

**The Impact of Covid-19 on Children:
Parent-Rated Stress due to Covid-19, Parenting Styles, and Children's Defense
Mechanism Use**

by

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Abstract

The Covid-19 pandemic has been a significant source of stress for families worldwide (Beland et al., 2020). Among the multitude of methods individuals may utilize to manage and adapt to stressors includes psychological defenses, or defense mechanisms. Past research has found support for Cramer's theory of defenses (2009) which makes two key claims regarding stress and defense use: 1.) as stress increases so too does the use of defenses and 2.) as stress increases, less adaptive or immature defenses are more likely to be used. This theory has been supported across a variety of ages, types of stressors, and settings (Zimmerman et al., 2019; Huh & Sin, 2015), however there is a lack of research on whether this can be observed in real-world contexts with longer-term stress such as the pandemic. Additionally, past research has found parenting styles and other similar aspects of parenting to impact a variety of outcomes in children including ability to cope, resilience, and defense use (Fonseca et al., 2020; Zakeri et al., 2010; Wolmer et al., 2001). However, while previous research has found separate links between these factors that suggest a possible overall relationship, little research has been done on the relationship as a whole. There are two main goals of this study; the first being to identify how children's use of defenses changed in response to the stress of the pandemic, and the second being to look more specifically at the possible relationship between parent-rated stress due to Covid-19, parenting styles, and children's defense use at their baseline before the pandemic as compared to at the height of the pandemic. A total of 316 participants were recruited through CloudResearch's Prime Panels in order to gather a sample of parents with at least one child between ages 4 and 12. Statistical analyses found that parents rated their children as having used the same type of defenses at a higher frequency during the height of the pandemic relative to their baseline. It was also found that both a partial and a full mediation relationship existed between parental distress due to the pandemic and the type of defenses children used during the pandemic, with the type of parenting style acting as the mediator. Implications from this research include investigating interventions which can help parents avoid permissive parenting and promote authoritative parenting to reduce children's use of non-adaptive defenses and promote their use of healthy

defenses. Furthermore, providers working with families could do quick check-ins and route families greatly impacted by the pandemic to sources of support and interventions for the family as a whole in order to, at least in part, benefit children.

Chapter One

Introduction

Individuals differ with regard to their management of stress. A number of individual differences have been identified that correspond to how individuals manage and adapt to stressors. One well-researched construct is psychological defenses. Defense mechanisms are unconscious psychological strategies that protect the self from anxiety and serve to protect one's self-image. Cramer's (2009) theory of defenses emphasizes that frequency of use and types of defenses employed change as a function of stress level. When people are more stressed, they are more likely to employ defenses more frequently and to rely on less adaptive defenses. The Covid-19 pandemic has been a recent source of stress for families. Children, specifically, have faced a number of challenging stressors. Based on Cramer's theory, we anticipate that increases in the stress experienced by children would likely lead them to use defenses more frequently and to rely on less mature defenses. However, it is possible that other factors, such as parenting style, may affect (e.g., moderate) these associations. The purpose of this study is to examine if children's use of defense mechanisms changed as a function of the pandemic. Additionally, we will explore if parenting style impacts which children experience the largest changes in defensive functioning. Prior to describing our specific hypotheses and the methods employed to test them, we provide a review of the literature on the impacts of stress (i.e., family distress, children's distress, and parental distress), psychological defenses, and parenting styles.

What are Psychological Defenses?

Defense mechanisms refer to a variety of mental mechanisms that act on an unconscious level to manage stress, protect self-image, and manage strong emotions (Cramer, 2009). Cramer's (2009) theory of defenses states that the purpose of defense mechanisms is to protect the individual from experiencing excessive anxiety and protecting the self-image. The use of defenses for these functions starts in childhood (Laor et al., 2001; McKenzie Robinson, 2012; Wolmer et al., 2020). Initially, children use immature defenses to protect themselves from anxiety and to maintain a positive self-image. As they develop, they use more and more mature strategies.

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Historically, differences in defense use have been used to classify forms of psychopathology. Indeed, measures of children's defenses have been shown to effectively discriminate children with a disorder from those without a disorder (Laor et al., 2001) and to differentiate various types of psychopathologies (Wolmer et al., 2020). While defenses are useful in clinical settings, modern theories no longer view defense mechanisms as inherently maladaptive or pathological. In fact, the use of mature and adaptive defenses has been associated with a number of positive life outcomes, such as improved self-esteem, greater resilience, and better management of stress. This is also true for children. For example, Wolmer and colleagues (2001) found that children who used healthy defenses were better able to cope with the stress of being exposed to missile attacks during the Gulf War. While they can be adaptive, excessive use of or reliance on maladaptive/immature defenses can contribute to psychopathology in adults (Cramer, 2009) and in children (Laor et al., 2001; Wolmer et al., 2020).

Cramer (2006, 2009, 2015) has provided the leading theory of defense mechanisms. Her theory involves seven "pillars." Pillar I states that defense mechanisms are unconscious cognitive operations, operating outside of the individual's awareness and distinct from conscious efforts to cope. Pillar II states that there is a chronology of the development of defense mechanisms. Humans begin using defenses in childhood and continue to use them as they mature into adults. However, specific defenses are associated with various developmental levels. For example, infants may rely on primitive defenses, such as denial, because their brains have not sufficiently developed cognitively to employ more adaptive defenses. Forty-four defense mechanisms have been described, all of which vary in level of developmental maturity and the cognitive complexity they require. Pillar III states that defense mechanisms are part of normal, daily functioning and asserts that mature defenses support successful adaptation to life's stressors. Pillar IV states that use of defenses increases under conditions of stress. Also, this pillar asserts that stress tends to reduce the use of mature defenses. Pillar V states that defenses reduce the conscious experience of anxiety (and other negative affects). Pillar VI states that defense use is an involuntary, non-conscious process and occurs on an implicit level in response to emotional arousal. In other words, the use of defense mechanisms is correlated with the activation of the autonomic nervous system. Pillar VII states that the excessive use of defenses or the use of immature or age-inappropriate defenses is associated with psychopathology. While

the use of defense mechanisms in moderation is adaptive to protect the self, the use of a defense as a repetitive reaction that an individual is prone to across most situations or the use of age-inappropriate defenses is commonly found in cases of psychopathology (Cramer, 2009).

How are Defense Mechanisms Measured

Defenses have been measured using performance-based tests, expert-rater coding systems, and self-report measures. Many approaches employ expert raters and coding systems. For example, the Defense Mechanism Manual (DMM; Cramer 1991) is a system for rating the defenses of denial, projection, and identification in response to picture story exercises (PSEs). Typically, respondents generate stories in response to Thematic Apperception Test (TAT) cards. These stories are then coded using the DMM. The DMM has been used to study defenses in children and in adults (Cramer, 2017; Sandstrom & Cramer, 2003; Hibbard et al., 2000).

The Defense Mechanisms Rating Scales (DMRS) is also an expert-rated system for coding defenses. It has been used to code content from narratives (Zimmerman et al., 2019), interviews (Berney et al., 2014), and psychotherapy sessions (Hersoug et al., 2002). It codes for 30 defenses, grouping them into seven levels (action, major image distorting, disavowal, minor dissociation, hysterical, mental inhibition/neurotic, and high adaptive) ranging from immature to mature. It also produces an overall defensive functioning (ODF) score that indicates the overall adaptiveness of the respondent's defenses. It has primarily been used with adults (Di Giuseppe et al., 2020; Zimmerman et al., 2019; Berney et al., 2014; Hersoug et al., 2002).

There are also multiple self-report measures of defenses, such as the Defense Styles Questionnaire (DSQ). The DSQ is one of the most widely used self-report measures of defenses; and several different versions exist. Overall the DSQ assesses multiple defense mechanisms and, like the DMRS, locates them on a maturity-immaturity continuum. Factor analytic studies suggest that the DSQ items can be grouped into three categories: immature, neurotic, and healthy defenses (Ramkissoon, 2014; Saint-Martin et al., 2013; Thygesen et al., 2008; Ruuttu et al., 2006).

Another commonly used self-report measure is the Defense Mechanisms Rating Scales-SR-30. This recently developed measure is a complement to the DMRS, meaning it seeks to measure the same defenses using self-report. It includes 30 items that identify 28 defenses as well as identifies defenses on the same seven categories of maturity and ODF scores of adaptiveness as the original DMRS (Di Giuseppe et al., 2020).

Assessing Defenses in Children

In addition to performance-based measures of defenses, such as the DMM, there are a number of parent-rated measures that can be used to assess defenses in young children (e.g., ages five to 12). The Response Evaluation Measure for Parents (REM-P; Steiner et al., 2001; Yasnovsky et al., 2003 as cited by Lindblom et al., 2016) is a parent-report measure similar to the DSQ. Items have been modified to better fit adolescents and children as well as avoid wording that may seem overly pathological; it identifies 21 defenses that range from immature to neurotic and mature defenses (Lindblom et al., 2016). Studies suggest reasonable agreement between ratings made by children and their parents (Yasnovsky et al., 2003). Additionally, factor analysis of this measure suggests that while use of specific defenses varies greatly among adults, in children the structure of defense scales is similar among adults and children (Araujo et al., 2006; Yasnovsky et al., 2003).

Another parent-rated measure for assessing defenses is the Comprehensive Assessment of Defense Style (CADS) developed by Laor and colleagues (2001). Using the CADS parents or those familiar with the child rate items. These items are then scored and provide indexes of the various defenses the child employs. The validity of the CADS has been established in a number of studies. For example, scores on the CADS have been shown to differentiate youth with psychopathology from youth without pathology (Laor et al., 2001; Wolmer et al., 2020). Additionally, parent ratings of children's defenses have been found to be associated with expert rated scores of children's stories using the DMM, expert ratings for child attachment status (McKenzie Robinson, 2012), and children's long-term responses to stressors (Wolmer et al., 2001),

Several researchers have used these approaches to quantifying defenses to study the various pillars of Cramer's (2009) theory of defenses. Below we provide a brief review of research on Pillar IV, which is the pillar most relevant to the present study.

Are Defenses Impacted by Stress?

Cramer's (2009) Pillar IV, which is a key pillar for the rationale of this study, states defense mechanisms use is impacted by stress. Pillar IV makes two claims regarding the relationship of stress/psychological distress and defenses: a frequency claim and a regression claim. First, the frequency claim suggests that as stress increases so too will the use of defense mechanisms. Second, it asserts a regressive hypothesis, arguing that less adaptive defenses are

more likely to be employed (i.e., regression) when one is stressed relative to when one is not stressed.

Early studies on the association between stress and defenses focused on adults. For example, Cramer (1991) examined how stress related to anger impacted defense mechanism use in a sample of 80 upperclassmen college students. Participants were asked to lay down on a cot in a room with low light and a large camera pointed at them (to increase the feeling of being under scrutiny). Participants were randomly assigned to an experimental group or control group. Participants in both groups were asked to generate stories in response to eight TAT cards. For the first four stories there was no experimental manipulation; both groups told stories under the same condition. However, after the fourth story was completed, a manipulation was used. For those in the experimental condition, the experimenter harshly criticized the stories and questioned participants' effort after the fourth story, saying statements such as "These stories are about the worst I have ever heard. Could you try to get some better ones?" (Cramer, 1991). For those in the control group, the experimenter responded to each story by saying "all right" or "ok" in a neutral voice. After telling the stories, participants completed a brief questionnaire to assess their affective state when they entered the study, after their first story, and after their last story (to allow researchers to see if their affect changed). The stories were transcribed. Use of denial, projection, and identification in the stories was coded by expert raters using the DMM. For the first four stories, use of defenses did not differ across the groups. For stories five through eight, those in the experimental group exhibited significantly more use of projection compared to their use of projection in the first four stories. Additionally, for stories five through eight, those in the experimental group used defenses significantly more frequently than did those in the control group (Cramer, 1991). This study supports the hypothesis that experiencing increased stress, such as negative affect in this case, leads to increased defense usage, as defense use differed between groups only after the introduction of a stressor; participants who were criticized showed increased defense use after experiencing criticism as compared to those who were not criticized.

One may question if Cramer's (1991) results are specific to the lab setting. Other researchers have addressed this concern by examining Pillar IV in stressful situations in the real world. For example, a quasi-experimental study investigated defenses in 50 adult cancer patients in active treatment, 76 breast cancer survivors, and 157 community controls (Zimmerman et al, 2019). Participants reported an early memory, a low point memory, a high point memory, and a

turning point memory. Memories were coded by experts using the DMRS. The researchers compared those undergoing treatment (high stress) with those not currently in treatment (lower stress) and healthy controls (lowest stress). Participants undergoing treatment more frequently used defenses and exhibited greater use of immature defenses (relative to the other participant groups; Zimmerman et al., 2019). These results supported the hypotheses within Pillar IV and extended prior work by showing that the pattern generalizes to situations involving naturally occurring stressors. Still, given their focus on adults, it is unclear if the findings of these studies will generalize to children.

A handful of studies explore Pillar IV with children. Sandstrom and Cramer (2003) compared defense usage in 50 fourth-grade girls in a quasi-experimental study. Girls first told stories to three TAT cards. Then, they were told they would play a game with another girl through a “closed-circuit TV”; however, there was no other girl. Instead, pre-recorded video messages were played for participants (as if they were live interactions). Participants asked the peer to play with them, and the researcher played back a video in which the peer responded, “No, I don’t think so...I don’t want to play” (Sandstrom & Cramer, 2003). Girls then told stories to three additional TAT cards. All stories were coded by blind raters using the DMM. Finally, the researchers assessed the girls’ current social status (popular, average, rejected, or neglected). They anticipated that girls classified as rejected or neglected would experience the most stress from the social rejection, and thus use more and less mature defenses (e.g., denial). Indeed, rejected and neglected girls used significantly more defenses (compared to the average and popular girls) and made greater use of denial and projection (Sandstrom & Cramer, 2003). The study demonstrated that those experiencing more stress were more defensive in general and made use of less mature defenses. This study utilized a relational stressor. Would the pattern hold for other types of stressors in childhood?

