the inclusion of the CRPBI behavioral control measure improved overall model fit, scores on the measure correlated negatively with scores on all other measures of PO.

In other words, higher levels of self-reported behavioral control, which constitutes setting clear expectations for appropriate child behaviors and monitoring child adherence to them, were associated with *lower* levels of the other self-report indicators of PO in the model. In addition, CRPBI behavioral control scores were consistently negatively correlated with scores on child anxiety measures. These findings are in line with Barber's (1996) initial conceptualization of parental control behaviors as a construct. Specifically, Barber (1996) hypothesized that *behavioral* control should be considered a distinct construct from "psychological control," which he described as characterized by an emphasis on children's psychological and emotional expression and experiences. Specifically, psychological control was noted to emphasize children's autonomy—or lack thereof. In contrast, Barber (1996) posited that behavioral control may be more reflective of expectations that children should adhere to rules and societal expectations. As such, he expected that psychological control would be most strongly associated with internalizing concerns (e.g., anxiety) and that behavioral control be more closely related to the development of externalizing concerns (e.g., rule-breaking behaviors). Indeed, there is empirical evidence that behavioral control, rather than psychological control, is comparatively more germane to the development of child *externalizing* symptoms (Barber, Olsen, & Shable, 1994; Bean, Barber, & Crane, 2007). It is also worth considering the possibility that behavioral control may be an *adaptive* parenting strategy in the context of childhood anxiety; Pinquart (2017), for example, found meta-analytic evidence that higher levels of behavioral control were associated with lower reports of child internalizing symptoms. However, it is also possible that child characteristics at least partly drive parents' behaviors; for instance, children with lower levels of anxiety, who may be at higher risk for engagement in risky activities, may evoke

comparatively higher levels of behavioral control from their parents than do more anxious children.

Additionally, although scores on the CDQ-DEP, which required respondents to select from several options how they would respond to their child for each of 14 situations illustrated in vignettes, improved model fit, they made only a small contribution to the model and showed weak and non-significant correlations with other study variables. This finding raises the possibility that the CDQ-DEP may capture a facet of PO that was not reflected in the other measures. Specifically, this measure posed questions about concrete and discrete parenting decisions, whereas the other measures of PO included in this study emphasized global parenting styles that may be more trait-like in nature.

Morsbach and Prinz (2006) have noted that social desirability biases may affect the accuracy of parent reporting on their own behaviors; the nature of the CDQ measure may also have made it more sensitive to this bias than the other measures of PO. For example, respondents may have been hesitant to report that they would engage in some behaviors identified in the measure, such as allowing a fearful child to avoid a shot, as social norms and regulations might hold that parents should ensure that their children receive important (and often required) immunizations. Indeed, in the initial validation study of the CDQ, Zabin and Melamed (1980) found a statistically significant negative correlation between mothers' scores on the reinforcement of dependency scale and on a measure of social desirability. Inclusion of a measure of social desirability, such as the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982), may help to address this concern in the future.

Finally, this measure differs in structure from all other measures of PO in this study; scores reflect counts of the times parents indicated they would respondent in a manner

reinforcing decency. In contrast, all other measures of PO used Likert-type scales. As such, method variance may account for the differential associations of this measure. It should be noted, however, that the use of SEM helps to account for measurement error.

4.5 Implications for Intervention

One important end goal of research on parenting and child psychopathology is tailoring treatment and prevention efforts (i.e., treatments emphasizing/tailored to address specific parenting practices; see Taboas, McKay, Whiteside, & Storch, 2015). The present results have the potential to provide helpful information about how practitioners might approach caregiver involvement in treatment for childhood anxiety disorders. Just as research on fathers' parenting practices and child psychopathology is thin, so too is research on the value of including fathers in their children's treatment (Phares, Rojas, Thurston, & Hankinson, 2010). Such research could have important implications for whether or not interventions and prevention efforts should differ based on the gender(s) of the parent(s) who are involved, or their relationships with the child given the child's gender. It could also inform the degree to which clinicians work to encourage fathers' participation in family-based treatments.

Historically, fathers have been less involved than mothers in their children's psychological treatment (Lamb, 2010), including parenting interventions (Frank, Keown, Dittman, & Sanders, 2015). Indeed, one study found that even when asked to participate in treatment, about half of fathers declined (Phares et al., 2010). Parental involvement is recommended as a potentially important component of evidence-based interventions for youth anxiety (e.g., Brendel & Maynard, 2014; Yap & Jorm, 2015). However, there is evidence that parental involvement may only engender small benefits relative to individual therapy, and that efforts to increase the effects of caregiver involvement are warranted (Dowell & Ogles, 2010).

My results suggest that consideration of fathers' participation may be important to intervention efforts, particularly when treatments target overcontrolling behaviors. Practitioners may seek to understand the ways in which each caregiver in a family engages with their children. However, rather than parent gender, parent involvement in treatment may perhaps be predicated at least in part on each individual's parenting style. Ensuring that a parent who is prone to engage in overcontrolling ways is engaged in parent training elements of treatment may, for example, be more important than ensuring that a parent in a mothering or fathering role is necessarily engaged.

4.6 Limitations and Future Directions

Although the present study offers important contributions to the literature, it has limitations that warrant consideration. First, the cross-sectional design precludes inferences about causality. One strategy for addressing this concern is to include fathers and children in the design of future longitudinal studies, which would also allow for the examination of change across development.

Second, the recruitment strategy I used in this study did not allow for children's perspectives to be taken into account. Thus, the study relies on parent-report, which shows variable levels of agreement with children's own reports of anxiety (e.g., Nauta et al., 2004). Including child reports may be especially useful, given evidence that the association between parenting behaviors and child psychopathology is bidirectional (i.e., that children's and parent's behaviors influence one another; see Connell & Goodman, 2002). For example, there is some evidence that children exhibiting anxious behaviors *evoke* PO responses in their caregivers (Allmann, Klein, & Kopaba-Sibley, 2021), a nuance I was not able to examine in this study. Including children's report may also facilitate the examination of goodness-of-fit between parent

behaviors and child characteristics (i.e., the degree to which a particular parent is suited to adapt their behaviors to meet a child's needs; see Gordon, 1981). There is evidence that poor fit between parent and child is associated with increased rates of child psychopathology (Lerner & Lerner, 2017); better understanding the role fit may play in the relationship between PO and child anxiety could help further inform intervention development.

Surprisingly, the sample included an overrepresentation of sons relative to daughters, which was the result of fathers' tendency to select a son rather than a daughter as the target child to respond about. As a result, the sample size for daughters was reduced, which may affect the generalizability of the study. This disparity may be accounted for by chance; participating fathers, but not mothers, may simply have been more likely to have sons than daughters in the target age range. Alternatively, however, these findings may be in line with evidence that fathers tend to invest more time in their sons than their daughters, but mothers invest time equivalently regardless of child gender (e.g., Lundberg, 2005; Mammen, 2011). Future research may specify child gender in recruitment efforts (e.g., recruiting specifically for mothers with sons) in order to account for possible overgeneralization. A more nuanced measure of time spent with child, such as hours per week (rather than days), may allow for examination of this factor. Additionally, caregivers who identified their sexual orientation as "bisexual" were overrepresented in the sample relative to the demographics of the United States (Gates, 2011). Continuing to include questions about caregiver sexual orientation may be important to assess the ways in which these identities may impact parenting.

As with many studies of psychological phenomena (Paulhus & Vazire, 2007), this study relied on self-report data, which may be limited by factors such as social desirability bias, participant misinterpretation of items, and insight. However, the construct of PO, as

operationalized in this study, comprises a set of behaviors that would be complicated to meaningfully capture through observational methods. Identifying ways to efficiently and effectively gather and summarize observational data regarding behaviors reflective of PO would be an important advance that might facilitate richer research in this area. Ecological momentary assessments gathered during parent-child interactions regarding each others' behaviors would be one potential route to obtaining such data.

Future research may also include take a dyadic/family systems/network approach, as suggested by Cabrera and colleagues (2018). Examining relationships between caregivers' behaviors allows researchers to account for the effect of other caregivers, thereby offering a more nuanced understanding of each individual caregiver's effects on their children, both directly and indirectly. For example, one study used an Actor Partner Interdependence Model to examining maternal behaviors as a mediator of the effects of father anxiety and behaviors on toddler anxiety (Gibler, Kalomiris, & Kiel, 2018). They found that although there was not a direct relationship between parent and child anxiety when controlling for parenting behaviors, paternal anxiety was linked with child anxiety *indirectly* through mothers' encouragement of independence, but not for mothers' overprotective behaviors.

