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Impacts of Children's Negative Affectivity and Effortful Control on Parenting Styles and Parental Stress

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Abstract

While a wealth of research has explicated the impact of parents on children, the effects of children on parents has received less attention. Research has shown associations between temperament and parent stress as well as between parenting styles and parent stress. Studies have demonstrated that both high negative affectivity and low effortful control can cause parents to experience higher levels of stress (Konstantareas & Papageorgiou, 2006; Pesonen, Räikkönen, Heinonen, Komsi, Järvenpää, & Strandberg, 2008; Szymańska & Aranowska, 2019). Research has also shown that parents who employ authoritarian parenting tend to experience higher levels of stress than those who employ authoritative parenting (Aunola, Stattin & Nurmi, 1999; Calam, Bolton & Roberts, 2002; Lovejoy, Weis, O'Hare, & Rubin, 1999). The current study investigates whether certain child temperament characteristics are associated with specific parenting styles as well as with more parent stress, and whether the associations between temperament and parent stress are mediated by parenting styles. Preschool aged children are the focus of this investigation. A mediation model in this case would provide more insight into the nature of the effect that temperament has on parent stress. The sample included 46 children 3 to 5 years of age (26 girls, *M*age = 4.24 years, *SD* = 0.48) and their parents (38 mothers, *M*age = 31.71 years, *SD* = 7.83); families were multi-ethnic in background and reflected varying levels of socioeconomic status. Parents completed questionnaires assessing child temperament, parenting styles, and parent stress. A mediation model was run to test the effects of negative affectivity and effortful control on parenting styles and parenting stress. Results did show that high negative affectivity predicted high parent stress and that authoritative parenting predicted less parent stress, but that negative affectivity was unrelated to parenting styles. Further studies should investigate the role that other temperament characteristics may play in predicting parenting styles and parent stress.

Keywords: *Negative affectivity, Effortful control, Authoritative parenting, Parent stress, Authoritarian parenting*

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Introduction

Child temperament has been shown to contribute to parenting stress. Additionally, previous studies have illustrated that different parenting styles may be differentially associated with parent stress levels. Authoritative parenting is characterized by warmth and responsiveness when asserting control is related to less parenting stress (Aunola, Stattin, & Nurmi, 2000; Coplan, Hastings, Lagacé-Séguin, & Moulton, 2002; Deater-Deckard, 2004) while authoritarian parenting, characterized by harsh and coercive dominance to control child behavior, is related to more parenting stress (Baumrind, 2012; Baumrind, Larzelere, & Owens, 2010; Coplan et al., 2002; Deater-Deckard, 2004). While extensive literature has focused on how different parenting styles impact child behaviors early in development (Aunola et al., 2000; Berk, 2012; Boudreault-Bouchard, Dion, Hains, Vandermeerschen, Laberge, & Perron, 2013; Martínez & García, 2007; Milevsky, Schlechter, Netter, & Keehn, 2007; Steinberg, Darling, & Fletcher, 1995), the current study considers how a child's temperament may affect parents' behaviors and adjustment. Specifically, the current study examines whether certain child temperament characteristics elicit certain parenting styles (i.e., authoritative and authoritarian), and whether parenting styles in turn elicit more parenting stress.

A. Temperament

In his published work *Pattern and Growth in Personality,* Gordon Allport described temperament as a broader concept referring to one's emotional nature, the level of one's susceptibility to emotional stimulation, both speed and quality of response to such stimulation, as well as one's overall mental state (Allport, 1961). He believed temperament depended upon an

individual's biological makeup and therefore was solely hereditary. Over time psychologists have further altered the definition to more specifically describe the inner mechanisms that impact how temperament is expressed. The more contemporary description that is referenced throughout many current published works is the definition found in the text *Temperament and Social Behavior* (Damon, Lerner, & Eisenberg, 2006). In chapter 3 of this text, written by Mary Rothbart and John Bates (2006), temperament is defined as "constitutionally based individual differences in reactivity and self-regulation, in the domains of affectivity, activity and attention" (p. 100). Factor analyses of child temperament by Rothbart and her colleagues have yielded three broad factors: Surgency/Extraversion, Negative Affectivity and Effortful Control (Rothbart, Ahadi, Hershey, & Fisher, 2001). Both negative emotionality and poor effortful control are significant components of what is referred to as difficult temperament, which is generally found to elicit poor responsiveness from parents (Kochanska & Kim, 2013). Therefore, this paper will focus on how negative affectivity and effortful control impact parenting style behavior and how resulting parent stress levels are affected.