To extend beyond relational stressors, researchers have induced stress in children using other experiences. For example, 64 second-graders and sixth-graders participated in a game in which the child placed three marbles at the top of a track (Cramer & Gaul, 1988). They were told to get the marbles down the track as fast as possible in order to beat a fictitious time. All participants were told that most children their age could beat this time. Children were randomly assigned to a success or failure group. After they completed the marble task, those in the success group were told they had succeeded and beat the standard time. Those in the failure condition,

however, were told they had failed to beat the standard time. Defense use was measured by having participants tell stories to TAT cards. These stories were transcribed and coded by experts using the DMM. As with prior studies, children told stories before and after the experimental manipulation (allow for both within- and between-group comparisons). Defense use did not significantly differ between the groups prior to the manipulation; however, those who experienced the stress induced by failure showed a significant increase in the use of denial and projection compared to their stories pre-manipulation and compared to the control group. Those who experienced success, on the other hand, showed an increased use of identification, a more mature defense, as compared to the failure group (Cramer & Gaul, 1988). Therefore, both younger and older children who experienced increased stress increased their use of less adaptive defenses, as opposed to their counterparts. This pattern of findings is consistent with Pillar IV and suggests that this pillar is not limited to relational stressors.

The two studies with children relied exclusively on the use of the DMM, which only codes for three defenses. This begs the question: do the hypotheses within Pillar IV hold when we measure more than three defenses? One study examining this question focused on 106 elementary school students in Korea who were taking additional English classes after school at a private institution. Students completed a survey measuring stress from learning English and a Korean Version of Defense Style Questionnaire (K-DSQ; Huh & Sin, 2015), which measures several defenses. The researchers also collected final exam scores to evaluate academic achievement. Students were split into two groups based on the level of stress they reported (i.e., low stress group vs. high stress group). When comparing overall defense use, students in the high stress group reported a significantly higher frequency of immature, self-restraining, and conflict-avoiding defense mechanisms as compared to the low stress group. The groups did not differ significantly in terms of their use of adaptive defenses (Huh & Sin, 2015). These findings suggest that the impact of stress on defense usage in naturally occurring stress shows similar patterns as experimentally controlled stress; students experiencing high stress from their English classes more frequently used immature or less adaptive defenses.

Wolmer and colleagues (2001) used parental ratings of the CADS to examine if children's use of defenses were associated with their responses to a significant stressor (i.e., exposure to a Scud missile attack). This longitudinal study assessed defense use, symptoms, and positive personality domains in 81 children-mother dyads. Children were preschool age at the

time of the missile attack (and between ages eight to 10 at the time of testing). The child's defense style was assessed with both the CADS (Laor et al., 2001) and the DMM (Cramer, 1990). DMM scores were based on children's TAT responses. Children's use of immature (self-oriented and other-oriented) defenses in middle childhood were associated with symptoms and personality shortly after the missile attacks. Externalizing symptoms were strongly associated with use of other-oriented defenses while internalizing symptoms and stress symptoms were strongly associated with use of self-oriented defenses (Wolmer et al., 2001). Thus, this study suggests that even in the case of significant stressors, the impact of stress on defense use is similar, with increased stress being associated with more frequent immature defense use. Overall, research has supported both the frequency and regression hypotheses of Pillar IV of Cramer's theory. Both adults and children, in experimentally controlled and naturally occurring situations, have shown that when experiencing times of increased stress, their use of defenses increases and the use of less adaptive defenses increases as well.

The Covid-19 pandemic has been a new source of stress for families worldwide (Brock & Laifer, 2020; Lebow, 2020; Beland et al., 2020). The pandemic has led to many stressful changes for families and for children. For example, many children endorsed illness, have had to be schooled at home, and experienced limited contact with peers and social supports (Zhu et al., 2021; Prime et al., 2020; Isumi et al., 2020). This stress caused by the pandemic can be thought of as including three categories: children's personal stress, family stress, and parental stress. First, in considering personal stress, children have faced a number of challenging stressors, as mentioned above. This has had the potential to have a major impact on children's mental health. For example, one study found levels of post-traumatic stress to be four times higher in children who had been quarantined as compared to those who were not (Sprang & Silman, 2013). Second, when considering all the stressors caused by the pandemic, many can be difficult to attribute to one individual alone, as several factors impacted the family as a whole – acting as family stress. Family stress can be defined as an extension of individual stress applied to the family domain (Hobfoll & Spielberger, 1992). In this way, both individuals that make up the family, as well as the family as a unit are challenged by the environment (Hobfoll & Spielberger, 1992). And finally, similar to children's personal stress, the sudden changes caused by Covid-19, particularly during quarantine, had significantly increased the risk of experiencing stress and negative emotions in parents, which has a potential cascading effect on children's wellbeing (Sprang &

Silman, 2013). Research has shown that children have lower personal resources to deal with the many changes brought on by the pandemic; because of this, when children do not find responsive answers to their fears and worries from their parents, they may show more distress, as typically evidenced by more emotional and behavioral problems (Liu et al., 2020; Spinelli et al., 2020). For example, past research on families' experience of the Covid-19 pandemic has found a link between parents' stress and children's psychological problems and wellbeing. Spinelli and colleagues' (2020) research found parent's perception of the pandemic was found to impact parent's stress which in turn impacted children's psychological, behavioral, and emotional problems. Overall, it was found that parent's stress in relation to the pandemic significantly impacted children's wellbeing (Spinelli et al., 2020). One possible explanation for this effect could be through the parent-child relationship, with more stressed parents finding it more difficult to understand their child's needs and to respond in a sensitive way, causing their children to feel less understood by their parents and possibly reacting in more negative and aggressive ways (Spinelli et al., 2020).

The pandemic provides an opportunity to study the assertions contained with Cramer's Pillar IV in a real-world setting. Specifically, if the theory is sound one would expect that children's use of defenses would have increased in response to elevated stress created by the pandemic. Additionally, we would expect that they would use less mature defenses relative to those they typically use. These are the first two primary hypotheses of the present study. Additionally, we anticipate that moderation is likely to occur. Specifically, while all children are likely to experience an increase in defense use frequency and a decline in the quality of defenses used, we would expect these patterns to be most prominent in children who were more directly negatively impacted by Covid-19. To assess this hypothesis, we will measure the impact of Covid-19 on the child (based on parental rating). This will allow us to examine the rate of change (from pre-pandemic to pandemic) among those who were highly impacted with those who were less impacted. In addition to these two primary hypotheses, we will explore if parenting style is related to changes in defense use in children. We first review prior research related to this hypothesis below.

Might Parenting Style Impact Children's Experience of Stress?

According to Baumrind (1971;1991), there are three parenting styles which vary in levels of two key dimensions of parenting: parental responsiveness, also known as warmth or

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supportiveness, and parental demandingness, otherwise known as behavior control. Each style of parenting varies on the level of nurturance and limit-setting for their child. The first style is the authoritative parenting style, marked by high levels of both responsiveness and demandingness; parents who use this style tend to set clear standards for their child's behavior, are receptive to their child's opinions and point of view, and use supportive rather than punitive discipline. The second style is the authoritarian style, which is marked by high demandingness and low responsiveness. Parents who use this style are likely to exert high levels of control, set rigid rules that are expected to be obeyed without explanation, and frequently use punishment to get compliance from their child. The final style is the permissive style, which is marked by low demandingness and high responsiveness. Parents who use this style typically provide little structure and set few rules, finding it difficult to punish their child and instead frequently indulging the child and giving affection (Fonseca et al., 2020; Cramer, 2011).

Parenting styles have been linked to a variety of outcomes in children, with overall research suggesting that an authoritative style is related to more positive adaptation in children and adolescents (Fonseca et al., 2020). For example, authoritative parenting styles are associated with a child's ability to cope with everyday stress. Hardy and colleagues (1993) investigated the relationship between parenting and the coping styles used by children in response to everyday stress. Participants were 60 children, ages nine to 10, and their mothers. Each dyad completed a semi-structured interview in which the mothers were asked to discuss six different situations that had been stressful for their child in the past year. Each event discussed focused on one of six domains: peer conflict, authority conflict, medical stress, school failure, peer separation, and physical accident. The interviewer then discussed those specific events with the child to identify coping strategies used. Transcripts of the child's interviews were coded by trained individuals into categories of coping strategies. Following the interview, questionnaires were used to assess parenting style, social environment characteristics of the family (e.g., interpersonal relationships, personal growth, and basic organizational structure), family cohesiveness and adaptability; parental monitoring and control of the child's activities; and the degree the mother protected and solved problems for their child. Supportive parenting with low levels of structure in the home was associated with children's use of a wider range of coping strategies. The more supportive parents were, the more avoidant coping strategies (i.e., behavioral and mental disengagement) were used by their children *in situations children considered beyond their control*. Finally, when

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parents created a high level of structure their children used fewer aggressive coping strategies (Hardy et al., 1993). Thus, different aspects of parenting style, including supportiveness and degree of structure (similar to the responsiveness and demandingness), were associated with children's coping style.

While not identical to coping, emotional regulation also involves adaptively managing stressors. Parenting style impacts children's emotional regulation. For example, Shaw and Starr (2019) investigated the intergenerational transmission of emotion regulation, hypothesizing that parents who struggle with emotional regulation are more likely to adopt an authoritarian parenting style during times of stress. They expected this to contribute to emotional dysregulation in their child (Shaw & Starr, 2019). Participants were 218 mother-adolescent dyads who completed self-report measures assessing emotion dysregulation and parenting style, as well as an interview measure evaluating family stress. Poor emotion regulation in the parent was associated with use of an authoritarian parenting style. Additionally, authoritarian parenting was associated with emotion dysregulation in adolescents. These effects held stable regardless of stress level; however, the relationships were most pronounced in families with chronic stress (i.e., mothers under stress were more likely to adopt authoritarian styles, resulting in greater emotion dysregulation in adolescents; Shaw & Star, 2019). Similar to prior research linking parenting to children's use of coping strategies, this study suggests links between parenting style, parents' management of stress, and children's management of stress.

Parenting style is also linked to resilience in children. Resilience refers to the ability to bounce back and thrive in response to or despite challenges, stressful situations, or threatening circumstances (Zakeri et al., 2010). One longitudinal study investigated a variety of risk and resilience factors for behavioral and emotional problems in middle childhood. Participants were 706 mothers followed since pregnancy as part of the longitudinal Community Prenatal Care study. These mothers were surveyed when their children were three, four to six, and six to eight. Participants completed the CPC-8 survey which included questions on a variety of factors including demographics, children's health, development, activities, media, technology, family, friends, community, school life, and the mother's health. Parenting factors that predicted behavior problems included maternal mental health, poor parenting interactions, and low parenting morale. Parenting factors that acted as protective factors for children at high risk for behavior problems included high maternal self-esteem, good maternal emotional health, and

adequate quality parenting time (Cabaj et al., 2014). As positive parent-child relationships are linked with resilience, acting as a protective factor for children, it is likely that an authoritative parenting style, which is marked by adequate nurturance and limit-setting as compared to other styles, is also linked with resilience.

The relationship between parenting styles and resilience, which is impacted by coping, also persists beyond childhood. Zakeri and colleagues (2010) evaluated the relationship between parenting styles and resilience in 350 university students. Participants completed two self-report measures assessing their parent's parenting style (retrospectively) and their own resilience. Parenting style was measured along two dimensions: parental acceptance and parental involvement. Acceptance-involvement parenting is warm, firm, involved, sensitive to the child's needs, and sets realistic standards with clear rules. In short, it is highly similar to the authoritative parenting style. There was a significant positive correlation between acceptance-involvement parenting styles and resilience in adolescents (Zakeri et al., 2010). The findings of this study built on prior studies with younger children in suggesting that acceptance-involvement parenting style, which is similar to an authoritative parenting style, is associated with the development of resilience. It extended prior work by showing that the impacts of parenting style may last beyond childhood.

The impacts of parenting style of children's coping may extend beyond childhood, as parenting styles play a role in the social and emotional development of children (Nijhof & Engels, 2007; Shaw & Starr, 2019). Nijhof and Engels (2007) recruited 670 first year college students, ages 16 to 25, to complete self-report questionnaires on parenting style, problem behaviors, and coping with homesickness. Coping with homesickness was measured with the questionnaire 'coping with homesickness' (Van Tilburg et al., 1997), which included three subscales: problem-solving or active coping, avoidance or passive coping, and support-seeking or active coping. Students raised with authoritative and permissive parenting styles used problem-solving and support-seeking coping strategies more frequently than students raised with authoritarian and uninvolved parenting styles (Nijhof & Engels, 2007). This research suggests that the impact of parenting style on children's use of coping strategies extends to stressful situations outside of the home (e.g., first year at college). They are consistent with prior studies in suggesting that authoritative parenting is associated with more adaptive coping.

Parenting Style and Defenses in Children

There has been support that aspects of parenting impact children's defense usage (Renzi et al., 2017; Lackovics et al., 2020; Nevarez et al., 2018). Early theories of defense development suggested that parenting style impacts children's use of defenses. Wolmer and colleagues (2001) found that mother's adaptive object relations were negatively associated with immature defense use in their children (as reported by mothers using the CADS; Laor et al., 2001). Using a parental measure of children's defenses, Lindblom and colleagues (2016) found that dysfunctional early family relationships during infancy (i.e., 2 and 12 months) predicted the use of neurotic and immature defenses in middle childhood. Thus, some studies have directly examined how the quality of family interactions impact children's defense use.