This study contributes to the understanding of associations between mothers' and fathers' PO behaviors and anxiety conceptualized broadly. However, there is some theory and evidence to suggest that parent gender may have differential effects based on symptom cluster. For example, Bögels and Perotti's (2010) model of paternal influence on children's social anxiety, predicts a stronger association between *social anxiety* and parenting behaviors for fathers than for mothers, given evolutionary theory that fathers play a more significant role in signaling how children should understand their social environments. Morris and Oosterhoff (2016), in a study

of school-aged children, found that maternal overcontrolling behaviors were associated with increased child social anxiety, but paternal behaviors were not. They did not find a difference when using "general" anxiety as their outcome.

The recruitment method used in this study, Amazon Mechanical Turk, and the context in which data were collected, may affect generalizability. Notably, on the GAD-7, respondents reported experiencing higher levels of anxiety than may be expected in a sample of the general population, based on published norms for the measure (Spitzer et al., 2007). Similarly, participating parents reported levels of child anxiety on the SCARED-Parent report and SCAS-P that were elevated relative to findings from previous psychometric studies using the measures with a community sample (Birmaher et al., 1997 and Nauta et al., 2004, respectively). As with Jensen-Doss et al. (2021), my sample may be better characterized as at-risk than as a general community sample. However, it warrants consideration that data were collected during the midst of the COVID-19 pandemic, which may have contributed to elevated levels of anxiety. Indeed, higher scores on all measures of anxiety correlated, in a statistically significant manner, with greater reported covid-related stress for both youth and parents. It will be important to replicate this study when pandemic-related stress has decreased, as effects of this global event on study data could not be isolated.

It is also important to consider that, although the posting on MTurk did not state that it was about child anxiety or parental overcontrol, parents may have been more likely to report on a child with mental health difficulties, or a child whom they are more likely to overcontrol, relative to their other children. Random selection of a child for a parent to report on, if they have multiple children, would help address this potential limit to generalizability.

4.7 Conclusion

Research on child anxiety and parenting behaviors has emphasized parental overcontrol, an excessive amount of involvement in, and control over, a child's environment and experiences. A key limitation of this research has been the reliance on samples composed primarily—or entirely—of mothers. Consequently, research has offered limited insight into the role of parent gender's effect on PO and child anxiety. Findings from the current study suggest that overcontrolling behaviors have similar effects on child anxiety, regardless of whether enacted by a mother or a father. They also offer support for the utility of measuring PO as a latent construct. Clinically, results have the potential to inform the nature of caregiver involvement in treatment for childhood anxiety disorders and suggest that father participation may be beneficial, particularly when interventions target parental overcontrol. Taken together with the extant literature, my results point to longitudinal studies including child-report and multiple caregivers, if available, as a particularly fruitful avenue for future research.

REFERENCES

Affrunti, N. W., & Ginsburg, G. S. (2012). Exploring parental predictors of child anxiety: The mediating role of child interpretation bias. *Child Youth Care Forum, 41*, 517-527. doi: 10.1007/s10566-012-9186-6

Allmann, A., Klein, D., & Kopala-Sibley, D. (2021). Bidirectional and transactional relationships between parenting styles and child symptoms of ADHD, ODD, depression, and anxiety over 6 years. *Development and Psychopathology,* 1-12. doi:10.1017/S0954579421000201

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child development, 67*(6), 3296-3319. doi: 10.2307/1131780.

Beach, D. A. (1989). Identifying the random responder. *The Journal of psychology, 123*(1), 101-103.

Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): A replication study. *Journal of the American academy of child & adolescent psychiatry*, *38*(10), 1230-1236.

Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J., & Neer, S. M. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(4), 545-553.

Bögels, S. M., & Brechman-Toussaint, M. L. (2006). Family issues in child anxiety: Attachment, family functioning, parental rearing and beliefs. *Clinical psychology review*, *26*(7), 834-856.

Bögels, S.M. & Phares, V. (2008). Fathers' role in the etiology, prevention and treatment of child anxiety: A review and new model. *Clinical Psychology Review, 28* (4), 539–558. http://dx.doi.org/10.1016/j.cpr.2007.07.011.

Borelli, J. L., & Margolin, G. (2013). The USC Parental Overcontrol Scale. *Unpublished document*.

Borelli, J. L., Margolin, G., & Rasmussen, H. F. (2015). Parental overcontrol as a mechanism explaining the longitudinal association between parent and child anxiety. *Journal of Child and Family Studies*, *24*(6), 1559-1574.

Bowen, N. & Guo, S. (2012). *Structural Equation Modeling*. New York, New York: Oxford University Press, Inc.

Brendel, K. E., & Maynard, B. R. (2014). Child-parent interventions for childhood anxiety disorders: A systematic review and meta-analysis. *Research on Social Work Practice, 24*(3), 287–295. https://doi.org/10.1177/1049731513503713

Brook, C. A., & Schmidt, L. A. (2008). Social anxiety disorder: A review of environmental risk factors. *Neuropsychiatric Disease and Treatment, 4*(1A), 123-143.

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). New York, NY: Guilford Publications.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data?. *Perspectives on psychological science*, *6*(1), 3-5.

Cabrera, N. J., Volling, B. L., & Barr, R. (2018). Fathers are parents, too! Widening the lens on parenting for children's development. *Child Development Perspectives*, *12*(3), 152-157.

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in human behavior*, *29*(6), 2156-2160. https://doi.org/10.1016/j.chb.2013.05.009

Cassano, M., Adrian, M., Veits, G., & Zeman, J. (2006). The inclusion of fathers in the empirical investigation of child psychopathology: An update. *Journal of Clinical Child and Adolescent Psychology*, *35*(4), 583-589. https://doi.org/10.1207/s15374424jccp3504_10

Chen, F., Zheng, D., Liu, J., Gong, Y., Guan, Z., & Lou, D. (2020). Depression and anxiety among adolescents during COVID-19: A cross-sectional study. *Brain, behavior, and immunity*, *88*, 36.

Choi, E. P. H., Hui, B. P. H., & Wan, E. Y. F. (2020). Depression and anxiety in Hong Kong during COVID-19. *International journal of environmental research and public health*, *17*(10), 3740.

Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin, 124*(1), 3–21. doi:10.1037/0033-2909.124.1.3.

Christakis, D. A., Van Cleve, W., & Zimmerman, F. J. (2020). Estimation of US children's educational attainment and years of life lost associated with primary school closures during the coronavirus disease 2019 pandemic. *JAMA network open*, *3*(11), e2028786-e2028786.

Connell, A. M., & Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: A meta-analysis. *Psychological bulletin*, *128*(5), 746.

Costello, E. J., Egger, H. L., & Angold, A. (2005). The developmental epidemiology of anxiety disorders: Phenomenology, prevalence, and comorbidity. *Child and Adolescent Psychiatric Clinics of North America*, *14*, 631–648.

de Lijster, J. M., Dieleman, G. C., Utens, E. M., Dierckx, B., Wierenga, M., Verhulst, F. C., & Legerstee, J. S. (2018). Social and academic functioning in adolescents with anxiety disorders: A systematic review. *Journal of affective disorders*, *230*, 108-117.

Dowell, K. A., & Ogles, B. M. (2010). The effects of parent participation on child psychotherapy outcome: A meta-analytic review. *Journal of Clinical Child and Adolescent Psychology, 39*(2), 151–162. https://doi.org/10.1080/15374410903532585

Edwards, S. L., Rapee, R. M., & Kennedy, S. (2008). Psychometric properties of a parent-report measure of overprotection of preschool-aged children. *Unpublished manuscript.*

Edwards, S. L., Rapee, R. M., & Kennedy, S. (2010). Prediction of anxiety symptoms in preschool-aged children: Examination of maternal and paternal perspectives. *Journal of Child Psychology and Psychiatry*, *51*(3), 313-321.

Essau, C. A., Conradt, J., & Petermann, F. (2000). Frequency, comorbidity, and psychosocial impairment of anxiety disorders in German adolescents. *Journal of anxiety disorders*, *14*(3), 263-279.

Essau, C. A., Lewinsohn, P. M., Lim, J. X., Moon-ho, R. H., & Rohde, P. (2018). Incidence, recurrence and comorbidity of anxiety disorders in four major developmental stages. *Journal of affective disorders*, *228*, 248-253.

Fabiano, G. A., & Caserta, A. (2018). Future directions in father inclusion, engagement, retention, and positive outcomes in child and adolescent research. *Journal of Clinical Child & Adolescent Psychology*, *47*(5), 847-862.

Fagan, J., Day, R., Lamb, M. E., & Cabrera, N. J. (2014). Should researchers conceptualize differently the dimensions of parenting for fathers and mothers?. *Journal of Family Theory & Review*, *6*(4), 390-405.