B. Negative Affectivity and Effortful Control

Negative affectivity and effortful control are observable early in development. Negative affectivity (NA) refers to children's proclivities for negative emotionality including anger, frustration, discomfort, fear, and sadness (Rothbart & Bates, 2006; Rothbart et al., 2001). Those high in NA have been found to experience such feelings throughout all situations, including situations that lack a clear stressor to bring about their onset (Watson & Clark, 1984).

Effortful control (EC) can be defined as a child's ability to regulate both emotion and behavior through the utilization of attentional and inhibitory control processes (Rothbart, Ahadi, & Hershey, 1994; Rothbart et al., 2001). Children who are high in effortful control can regulate their attention, their emotion, inhibit dominant impulses, and activate certain behaviors that allow them to respond appropriately to particular situations (Eisenberg, Zhou, Spinrad, Valiente, Fabes, & Liew, 2005). Based on the definition of EC given by Rothbart and colleagues, the extent to which children can inhibit dominant impulsive behavior is a major component of the effortful control capabilities that can develop within children.

C. Temperament and Parent Stress

Previous studies have illustrated the link between both high NA and low EC (i.e., low perseverance, low flexibility, and poor attentional focusing) with higher stress levels of the parents (Konstantareas & Papageorgiou, 2006; Pesonen et al., 2019). For example, a recent study of young children conducted by Szymańska and Aranowska (2019) assessed the relation of difficult child temperament (defined as high NA and low EC) and its relation to parental stress. Results of this study showed that NA had the most significant impact on stress levels, such that the more negative the mood of the child, the higher the reported parenting stress levels. Another study by Konstantereas and Papageorgiou (2006) observed the effects of temperament on maternal stress among mothers of children with autism. The results illustrated that among lower-functioning children, difficult temperament such as high activity level, low flexibility and low mood were associated with more stress. Mood and activity level were found to be the best predictors of maternal stress in this study (Konstantareas & Papageorgiou, 2006). Studies similar

to this with typically developing (TD) children were not found suggesting a gap in what is currently known about how difficult temperament found in TD children specifically impacts parent stress. Based on the studies previously mentioned, I hypothesize that NA will be associated with higher levels of parent stress while EC will be associated with low levels of parent stress because children who have high EC are better able to regulate their emotions and therefore will not express the negative emotionality that has been found to contribute to high parent stress.

D. Parent Stress

In addition to child behavior, other external factors can impact stress levels experienced by parents. Parents can experience stress related to careers, traumatic events, other interpersonal relationships etc. but stress specifically observed in the parenting role is distinct from the stress arising from these more peripheral factors (Deater-Deckard, 2004). A major portion of parental stress is the parent-child relationship. In fact, Mash and Johnston (1990), have suggested that differences in parents' approaches to parenting may contribute to parenting stress, especially when they are misaligned with their child's characteristics and behaviors. Similarly, Abidin (1990) describes this domain of parental stress to be heavily influenced by both parent and child characteristics but incorporates an additional component. He describes that a major cause of experienced stress is the interplay of the parent's behavior and the child's behavior in a given situation. In relation to the theory proposed by Abidin (1990), studies have illustrated that parenting style (therefore parental behavior), is known to influence parental stress.