While not identical to parenting style, attachment theorists focus on the quality of the parent-child relationship. Indeed, parenting style impacts children's attachment status. For example, aspects of parenting styles such as warmth, involvement, and support (Crowell et al., 1991); structure (Cohn et al., 1992); and organization (Crowell et al., 1991) are associated with secure attachment. Additionally, research found that those raised with authoritative parents typically showed lower levels of attachment anxiety and avoidance (reflecting a secure attachment style), as compared to a permissive or authoritarian parenting style (Tomsa, 2019). Given that parenting style impacts children's attachment status, and attachment status impacts children's use of defenses, the impact of attachment status on children's defense use is an important factor to consider when inferring the potential impact of parenting style on children's defense use. McKenzie Robinson (2012) found a significant association between attachment style and defense mechanism use, as assessed by parental ratings of the CADS (Laor et al., 2001), in middle childhood (ages eight to 12). Secure and disorganized styles had the lowest frequency of defense use, while the avoidant style had the highest use. Securely attached children more frequently used mature defenses and employed a wider range; the avoidant style employed significantly more immature defenses (McKenzie Robinson, 2012). Lackovics and colleagues (2020) reported similar findings in a sample of 1,487 high-school students. In this study, secure attachment predicted use of mature defenses and less frequent use of immature defenses. Insecure attachment was inversely related to use of adaptive defenses and positively related to use of maladaptive defenses. The relationship between insecure attachment and psychopathology was mediated by immature defense use (Lackovics et al., 2020). Given that

childhood attachment is known to be influenced by parenting style (Crowell et al., 1991; Cohn et al., 1992) and these studies show that attachment status impacts defense use, it seems likely that parenting style exerts some impact on children's use of defenses.

Retrospective studies with adults also suggest links between parenting and defense use. Renzi and colleagues (2017) investigated the relationship between memories of bonding with parents and use of coping and defense mechanisms in 110 breast cancer patients in Italy. Findings differed across parents. Memories indicating high levels of paternal overprotection were associated with immature defenses and less adaptive coping. Memories for bonding with mothers were not related to use of defenses or coping strategies. Immature defenses correlated with less adaptive coping styles and mature defenses were associated with more adaptive coping styles (Renzi et al., 2017). These findings provide mixed support for the hypothesis that parenting style impacts defense use (and coping styles).

Longitudinal studies have provided strong support for the hypothesis that childhood nurturance is linked to children's use of defenses (in adulthood). Nevarez et al., (2018) used a longitudinal approach to examine how childhood nurturance impacted later use of defense mechanisms in adulthood. Participants were 135 male college students who were extensively interviewed at the start of participation and who completed questionnaires every 2 years. They were also re-interviewed between the ages of 30 and 45. Overall, greater childhood nurturance, marked by aspects such as warmth and family cohesiveness, was associated with more adaptive defense styles and healthier midlife functioning in relationships and work (Nevarez et al., 2018). Thus, the relationship between nurturing parenting and positive adult outcomes (e.g., relationship quality) later in life was partially mediated by use of adaptive defenses. Nurturing parenting is defined in a manner similar to authoritative parenting; ergo, this research would support the assertion that authoritative parenting styles are likely associated with the development of more adaptive defense styles.

In sum, while studies are limited there is some support for the hypothesis that parenting style impacts children's use of defenses in childhood and that these impacts linger and carryover into adulthood. Authoritative parenting is associated with the development of resilience and use of more adaptive coping strategies and defense mechanisms. In contrast, authoritarian and permissive parenting styles appear to limit children's ability to cope with stressful situations. Therefore, when considering the case of families dealing with the stress caused by Covid-19, it is

likely that children raised by authoritarian and permissive parenting styles will demonstrate more frequent defense use and more use of immature defenses as compared to those raised by an authoritative parenting style.

The Present Study & Hypotheses

Children, like adults, differ in terms of how they adapt to stress. While many factors are likely important, research suggests that defense mechanisms, coping strategies, and parental styles are likely to play an important role. Cramer has provided a sophisticated theory of defense mechanisms that has been well tested across a wide range of studies. A core component of this theory concerns the relationship between defense mechanism usage and stress. Specifically, she asserts that stress leads humans to use defense mechanisms more frequently and to experience a mild-to-moderate regression in the defenses they use. While this hypothesis has been well tested in children using experimental designs and well testing in adults using experimental and naturalistic designs, there are few studies testing the hypothesis in children using naturally occurring stressors. This study seeks to close that gap.

Recently, children faced a notable societal stressor: the Covid-19 pandemic. The primary purpose of the present study is to examine how children's use of defenses changed (from baseline to the height of Covid-19) by asking parents to rate their children's use of defenses prior to the pandemic and at the height of the pandemic. Secondary purposes of this study include the following: 1) examining if children's maturity of defense use during the pandemic is related to their parent's experience of stress during the pandemic, 2) examining if parenting style is associated with children's use of defenses before and/or during the pandemic, and 3) to examine if parenting style and experience of stress during the pandemic each uniquely contribute to the prediction of the child's use of defenses during the pandemic. We put forth the following hypotheses.

1. Parents will rate children as using an increased number of less adaptive defenses during the height of the pandemic relative to the child's baseline.
2. Parents will rate children as using fewer healthy and mature defenses during the height of the pandemic relative to the child's baseline.
3. Parents who report having experienced greater subjective stress (i.e., greater family impact from Covid-19, greater parental distress, and greater child distress) will rate their children as using more frequent and more immature defenses during the height of Covid-

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19 (while it is impossible to prove a null hypothesis, we anticipate that subjective distress during Covid-19 will not be related to children's use of defenses at baseline).

4. Parenting style will be related to the child's use of defenses (at the height of Covid-19).
 - 4a. The authoritative parenting dimension will be positively associated with mature defenses and negatively associated with both self- and other-oriented defenses.
 - 4b. The authoritarian parenting style will be inversely associated with mature defenses and positively associated with both self- and other-oriented defenses.
 - 4c. The permissive parenting style will be inversely associated with mature defenses and positively associated with both self- and other-oriented defenses.
5. Finally, we will test a model in which the relationship between parent's level of stress from Covid-19 (i.e., parental distress) and the children's use of defenses during the pandemic is partially mediated by parent's ratings of parenting style during the pandemic. In plain English, we anticipate that parents who experienced greater impacts from Covid-19 to have a harder time adopting an authoritative parenting style during the pandemic resulting in increased use of and/or reduced maturity of defense mechanisms.

Chapter Two

Method

Participants

A total of 497 parents were recruited from CloudResearch's Prime Panels as participants for this study. To qualify for this study, participants were required to speak and read English, be 21 to 60 years of age, and have at least one child between the ages of 4 and 12 years old. Of the total number recruited, 336 participants passed the validity check, correctly answering at least 90% of the validity items spread throughout the survey. During data cleaning, 20 additional participants were excluded from the final data set due to reporting they do not have a child, not consenting to participate, and/or not answering a majority of the CEFIS items. In total, this resulted in our final sample of 316 parents.

The following information was obtained from participants: gender identity, age, ethnic identity, education level, and relationship status of the participant. We also gathered demographic data on the participant's child's age, gender identity, number of siblings, and roughly the percentage of time their child lives in the home with them. As seen in Table 1, the majority of participants were between the ages of 30 and 39, forming 50% of the sample ($M = 36$, $sd = 8.09$, $Min = 21$, $Max = 60$). Approximately 64% of the participants reported as identifying as female and about 36% as male. The majority of participants also identified as white, having completed a high school education, as married, and as having their child in the home with them 100% of the time. Also, according to parent report, approximately 45% of the children rated were girls and 50% were boys, along with one trans-girl and 16 children whose gender was not reported. The ages of children rated was relatively evenly spread, with both 4-year-olds and 10-year-olds making up the largest percentage of the sample of children that were reported on at around 15% each ($M = 8$, $SD = 2.69$, $Min = 4$, $Max = 12$). The complete breakdown of sample characteristics can be found in Table 1.

Measures and Materials

The Comprehensive Assessment of Defense Style (CADS; Laor et al., 2001)

The CADS is a 60 item inventory that assessed children's defense mechanisms as characterized by the child's typical behavior based on an observer's report. Items were worded as statements regarding the child's behavior (e.g., "Easily provoked, and reacts by losing their temper") rated on a 0 (not at all) to 3 (very much) Likert scale. The inventory identified 30 defense mechanisms that Laor and colleagues' (2001) original research found to fit to three factors: self-oriented, other-oriented, and mature. Laor and colleagues (2001) found the internal consistency to be satisfactory for both other-oriented (.84) and self-oriented (.79) factors and slightly lower for the mature factor (.66).

Participants rated the CADS items twice. First, they rated each item based on how the child "typically" was prior to Covid-19 pandemic. Second, they rated each item based on how the child was at the height of the Covid-19 pandemic. In this way, we were able to compare if parents perceived the child's use of defenses as stable, improving, or declining as a function of the Covid-19 pandemic.

The Parenting Styles & Dimensions Questionnaire – Short Version (PSDQ-Short Version; Robinson et al., 2001)

The PSDQ-Short Version is a 32 item self-report inventory that assessed dimensions of parenting styles. Three scales were included: authoritative, authoritarian, and permissive. Two scales included multiple subfactors. The authoritative scale included three subfactors: connection dimension (warmth & support), regulation dimension (reasoning/induction), and autonomy granting dimension (democratic participation). The authoritarian scale also had three subfactors: physical coercion dimension, verbal hostility dimension, and non-reasoning/punitive dimension. The permissive scale comprised of the indulgent dimension alone. Items were presented as statements regarding parenting practices (e.g., I encourage our child to talk about the child's troubles) which were rated on a 1 (never) to 5 (always) Likert scale. Higher scores within scales and subfactors indicated a prevalence of that style. The original scale prompted the participant to separately evaluate both their own and their spouse's parenting style. In regards to this study, only the self-evaluation of parenting style was considered, and participants were asked to rate themselves both before and at the height of Covid-19. Onder and Gulay (2009) found

satisfactory internal consistency across scales, the authoritarian scale at .81, the authoritative scale at .83, and the permissive scale at .65.

COVID-19 Exposure and Family Impact Survey (CEFIS; Kazak et al., 2021)

The CEFIS is a 37 item caregiver-report inventory that assessed how the Covid-19 pandemic impacted families by conceptualizing exposure to various potentially traumatic aspects of the pandemic and assessed the impact of the pandemic on the family. Three scales were included: Exposure, Impact, and Distress. Within the Exposure scale, 25 items were worded as statements (e.g., "We had a 'stay at home' order") and rated as yes/no; "yes" responses were summed to produce a total exposure score. Higher scores indicated greater exposure to the Covid-19 pandemic and related events. The Impact scale included 10 items that were presented as various areas of family relationships and emotional well-being that may have been impacted by the pandemic (e.g., "How family members get along with each other") which were rated on a 1 (made it a lot better) to 4 (made it a lot worse) Likert scale. Responses were then summed up to produce an overall impact score in which higher scores indicated more negative impact, which this study used as a measure of parent-reported family stress. The Distress scale included two items that used a 10-point distress scale to assess how much distress caregivers and their children experienced due to the pandemic. Items can be averaged to form a Distress scale score, however in this study each item was used separately as a measure of parent and child distress respectively (Kazak et al., 2021). Enlow and colleagues (2022) found acceptable internal consistency across scales, with the Exposure scale at 0.80, the Impact scale at 0.92, and the Distress scale at 0.76 (Kazak et al., 2021).

Procedure

Potential participants learned of the study via CloudResearch's Prime Panels - an online recruitment platform through which participants can be recruited via multiple online research panels. Those who decided to participate clicked on a hyperlink that took them to an online survey hosted by Qualtrics.

Prior to completing the actual survey, potential participants reviewed an online consent form which covered the basic purpose of the study, described the study methods, reviewed eligibility criteria, reviewed potential risks and benefits, stated the expected duration of the questionnaire, reviewed participant's right to end participation at any time, reviewed compensation requirements, and provided contact information of the primary researcher (see

Appendix A). Those who wished to participate after reviewing this form indicated that they consent by clicking the “continue” button to begin the survey. Those who did not wish to continue were instructed to close their browser.

The formal survey began with participants completing demographics questions (See Appendix B) and then completing a series of self-report measures. Participants with more than one child were explicitly told to select one of their children to focus on for this study. Participants *did not* have to indicate which of their children they chose. Participants completed the CADS to assess the child's use of defense styles based on the parent's perception as well as the PDSQ-Short Version to assess their parenting style. Both the CADS and PDSQ-SV items were rated based on baseline (pre-Covid-19 functioning; See Appendix C and D). Participants then re-rated both questionnaires (the CADS and PDSQ-Short Version) based on functioning during the height of the Covid-19 pandemic (See Appendix E and F). Participants then completed the CEFIS regarding subjective impact and distress due to Covid-19 (See Appendix G).

Once the participants completed the survey, they were shown a screen thanking them for their participation (See Appendix H). Participants were compensated in the amount they agreed to with the platform through which they entered the survey for their participation in this study. In order to be eligible for compensation participants needed to correctly answer 90% of the validity/attention check items, have an internal consistency score in the acceptable range, and fulfill the time requirements of the study.

Data Analytic Plan

Prior to running any tests of hypotheses, we first cleaned the data by examining that all item responses were in range. Participants missing 10% or more of the items for any scale were removed. We then examined the distribution of data for all scales by examining distributions. If they approached a normal distribution, we then would rely primarily on linear statistics.

We reported the means and standard deviations for each scale. We calculated coefficient alpha for each scale to assess internal frequency within our sample. We then used a paired t-test to assess Hypothesis 1 and Hypothesis 2. We used correlational analyses to examine relationships specified in Hypotheses 3 and Hypothesis 4. The AMOS plugin for SPSS was used to test the fidelity of the model specified in Hypothesis 5. Model fit was assessed using the Root

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Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI).

Chapter Three

Results

Internal Consistency Estimates

Prior to conducting hypothesis tests, we calculated internal consistency estimates (i.e., coefficient alpha) for all scales to ensure that estimates were in a viable range for using linear statistics.