Field, A. (2017). *Discovering Statistics Using IBM SPSS Statistics: North American Edition* (5th ed.). SAGE Publications Ltd.

Fliek, L., Daemen, E., Roelofs, J., & Muris, P. (2015). Rough-and-tumble play and other parental factors as correlates of anxiety symptoms in preschool children. *Journal of Child and Family Studies,*. doi:10.1007/s10826-014-0083-5.

Francis, S. M., Tone, E. B., Caporino, N. E., Tully, E. C., & Cohen, L. L. (2019). Cognitive predictors of parental rescue behavior and malleability of behavior using a brief psychoeducation intervention. *Child Psychiatry & Human Development, 50*(2), 321-331.

Frank, T. J., Keown, L. J., Dittman, C. K., & Sanders, M. R. (2015). Using father preference data to increase father engagement in evidence-based parenting programs. *Journal of Child and Family Studies, 24*(4), 937-947.

Gates, G. J. (2011, April). *How many people are lesbian, gay, bisexual, and transgender?* The Williams Institute. Retrieved from https://escholarship.org/uc/item/09h684x2

Gerlsma, C., Emmelkamp, P. M., & Arrindell, W. A. (1990). Anxiety, depression, and perception of early parenting: A meta-analysis. *Clinical Psychology Review*, *10*(3), 251-277.

Gibler, R. C., Kalomiris, A. E., & Kiel, E. J. (2018). Paternal anxiety in relation to toddler anxiety: The mediating role of maternal behavior. *Child Psychiatry & Human Development*, *49*(4), 512-522.

Ginsburg, G. S., & Schlossberg, M. C. (2002). Family-based treatment of childhood anxiety disorders. *International Review of Psychiatry*, *14*(2), 143-154.

Gordon, B. N. (1981). Child temperament and adult behavior: An exploration of "goodness of fit". *Child Psychiatry and Human Development*, *11*(3), 167-178.

Grossmann, K., Grossmann, K. E., Fremmer-Bombik, E., Kindler, H., Scheuerer-Englisch, H., & Zimmermann, A. P. (2002). The uniqueness of the child–father attachment relationship: Fathers' sensitive and challenging play as a pivotal variable in a 16-year longitudinal study. *Social development*, *11*(3), 301-337.

Hill, R. M., Castellanos, D., & Pettit, J. W. (2011). Suicide-related behaviors and anxiety in children and adolescents: A review. *Clinical psychology review*, *31*(7), 1133-1144.

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology, 27*(1), 99-114.

Jensen-Doss, A., Patel, Z. S., Casline, E., Mora Ringle, V. A., & Timpano, K. R. (2021). Using Mechanical Turk to study parents and children: An examination of data quality and representativeness. *Journal of Clinical Child & Adolescent Psychology*, DOI: 10.1080/15374416.2020.1815205

Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: A randomized clinical trial evaluating child and family modalities. *Journal of consulting and clinical psychology, 76*(2), 282.

Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: Outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *Journal of consulting and clinical psychology*, *72*(2), 276.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York, New York: The Guilford Publications.

Korelitz, K. E., & Garber, J. (2016). Congruence of parents' and children's perceptions of parenting: A meta-analysis. *Journal of youth and adolescence, 45*(10), 1973-1995.

Lansford, J. E., Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2014). Mothers' and fathers' autonomy-relevant parenting: Longitudinal links with adolescents' externalizing and internalizing behavior. *Journal of youth and adolescence, 43*(11), 1877-1889.

Lamb, M. E. (Ed.). (2010). *The role of the father in child development*. John Wiley & Sons.

Langley, A. K., Bergman, R. L., McCracken, J., & Piacentini, J. C. (2004). Impairment in childhood anxiety disorders: Preliminary examination of the child anxiety impact scale–parent version. *Journal of Child and Adolescent Psychopharmacology*, *14*(1), 105-114.

Leidy, M. S., Schofield, T. J., & Parke, R. D. (2013). Fathers' contributions to children's social development. In N. J. Cabrera & C. S. Tamis- LeMonda (Eds.), *Handbook of father involvement: Multidisciplinary perspectives* (2nd ed., pp. 151–167). New York, NY: Routledge, Taylor and Francis Group.

Lerner, Richard M., and Jacqueline V. Lerner. "Children in their contexts: A goodness-of-fit model." In *Parenting across the life span*, pp. 377-404. Routledge, 2017.

Lundberg, S. (2005). Sons, daughters, and parental behaviour. *Oxford Review of Economic Policy, 21*, 340-356.

MacCallum, R. C., & Austin, J. T. (2000). Applications of structural equation modeling in psychological research. *Annual review of psychology*, *51*(1), 201-226.

Macfadyen, A., Swallow, V., Santacroce, S., & Lambert, H. (2011). Involving fathers in research. *Journal for Specialists in Pediatric Nursing, 16*, 216–219.

Majdandžić, M., de Vente, W., & Bögels, S. M. (2016). Challenging parenting behavior from infancy to toddlerhood: Etiology, measurement, and differences between fathers and mothers. *Infancy*, *21*(4), 423-452.

Majdandžić, M., Möller, E. L., de Vente, W., Bögels, S. M., & van den Boom, D. C. (2014). Fathers' challenging parenting behavior prevents social anxiety development in their 4-year-old children: A longitudinal observational study. *Journal of Abnormal Child Psychology*, *42*(2), 301-310.

Mammen, K. (2011). Fathers' time investments in children: Do sons get more?. *Journal of Population Economics*, *24*(3), 839-871.

Martin, S. R., Chorney, J. M., Cohen, L. L., & Kain, Z. N. (2013). Sequential analysis of mothers' and fathers' reassurance and children's postoperative distress. *Journal of Pediatric Psychology, 38,* 1121–1129. doi:10.1093/jpepsy/jst061

McBride, B. A., & Mills, G. (1993). A comparison of mother and father involvement with their preschool age children. *Early Childhood Research Quarterly, 8,* 457–477.

McCredie, M. N., & Morey, L. C. (2018). Who are the Turkers? A characterization of MTurk workers using the personality assessment inventory. *Assessment*, *26*(5), 759-766.

McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical psychology review*, *27*(2), 155-172.

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological methods, 17*(3), 437.

Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(10), 980-989.

Mitchell, S. J., See, H. M., Tarkow, A. K. H., Cabrera, N., McFadden, K. E., & Shannon, J. D. (2007). Conducting studies with fathers: Challenges and opportunities. *Applied Developmental Science, 11,* 239–244.

Möller, E. L., Nikolić, M., Majdandžić, M., & Bögels, S. M. (2016). Associations between maternal and paternal parenting behaviors, anxiety and its precursors in early childhood: A meta-analysis. *Clinical Psychology Review*, *45*, 17-33.

Morris, T. L., & Oosterhoff, B. (2016). Observed mother and father rejection and control: Association with child social anxiety, general anxiety, and depression. *Journal of Child and Family Studies*, *25*(9), 2904-2914.

Morsbach, S. K., & Prinz, R. J. (2006). Understanding and improving the validity of self-report of parenting. *Clinical Child and Family Psychology Review*, *9*(1), 1-21.

Muris, P., & Merckelbach, H. (1998). Perceived parental rearing behaviour and anxiety disorders symptoms in normal children. *Personality and Individual Differences*, *25*(6), 1199-1206.

Muris, P., Merckelbach, H., van Brakel, A., Mayer, B., & van Dongen, L. (1998). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Relationship with anxiety and depression in normal children. *Personality and Individual Differences*, *24*(4), 451-456.

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus: Statistical Analysis with Latent Variables: User's Guide (8th ed.)*. Los Angeles, CA: Muthén & Muthén.

Nauta, M. H., Scholing, A., Rapee, R. M., Abbott, M., Spence, S. H., & Waters, A. (2004). A parent-report measure of children's anxiety: Psychometric properties and comparison with child-report in a clinic and normal sample. *Behaviour research and therapy*, *42*(7), 813-839.

Otto, Y., Kolmorgen, K., Sierau, S., Weis, S., von Klitzing, K., & Klein, A. M. (2016). Parenting behaviors of mothers and fathers of preschool age children with internalizing disorders. *Journal of Child and Family Studies*, *25*(2), 381-395.

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality* (pp. 224–239). London, England: Guilford.

Parent, J., Forehand, R., Pomerantz, H., Peisch, V., & Seehuus, M. (2017). Father Participation in child psychopathology research. *Journal of Abnormal Child Psychology*, *45*(7), 1259-1270. doi: 10.1007/s10802-016-0254-5

Phares, V., & Compas, B. E. (1992). The role of fathers in child and adolescent psychopathology: Make room for daddy. *Psychological bulletin*, *111*(3), 387.