E. Parenting Styles

In addition to child behavior, other factors such as parenting style can impact stress levels experienced by parents. The parenting style that a parent possesses is characterized by a combination of particular rearing behaviors that they employ. For example, authoritative and authoritarian parenting styles have emerged as two of the most prominent parenting styles due to their definitive behavioral characteristics (which will be further discussed) that are opposing in nature. The opposition found between both of these parenting styles is either the presence or absence of warmth. Authoritative parents employ strictness through warmth while authoritarian parents employ strictness in the absence of warmth (Garcia, Fuentes, Gracia, Serra, & Garcia, 2020). Mash and Johnston (1990) have suggested that differences in parents' approaches to parenting may also influence their experiences of parenting stress. Specifically, authoritative and authoritarian parenting styles are believed to be differentially associated with parenting stress.

1. Authoritative Child-Rearing

Authoritative parenting style is characterized by firm establishment and control of behavior standards expressed through warmth, responsiveness and sensitivity (Aunola et al., 2000; Coplan et al., 2002; Deater-Deckard, 2004). Authoritative parents engage in open communication when making demands towards the child regarding their behavior. They consistently enforce rules while providing explanations for punishments given in response to poor behavior (Berk, 2012; Coplan et al., 2002). Authoritative parents also provide positive reinforcement when a child engages in acceptable and appropriate behaviors (Deater-Deckard, 2004). In addition, authoritative parents provide encouragement towards their child to support communication and expression of the child's inner thoughts and feelings (Berk, 2012; Coplan et

al., 2002). Upon disagreement between the parent and the child, authoritative parents will engage in what Berk (2012) refers to as "joint decision making" (p. 574), in which parents exhibit a willingness to incorporate their child's perspective on the issue into the resolution. Authoritative parenting style has been suggested to represent the most optimal approach to parenting due to both warm support and encouragement along with behavior control that is receptive and adaptive to the child's perspective (Berk, 2012). In this study, the rearing behavior of warmth will be used to represent authoritative parenting style because it is a characteristic that is fundamental to authoritative parenting and that is also absent from the group of behaviors that defines authoritarian parenting.

2. Authoritarian Child-Rearing

Authoritarian parenting style is characterized by overly harsh and reactive rearing practices which serve to assert power and control over children. Such parenting is done in the absence of warmth and nurturance without two-way parent-child communication (Coplan et al., 2002; Deater-Deckard, 2004). These parents provide little acceptance of their child's behavior or their child's needs (Berk, 2012). Authoritarian parents engage in coercive control over their child's behavior in which they respond to the child's actions with verbal criticism and may in some cases involve hostile threats and commands as well as physical punishments (Baumrind, 2012; Baumrind et al., 2010). Authoritarian parents make demands for improved behavior from their child excessively, using harsh actions and punishments that serve to force the child's compliance (Baumrind, 2012; Berk, 2012). In addition to coercive control, authoritarian parents may also utilize psychological control over the child to manage their behavior (Baumrind et al., 2010). Baumrind (1996) characterizes psychological control as an indirect method that utilizes

manipulative, guilt-inducing parenting techniques to assert power over the child. This includes manipulation of the child's thoughts and expressions as well as exploitation of the child's dependence upon themselves (Berk, 2012). Lastly, authoritarian parents grant their children very little autonomy in which they make decisions for their child and refrain from acknowledging their child's perspective on an issue (Berk, 2012). In this study, the rearing behavior of strictness will be used to represent authoritarian parenting style as it is the central defining characteristic that incorporates enforcement behaviors employed by parents without warmth.

F. Parenting Styles and Parent Stress

Previous research has shown that parents who report high experienced stress are often parents that exhibit coercive behaviors and possess hostile and critical views toward their children (Calam et al., 2002; Lovejoy et al., 1999). Research conducted by Aunola and colleagues (1999) assessed associations between parental characteristics, parenting styles and parental stress. They found that the authoritative parenting style was associated with high parental self-esteem and parental use of mastery orientation strategies. A key finding among their results was that authoritative parenting style was also associated with low levels of experienced stress. Another comprehensive study by Reitman and colleagues (2001), found that parent tendencies for over reactivity were associated with authoritarian parenting styles as well as more parenting stress. Therefore, it is important to examine the factors that influence the development of such rearing behaviors. Based on the associations found between authoritarian and authoritative parenting and parent stress levels, I hypothesize that authoritative parenting style

will be associated with low parent stress while authoritarian parenting style will be associated with high parent stress.