The CEFIS Impact scale contains 10 items assessing the impact of Covid-19 on key areas of functioning. It produces one overall score. Coefficient alpha for this scale was .92, which is in the excellent range. The CEFIS also has a single item that measures overall parental distress and a single item that assesses overall child distress (from the parent's perspective).

The CADS produces three overarching factor scales and 30 defense level subscales. Each subscale taps a specific psychological defense. Since subscales contain only two items and since all analyses were conducted at the level of the factor scale, we did not calculate coefficient alpha for subscales. Coefficient alpha for each factor scale was calculated using all individual items that load onto the scale. Coefficient alpha for the other-oriented factor scale (which contains 18 items) was .92 for the baseline ratings and .93 for the use during the pandemic. Coefficient alpha for the self-oriented factor scale (which contains 22 items) was .92 for the baseline ratings and .93 for the use during the pandemic. Coefficient alpha for the mature factor scale (which contains 18 items) was .92 for the baseline ratings and .92 for the use during the pandemic.

The PSDQ-Short Version produces three separate scales. Coefficient alpha for the authoritative parenting style (which contains 15 items) was .89 at baseline and .92 for during the pandemic. Coefficient alpha for the authoritarian parenting style (which contains 12 items) was .93 at baseline and .93 for during the pandemic. Coefficient alpha for the permissive parenting style (which contains 5 items) was .69 at baseline and .75 for during the pandemic.

Additionally, the PSDQ-Short version produces three subscales for the authoritative parenting dimension and three subscales for the authoritarian parenting dimension. Coefficient alpha for the name Connection (Warmth and Support) subscale of authoritative parenting (which

contains 5 items) was .77 at baseline and .81 for during the pandemic. Coefficient alpha for the Regulation (Reasoning/Induction) subscale of authoritative parenting (which contains 5 items) was .79 at baseline and .88 for during the pandemic. Coefficient alpha for the Autonomy Granting (Democratic Participation) subscale of authoritative parenting (which contains 5 items) was .73 at baseline and .79 for during the pandemic. Coefficient alpha for the Physical Coercion subscale of authoritarian parenting (which contains 4 items) was .86 at baseline and .88 for during the pandemic. Coefficient alpha for the Verbal Hostility subscale of authoritarian parenting (which contains 4 items) was .85 at baseline and .86 for during the pandemic. Coefficient alpha for the Non-Reasoning/Punitive subscale of authoritarian parenting (which contains 4 items) was .79 at baseline and .80 for during the pandemic.

Descriptive Statistics

Means, standard deviations, maximum values, and minimum values for all scales and subscales are reported in Table 2. For the purpose of describing our dataset, we also report the intercorrelations among all primary scales used in this study in Tables 3, 4, 5, and 6.

Preliminary Analyses

Given that age is expected to be associated with use of defenses, we calculated correlations between child's age and CADS scales. Child age was not significantly associated with self-oriented defenses or other-oriented defenses at baseline or during the pandemic. It was associated with mature defenses at baseline ($r = .19, p < .01$) and during the pandemic ($r = .22, p < .01$).

Intercorrelations among CADS scales at baseline and during the height of the pandemic are reported in Table 3. Additionally, agreement between CADS scores from baseline to during the pandemic are also reported in Table 3. Of note, we found large associations for all three scales with regard to scores from baseline and during the pandemic. Specifically, defenses at baseline were strongly associated with defenses during the pandemic for the other-oriented scale ($r = .87, p < .01$), the self-oriented scale ($r = .87, p < .01$), and the mature scale ($r = .83, p < .01$).

Intercorrelations among PSDQ-Short Version scales at baseline and during the height of the pandemic are reported in Table 4, as are associations between PSDQ-Short Version scales from baseline to during the pandemic.

Hypothesis 1: Change in Children's use of Self-Oriented and Other-Oriented Defenses During the Pandemic

Hypothesis 1 focused on less adaptive defenses. In this hypothesis, we asserted that parents would rate their children as using an increased number of less adaptive defenses during the height of the pandemic (relative to the child's baseline). The CADS assessed two types of less adaptive defenses. Thus, we broke this hypothesis into two parts. First, we expected that children would be rated as exhibiting higher levels of other-oriented defenses during the pandemic (Part A). We tested this assertion with a paired *t*-test. Parents' ratings for other-oriented defense as baseline ($M = 1.41, sd = 0.64$) were not significantly different from their ratings of children's use during the pandemic ($M = 1.39, sd = 0.68; t(315) = 1.06, p = .29; d = 0.06$). In short, we did not find evidence for this hypothesis.

For Part B, we predicted that children would be rated as exhibiting higher levels of self-oriented defenses during the pandemic (Part B). We tested this assertion with a paired *t*-test. Parents' ratings for self-oriented defenses at baseline ($M = 1.37, sd = 0.58$) were not significantly different from their ratings of children use during the pandemic ($M = 1.36, sd = 0.63, t(315) = 0.45, p = .66; d = 0.03$).

Overall, we did not find support for our hypotheses. In fact, given the correlations reported in the preliminary results, data are suggestive of tremendous consistency in defense use from baseline to the height of the pandemic.

Hypothesis 2: Change in Mature and Healthy Defense Use During the Pandemic

In Hypothesis 2, we asserted that children would be rated as using fewer healthy and mature defenses during the height of the pandemic (relative to the child's baseline). To test this hypothesis, we conducted a paired *t*-test. Parents' ratings for healthy defenses at baseline ($M = 1.80, sd = 0.54$) were not significantly different from their ratings of children during the pandemic ($M = 1.77, sd = 0.62, t(315) = 1.14, p = .25; d = 0.06$). Again, we not only failed to find evidence to support our hypothesis but the preliminary results suggested that healthy defense use tended to be heavily reliable from baseline to during the pandemic.

Hypothesis 3: Distress and Impact from Covid-19 and Children's Use of Defenses During the Pandemic

In Hypothesis 3, we asserted that parental subjective stress during the pandemic will be associated with greater use of self-oriented and other-oriented defenses. While not a testable

hypothesis, we anticipated that parental stress during the pandemic would show much smaller associations with children's use of defenses at baseline. To examine these associations, we employed Pearson correlations.

We examined this hypothesis in three ways. First, we examined if parental ratings for Covid-19 family impact (using the CEFIS Covid-19 impact scale) were associated with increased use of defenses. As shown in Table 5, CEFIS Covid-19 impact scores were significantly associated with other-oriented ($r = .21, p < .01$) and self-oriented defense use during the pandemic ($r = .23, p < .01$). Both effect sizes were in the small-to-moderate range, suggesting modest support for our hypothesis. As expected, CEFIS family impact ratings were not significantly related to the use of healthy defenses ($r = -.02, p = .70$).

Next we examined if parental distress, as indicated by the single-item CEFIS rating, was related to use of self-oriented and other-oriented defenses. Parental distress was significantly associated with other-oriented defenses ($r = .13, p = .02$), but the effect size was in the trivial-to-small range. Parental distress was also significantly associated with self-oriented defenses ($r = .20, p < .01$) and the effect size was in the small range. Thus, we consider these findings as showing mixed support for our hypothesis. Consistent with expectations, parental distress was not associated with the use of mature defenses ($r = .03, p = .64$).

Finally, we examined if parent-rated child distress, as indicated by the single-item CEFIS rating, would be associated with use of defenses. Child distress was significantly associated with other-oriented defenses ($r = .13, p = .02$) and with self-oriented defenses ($r = .16, p < .01$); however, both effect sizes were in small range. Thus, we considered these findings as providing little support for the hypothesis. Consistent with expectations, parent-rated child distress was not associated with the use of mature defenses ($r = .05, p = .37$).

Hypothesis 4: Parenting Style and Children's Defense Use

Hypothesis 4 focused on how parenting style (during the pandemic) was related to children's use of defenses during the pandemic. This hypothesis contained three parts. In Part A, we asserted that authoritative parenting would be associated with the children's use of mature defenses and inversely associated with self- and other-oriented defenses. To test this component of the hypothesis we examined correlations. As can be seen in Table 6, authoritative parenting during the pandemic was associated with mature defense use during the pandemic ($r = .36, p < .01$) with an effect size in the moderate range. However, counter to expectations, children's

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mature defense use during the pandemic was correlated with both authoritarian parenting ($r = .33, p < .01$) and permissive parenting ($r = .17, p < .01$).

Since bivariate associations may contain shared variance, we ran a regression to better identify which aspects of parenting style were uniquely predictive of mature defense use during the pandemic. In this regression, the CADS mature defense scale was the dependent variable. Predictors were the three PSDQ-Short Version scales. The overall model was significant ($R = .56, R^2 = .21, F(3, 312) = 47.68, p < .01$). Further, significant, unique contributions to the prediction of mature defenses were made by the authoritative scale ($\beta = .47, t = 9.61, p < .01$), authoritarian scale ($\beta = .53, t = 8.49, p < .01$), and the permissive scale ($\beta = -.17, t = 2.92, p < .01$). Overall, both the correlations and the regression provided mixed support for our hypothesis. As expected, authoritative parenting during the pandemic was associated with children's mature defense use during the pandemic. However, counter to expectations, authoritarian parenting during the pandemic was also positively associated with mature defense use during the pandemic (even in the regression model).

In Part B, we asserted that self-oriented defenses during the Covid-19 pandemic would be positively associated with authoritarian and permissive parenting dimensions during the pandemic and inversely associated with authoritative parenting during the pandemic. We used the same approach employed to test the hypothesis in Part A. Authoritative parenting was unrelated to self-oriented defenses during the pandemic ($r = -.03, p = .59$). However, use of self-oriented defenses during the pandemic was significantly related to authoritarian parenting ($r = .63, p < .01$) and permissive parenting ($r = .52, p < .01$).

Again, we conducted a regression to identify which aspects of parenting style were uniquely predictive of self-oriented defense use during the pandemic. In this regression, the CADS self-oriented defense scale was the dependent variable. Predictors were the three PSDQ-Short Version scales. The overall model was significant ($R = .65, R^2 = .42, F(3, 312) = 75.43, p < .01$). Further, significant, unique contributions to the prediction of self-oriented defenses were made by the authoritarian scale ($\beta = .51, t = 8.92, p < .01$) and the permissive scale ($\beta = .20, t = 3.50, p < .01$). The contribution of the authoritative scale ($\beta = .06, t = 1.23, p = .22$) was not statistically significant. Overall, the regression provided mixed support for our hypothesis. As expected, authoritarian and permissive parenting during the pandemic was associated with children's self-oriented defense use during the pandemic. However, counter to expectations,

authoritative parenting during the pandemic was also not associated with self-oriented defense use during the pandemic as expected.

In Part C, we asserted that other-oriented defenses during the Covid-19 pandemic would be positively associated with authoritarian and permissive parenting dimensions during the pandemic and inversely associated with authoritative parenting during the pandemic. We used the same approach employed to test the hypothesis in Part A. Authoritative parenting was unrelated to self-oriented defenses during the pandemic ($r = -.06, p = .29$). However, use of other-oriented defenses during the pandemic was significantly related to authoritarian parenting ($r = .61, p < .01$) and permissive parenting ($r = .57, p < .01$).

Again, we conducted a regression to identify which aspects of parenting style were uniquely predictive of other-oriented defense use during the pandemic. In this regression, the CADS other-oriented defense scale was the dependent variable. Predictors were the three PSDQ-Short Version scales. The overall model was significant ($R = .65, R^2 = .43, F(3, 312) = 77.02, p < .01$). Further, significant, unique contributions to the prediction of self-oriented defenses were made by the authoritarian scale ($\beta = .42, t = 7.34, p < .01$) and the permissive scale ($\beta = .30, t = 5.40, p < .01$). The contribution of the authoritative scale ($\beta = .00, t = .06, p = .95$) was not statistically significant. Overall, the regression provided mixed support for our hypothesis. As expected, authoritarian and permissive parenting during the pandemic was associated with children's other-oriented defense use during the pandemic. However, counter to expectations, authoritative parenting during the pandemic was also not associated with other-oriented defense use during the pandemic as expected.

Hypothesis 5: Parental Stress will Mediate Associations Between Authoritative Parenting Style and Children's use of Defenses During the Pandemic

Hypothesis 5 asserted that parental stress during the pandemic was likely to impact parenting style, which would go on to impact children's use of defenses during the pandemic. To test this hypothesis, we employed the Preacher and Hayes PROCESS (v.4.3) macro for SPSS (v.28) to examine three models (one for mature defenses, one for self-oriented defenses, and one for other-oriented defenses). In the first model, children's use of mature defenses during the pandemic was entered as the dependent variable, parental distress during the pandemic was entered as the predictor variable, and the three parenting style dimensions (authoritative, authoritarian, and permissive) were all entered as potential mediators. We used the

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recommended approach of employing 5,000 Bootstrapped datasets and set our significance level at $p < .05$. However, there was no evidence of mediation as parental distress proved to be unrelated to use of mature defenses. As such, we moved to analyzing our second model.