Phares, V., Fields, S., Kamboukos, D., & Lopez, E. (2005). Still looking for poppa. *American Psychologist, 60,* 735–736. doi:10.1037/0003- 066X.60.7.735.

Phares, V., Rojas, A., Thurston, I.B., & Hankinson, J.C. (2010). Including fathers in clinical interventions for children and adolescents. In M.E. Lamb (Ed.), *The role of the father in child development.* (pp. 459–485). Hoboken, NJ: John Wiley & Sons.

Pinquart, M. (2017). Associations of parenting dimensions and styles with internalizing symptoms in children and adolescents: A meta-analysis. *Marriage & Family Review*, *53*(7), 613-640.

Poole, M. K., Fleischhacker, S. E., & Bleich, S. N. (2021). Addressing child hunger when school is closed—Considerations during the pandemic and beyond. *New England Journal of Medicine*, *384*(10), e35.

Racine, N., Cooke, J. E., Eirich, R., Korczak, D. J., McArthur, B., & Madigan, S. (2020). Child and adolescent mental illness during COVID-19: A rapid review. *Psychiatry research*, *292*, 113307.

Raley, S., Bianchi, S. M., Wang, W. (2012). When do fathers care? Mothers' economic contribution and fathers' involvement in child care. *American Journal of Sociology*, *117*(5), 1422–1459.

Rapee, R. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical psychology review*, *17*(1), 47-67.

Reitman, D., & Asseff, J. (2010). Parenting practices and their relation to anxiety in young adulthood. *Journal of anxiety disorders*, *24*(6), 565-572.

Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of clinical psychology*, *38*(1), 119-125.

Rork, K. E., & Morris, T. L. (2009). Influence of parenting factors on childhood social anxiety: Direct observation of parental warmth and control. *Child & Family Behavior Therapy*, *31*(3), 220-235.

Rudy, B. M., Zavrou, S., Johnco, C., Storch, E. A., & Lewin, A. B. (2017). Parent-led exposure therapy: A pilot study of a brief behavioral treatment for anxiety in young children. *Journal of Child and Family Studies*, *26*(9), 2475-2484.

Runyon, K., Chesnut, S. R., & Burley, H. (2018). Screening for childhood anxiety: A meta-analysis of the screen for child anxiety related emotional disorders. *Journal of affective disorders*, *240*, 220-229.

Sayer, L. C. (2016). Trends in women's and men's time use, 1965–2012: Back to the future? In S. M. McHale, V. King, J. van Hook, & A. Booth (Eds.), *Gender and couple relationships* (pp. 43–77). Switzerland: Springer.

Schaefer, E. S. (1965). Children's reports of parental behavior: An inventory. *Child development*, *36*, 413-423.

Schleider, J. L., & Weisz, J. R. (2015). Using Mechanical Turk to study family processes and youth mental health: A test of feasibility. *Journal of Child and Family Studies*, *24*(11), 3235-3246.

Schwarz, J. C., Barton-Henry, M. L., & Pruzinsky, T. (1985). Assessing child-rearing behaviors: A comparison of ratings made by mother, father, child, and sibling on the CRPBI. *Child development*, 462-479.

Sherr, L., Davé, S., Lucas, P., Senior, R., & Nazareth, I. (2006). A feasibility study on recruiting fathers of young children to examine the impact of paternal depression on child development. *Child Psychiatry and Human Development*, *36*, 295–309. doi:10.1007 /s10578-005-0004-3.

Shevlin, M., McBride, O., Murphy, J., Miller, J. G., Hartman, T. K., Levita, L., ... & Bentall, R. P. (2020). Anxiety, depression, traumatic stress and COVID-19-related anxiety in the UK general population during the COVID-19 pandemic. *BJPsych Open*, *6*(6).

Silverberg, S. B., & Steinberg, L. (1987). Adolescent autonomy, parent-adolescent conflict, and parental well-being. *Journal of youth and adolescence*, *16*(3), 293-312.

Sim, W. H., Jorm, A. F., Lawrence, K. A., & Yap, M. B. (2019). Development and evaluation of the Parenting to Reduce Child Anxiety and Depression Scale (PaRCADS): Assessment of parental concordance with guidelines for the prevention of child anxiety and depression. *PeerJ*, *7*, e6865.

Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal of Clinical Child Psychology*, *25*(2), 225-237.

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of internal medicine*, *166*(10), 1092-1097.

Taboas, W. R., McKay, D., Whiteside, S. P., & Storch, E. A. (2015). Parental involvement in youth anxiety treatment: Conceptual bases, controversies, and recommendations for intervention. *Journal of Anxiety Disorders*, *30*, 16-18.

Taylor, S. (2021). COVID stress syndrome: Clinical and nosological considerations. *Current psychiatry reports*, *23*(4), 1-7.

Taylor, S., Landry, C. A., Paluszek, M. M., Fergus, T. A., McKay, D., & Asmundson, G. J. (2020). Development and initial validation of the COVID Stress Scales. *Journal of Anxiety Disorders*, *72*, 102232. doi: 10.1016/j.janxdis.2020.102232

U.S. Census Bureau (2016). *Current Population Survey Annual Social and Economic Supplement.* Retrieved from https://www.census.gov/programs-surveys/cps.html

Van der Bruggen, C., Stams, G., & Bögels, S. (2008). Research Review: The relation between child and parent anxiety and parental control: A meta-analytic review. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 49*(12), 1257-1269.

Verhoeven, M., Bögels, S.M. & van der Bruggen, C. (2012). Unique roles of mothering and fathering in child anxiety: Moderation by child's age and gender. *Journal of Child and Family Studies. (21)*2, 331-343. https://doi.org/10.1007/s10826-011-9483-y

Wang, J., & Wang, X. (2019). *Structural equation modeling: Applications using Mplus* (2nd ed.). Hoboken, NJ: Wiley.

Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W., & Chu, B. C. (2003). Parenting and childhood anxiety: Theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry, 44*, 134–151. doi:10.1111/1469-7610.00106.

Yap, M. B., & Jorm, A. F. (2015). Parental factors associated with childhood anxiety, depression, and internalizing problems: A systematic review and meta-analysis. *Journal of Affective Disorders, 175*, 424–440. https://doi.org/10.1016/j.jad.2015.01.050

Zabin, M. A., & Melamed, B. G. (1980). Relationship between parental discipline and children's ability to cope with stress. *Journal of Behavioral Assessment, 2*(1), 17-38.

APPENDICES

Appendix A

Parental Overprotection Scale

This questionnaire is designed to gather information about various aspects of parenting. Each child has unique needs so there are no right or wrong answers. For each item, please circle a number indicating often each aspect of parenting represents your usual response to your child.

0	1	2	3	4
Not at all	A little	Somewhat	Quite often	Very much

1. I comfort my child immediately when he/she cries	0	1	2	3	4
2. When playing in a park, I keep my child within a close distance of me (i.e. within about 30m)	0	1	2	3	4
3. I protect my child from criticism	0	1	2	3	4
4. I give my child extra attention when he/she clings to me	0	1	2	3	4
5. I would not allow my child to go out with family friends if I were not present	0	1	2	3	4
6. I almost always take my child to the doctor if he/she is unwell	0	1	2	3	4
7. I keep a close watch on my child at all times	0	1	2	3	4
8. I tend to be over-protective of my child	0	1	2	3	4
9. I try to anticipate and avoid situations where my child might do something risky	0	1	2	3	4
10. I try to protect my child from making mistakes	0	1	2	3	4
11. I do not allow my child to climb trees	0	1	2	3	4
12. I shelter my child from life's difficulties	0	1	2	3	4
13. When away from home I tend to panic if my child is out of my sight, even for a moment	0	1	2	3	4
14. I am reluctant for my child to play some sports for fear he/she might get hurt	0	1	2	3	4
15. I will only leave my child with close friends or relatives if I have to go out	0	1	2	3	4
16. I accompany my child on all outings	0	1	2	3	4
17. I shield my child from conflict	0	1	2	3	4
18. I do everything possible to protect my child from potential injury	0	1	2	3	4
19. I protect my child from his/her fears	0	1	2	3	4

Appendix B

Children's Report of Parenting Behavioral Inventory – Parent Report (CRPBI-30-Parent Report)

Please read each statement on the following pages and circle the answer that most closely describes the way you act toward your child.
If you think the statement describes a person who is **Not Like** you, circle 1.
If you think the statement describes a person who is **Somewhat Like** you, circle 2.
If you think the statement describes a person who is **A Lot Like** you, circle 3.