G. Temperament and Parenting Style

Much of extant literature featuring associations between temperament and parenting styles has focused on the impact of parenting style on child temperament but less is known about the extent to which temperament can elicit certain rearing styles practiced by parents. Previous studies have illustrated that certain temperament characteristics can evoke specific parent behavioral responses that comprise authoritarian and authoritative parenting styles (Bridgett, Gartstein, Putnam, McKay, Iddins, Robertson, Ramsay, & Rittmueller, 2009; Fabes, Eisenberg, Karbon, Bernzweig, Speer, & Carlo, 1994; Laukkanen, Ojansuu, Tolvanen, Alatupa, & Aunola, 2014). For example, Laukkanen and colleagues (2014) found that a child's negative emotionality was positively correlated with mothers' behavioral control and psychological control (Laukkanen et al., 2014). Similarly, another study Bridgett and colleagues (2009) found that larger decreases in infants' regulatory capacity, which is a precursor of effortful control, from 4 to 12 months of age was associated with more negative parenting behaviors. Thus, decreases in infants' regulatory abilities over time appear to precede subsequent increases in negative parenting. One study to date has examined associations between temperament and parenting styles. In a study conducted with Chinese elementary school children, Lee and colleagues (2013) found evidence for a bidirectional relationship between temperament and authoritative and authoritarian parenting styles. Specifically, results showed that children low in effortful control or high in anger/frustration had parents who exhibited more authoritarian parenting style over time. The

results relating to the ability of child temperament to predict authoritative parenting over time was not found (Lee, Zhou, Eisenberg, & Wang, 2013). Taken together, a child's temperament appears to have an evocative effect on the rearing behaviors their parents employ which provides further insight on the subsequent parenting style that develops. Therefore, because high NA and low EC have been found to be associated with parenting behaviors that are characteristically authoritarian, I hypothesize that NA will be associated with higher levels of authoritarian parenting assuming that children possess more negative emotionality due to their inability to regulate their emotions (i.e., low in EC). In conjunction with this, I hypothesize, that children better able to regulate their emotions, i.e., children high in EC, will predict authoritative parenting rather than authoritarian parenting, because less negative emotionality will be expressed.

H. Current Study

The goal of the present study was to investigate associations of children's temperamental negative affectivity and effortful control on authoritative and authoritarian parenting styles and subsequent parent stress. The current study had four primary aims:

1. Hypotheses

Aim 1: Examine associations between child temperament and parent stress.

Hypothesis 1a. Children's higher negative affectivity was expected to show associations with more parent stress levels.

Hypothesis 1b. Children rated as high in EC were expected to be associated with lower distress levels in parents.

Aim 2: Test associations between parenting styles and parent stress.

Hypothesis 2a. Authoritarian parenting was expected to be associated with higher parent distress levels.

Hypothesis 2b. Authoritative parenting was expected to be associated with lower parent distress levels.

Aim 3: Test associations between child temperament and parenting behavior styles.

Hypothesis 3a. High negative affectivity was expected to be associated with authoritarian parenting.

Hypothesis 3b. High effortful control was expected to be associated with authoritative parenting.

Aim 4: Examine whether parenting styles mediate the association of child temperament and parent stress.

Hypothesis 4a. High parent stress experienced due to high NA is expected to be mediated by authoritarian parenting.

Hypothesis 4b. Low parent stress experienced due to high EC is expected to be mediated by authoritative parenting.