The second model mirrored the first, with the exception that the dependent variable in this analysis was children's use of self-oriented defenses. As can be seen in Figure 1, parental distress from Covid-19 was significantly associated with self-oriented defenses ($\beta = .20, p < .01$), indicating that as parental distress increased children's use of self-oriented defenses increased. Additionally, as shown in the figure, parental distress had small, but statistically significant associations with all three parenting styles. However, authoritative parenting was not significantly related to children's use of self-oriented defenses (thus, it clearly does not help explain why parental distress is related to children's use of self-oriented defenses). While Authoritarian parenting is related to children's use of self-oriented defenses, there was no evidence that this association mediated the relationship between parental distress from Covid-19 and children's use of self-oriented defenses. Specifically, the completely standardized indirect effect for this pathway was .06 ($SE = .03$) with a bootstrapped lower level confidence interval (BLLCI) of -.001 and a bootstrapped upper level confidence interval (BULCI) of .12. Since zero falls within the confidence intervals we cannot conclude that there is statistically significant evidence of mediation through this pathway. In contrast, the pathway through permissive parenting was statistically significant. Specifically, the completely standardized indirect effect for this pathway was .03 ($SE = .02$) with a bootstrapped lower level confidence interval (BLLCI) of .01 and a bootstrapped upper level confidence interval (BULCI) of .07. Since a zero does not fall within the interval, we can conclude that this pathway is statistically significant at the $p < .05$ level. As can be seen in Figure 1, the initial association between parental distress and children's use of Self-oriented defenses was initially .20 ($p < .01$) and declined notably to .10 ($p < .05$) when the mediators were accounted for. Subsequent evaluation of the model indicated that this decline was driven primarily by the permissive pathway (specifically, when a revised model that only included permissive parenting as the mediator the association between parental distress and children's use of Self-oriented defenses fell from .20 [$p < .01$] to .11 [$p < .05$]). This pattern of findings indicates partial mediation and suggests that parental distress led to more permissive parenting which increased children's use of self-oriented defenses. To be clear, authoritarian parenting was clearly associated with children's use of self-oriented defenses; however, use of

authoritarian parenting was not sufficiently associated with parental distress from Covid-19 to suggest mediation.

In the third model, we used the same approach as we had for the first two models. The only difference was that the dependent variable was children's use of other-oriented defenses. As can be seen in Figure 2, parental distress from Covid-19 was modestly, but significantly associated with children's use of other-oriented defenses ($\beta = .13, p < .05$). There was no statistically significant evidence of mediation for the path running through authoritative parenting and authoritarian parenting. In contrast, the pathway through permissive parenting was statistically significant. Specifically, the completely standardized indirect effect for this pathway was .05 ($SE = .02$) with a bootstrapped lower level confidence interval (BLLCI) of .01 and a bootstrapped upper level confidence interval (BULCI) of .09. Since a zero does not fall within the interval, we can conclude that this pathway is statistically significant at the $p < .05$ level. As can be seen in Figure 1, the association between parental distress and children's use of other-oriented defenses was initially .13 ($p < .05$) and declined notably to .03 and lost statistical significance ($p > .05$). This suggests full mediation of the relationship. Subsequent evaluation of the model, which only included permissive parenting as a mediator, supported this assertion ((specifically, in the revised with one mediator the association between parental distress and children's use of Self-oriented defenses fell from .13 [$p < .05$] to .03 [non-significant]). This pattern of findings indicates that the permissive parenting pathway fully mediated associations between parental distress and children's use of other-oriented defenses.

Exploratory Analyses

Changes in Specific Defenses Use During the Pandemic

While we did not generate specific hypotheses, we explored if children's use of specific defenses changed (from baseline to the Covid-19 pandemic) using a series of paired *t*-tests. These analyses revealed that ratings of children's use of Altruism at baseline ($M = 2.07, sd = .70$) were significantly different from their ratings of children's use during the pandemic ($M = 1.94, sd = .76, t(315) = 3.71, p < .01; d = .21$). Similarly, ratings of children's use of Anticipation at baseline ($M = 1.79, sd = .75$) significantly differed from during the pandemic ($M = 1.71, sd = .87, t(315) = 2.38, p = .02; d = .13$), and ratings of children's use of Autosadism at baseline ($M = 1.63, sd = .76$) significantly differed from ratings of their use during the pandemic ($M = 1.53,$

$sd = .86, t(315) = 2.55, p = .01; d = .14$). All other comparisons of defenses at baseline and during the pandemic were not significant.

Associations Between Parenting Style and CADS at Baseline

We also explored correlations between the three parenting style dimensions and children's use of defenses (at baseline, before the Pandemic) to explore if particular styles of parenting were related to children employing particular types of defenses. As can be seen in Table 6, authoritative parenting at baseline was associated with mature defense use at baseline ($r = .36, p < .01$). Authoritative parenting was not associated with other-oriented ($r = -.06, p > 0.05$) or self-oriented ($r = .00, p > 0.05$) defense use at baseline. Interestingly, authoritarian parenting at baseline was associated with mature ($r = .32, p < .01$), other-oriented ($r = .57, p < .01$), and self-oriented ($r = .59, p < .01$) defense use at baseline. Similarly, permissive parenting style at baseline was also associated with mature ($r = .14, p < .05$), other-oriented ($r = .52, p < .01$), and self-oriented ($r = .51, p < .01$) defense use at baseline.

Change in Parenting Style

While the primary aim of our study was to explore if children's use of defenses changed as a function of the pandemic, we also decided to explore if parents indicated that their parenting styles were altered by the pandemic. Using paired *t*-tests we compared parent's baseline ratings of the three parenting style dimensions with their ratings based on their parenting style during the pandemic. These analyses revealed that use of an authoritative parenting style at baseline ($M = 3.98, sd = .66$) was significantly different from use of an authoritative parenting style during the pandemic ($M = 3.88, sd = .80, t(315) = 3.72, p < .01; d = .21$). Parents' ratings for use of an authoritarian parenting style at baseline ($M = 2.22, sd = .95$) was not significantly different from their ratings of use of an authoritarian parenting style during the pandemic ($M = 2.18, sd = .95, t(315) = 1.31, p = .19; d = .07$). Similarly, parents' ratings for use of a permissive parenting style at baseline ($M = 2.57, sd = .84$) was not significantly different from their ratings of use of a permissive parenting style during the pandemic ($M = 2.57, sd = .88, t(315) = -.53, p = .60; d = -.03$).

Chapter Four

Discussion

As is often the case with good research, our study raised as many questions as it answered. Using a novel method, we sought to explore if a real-world, ongoing stressor, the Covid-19 Pandemic, had led to measurable changes in children's use of defenses. We retrospectively assessed defenses using parental ratings of their children at baseline and during the height of the Covid-19 pandemic. Counter to expectations, parents rated their children's use of defenses before and during Covid-19 in highly similar ways. However, cross-sectional data told a slightly different story. Parental ratings of family distress were associated with their ratings for children's use of maladaptive defenses. Reconciling these somewhat discrepant findings isn't easy. One possibility is that children's responses to significant life stressors may be related to contextual factors (i.e., real-world contexts as compared to lab-induced stressors as well as longer-term stress as compared to acute stressors). A secondary aim of this study was to examine if parenting styles impacted use of defenses. Here, we found more compelling findings. We discuss both sets of ideas more in the sections below.

Children's Defense Use in Response to the Pandemic

This study had two primary purposes. First, it sought to examine how children's use of defenses changed in response to the stress of the pandemic by comparing their defense use from baseline to the height of Covid-19 through parent report. Pillar IV of Cramer's (2009) theory of defenses makes two claims regarding the relationship of stress and defenses: 1) we use defenses more frequently when stressed and 2) we use less adaptive defenses when stressed. Several studies have supported these assertions (Cramer & Gaul, 1988; Wolmer et al., 2001), including studies with adults (Cramer, 1991) and children (Sandstrom & Cramer, 2003; Huh & Sin, 2015). Further, support for these assertions has been produced in laboratory studies (e.g., Cramer, 1991) and real-world settings (Zimmerman et al., 2019). Based on this, we expected to find that Covid-19 increased children's use of defenses in general and led them to employ less adaptive defenses

(i.e., other-oriented and self-oriented defenses) relative to how they typically are. Interestingly, our results found mixed support for this theory.

In contrast with past research, we failed to find evidence that children's use of mature and immature defenses shifted. Specifically, parental ratings of their child at baseline and during the Covid-19 pandemic were highly stable. Based on Cramer's theory (2009), we expected parents to observe an increase in their children's use of immature defenses at the height of the pandemic (as compared to baseline ratings). Instead, children appeared to typically use the same type of defenses, but at a higher frequency during the pandemic as compared to their baseline before. One aspect of this study that may have led us to fail to find what most found could be in our method of measuring children's defense use. The measure employed was a parent-rating scale, this left a potential for ratings to not be entirely accurate. For example, some parents may not have as much insight on their children's defense; this could potentially be due to time constraints on time spent their child or potentially due to parents lessening the extent of their child's immature defense use based on their own feelings of distress or due to worry that seemingly worse behavior in their child could be read as due to bad parenting on their part. Future studies could investigate this theory on children's defense use with parent-report measures as well as investigate the impact of social desirability in terms of parenting on these ratings.

Another aspect that may have caused us to not find what past research has found may have been that our study measured stress/impact due to the pandemic from the parent's report; it is possible that parents' experienced stress due to Covid-19 was not equal to the child's experienced stress. Future studies could utilize methods that instead more directly measure children's stress due to the pandemic as compared to parent-reports to investigate if there is a significant consistency or discrepancy between the two and if parents tend to have adequate insight on the stress Covid-19 has caused for their child.

On the other hand, we also found evidence for some components of Cramer's (2009) theory. Our results suggested that frequency of defense use in children was modestly associated with family distress and impact during the pandemic. Specifically, family impact, and to a lesser extent parental distress, was associated with use of other-oriented defenses and self-oriented defenses, but not with the use of mature defenses. In this aspect, our study builds on prior research and extends it to a real-world stressor. Our findings suggest that family-experienced distress impacts children's use of defenses. When the family experiences more distress, children

employ more defenses (particularly maladaptive defenses) in order to cope. One implication of this is that interventions that support the family as a whole may be helpful, at least in part, in reducing children's risk for employing less adaptive defenses. For example, providers working with families could do quick check-ins with parents to assess family impact and stress from Covid-19. When this is high, routing families to source of support and engaging in interventions to reduce family stress may benefit children.

While far from the first study to examine Cramer's Pillar IV, this study does extend prior work in this area in some significant ways. For example, the majority of research on this topic has been lab-based and involved acute stressors. It is important to establish that links between stress and defense use can be observed in real-world contexts that involve longer-term stress (e.g., Covid-19 Pandemic). This study begins to fill this gap in the literature. Additionally, prior studies on this topic rarely make use of parental observations (and tend to rely on expert raters). The present study obtained findings utilizing a parent-rated measure of children's defense use, the CADS. Though used for other endeavors, this is the first study applying this measure to this topic.

Stress, Parenting Style, and Children's Defense Use

The secondary purpose of this study sought to look more specifically at the possible relationship between parent-rated stress due to Covid-19, parenting styles, and children's defense use at baseline as compared to the height of the pandemic. Prior research suggests that an authoritative parenting style is related to more positive adaptation in children (Fonseca et al., 2020). For example, authoritative parenting is linked to children's use of more adaptive coping strategies (Hardy et al., 1993), emotional regulation (Shaw & Star, 2019), and resilience (Zakeri et al., 2010). Similarly, various aspects of parenting that are related to parenting styles such as the quality of the parent-child relationship, attachment status, and nurturance (Andersson & Perris, 2000; Nevarez et al., 2018; Tomsa, 2019) have been found to impact children's defense usage (Wolmer et al., 2001; McKenzie Robinson, 2012; Renzi et al., 2017; Lackovics et al., 2020). Given prior research in this area, we expected to see parenting style play a mediating role between the parental ratings of impact/distress due to Covid-19 and children's defense use.

Our results suggest that both parental distress and parenting styles are associated with children's use of defenses. Additionally, parenting styles play a mediating role in the relationship between parental distress due to the pandemic and children's defense use. More

specifically, we found that *the primary* path by which parental distress is linked to children's use of other-oriented defenses is through a permissive parenting style (i.e., higher parental distress is associated with an increased use of a permissive parenting style which is associated with increased use of less adaptive, other-oriented defenses in children). Additionally, *one of* the many paths in which parenting distress is linked to children's use of self-oriented defenses is through a permissive parenting style. When parental distress led parents to engage in more permissive parenting during the Covid-19 pandemic, their children's risk of using self-oriented and other-oriented defenses increased. While previous research has found separate links between these factors that suggest a possible overall relationship, this study is one of the first that investigated this mediating relationship as a whole, particularly in response to a significant real-world stressor: the Covid-19 pandemic.

Separate from our mediation analyses, our data suggests that parenting style is more related to children's use of defenses than parental distress. In fact, parenting style was the main driver identified in our study. Permissive parenting was associated with increased use of self- and other-oriented defenses in children. Authoritarian parenting led to an increased use of mature, self-oriented, and other-oriented defenses in children. In contrast, authoritative parenting led to an increased use of mature defenses in children. In short, more passive parenting appears to increase risk for children using less adaptive defenses. Further, permissive parenting was actually associated with a slight decrease in the use of healthy defenses. More active parenting styles (i.e., Authoritative; Authoritarian) increased the use of healthy mature defenses. However, authoritarian parenting did so with side effects. In addition to increasing use of healthy defenses, it also increased risk of self-oriented and other-oriented defenses. In other words, authoritarian parenting led children to make employ more defense from all levels and be more defensive in general. In contrast, authoritative parenting was associated with increased use of healthy defenses, but it was not associated with the use of self-oriented or other-oriented defenses. While it was not found to prevent the use of less adaptive defenses (i.e., it was unrelated to their use), it also not found to promote their use. Thus, of the three styles, it appears to promote use of healthy defenses without incurring unwanted side effects.

This points to authoritative parenting as the parenting style with the most desirable outcome: promoting mature defenses without also promoting less adaptive defenses like the other two parenting styles. Of notes, these relationships held regardless of parents' level of

distress and regardless of a family's situation in relation to the pandemic. Thus, our findings point to parenting styles being a key area of intervention. Helping parents reduce the use of permissive and authoritative parenting styles is likely to reduce the use of self- and other-oriented defenses; similarly, helping parents engage in authoritative parenting is likely to promote children's use of healthy defenses. This is likely to be true during times of relative stress and during times of relative calm.