I AM A PERSON WHO ...		
1. ... makes my child feel better after talking over their worries with me.		
1	2	3
2. ... tells my child of all the things I has done for them.		
1	2	3
3. ... believes in having a lot of rules and sticking with them.		
1	2	3
4. ... smiles at my child often.		
1	2	3
5. ... says, if my child really cared for me, they would not do things that cause me to worry.		
1	2	3
6. ... insists that my child must do exactly as they are told.		
1	2	3
7. ... am able to make my child feel better when they are upset.		
1	2	3
8. ... is always telling my child how they should behave.		
1	2	3
9. ... is very strict with my child.		
1	2	3
10. ... enjoys doing things with my child.		
1	2	3
11. ... would like to be able to tell my child what to do all the time.		
1	2	3
12. ... gives hard punishment.		
1	2	3
13. ... cheers my child up when they are sad.		
1	2	3
14. ... wants to control whatever my child does.		
1	2	3
15. ... is easy with my child.		
1	2	3

16. ... gives my child a lot of care and attention.
1 2 3
17. ... is always trying to change my child.
1 2 3
18. ... lets my child off easy when they do something wrong.
1 2 3
19. ... makes my child feel like the most important person in my life.
1 2 3
20. ... only keeps rules when it suits me.
1 2 3
21. ... gives my child as much freedom as they want.
1 2 3
22. ... believes in showing my love for my child.
1 2 3
23. ... is less friendly with my child, if I do not see things their way.
1 2 3
24. ... lets my child go anyplace they please without asking.
1 2 3
25. ... often praises my child.
1 2 3
26. ... will avoid looking at my child when she/he has disappointed me.
1 2 3
27. ... lets my child go out any evening that they want.
1 2 3
28. ... is easy to talk to.
1 2 3
29. ... if my child has hurt my feelings, stops talking to them until they please me again.
1 2 3
30. ... lets my child do anything they like to do.
1 2 3

Appendix C

USC-Parental Overprotection Scale

Below is a list of sentences that describe how people feel. Read each phrase and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for your child. Then, for each statement, fill in one circle that corresponds to the response that seems to describe your child. Please respond to all statements as well as you can, even if some do not seem to concern your child.

The rating scale is as follows:
0 Not at all descriptive
1
2
3
4 Extremely descriptive

1	I encourage my child to be curious, to explore, and to question things. *(Reverse Coded)*	0	1	2	3	4
2	I do not allow my child to get angry with me.	0	1	2	3	4
3	I don't think children should be given sexual information.	0	1	2	3	4
4	I believe that talking with my child about his/her worries will only make him/her more upset.	0	1	2	3	4
5	When my child expresses negative feelings, I am negative in return.	0	1	2	3	4
6	There are lots of ways that I'd like to change my child.	0	1	2	3	4
7	I expect my child to tell me everything that happens when he/she is away from home.	0	1	2	3	4
8	I think my child disobeys me just to upset me.	0	1	2	3	4
9	When I am disappointed or irritated with my child, I withhold affection.	0	1	2	3	4
10	I am less friendly when my child doesn't see things my way.	0	1	2	3	4

Appendix D

Child Development Questionnaire

The following 14 items represent various situations which children often face while growing up. Please respond to each item in the way that you would deal with the situation if it arose with your child at the present time. Even if you and your child have not faced a particular situation, please assume that the situation did arise and answer the question accordingly. There are alternative responses plus an "other" for each item. Select the alternative that you would be most likely to use. Please choose only ONE response for each item. If you find it necessary to use the "other" category, write your response clearly on the line next to the word "other." Please try to limit your use of this category. Note that there are no right or wrong answers. Parents respond in various ways to different situations.

1. If I took my child to get a haircut and he absolutely refused to sit on the chair because he was frightened, I would most likely
   _____explain that children get their hair cut all the time and nothing bad happens to them.
   _____tell my child that if he didn't sit down he'd get a mild spanking.
   _____tell my child that if he sat in the chair and behaved he'd get a lollipop.
   _____take my child home immediately.
   _____put my child in the chair and hold him there.
   _____Other:_____

2. If my child was afraid to go near a small harmless puppy, I would most likely
   _____place his hand on the puppy against his will.
   _____permit him to stay away from the puppy.
   _____tell him that if he did not touch the dog I would be ashamed of him.
   _____pet the puppy to show him it was harmless.
   _____tell him that if he touched the dog he'd make me very happy.
   _____Other:_____

3. If I took my child to the doctor's office to get an injection and he ran out of the room when he saw the needle, I would most likely
   _____tell him if he came back and cooperated with the doctor, I'd buy him an ice cream cone.
   _____tell him if he didn't come back he would not be permitted to watch TV.
   _____pull him back into the room and hold him while the doctor administered the injection.
   _____tell the doctor we'd come back some other time.
   _____tell him that many of his friends get shots and are not afraid.
   _____Other:_____

4. If my child woke up in the middle of the night complaining he had a bad dream and said he would not go back to bed unless his bedroom light was let on, I would most likely

_____tell him that if he did not return to bed and leave the light off, he would not be able to play with his friends.
_____ allow him to leave on a small hall or bathroom light and gradually have him get used to sleeping with no light at all.
_____tell him that if he went back to bed with the light off, I'd give him a special treat.
_____put him into bed and fit it so he could not turn on the light; for instance by taking out the bulb.
_____allow the light to be left on.
_____Other:_____

5. If while learning to ride a bicycle, my child fell off, uninjured, and would not get back on, I would most likely
_____allow him to practice some other time.
_____ tell him that if he didn't learn to ride a bike, all the children on the block would laugh at him.
_____get on the bicycle myself and show him how easy it becomes with just a little more practice.
_____tell him how proud I'd be if he tried again.
_____lift him onto the bicycle, against his wishes.
_____Other:_____

6. If it was my child's first exposure to a lake or pool, and he was too frightened to go near the water, I would most likely
_____take my child and place him in the water against his will.
_____tell him that if he went into the water, I'd think he was a great swimmer.
_____gradually get him used to the water by first wetting his hands and feet.
_____permit him to stay out of the water.
_____tell him if he didn't go into the water, I'd think he was "chicken."
_____Other:_____

7. If my child was afraid of thunder and lighting and wanted to come into bed with me at night, I would most likely
_____tell him that thunder and lightning were only noises and lights in the far distance and could not harm him while in his own bed.
_____take him back to his room, put him to bed, and shut the door.
_____tell him that if he did not sleep in his own bed, he'd be behaving like a baby.
_____tell him that if he went back to his own bed, he'd be able to stay up later the next night.
_____let him sleep with me.
_____Other:_____

8. If, while at summer camp, my child became terribly homesick and asked to be taken home, I would most likely
   _____tell him that if he didn't stop his childish behavior, all the children and counselors would be very upset with him.
   _____tell him that other children go to camp and are never homesick.
   _____take him home.
   _____tell him that if he stayed, he would prove to everyone how very grown-up and mature he was.
   _____ignore his pleas to come home and leave him at camp until it was time to return.
   _____Other:_____

9. If my child became very frightened on the day he had to give a "show and tell" in school and said he would refuse to do it, I would most likely
   _____ask the teacher to excuse my child from doing the assignment.
   _____make sure he'd give his presentation, even if I had to take him to the front of the classroom.
   _____tell my child that if he gave his talk I would buy him a surprise.
   _____tell my child that, once in front of the class, his fear would disappear very quickly.
   _____tell my child that if he didn't give his presentation the teacher would give him a bad grade.
   _____Other:_____

10. If my child expressed great fear when he learned that he must go to the hospital for a tonsillectomy, and decided that he would not go, I would most likely
    _____tell him that if he didn't have the operation, he would become very sick.
    _____see if the operation could be postponed to a later date.
    _____tell him that the hospital has excellent doctors and nurses who would take good care of him.
    _____tell him that if he went to the hospital and had the operation, the family would make a party for him when he returned.
    _____tell him that whether he liked it or not, he was going to the hospital.
    _____Other:_____

11. If I took my child to get his teeth drilled, and because of his great fear he was unable to sit still and cooperate with the dentist, I would most likely
    _____tell him that if he cooperated with the dentist, he could invite a friend to sleep that evening at our house.
    _____hold him still in the chair, against his will, while the dentist drilled his teeth.
    _____tell him that I've had my teeth drilled many times and that it hurts for just a short time.
    _____take my child home.
    _____tell him that if he did not let the dentist take care of him, his teeth would rot and perhaps fall out.
    _____Other:_____