Methods

A. Participants

Participants included 46 preschool aged children (20 boys), ages 3.5-5 years (*M*age = 4.24 years, *SD* = 0.48). Each child was accompanied by a parent who participated in a larger study on family stress and child outcomes. Parent participants included 8 fathers and 38 mothers (*M*age = 31.71 years, *SD* = 7.83). Parents filled out a demographic questionnaire in which they reported the following about their child: sex, date of birth, and race/ethnicity. They also reported their own demographic information including age, race, income and education level. Children were mostly Caucasian and African American. Less than 10% of children were either Hispanic, Asian, Native American or Other, and 22% of children were more than one race. Similarly, parents were mostly Caucasian and African American and less than 11% of parents endorsed either Hispanic, Asian, Native American, Other, or multiracial categories. Parents that reported more than one race were found to be 7% of the participants. Majority of families were low in socioeconomic status, with 61% of families reporting annual incomes less than $40,000 almost half of these families reported (25%) an income of less than $10,000 per year. Reports of parent education level showed that the majority of parents had completed at least a high school diploma or GED and 13% of parents had graduate or professional degrees.

B. Measures

For temperament variables measured by the CBQ, scale scores for both dimensions represent the mean score calculated by using all scale items within each dimension. The scale items judged by the caregiver are relevant to the child within 6 months prior to testing. The items

that were omitted and checked as “Does not apply” by the caregiver, were not given a numerical score and therefore not included into the scale score. In order to attain significant alpha values for the child temperament variables used, two items were removed for EC and one item was removed for negative affectivity. The items dropped for both EC and NA were found to be negatively correlated with the scale and therefore found to decrease alpha values. Three items on the negative affectivity scale were reverse coded. Five items were reverse scored for warmth and one item was reverse scored for strictness. For parental distress measured by the PSI-4 vsf questionnaire, responses were summed and subscale scores were determined. If the caregiver did not respond to one of the items, average scores were completed for the items included in the subscale. This value was then used for the missing item in the scale. Subscales were then summed and averaged with this new assigned score.

1. Child Temperament

Child temperament was measured using the very short form of the Children’s Behavior Questionnaire (CBQ-VSF) developed by Samuel Putnam and Mary Rothbart (2006). The CBQ was designed to collect detailed information of the many characteristics of temperament in children from ages 3-7 (Rothbart et al., 2001). The CBQ provides subscale scores for three temperament factors, two of which were used in the current study: Negative Affectivity and Effortful Control (Rothbart et al., 2001). Negative Affectivity refers to overall negative emotionality and therefore includes measures such as anger/frustration, discomfort, fear, sadness, and soothability while effortful control includes measures of attention, inhibitory control, perceptual sensitivity and low intensity pleasure (Rothbart & Bates, 2006; Rothbart et al., 2001). Parents are asked to rate whether each of the 36 statements describes their child on a 7-point

Likert type scale ranging from 1 extremely untrue, to 7 extremely true. As discussed in the review "Investigations of Temperament at Three to Seven Years: The Children's Behavior Questionnaire" by Rothbart and colleagues (2001), the CBQ has demonstrated adequate internal consistency across multiple samples, with alpha coefficient estimates ranging between .63 and .94. Alpha coefficients for the data used in this study are .64 for negative affectivity (one item removed) and .60 for effortful control (two items removed). Items were removed in order to increase the alpha coefficients for these variables to reach above .6. Alpha increased from .59 to .64 for negative affectivity. For EC, alpha increased from .51 (all items) to .6 with two items removed. The first item was removed because it was negatively correlated with the entire scale. After this, the alpha increased to .55. The second item was dropped in order to increase the final reliability to .6.

2. Parenting Styles

Parenting styles were assessed using the Parent Attitude toward Child Rearing questionnaire developed by Ann Easterbrooks and Wendy Goldberg (1984). This questionnaire contains 51 items chosen to address rearing behaviors related to toddler issues significant to parents such as: child autonomy, warmth, and discipline. Parents are presented with statements and asked to indicate the extent to which they agree with each on a six-point Likert-type scale, from 1- "strongly disagree" to 6- "strongly agree". The PACR questionnaire yields four subscales including Warmth, Encouragement of Independence, Strictness and Aggravation. The PACR shows adequate internal consistency. Consistent with previous literature, Warmth measures will be used to indicate authoritative parenting style and Strictness measures will be used to indicate Authoritarian parenting styles (Garcia et al., 2020; Halpern, Brand, & Malone,

2001). Alpha coefficients for the current study were .71 for warmth and .63 (one item removed) for strictness.