Limitations

There are several limitations to this study. As is the nature of self-reported online studies, there is the possibility that participants were not thorough and thoughtful while completing the study. Around 160 participants were omitted from the study as they did not meet validity criteria to demonstrate that they properly answered the study items. Future research should utilize methods to ensure participants are remaining attentive throughout the study. Additionally, as this study utilized parent perspective on child defense use, we are unable to know the accuracy of ratings on children's actual defense use. Similarly, due to using parent perspective, we are unable to know if their experienced stress due to the pandemic is similar or equal to their child's experienced stress. Future research should incorporate direct measures of children's defense use and experienced stress due to the pandemic to account for this. Another potential limitation of this study is that we used the short version of the PSDQ, which provides less variation and lower internal consistency than the full version. As such, further research should include the full version of the PSDQ.

Conclusions and Next Steps

The findings of this study point to an unexpected consistency of the type of defense use in children in response to the pandemic, as well as expected links between the impact of Covid-19 and increased frequency of defense use in children. Additionally, this study found both partial and full mediation relationships between parental distress and children's defense use through the pathway of parenting style. In response to these findings, researchers should investigate methods and interventions that can help parents to avoid permissive parenting when they are distressed to help reduce their children's use of non-adaptive defenses as well as methods and interventions that can help promote authoritative parenting styles in parents to help promote healthy defense use in their children. Also, as only a partial mediating relationship was found between parental distress and children's self-oriented defense use, future research should investigate other

potential pathways between these variables which can help to inform other areas of intervention. Finally, due to the unexpected findings of consistency in type of defense use, further investigation of the use of the CADS for similar research is recommended, as this is the first study that utilized this measure on this topic. For example, future studies could utilize the methods of this study and have parents of 8- to 10-year-olds rate their child's defense use at 5-years-old as opposed to their current age to help determine if the CADS more accurately provides observations of state or trait measures of defense use in children.

Tables

Table 1.
Sample Characteristics

Parent Demographics	N	Percent
Gender		
Women	202	63.9
Men	113	35.8
Unspecified	1	0.3
Age		
21-29	54	17.1
30-39	158	50.0
40-49	78	24.7
50-60	25	7.9
Unspecified	1	0.3
Ethnicity		
White or Caucasian	227	71.8
Black or African-American	44	13.9
Latino or Hispanic	15	4.7
Asian	11	3.5
American Indian or Alaskan Native	7	2.2
Multiracial	12	3.8
Education		
Some High School	9	2.8
High School	136	43.0
Bachelor's Degree	83	26.3
Master's Degree	41	13.0
Ph.D. or Higher	23	7.3
Trade School	24	7.6
Relationship Status		
Single, Never Married	95	30.1
Married	180	57.0
Divorced, Currently Single	25	7.9
Divorced, Re-Married	1	0.3
Widowed, Currently Single	4	1.3
Widowed, Re-Married	1	0.3
Other	10	3.2

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Time in Home with Child

100% of the time.	255	80.7
Roughly 75% of the time.	29	9.2
Roughly 50% of the time.	9	2.8
Roughly 25% of the time.	5	1.6
Less than 25% of the time.	12	3.8
Other	5	1.6
Unspecified	1	0.3

Child Demographics	N	Percent
Gender		
Girl	141	44.6
Boy	158	50.0
Trans-Girl	1	0.3
Unspecified	16	5.1
Age		
4	46	14.6
5	32	10.1
6	21	6.6
7	20	6.3
8	38	12.0
9	34	10.8
10	47	14.9
11	33	10.4
12	36	11.4
Unspecified	9	2.8
Siblings		
Yes	199	63.0
No	110	34.8
Unspecified	7	2.2

Note. Child demographics are presented as reported by their parent

COVID-19, PARENTING STYLE, AND CHILDREN’S DEFENSE USE

Table 2.

Descriptive Statistics for Scales

Scale	<i>M</i>	<i>sd</i>	Min.	Max	Kurtosis	Skewness
CEFIS Impact Sum	33.46	9.65	13.00	59.00	-.63	.14
CEFIS Parental Distress	6.58	2.38	1.00	10.00	-.51	-.34
CEFIS Child Distress	5.77	2.41	1.00	10.00	-.59	-.17
CADS OO-B	1.41	.64	.11	2.94	-.74	-.11
CADS SO-B	1.37	.59	.09	2.86	-.60	-.18
CADS Mature-B	1.80	.54	.06	3.00	.25	-.40
CADS OO-D	1.37	.68	.00	2.94	-.71	-.11
CADS SO-D	1.36	.63	.00	2.91	-.62	-.01
CADS Mature-D	1.78	.62	.00	3.00	.27	-.60
PDSQ-Authoritative-B	3.98	.66	1.87	5.00	.03	-.65
PDSQ-Authoritarian-B	2.22	.95	1.00	4.92	-.16	.96
PDSQ-Permissive-B	2.57	.84	1.00	5.00	-.35	.38
PDSQ-Authoritative-D	3.88	.80	1.27	5.00	.01	-.67
PDSQ-Authoritarian-D	2.18	.95	1.00	4.83	-.18	.87
PDSQ-Permissive-D	2.59	.88	1.00	5.00	-.48	.28

Note. ** = $p < .01$; * = $p < .05$; CEFIS = COVID-19 Exposure and Family Impact Survey; OO-B = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; SO-B = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; Mature-B = Mature Defenses scale Comprehensive Assessment of Defense Style at Baseline; OO-D = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; SO-D = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; Mature-D = Mature Defenses scale Comprehensive Assessment of Defense Style During the pandemic; PDSQ-Authoritative-B = Authoritative Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; PDSQ-Authoritarian-B = Authoritarian Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; PDSQ-Permissive-B = Permissive Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; PDSQ-Authoritative-D = Authoritative Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic; PDSQ-Authoritarian-D = Authoritarian Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic; PDSQ-Permissive-D = Permissive Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic

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Table 3.

Correlations among CADS Scales.

Scale	Mature-B	OO-B	SO-B	Mature-D	OO-D	SO-D
Mature-B	-					
OO-B	.32**	-				
SO-B	.40**	.86**	-			
Mature-D	.83**	.24**	.34**	-		
OO-D	.29**	.87**	.80**	.30**	-	
SO-D	.38**	.78**	.87**	.43**	.88**	-

Note. ** = $p < .01$; * = $p < .05$; Mature-B = Mature Defenses scale Comprehensive Assessment of Defense Style at Baseline; OO-B = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; SO-B = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; Mature-D = Mature Defenses scale Comprehensive Assessment of Defense Style During the pandemic; OO-D = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; SO-D = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic

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Table 4.

Correlations among PSDQ-Short Version Scales.

Scale	1	2	3	4	5	6
1 Authoritative-B	-					
2 Authoritarian-B	-.12*	-				
3 Permissive-B	.02	.65**	-			
4 Authoritative-D	.79**	-.18**	.01	-		
5 Authoritarian-D	-.12*	.88**	.59**	-.19**	-	
6 Permissive-D	.04	.54**	.77**	.05	.62**	-

Note. ** = $p < .01$; * = $p < .05$; 1 Authoritative-B = Authoritative Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; 2 Authoritarian-B = Authoritarian Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; 3 Permissive-B = Permissive Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; 4 Authoritative-D = Authoritative Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic; 5 Authoritarian-D = Authoritarian Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic; 6 Permissive-D = Permissive Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic

Table 5.

Correlations Between Defense Levels and Covid-19 family Impact, Parental Distress, and Child Distress.

During the Pandemic

Defense Level	Family Impact	Parental Distress	Child Distress
OO-D	.21**	.13*	.13*
SO-D	.23**	.20**	.16**
Mature-D	-.02	.03	.05

At Baseline

Defense Level	Family Impact	Parental Distress	Child Distress
OO-B	.20**	.15**	.11*
SO-B	.22**	.21**	.17**
Mature-B	-.02	.01	.03

Note. ** = $p < .01$; * = $p < .05$; OO-D = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; SO-D = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; Mature-D = Mature Defenses scale Comprehensive Assessment of Defense Style During the pandemic; OO-B = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; SO-B = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; Mature-B = Mature Defenses scale Comprehensive Assessment of Defense Style at Baseline;

Table 6.

Univariate Associations Between Parenting Style and CADS Defense Scores During the Pandemic and at Baseline.

During the Pandemic			
	Mature-D	OO-D	SO-D
Authoritative-D	.36**	-.06	-.03
Authoritarian-D	.33**	.61**	.63**
Permissive-D	.17**	.57**	.52**

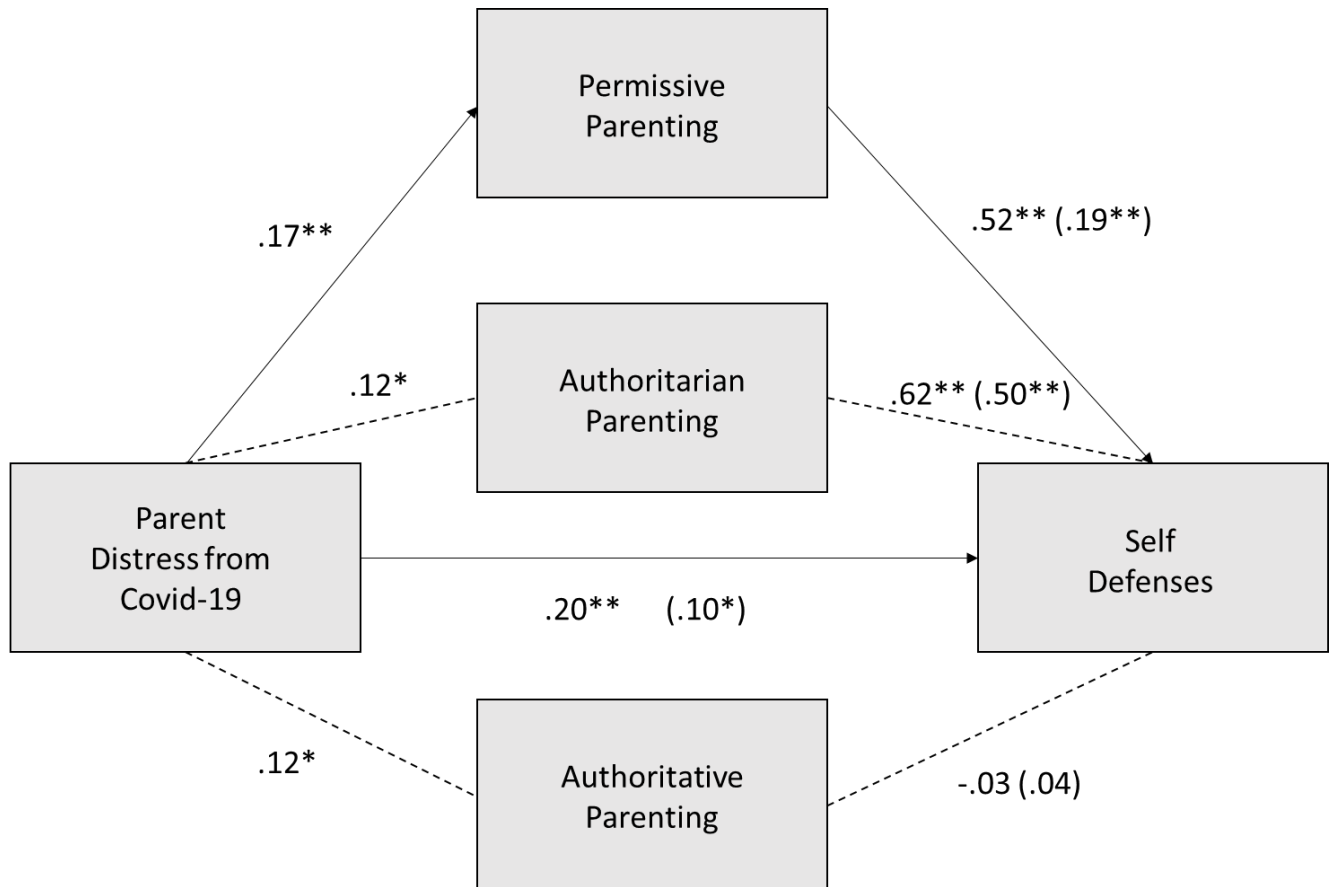
At Baseline			
	Mature-B	OO-B	SO-B
Authoritative-B	.36**	-.06	.00
Authoritarian-B	.32**	.57**	.59**
Permissive-B	.14*	.52**	.51**

Note. ** = $p < .01$; * = $p < .05$; OO-B = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; SO-B = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style at Baseline; Mature-B = Mature Defenses scale Comprehensive Assessment of Defense Style at Baseline; OO-D = Other-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; SO-D = Self-Oriented Defenses scale Comprehensive Assessment of Defense Style During the pandemic; Mature-D = Mature Defenses scale Comprehensive Assessment of Defense Style During the pandemic; Authoritative-B = Authoritative Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; Authoritarian-B = Authoritarian Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; Permissive-B = Permissive Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version at Baseline; Authoritative-D = Authoritative Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic; Authoritarian-D = Authoritarian Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic; Permissive-D = Permissive Parenting Style scale Parenting Styles & Dimensions Questionnaire - Short Version During the pandemic

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

Figure 1.

Model showing direct and indirect effects of parental distress and parenting styles on children's use of self-oriented defenses.