12. If my child refused to open a closet because he thought there was a ghost inside, I would most likely
    _____tell him how shocked and disappointed I was that he would not open the door.
    _____tell him that if he opened the door I would think he was a hero.
    _____take my child, unwillingly, by the hand and have him open the door.
    _____open the door myself to show him no ghost existed.
    _____let him leave the door closed.
    _____Other:_____

13. If my child would not leave the house because he was afraid that the child next door would tease him and call him names, I would most likely
    _____tell him that his friend is not afraid of the child next door.
    _____tell him that if he didn't leave the house he would be put to bed early.
    _____let my child remain in the house.
    _____take him, unwillingly, outside and have him confront the child next door.
    _____tell him that if he went outside he would watch his favorite TV show.
    _____Other:_____

14. If I told my child that my spouse and I were leaving him with a friend while we went away for a few days, and he appeared very frightened and said he would not sleep in anyone's home but his own, I would most likely
    _____tell him that he had no choice in the matter and had to go.
    _____tell him that we'd only be gone for a few days and we'd be home before he knew it.
    _____tell him that if he didn't go, we'd leave him home on the next trip that the family took together.
    _____see if it was possible if a friend or relative could come to sleep with him in our own home.
    _____tell him that if he went willingly, we'd all go for a Saturday outing to the park or zoo, when we returned.
    _____Other:_____

Appendix E

Screen for Child Anxiety Related Disorders – Parent Version (SCARED-P)

Below is a list of sentences that describe how people feel. Read each phrase and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for your child. Then, for each statement, fill in one circle that corresponds to the response that seems to describe your child. Please respond to all statements as well as you can, even if some do not seem to concern your child.

The rating scale is as follows:
0 Not True or Hardly Ever True
1 Somewhat True or Sometimes True
2 Very True or Often True

1	When my child feels frightened, it is hard for him/her to breathe.	0	1	2
2	My child gets headaches when he/she is at school.	0	1	2
3	My child doesn't like to be with people he/she doesn't know well.	0	1	2
4	My child gets scared if he/she sleeps away from home.	0	1	2
5	My child worries about other people liking him/her.	0	1	2
6	When my child gets frightened, he/she feels like passing out.	0	1	2
7	My child is nervous.	0	1	2
8	My child follows me wherever I go.	0	1	2
9	People tell me that my child looks nervous.	0	1	2
10	My child feels nervous with people he/she doesn't know well.	0	1	2
11	My child gets stomachaches at school.	0	1	2
12	When my child gets frightened, he/she feels like he/she is going crazy.	0	1	2
13	My child worries about sleeping alone.	0	1	2
14	My child worries about being as good as other kids.	0	1	2
15	When my child gets frightened, he/she feels like things are not real.	0	1	2
16	My child has nightmares about something bad happening to his/her parents.	0	1	2
17	My child worries about going to school.	0	1	2
18	When my child gets frightened, his/her heart beats fast.	0	1	2
19	My child gets shaky.	0	1	2
20	My child has nightmares about something bad happening to him/her.	0	1	2
21	My child worries about things working out for him/her.	0	1	2
22	When my child gets frightened, he/she sweats a lot.	0	1	2
23	My child is a worrier.	0	1	2
24	My child gets really frightened for no reason at all.	0	1	2
25	My child is afraid to be alone in the house.	0	1	2
26	It is hard for my child to talk with people he/she doesn't know well.	0	1	2
27	When my child gets frightened, he/she feels like he/she is choking.	0	1	2
28	People tell me that my child worries too much.	0	1	2
29	My child doesn't like to be away from his/her family.	0	1	2

30	My child is afraid of having anxiety (or panic) attacks.	0	1	2
31	My child worries that something bad might happen to his/her parents.	0	1	2
32	My child feels shy with people he/she doesn't know well.	0	1	2
33	My child worries about what is going to happen in the future.	0	1	2
34	When my child gets frightened, he/she feels like throwing up.	0	1	2
35	My child worries about how well he/she does things.	0	1	2
36	My child is scared to go to school.	0	1	2
37	My child worries about things that have already happened.	0	1	2
38	When my child gets frightened, he/she feels dizzy.	0	1	2
39	My child feels nervous when he/she is with other children or adults and he/she has to do something while they watch him/her (for example: read aloud, speak, play a game, play a sport).	0	1	2
40	My child feels nervous when he/she is going to parties, dances, or any place where there will be people that he/she doesn't know well.	0	1	2
41	My child is shy.	0	1	2

Appendix F

Spence Children's Anxiety Scale – Parent Report

Below is a list of items that describe children. For each item please circle the response that best describes your child. Please answer all the items.

The rating scale is as follows:
0 Never
1 Sometimes
2 Often
3 Always

1	My child worries about things	0	1	2	3
2	My child is scared of the dark	0	1	2	3
3	When my child has a problem, s(he) complains of having a funny feeling in his/her stomach	0	1	2	3
4	My child complains of feeling afraid	0	1	2	3
5	My child would feel afraid of being on his/her own at home	0	1	2	3
6	My child is scared when s(he) has to take a test	0	1	2	3
7	My child is afraid when s(he) has to use public toilet or bathrooms	0	1	2	3
8	My child worries about being away from us/me	0	1	2	3
9	My child feels afraid that s(he) will make a fool of him/herself in front of people	0	1	2	3
10	My child worries that s(he) will do badly at school	0	1	2	3
11	My child worries that something awful will happen to someone in our family	0	1	2	3
12	My child complains of suddenly feeling as if (s)he can't breathe when there is no reason for this	0	1	2	3
13	My child has to keep checking that s(he) has done things right (like the switch is off, or the door is locked)	0	1	2	3
14	My child is scared if s(he) has to sleep on his/her own	0	1	2	3
15	My child has trouble going to school in the mornings because s(he) feels nervous or afraid	0	1	2	3
16	My child is scared of dogs	0	1	2	3
17	My child can't seem to get bad or silly thoughts out of his/her head	0	1	2	3
18	When my child has a problem, s(he) complains of his/her heart beating really fast	0	1	2	3
19	My child suddenly starts to tremble or shake when there is no reason for this	0	1	2	3
20	My child worries that something bad will happen to him/her	0	1	2	3
21	My child is scared of going to the doctor or dentist	0	1	2	3
22	When my child has a problem, s(he) feels shaky	0	1	2	3
23	My child is scared of heights (e.g., being at the top of a cliff)	0	1	2	3

24	My child has to think special thoughts (like numbers or words) to keep things from happening	0	1	2	3
25	My child feels scared if s(he) has to travel in the car, or on a bus or train	0	1	2	3
26	My child worries what other people think of him/her	0	1	2	3
27	My child is afraid of being in crowded places (like shopping centers, the movies, buses, bus playgrounds)	0	1	2	3
28	All of a sudden my child feels really scared for no reason at all	0	1	2	3
29	My child is scared of insects or spiders	0	1	2	3
30	My child complains of suddenly becoming dizzy or faint when there is no reason for this	0	1	2	3
31	My child feels afraid when s(he) has to talk in front of the class	0	1	2	3
32	My child complains of his/her heart suddenly starting to beat too quickly for no reason	0	1	2	3
33	My child worries that s(he) will suddenly get a scared feeling when there is nothing to be afraid of	0	1	2	3
34	My child is afraid of being in small closed places, like tunnels or small rooms	0	1	2	3
35	My child has to do some things over and over again (like washing his/her hands, cleaning or putting things in a certain order)	0	1	2	3
36	My child gets bothered by bad or silly thoughts or pictures in his/her head	0	1	2	3
37	My child has to do certain things in just the right way to stop bad things from happening	0	1	2	3
38	My child would feel scared if s(he) had to stay away from home overnight	0	1	2	3
39. Is there anything else that your child is really afraid of? Please write down what it is, and fill out how often (s)he is afraid of this thing: _____ _____ _____		YES 0 0 0		NO 1 2 3 1 2 3 1 2 3	

Appendix G

Demographics Questionnaire

1. What is your age?

_____

2. With what gender do you identify?

- ❑ Male
- ❑ Female
- ❑ Non-binary
- ❑ Transgender
- ❑ Prefer to self-identify: _____
- ❑ Prefer not to respond

3. Which of the following best describes your sexual orientation?

- ○ Heterosexual
- ○ Gay/Lesbian
- ○ Bisexual
- ○ Pansexual
- ○ Asexual
- ○ Prefer to self-identify: _____
- ○ Prefer not to respond

4. What is your ethnic/racial background? You can select more than one option.

- ❑ Black or African-American
- ❑ White
- ❑ American Indian or Alaska Native
- ❑ Asian
- ❑ Native Hawaiian or Pacific Islander
- ❑ Hispanic or Latinx
- ❑ Other: _____
- ❑ Prefer not to respond

5. Are you a native English speaker?

- ❑ Yes
- ❑ No

For how many years have you been speaking English?