3. Parent Stress

Parental stress was measured using the Parental Stress Index 4, very short form (Abidin, 2012). This abbreviated version of the full-length PSI-4 includes 36 items (of the original 120) that are divided into three domains. The domains are Parental Distress, Parent-Child Dysfunctional Interaction and Difficult Child. Parents respond to the items of the questionnaire through a five-point Likert-Type scale. Responses range between 1 strongly agree to 5 strongly disagree. Parental distress will be the only domain used in this analysis. The Parental Distress (PD) domain assesses the extent to which the parent experiences feelings of the following in their role as a parent: conflicted, supported, competent, and/or depressed (Abidin, 1990). In the current study the alpha coefficient for Parent Distress was .83.

C. Procedure

The University at Albany Review Board reviewed and approved this study. The children that participated in the study were recruited from three preschool and daycare centers in Albany, NY and surrounding regions. One of the three centers provided Head Start services and all centers served families with low to middle annual incomes. The teachers of each center sent both an introductory letter and consent form to all families with children of eligible ages. Research assistants went to each site during pickup and drop-off times to follow up with parents of these children. Research assistants answered questions that the parents had as well as discussed the

study with parents who did not return the consent forms. Once parental consent was received, research assistants were then able to meet with the parent and child at the child's school to begin testing. Research assistants reviewed consent forms and answered any questions the parents had to ensure that they understood what they were providing consent for. Research assistants remained nearby while parents completed study questionnaires to answer emergent questions or concerns. In total, the duration of the study was approximately 45 minutes. Parents were compensated $15 upon completion of the study and were entered into a raffle with other parents for a chance to win one of two $50 gift cards.

D. Analytic Plan

Child and parent sex and race were dummy coded to be used in this analysis. Data were inspected for extreme values. Boxplots were obtained to observe the distribution of the study variables. Values that were greater than 1.5 times the interquartile range, were marked on the box plot and considered to be extreme. The extreme values were double checked for possible errors due to data entry. These values were retained in the analysis when they were determined to be valid. Skewness and kurtosis were calculated using SPSS statistics for the variable data used in this study. According to Kim (2013), values for skewness and kurtosis in a sample size of less than 50 are considered normal if they fall between the range of ± 1.96. According to Pett (2015), if data distribution contains serious skewness and does not follow a normal bell-shape curve, it is only necessary to further examine its skewness not its kurtosis. Therefore, to examine the extent of skewness seen in the PACR warmth data, Pearson skewness coefficient can be used (Pett, 2015). The Pearson skewness coefficient index was used by multiplying the difference between

the mean and the median for warmth by three and dividing that value by the standard deviation for warmth. Two mediation models were used to test study hypotheses. The first mediation model tested whether authoritarian parenting plays a mediating role between negative affectivity and subsequent high levels of parent stress. The second mediation model tested whether authoritative parenting plays a mediating role between high EC and subsequent low levels of parent stress. Independent variables were mean centered prior to conducting mediation analyses to aid interpretation.

Results

A. Data Cleaning and Missing Data Analysis

The normality of the data used for this analysis was assessed. The computer-generated SSPS values for skewness and kurtosis for warmth did not fall within the accepted range meaning that the values in this data set contain above normal skewness. Follow up calculations using the Pearson Skewness coefficient index were completed. The calculated Pearson skewness values for warmth fell between the range of ± .5 and therefore were considered an acceptable level of skewness (Lehman, 1991). Effortful control contained one extreme value, 3.9 out of 7, which was the lowest reported value for this variable. Strictness contained one extreme value of 2.5 out of 6 which is also the lowest reported value for this variable. Lastly, parental distress contained one extreme value of 4.9 out of 5 which is the highest reported value. However, each of these values were determined to reflect valid data and were retained for analyses. All variables used in this study were inspected for missingness. For the PSI, two participants didn't fill out the questionnaire (likely due to research assistant error). Two other participants missed two

questions when filling out the questionnaire. PSI guidelines were followed for missingness. For PACR, 9 people missed questions for strictness and 8 people missed questions for warmth. Averages were created for variables warmth and strictness not including the missing variables. For the CBQ, 10 people skipped a question for negative affectivity and 8 people skipped questions for effortful control. In total, no measure had less than 5% of missing data.