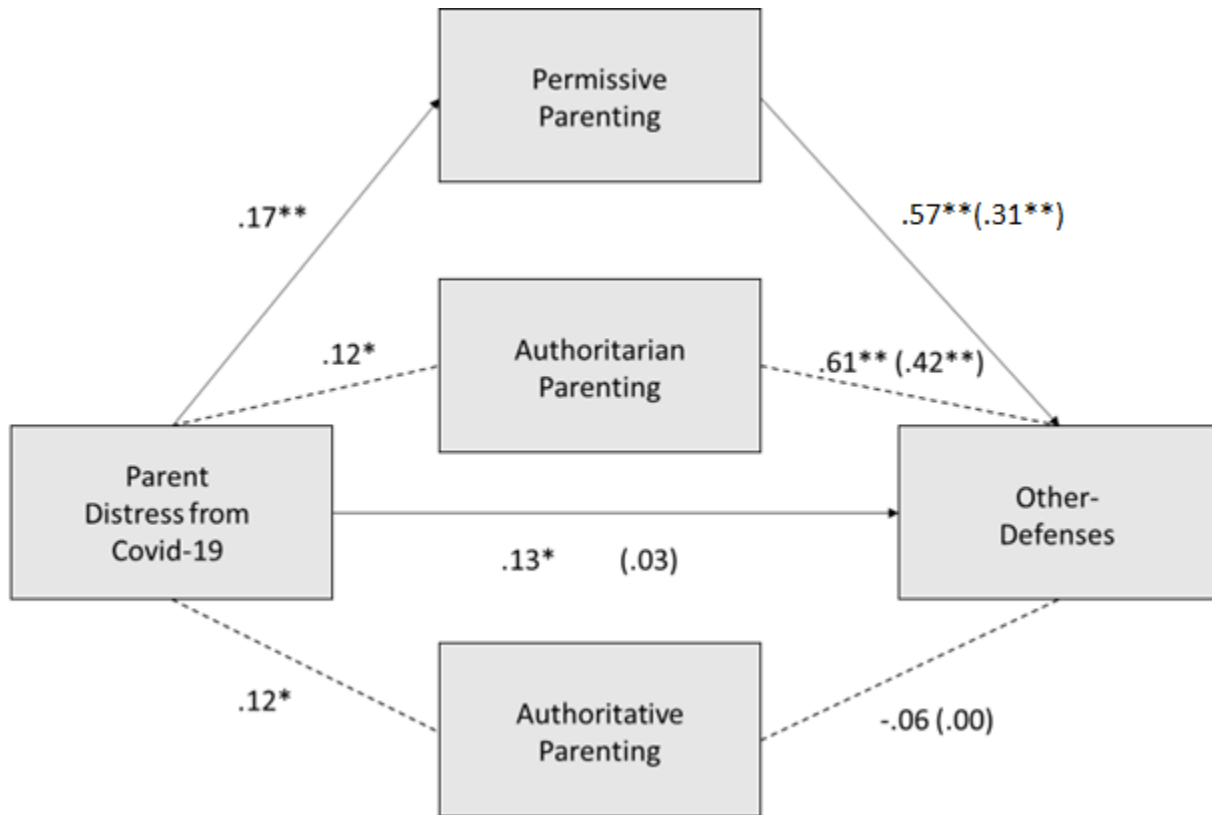


Note. $* = p < .05$; $** = p < .01$; Direct effects in the form of standardized beta (β) are presented outside of parentheses. The numbers in parentheses are standardized beta (β) estimates when all predictor and mediator variables are included in the model. All standardized beta (β) estimates statistically significant at $p < .01$. Dashed lines represent indirect paths that did not show evidence for statistically significant mediation regarding the parental distress – self-oriented defenses relationship. Solid lines represent indirect paths that showed statistically significant mediation ($p < .05$) for the parental distress – self-oriented defenses association.

COVID-19, PARENTING STYLE, AND CHILDREN’S DEFENSE USE

Figure 2.

Model showing direct and indirect effects of parental distress and parenting styles on children’s use of other-oriented defenses.



Note. $* = p < .05$; $** = p < .01$; Direct effects in the form of standardized beta (β) are presented outside of parentheses. The numbers in parentheses are standardized beta (β) estimates when all predictor and mediator variables are included in the model. All standardized beta (β) estimates statistically significant at $p < .01$. Dashed lines represent indirect paths that did not show evidence for statistically significant mediation regarding the parental distress – other-oriented defenses relationship. Solid lines represent indirect paths that showed statistically significant mediation ($p < .05$) for the parental distress – other-oriented defenses association.

Appendices

Appendix A.

Online Study Consent Form

UNIVERSITY OF MICHIGAN-DEARBORN

Parent and Child Adaptation to Covid-19 CONSENT Form

Study ID: HUM00209204

Principal Investigator: Katherine Smith, University of Michigan-Dearborn

Faculty Advisors: Caleb Siefert, Ph.D., University of Michigan-Dearborn; Nancy Wrobel, Ph.D., University of Michigan-Dearborn

You are invited to participate in a study focusing on how Covid-19 may have impacted how your children manages stress and emotions and your parenting style. Taking part in this research is voluntary. To participate you must be at least 21 years old, with at least one child between the ages of 4 and 12.

Participation involves providing some demographic information and answering five questionnaires. You will also be asked to provide demographic information about yourself (e.g., age, ethnic identity, marital status) and your child. You will then rate a questionnaire assessing how your child managed emotions prior to the Covid-19 pandemic and a questionnaire assessing your parenting style before the pandemic. Next, you will re-rate both questionnaires based on how your child managed their emotions during the Covid-19 pandemic and based on your parenting style during the pandemic. You'll finish the survey by completing a brief questionnaire

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on how much you felt impacted by the Covid-19 pandemic. This study will take approximately 15-25 minutes. Your responses will be kept completely confidential.

Benefits of the Research: While you may not directly benefit from your participation in this study, others may benefit due to the increased knowledge researchers may gain from your responses. You may also find this experience of participating in research interesting.

Risks and Discomforts: There are very few anticipated risks for this study. However, while researchers have taken steps to minimize any risks, you may still experience some risks related to your participation in this study. These risks may include possibly feeling bored or frustrated while completing the questionnaires. It is also possible you may find self-report measures to be intrusive. The questions that this study contains are not typically experienced as intrusive, however they may be experienced as such to some. Please remember all of your answers are completely anonymous. However, if a question is too intrusive, you may elect to not answer the question.

Compensation: As part of your participation, you agree to serve as a research subject for this study. Pending approval by the researchers, compensation is provided through Prime Panels. Upon completion of the study, if you meet the compensation criteria, you will receive compensation in the amount you have agreed to with the platform through which you entered this survey.

To be eligible for compensation you must 1) be over the age of 21, 2) reside in the United States, 3) answer 90% or more of the questions, 4) correctly answer 90% of the validity items, 5) pass a response consistency check, and 6) fulfill time requirements. Participants who do not fulfill these requirements will not be compensated and your data will not be used in the final data analysis.

You may withdraw at any time from this study without penalty; however, you will not be compensated. The data from those who withdraw will not be used in the final data analysis.

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Participating in this study is **completely voluntary**. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any survey question for any reason. If you decide to withdraw early, any data you have provided will be deleted and/or destroyed and will not be used in any way within this study.

We will protect the confidentiality of your research records by storing the data you provide in a private survey, of which only the researcher has access. At the end of this project, we will keep your data and may use it for future analysis. We plan to publish or present the research of this study, but will not include any identifying information and will only describe data at the group level.

There are some reasons why people other than the researchers may need to see the information you provided as part of the study. This includes organizations responsible for making sure the research is done safely and properly, such as the University of Michigan Health Sciences and Behavioral Sciences IRB.

If you have any questions about this research, or would like to learn the findings of this study, you may contact katmsmi@umich.edu or csiefert@umich.edu.

As part of their review, the University of Michigan Institutional Review Board has determined that this study is no more than minimal risk and exempt from on-going IRB oversight.

If you **DO NOT** agree to participate in this study, please close the window and exit out of the page.

If you wish to continue with the study, click on the "I consent" option below and then click on the forward arrow (in the lower right-hand corner) to begin.

Appendix B.

Demographics

What is your gender identity (e.g., Man; Woman; Non-Binary)?

What is your age?

Please specify the ethnicity you identify as.

- White or Caucasian (1)
- Black or African-American (2)
- Latino or Hispanic (3)
- Asian (4)
- American Indian or Alaskan Native (5)
- Native Hawaiian or other Pacific Islander (6)
- Other (please specify) (7) _____

What is the highest degree or level of education you have completed?

- Some High School (1)
- High School (2)
- Bachelor's Degree (3)
- Master's Degree (4)
- Ph.D. or higher (5)
- Trade School (6)

Which option best describes your marital status.

- Single, Never Married (1)
- Married (2)
- Divorced, Currently Single (3)

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- Divorced, Re-Married (4)
- Widowed, Currently Single (5)
- Widowed, Re-Married (6)
- Other (7) _____

What is your child's age? (If you have more than one child, please pick one child to rate throughout the questionnaire that is 4-12 years old.)

What gender does your child identify as (e.g., boy; girl; non-binary; trans-boy; trans-girl)?

Does your child have any siblings? If so, how many siblings? (e.g. 1 brother, 1 sister)

- Yes [please specify how many siblings (e.g. 1 brother, 1 sister)]

- No

My child lives in my home with me...

- ...100% of the time. (1)
- ...roughly 75% of the time. (2)
- ...roughly 50% of the time. (3)
- ...roughly 25% of the time. (4)
- ...less than 25% of the time. (5)
- Other (6) _____

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Appendix C.

CADS Before Covid-19

CADS Instructions On the following pages, you will complete a questionnaire about your child and yourself. Please rate these items based on how your child typically was before the Covid-19 pandemic.

According to the instructions, I will rate the next set of items based on:

- o How my child has always been (1)
- o What my child was like before the pandemic (2)
- o What my child was like during the Covid-19 pandemic (3)
- o What I think life will be like in the future after the Covid-19 pandemic (4)
- o How I wish things were during the pandemic (5)

CADS_B1 Easily provoked, and reacts by losing their temper.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B2 In order to better cope with problems on their own, turns to others for advice.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B3 Helps people in trouble without letting them take advantage of them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

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CADS_B4 Prepares themselves before events that make them anxious.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B5 Gets upset with themselves when things do not turn out their way.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B6 Suddenly loses their voice when they have to speak in public.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_1 For this item, please select "1 - Rarely. A little bit like them".

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B7 When frightened about an activity, gets involved in it so that they can overcome their fear.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

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CADS_B8 When someone hurts them, does not recognize it until much later.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B9 Despises people that they are disappointed in.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B10 When somebody hurts them, responds by hurting someone else.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B11 Has trouble organizing their thoughts under stress (e.g. is confused or blanks out).

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B12 During times of fear or sadness, retreats into an imaginary world.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

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CADS_B13 Cracks jokes that do not put anyone down in order to lighten a stressful situation.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B14 In times of stress, complains about physical problems and cannot be comforted.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B15 They are fully dependent on people they look up to.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_2 For this item, pick "3 - Frequently. Very much like them".

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B16 Deals with stressful situations by using behaviors learned from their role models.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B17 When they talk about upsetting events, does not show any sadness.

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- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B18 When faced with a challenge, acts like they are more powerful or talented than they really are more than anyone else.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B19 When asked to do something they dislike, such as homework or cleaning their room, says they will, but in fact they do not.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B20 When they do not succeed, claims that others treated them unfairly.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B21 When confronted with their bad behavior, comes up with "logical" arguments to explain it.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)

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- 3 - Frequently. Very much like them. (4)

CADS_B22 When expected to be upset about a demand, is surprisingly happy to take it on.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B23 When frustrated that they cannot complete a task, behaves in ways that are typical of younger children.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_3 Choose the item below that is an animal.

- Car (1)
- Dog (2)
- Green (3)
- Chair (4)

CADS_B24 Has difficulty talking about or remembering past unpleasant experiences.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B25 In emotional situations describes their feelings in a clear and accurate way.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)

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- o 3 - Frequently. Very much like them. (4)

CADS_B26 Complains about not feeling well when they have to do something that makes them nervous, such as going to school or to camp, or taking a test.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B27 In an argument, sees others as either with them or against them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B28 When frustrated that they cannot do what they want to do, is flexible about seeking socially acceptable alternatives.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B29 When they get angry, waits until they are calmer rather than acting impulsively.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B30 When things do not go their way, closes up and prefers to be alone.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)

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- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B31

Does what they feel like right away, without worrying about what others might think.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B32

During difficult times, relies on others without becoming fully dependent on them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B33

Is attentive to others in distress and comforts them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B34

When faced with an upcoming unpleasant event, controls their anxiety by planning for the event.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

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CADS_B35

Becomes angry with themselves when they are criticized.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_4 Choose the option that is a number.

- Twelve (1)
- Kitten (2)
- Honesty (3)
- Difficult (4)

CADS_B36

Suddenly cannot move an arm or leg when they have to perform under stress.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B37

Shows an active interest in objects that scare them so that they can master their fear.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B38

Ignores problems until the problems hit them in the face.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)

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- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B39

When people make them angry, sees their negative sides.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B40

In a stressful situation, takes their feelings out on an unrelated person or object.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B41

Gets so wrapped up in their own thoughts or feelings that they become clumsy.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B42

When faced with a difficult task, daydreams instead of dealing with it.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

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Val_5 For this item, select "0 - Never. Not at all like them."

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B43

When somebody hurts them, improves the situation by kidding around, but does not make a fool of themselves.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B44

When they fear being left alone, demands company because of an intense concern about getting sick.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B45

When people they admire fail them, cannot see their weaknesses.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B46

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In a conflict, chooses between good and bad behavior based on values learned from their role models.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B47

In an emotional situation, expresses their feelings in a distant way.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B48

When threatened, acts like they are stronger than they really are and as if they cannot be hurt.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B49

Does not appear too upset when asked to do something they dislike, but they seem to do it badly on purpose.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B50

Blames others for their mistakes.

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- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B51

When embarrassed by their behavior, comes up with "explanations" to excuse themselves.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_6 For this item, select "0 - Never. Not at all like them".