_____

6. In terms of education and income, would you say your family is:

- ❍ Upper class
- ❍ Upper-middle class
- ❍ Middle class
- ❍ Low-middle class
- ❍ Working class
- ❍ Prefer not to respond

7. What is the highest level of education you have completed?

- ❍ Less than high school
- ❍ High school graduate or GED
- ❍ Some college
- ❍ 2 year degree
- ❍ 4 year degree
- ❍ Some graduate school
- ❍ Master's degree
- ❍ PhD/MD/JD/Doctorate
- ❍ Other: _____
- ❍ Decline to respond

8. What is your marital/relationship status? You can select more than one option.

- ❑ Single
- ❑ Married
- ❑ In a committed relationship/partnership
- ❑ Widowed
- ❑ Separated
- ❑ Divorced
- ❑ Decline to respond

9. Does the child have another parent/caregiver?

- ❍ Yes
- ❍ No, I have sole custody

10. If you are raising your child(ren) with another person *in the home*, which of the following best describes your relationship with that individual?

- ❍ Romantic relationship (same gender)
- ❍ Romantic relationship (different gender)
- ❍ Non-romantic relationship (e.g., friendship)
- ❍ Other/prefer to describe: _____
- ❍ Decline to answer

11. Which of the following best describes your relationship with the other parent/caregiver?

- ❍ Married
- ❍ Divorced/separated
- ❍ Partnered
- ❍ Widowed
- ❍ Other/prefer to describe: _____
- ❍ Decline to answer

12. What is your relationship to the child about whom you answered the questionnaire?

- ❍ Mother
- ❍ Father
- ❍ Stepmother
- ❍ Stepfather
- ❍ Grandmother
- ❍ Grandfather
- ❍ Legal guardian
- ❍ Other/prefer to describe: _____

At what age did you enter the child's life?

_____

13. Is the child adopted?

- ❍ Yes
- ❍ No

14. Approximately how many days per week does your child spend with you, on average?
_____ (range 0-7)

15. Which of the following best describes your child's custody arrangement?

- ❍ Shared legal & physical custody
- ❍ Shared legal custody only
- ❍ Shared physical custody only
- ❍ Other: _____

16. Which of the following, if any, apply to your family? You may select more than one.

- ❑ My child has a nanny
- ❑ My child attends a daycare held in a home
- ❑ My child attends a daycare at a childcare center
- ❑ My child attends daycare with a family member
- ❑ My child attends a public school
- ❑ My child attends a private school

- ❑ Decline to answer

17. If there is additional information that you feel would help us to understand your family or your relationship to your child, you may provide a description below.

_____
_____
_____
_____
_____

Appendix H

COVID Stress Scales: Danger & Contamination Subscale

The following asks about various kinds of worries that ***you*** might have experienced over the ***past seven days***. In the following statements, we refer to COVID-19 as "the virus".

	Not at all	**Slightly**	**Moderately**	**Very**	**Extremely**
1. I am worried about catching the virus	1	2	3	4	5
2. I am worried that basic hygiene (e.g., hand washing) is not enough to keep me safe from the virus	1	2	3	4	5
3. I am worried that our healthcare system is unable to keep me safe from the virus	1	2	3	4	5
4. I am worried that I can't keep my family safe from the virus	1	2	3	4	5
5. I am worried that our healthcare system won't be able to protect my loved ones	1	2	3	4	5
6. I am worried that social distancing is not enough to keep me safe from the virus	1	2	3	4	5
7. I am worried that people around me will infect me with the virus	1	2	3	4	5
8. I am worried that if I touched something in a public space (e.g., handrail, door handle), I would catch the virus	1	2	3	4	5
9. I am worried that if someone coughed or sneezed near me, I would catch the virus	1	2	3	4	5
10. I am worried that I might catch the virus from handling money or using a debit machine	1	2	3	4	5
11. I am worried about taking change in cash transactions	1	2	3	4	5
12. I am worried that my mail has been contaminated by mail handlers	1	2	3	4	5

COVID Stress Scales: Danger & Contamination Subscale – Parent Report Modification

The following asks about various kinds of worries that ***your child*** might have experienced over the ***past seven days***. In the following statements, we refer to COVID-19 as "the virus".

	Not at all	**Slightly**	**Moderately**	**Very**	**Extremely**
1. My child is worried about catching the virus	1	2	3	4	5
2. My child is worried that basic hygiene (e.g., hand washing) is not enough to keep him/her safe from the virus	1	2	3	4	5
3. My child is worried that our healthcare system is unable to keep him/her safe from the virus	1	2	3	4	5
4. My child is worried that he/she can't keep his/her family safe from the virus	1	2	3	4	5
5. My child is worried that our healthcare system won't be able to protect his/her loved ones	1	2	3	4	5
6. My child is worried that social distancing is not enough to keep him/her safe from the virus	1	2	3	4	5
7. My child is worried that people around him/her will infect him/her with the virus	1	2	3	4	5
8. My child is worried that if he/she touched something in a public space (e.g., handrail, door handle), he/she would catch the virus	1	2	3	4	5
9. My child is worried that if someone coughed or sneezed near him/her, he/she would catch the virus	1	2	3	4	5
10. My child is worried that he/she might catch the virus from handling money or using a debit machine	1	2	3	4	5
11. My child is worried about taking change in cash transactions	1	2	3	4	5
12. My child is worried that his/her mail has been contaminated by mail handlers	1	2	3	4	5

Appendix I

GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Appendix J

Boxplots for CRPBI Behavioral Control Variable

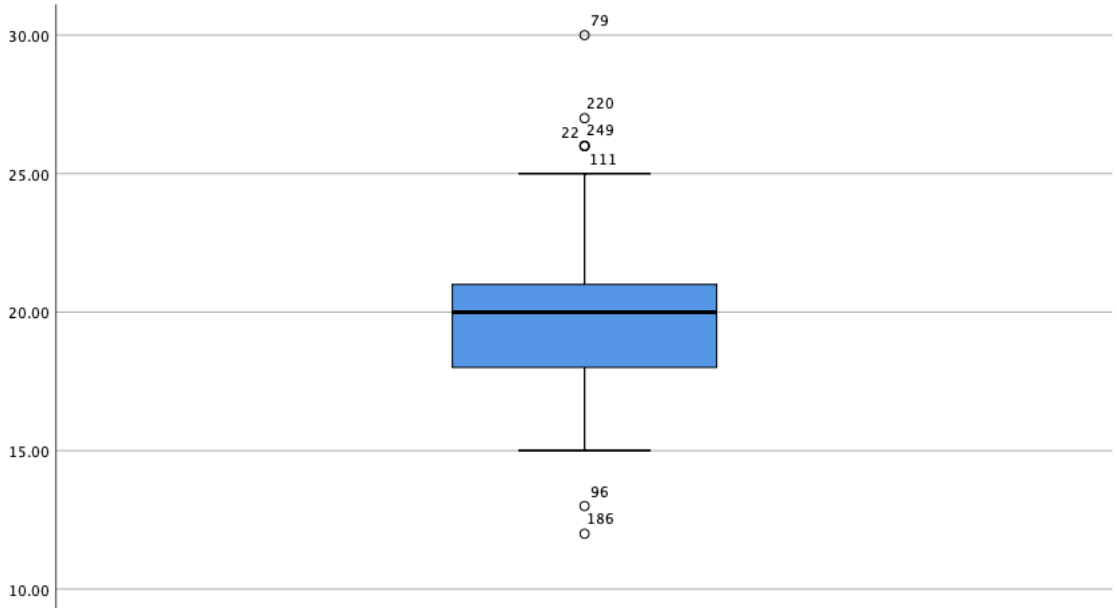

Figure J.1 Boxplot for the Entire Sample

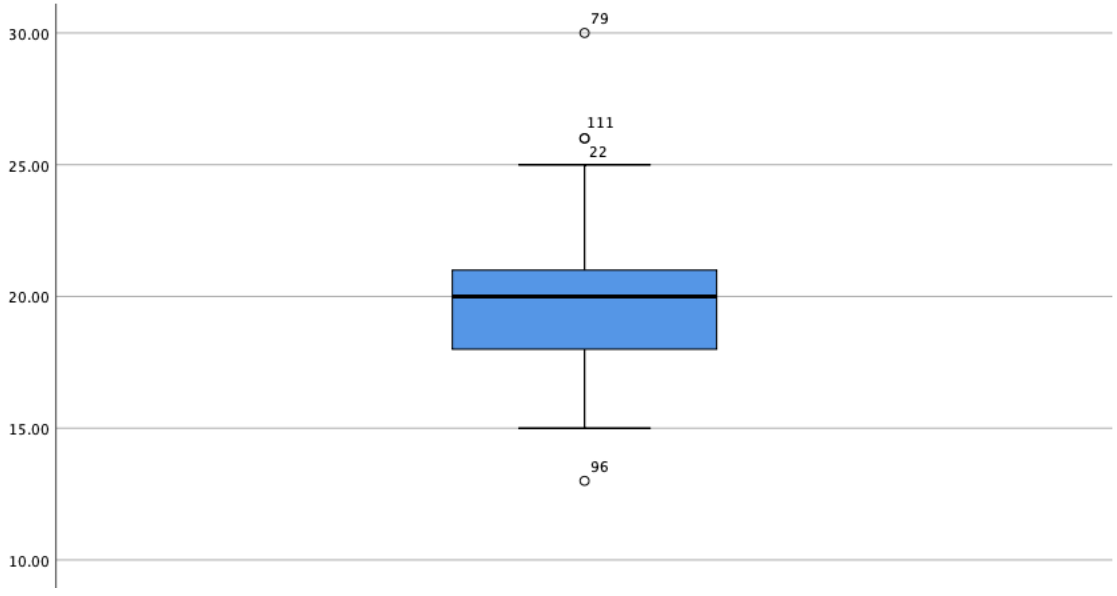

Figure J.2 Boxplot for the Sample of Mothers

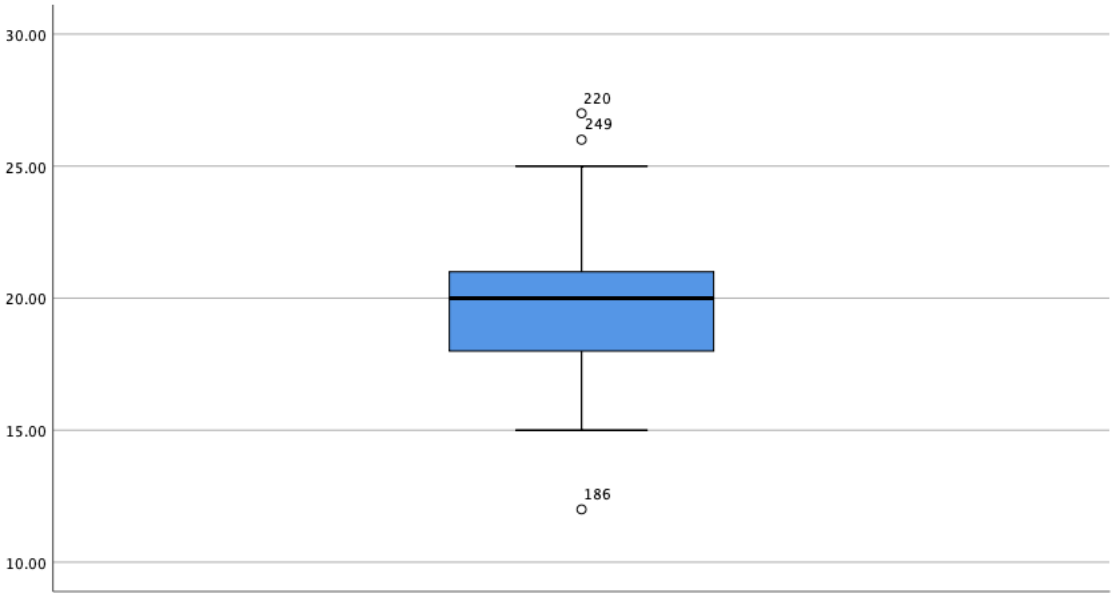

Figure J.3 Boxplot for the Sample of Fathers

Appendix K

Sample Demographics

Demographics	Mothers		Fathers		Full Sample	
	n	%	*n*	%	*n*	%
Parent Gender						
Female	161	99.4	0	0	161	47.5
Male	0	0	177	100	177	52.2
Non-binary	1	.62	0	0	1	.29
Transgender	0	0	0	0	0	0
Child Gender						
Female	82	50.62	41	23.16	123	36.28
Male	80	48.38	136	76.84	216	63.72
Sexual Orientation						
Heterosexual	120	74.07	143	80.79	263	77.58
Gay/Lesbian	3	1.85	1	.56	4	1.18
Bisexual	36	22.22	32	18.08	68	20.06
Pansexual	0	0	0	0	0	0
Asexual	1	.62	0	0	1	.29
Prefer not to respond	1	.62	0	0	1	.29
Missing	1	.62	1	.56	2	.59
Ethnic/Racial Background						
Black or African-American	43	26.54	37	20.90	80	23.60
White	107	66.05	122	68.93	229	67.55
American Indian/Alaska Native	2	1.23	0	0	2	.59
Asian	11	6.79	15	8.47	26	7.67

Native Hawaiian or Pacific Islander	0	0	0	0	0	0
Hispanic or Latinx	5	3.09	7	3.95	12	3.54
Native English Speaker						
Yes	156	96.30	168	94.92	324	95.58
No[a]	6	3.70	9	5.08	15	4.63
SES						
Upper class	2	1.23	0	0	2	.59
Upper-middle class	20	12.35	29	16.38	49	14.50
Middle class	84	51.85	114	64.41	198	58.41
Low-middle class	23	14.20	20	11.30	43	12.68
Working class	33	20.37	14	7.91	47	13.90
Highest Level of Education						
Less than high school	0	0	0	0	0	0
High school graduate/GED	8	4.94	8	4.52	16	4.72
Some college	16	9.88	13	7.34	29	8.55
2-year degree	10	6.17	10	5.65	20	6.08
4-year degree	83	51.23	90	50.85	173	51.03
Some graduate school	6	3.70	9	5.08	15	4.43
Master’s degree	37	22.84	43	24.29	80	23.60
PhD/MD/JD/Doctorate	1	.62	4	2.26	5	1.47
Other	0	0	0	0	0	0
Missing	1	.62	0	0	1	.29
Marital/Relationship Status						
Single	11	6.79	11	6.21	22	6.49
Married	134	82.72	153	86.44	287	84.67

Committed Relationship/Partnership	10	6.17	10	5.65	20	5.90
Widowed	0	0	0	0	0	0
Separated	1	.62	0	0	1	.29
Divorced	7	4.32	3	1.69	10	2.94
Secondary Caregiver						
Yes	99	61.11	100	56.50	199	58.70
No (Single parent)	63	38.89	77	43.50	140	41.30
Relationship with in-home coparent[b]						
Romantic (same gender)	20	20.83	26	26.53	46	23.83
Romantic (different gender)	72	75.00	68	69.39	140	72.54
Non-romantic	2	2.08	1	1.02	3	1.55
Decline to respond/other	2	2.08	3	3.06	4	2.07
Relationship with second caregiver						
Married	85	52.47	82	46.33	167	83.92
Divorced/separated	8	4.94	3	1.69	11	5.53
Partnered	4	2.47	11	6.21	15	7.54
Other	1	.62	1	.56	2	1.01
Decline to respond	1	.62	0	0	4	2.01
Relationship to child						
Mother	160	98.77	-	-	160	47.20
Father	-	-	177	100	177	52.21
Stepmother	1	.62	0	0	1	.29
Stepfather	0	0	0	0	0	0
Grandmother	1	.62	0	0	1	.29
Grandfather	0	0	0	0	0	0

Legal Guardian	0	0	0	0	0	0
Adoption Status						
Adopted	29	17.90	23	12.99	52	15.34
Not Adopted	131	80.86	152	85.88	283	83.48
Missing	2	1.23	2	1.13	4	1.18
Custody Arrangement						
Shared legal/physical	76	46.91	83	46.89	159	46.90
Shared legal	13	8.02	9	5.08	22	6.49
Shared physical	5	3.09	5	2.82	10	2.95
Alternative arrangement	3	1.85	3	1.69	6	1.77
Missing/not applicable	65	40.12	77	43.50	142	41.89
Other						
Nanny	33	20.37	24	13.56	57	16.81
Daycare (in home)	30	18.52	25	14.12	55	16.22
Daycare (childcare center)	25	15.43	25	14.12	50	14.75
Daycare (family member)	23	14.20	28	15.82	51	15.04
Attends public school	66	40.74	85	48.02	151	44.54
Attends private school	27	16.67	41	23.16	68	20.06

[a]participants reported an average of 31.53 years speaking English (range = 5 to 55; *SD* = 13.93)
[b] N = 193 caregivers (96 mothers) reported raising the child with another adult in the home