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B52

When somebody hurts them, expresses concern for that person instead of anger.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_B53

When they are sad or angry, behaves in a childish way relative to their age.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

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CADS_B54 When woken up by a nightmare, does not remember the content of the dream.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B55 Shows willingness to discuss their failures without coming up with excuses.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B56 Complains about being in physical pain (e.g. having a headache or stomachache) when they feel ignored or rejected.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B57 When they feel their friends are close to them, considers them all good, and when they disappoint them, considers them all bad.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B58 Occupies themselves with a hobby, such as sports, computers, art, or music, in order to relieve stress.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)

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- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B59 When unable to cope with a problem, waits and deals with the problem at a more appropriate time.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B60 When somebody hurts them in a social situation, feels uncomfortable and prefers to be alone.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B2R In order to better cope with problems on their own, turns to others for advice.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_B3R Helps people in trouble without letting them take advantage of them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

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Appendix D.

PSDQ-Short Version Before Covid-19

On the following pages, you will complete a questionnaire about your child and yourself. Please rate the following items based on how you typically were before the Covid-19 pandemic.

Based on the instructions, I will rate the next set of items based on:

- How I have always been (1)
- What I was like before the pandemic (2)
- What I was like during the Covid-19 pandemic (3)
- What I think life will be like in the future after the Covid-19 pandemic (4)
- How I wish things were during the pandemic (5)

PSDQ_B1 I am responsive to my child's feelings or needs

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B2 I use physical punishment as a way of disciplining my child

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B3 I take my child's desires into account before asking the child to do something

- Never (1)
- Sometimes (2)
- About half the time (3)

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

- Most of the time (4)
- Always (5)

PSDQ_B4 When my child asks why they have to conform, I state: because I said so, or I am your parent and I want you to.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B5 I explain to my child how I feel about the child's good and bad behavior.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B6 I spank when my child is disobedient.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B7 I encourage my child to talk about the child's troubles.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

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PSDQ_B8 I find it difficult to discipline my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B9 I encourage my child to freely express themselves even when disagreeing with parents.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B10 I punish by taking privileges away from my child with little if any explanations.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B11 I emphasize the reasons for rules.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

Val_7 For this item, select "Sometimes".

- Never (1)

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- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B12 I give comfort and understanding when my child is upset.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B13 I yell or shout when my child misbehaves.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B14 I give praise when my child is good.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B15 I give into my child when they cause a commotion about something.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)

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- Always (5)

PSDQ_B16 I explode in anger towards my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B17 I threaten my child with punishment more often than actually giving it.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B18 I take into account my child's preferences in making plans for the family.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B19 I grab my child when they are being disobedient.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B20 I state punishments to my child and do not actually do them.

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- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B21 I show respect for my child's opinions by encouraging my child to express them.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B22 I allow my child to give input into family rules.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B23 I scold and criticize to make my child improve.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B24 I spoil my child.

- Never (1)
- Sometimes (2)
- About half the time (3)

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

- Most of the time (4)
- Always (5)

Val_8 I spoke to my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B25 I give my child reasons why rules should be obeyed.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B26 I use threats as punishment with little or no justification.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B27 I have warm and intimate times together with my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

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PSDQ_B28 I punish by putting my child off somewhere alone with little if any explanations.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B29 I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of their own actions.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B30 I scold or criticize when my child's behavior doesn't meet my expectations.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B31 I explain the consequences of the child's behavior.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B32 I slap my child when the child misbehaves.

- Never (1)

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- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B2R I use physical punishment as a way of disciplining my child

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_B3R I take my child's desires into account before asking the child to do something

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

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Appendix E.

CADS at the Height of Covid-19

The Covid-19 pandemic affected many communities and families in many different ways. In the following set of items, we will be asking you to re-rate items based on how your child was during the height of the pandemic for your community and your family.

Based on the instructions, I will rate the next set of items based on:

- o How my child has always been (1)
- o What my child was like before the pandemic (2)
- o What my child was like during the Covid-19 pandemic (3)
- o What I think life will be like in the future after the Covid-19 pandemic (4)
- o How I wish things were during the pandemic (5)

CADS_D1 Easily provoked, and reacts by losing their temper.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D2 In order to better cope with problems on their own, turns to others for advice.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D3 Helps people in trouble without letting them take advantage of them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

CADS_D4 Prepares themselves before events that make them anxious.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D5 Gets upset with themselves when things do not turn out their way.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D6 Suddenly loses their voice when they have to speak in public.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_9 For this item, please select "2 - Sometimes. Somewhat like them".

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D7 When frightened about an activity, gets involved in it so that they can overcome their fear.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

CADS_D8 When someone hurts them, does not recognize it until much later.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D9 Despises people that they are disappointed in.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D10 When somebody hurts them, responds by hurting someone else.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D11 Has trouble organizing their thoughts under stress (e.g. is confused or blanks out).

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D12 During times of fear or sadness, retreats into an imaginary world.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

CADS_D13 Cracks jokes that do not put anyone down in order to lighten a stressful situation.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D14 In times of stress, complains about physical problems and cannot be comforted.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D15 They are fully dependent on people they look up to.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_10 For this item, pick "0 - Never. Not at all like them".

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D16 Deals with stressful situations by using behaviors learned from their role models.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D17 When they talk about upsetting events, does not show any sadness.

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D18 When faced with a challenge, acts like they are more powerful or talented than they really are more than anyone else.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D19 When asked to do something they dislike, such as homework or cleaning their room, says they will, but in fact they do not.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D20 When they do not succeed, claims that others treated them unfairly.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D21 When confronted with their bad behavior, comes up with "logical" arguments to explain it.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

COVID-19, PARENTING STYLE, AND CHILDREN'S DEFENSE USE

CADS_D22 When expected to be upset about a demand, is surprisingly happy to take it on.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D23 When frustrated that they cannot complete a task, behaves in ways that are typical of younger children.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_11 For this item, choose "2- Sometimes. Somewhat like them."

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D24 Has difficulty talking about or remembering past unpleasant experiences.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D25 In emotional situations describes their feelings in a clear and accurate way.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

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CADS_D26 Complains about not feeling well when they have to do something that makes them nervous, such as going to school or to camp, or taking a test.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D27 In an argument, sees others as either with them or against them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D28 When frustrated that they cannot do what they want to do, is flexible about seeking socially acceptable alternatives.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D29 When they get angry, waits until they are calmer rather than acting impulsively.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D30 When things do not go their way, closes up and prefers to be alone.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)

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- o 3 - Frequently. Very much like them. (4)

CADS_D31

Does what they feel like right away, without worrying about what others might think.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D32

During difficult times, relies on others without becoming fully dependent on them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D33

Is attentive to others in distress and comforts them.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D34

When faced with an upcoming unpleasant event, controls their anxiety by planning for the event.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D35

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Becomes angry with themselves when they are criticized.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_12 For this item, select "1-Rarely. A little like them."

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D36

Suddenly cannot move an arm or leg when they have to perform under stress.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D37

Shows an active interest in objects that scare them so that they can master their fear.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D38 Ignores problems until the problems hit them in the face.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)

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- o 3 - Frequently. Very much like them. (4)

CADS_D39

When people make them angry, sees their negative sides.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D40

In a stressful situation, takes their feelings out on an unrelated person or object.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D41

Gets so wrapped up in their own thoughts or feelings that they become clumsy.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D42

When faced with a difficult task, daydreams instead of dealing with it.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

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Val_13 For this item, Pick "3-Frequently. Very Much Like them."

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D43 When somebody hurts them, improves the situation by kidding around, but does not make a fool of themselves.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D44

When they fear being left alone, demands company because of an intense concern about getting sick.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D45

When people they admire fail them, cannot see their weaknesses.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D46

In a conflict, chooses between good and bad behavior based on values learned from their role models.

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- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D47

In an emotional situation, expresses their feelings in a distant way.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D48

When threatened, acts like they are stronger than they really are and as if they cannot be hurt.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D49

Does not appear too upset when asked to do something they dislike, but they seem to do it badly on purpose.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D50

Blames others for their mistakes.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)

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- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D51

When embarrassed by their behavior, comes up with "explanations" to excuse themselves.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

Val_14 For this item, select "0 - Never. Not at all like them".

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D52

When somebody hurts them, expresses concern for that person instead of anger.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D53

When they are sad or angry, behaves in a childish way relative to their age.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D54 When woken up by a nightmare, does not remember the content of the dream.

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- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D55 Shows willingness to discuss their failures without coming up with excuses.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D56 Complains about being in physical pain (e.g. having a headache or stomachache) when they feel ignored or rejected.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D57 When they feel their friends are close to them, considers them all good, and when they disappoint them, considers them all bad.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

CADS_D58 Occupies themselves with a hobby, such as sports, computers, art, or music, in order to relieve stress.

- o 0 - Never. Not at all like them. (1)
- o 1 - Rarely. A little like them. (2)
- o 2 - Sometimes. Somewhat like them. (3)
- o 3 - Frequently. Very much like them. (4)

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CADS_D59 When unable to cope with a problem, waits and deals with the problem at a more appropriate time.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D60 When somebody hurts them in a social situation, feels uncomfortable and prefers to be alone.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D4R Prepares themselves before events that make them anxious.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

CADS_D5R Gets upset with themselves when things do not turn out their way.

- 0 - Never. Not at all like them. (1)
- 1 - Rarely. A little like them. (2)
- 2 - Sometimes. Somewhat like them. (3)
- 3 - Frequently. Very much like them. (4)

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Appendix F.

PSDQ-Short Version at the Height of Covid-19

The Covid-19 pandemic affected many communities and families in many different ways. For the next set of items, we are asking you to re-rate how you have been with your child during the height of the pandemic for your community and your family.

Based on the instructions, I will rate the next set of items based on:

- How I have always been (1)
- What I was like before the pandemic (2)
- What I was like during the Covid-19 pandemic (3)
- What I think life will be like in the future after the Covid-19 pandemic (4)
- How I wish things were during the pandemic (5)

PSDQ_D1 I am responsive to my child's feelings or needs

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D2 I use physical punishment as a way of disciplining my child

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D3 I take my child's desires into account before asking the child to do something

- Never (1)
- Sometimes (2)

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- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D4 When my child asks why they have to conform, I state: because I said so, or I am your parent and I want you to.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D5 I explain to my child how I feel about the child's good and bad behavior.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D6 I spank when my child is disobedient.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D7 I encourage my child to talk about the child's troubles.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)

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- Always (5)

PSDQ_D8 I find it difficult to discipline my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D9 I encourage my child to freely express themselves even when disagreeing with parents.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D10 I punish by taking privileges away from my child with little if any explanations.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D11 I emphasize the reasons for rules.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

Val_15 For this item, select "Most of the time".

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- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D12 I give comfort and understanding when my child is upset.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D13 I yell or shout when my child misbehaves.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D14 I give praise when my child is good.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D15 I give into my child when they cause a commotion about something.

- Never (1)
- Sometimes (2)
- About half the time (3)

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- Most of the time (4)
- Always (5)

PSDQ_D16 I explode in anger towards my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D17 I threaten my child with punishment more often than actually giving it.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D18 I take into account my child's preferences in making plans for the family.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D19 I grab my child when they are being disobedient.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

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PSDQ_D20 I state punishments to my child and do not actually do them.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D21 I show respect for my child's opinions by encouraging my child to express them.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D22 I allow my child to give input into family rules.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D23 I scold and criticize to make my child improve.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D24 I spoil my child.

- Never (1)
- Sometimes (2)

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- About half the time (3)
- Most of the time (4)
- Always (5)

Val_16 For this item, choose "Sometimes."

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D25 I give my child reasons why rules should be obeyed.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D26 I use threats as punishment with little or no justification.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D27 I have warm and intimate times together with my child.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

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PSDQ_D28 I punish by putting my child off somewhere alone with little if any explanations.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D29 I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of their own actions.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D30 I scold or criticize when my child's behavior doesn't meet my expectations.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D31 I explain the consequences of the child's behavior.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D32 I slap my child when the child misbehaves.

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- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D4R When my child asks why they have to conform, I state: because I said so, or I am your parent and I want you to.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

PSDQ_D5R I explain to my child how I feel about the child's good and bad behavior.

- Never (1)
- Sometimes (2)
- About half the time (3)
- Most of the time (4)
- Always (5)

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Appendix G.

CEFIS

Covid-19 may have many impacts on you and your family life. In general, how has the Covid-19 pandemic affected each of the following?

Based on the instructions, I will rate the next set of items based on:

- How the following items were before the pandemic (1)
- How the Covid-19 pandemic has affected the following items (2)
- What I think the following items will be like in the future after the Covid-19 pandemic (3)
- How I wish the following items were during the pandemic (4)

CEFIS_1 Parenting

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_2 How family members get along with each other

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_3 Ability to care for your child with [illness/condition]

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse

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- 4 - Made it a lot worse
- Not Applicable

CEFIS_4 Ability to care for other children in your family

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_5 Ability to care for older adults or people with disabilities in your family

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

Val_17 Which option below is a color?

- Dog
- Honesty
- Table
- Red
- Glasses

CEFIS_6 Your physical wellbeing - exercise

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

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CEFIS_7 Your physical wellbeing - eating

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_8 Your physical wellbeing - sleeping

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_9 Your emotional wellbeing - anxiety

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_10 Your emotional wellbeing - mood

- 1 - Made it a lot better
- 2 - Made it a little better
- 3 - Made it a little worse
- 4 - Made it a lot worse
- Not Applicable

CEFIS_11 Overall, how much distress have you experienced related to Covid-19?

- 1 - No Distress

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- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 - Extreme Distress

CEFIS_12 In general, across all your children, how much distress have your children experienced related to Covid-19?

- 1 - No Distress
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 - Extreme Distress

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Appendix H.

Debrief Text

Thank you for your participation in this study.

Pending approval by the researchers, compensation is provided through Prime Panels. Upon completion of the study, if you meet the compensation criteria, you will receive compensation with the platform through which you entered this survey.

If you have any questions about this study, please contact
katmsmi@umich.edu.

If you were distressed by anything in this study or are having difficulty adjusting or readjusting to life after Covid-19, and you are looking for support or resources, we would recommend you consider BetterHelp at <https://www.betterhelp.com>.

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