B. Descriptive Statistics

The mean and standard deviations for all variables used in this study are included in Table 1. Correlations among study variables are represented in Table 2; correlations were assessed using two tailed tests of significance. Results showed that parents who reported that their children had higher levels of negative affectivity also reported higher parent stress. Effortful control was not significantly correlated with parent stress. The Warmth parenting style was found to be negatively correlated with parenting stress. Parents who reported warmer parenting style toward their child, also reported lower levels of stress. An association between Strictness and stress was not found.

The correlations among demographic variables and key study variables were also examined. There was a negative correlation found between level of parent education and parent strictness, $r = -.41$, $p = .004$. Additionally, both parent White race and parent age are negatively correlated with strictness, $r = -.39$, $p = .008$; $r = -.47$, $p = .001$. Aside from strictness, parent White race and child White race are negatively correlated with EC, $r = -.331$, $p = .024$; $r = -.324$ $p = .028$. Due to these significant correlations, demographic variables parent White race, parent education and parent age were controlled for.

C. Mediation Analyses

1. EC X Warmth X Parental distress

Results of the mediation analysis testing whether effortful control was associated with parental warmth and parenting stress are shown in Figure 1. Results revealed that there was not a significant association between EC and warmth or between EC and parenting stress. However, results did show a significant main effect of warmth parenting style on parenting stress where higher parent warmth predicted less parenting stress

2. NA X Strictness X Parental Distress

Results of the mediation analysis testing whether negative affectivity was associated with parental strictness and parental distress are shown in Figure 2. Results showed that the main effect of negative affectivity on parent distress was positive and significant. Higher levels of negative affectivity were associated with higher levels of parent stress. Negative affectivity was not associated with strictness parenting style. There was no association between parent strictness and parent stress.

Discussion

A. Discussion

The associations among child temperament, parenting styles and parental stress were examined in this study. Previous research has illustrated the impacts that parent stress and parent behavior styles can have on developing child temperament but much less is known about the reverse effects. For example, less is known how child temperament may elicit and therefore

predict certain parenting styles and subsequent levels of parenting stress. Additionally, little is known about the possible mediation role that parenting style may play in predicting how child temperament impacts parental distress. Therefore, in this study, there were four aims in total. The first three aims explored the associations among the independent (NA and EC), mediating (Authoritative and Authoritarian Parenting) and dependent variables (Parental Distress). The fourth aim served to test whether associations between child temperament and parent distress were mediated by parenting styles.

The first aim examined the association of child temperament and parent distress. Results showed that negative affectivity was associated with parental distress levels (Hypothesis 1a), but that effortful control was not (Hypothesis 1b). These findings suggest that children that express higher levels of negative affectivity may elicit more parenting stress, while EC appears to have no direct impacts on parent stress. This is consistent with previous research that has shown that low mood or high negative affectivity significantly predicts higher overall stress in parents (Konstantareas & Papageorgiou, 2006; Pesonen et al., 2008; Szymańska & Aranowska, 2019). Much less is known about EC's predictability of parent stress. Why there wasn't a significant association between EC and subsequent parent stress levels is unclear. This could serve as a possible area for further research to understand why high negative affectivity is more stressful for parents than low effortful control. Children with low EC have difficulty regulating their emotions and inhibiting inappropriate impulsive behaviors which can be stressful for parents (Eisenberg et al., 2005). Studying effortful control's components-inhibitory control and attentional processing- and their individual effects may provide a clearer understanding of the way in which a child's effortful control influences their parent's stress.

The second aim was to examine associations between parenting styles and parent stress. Results revealed that parental warmth was negatively associated with parental distress (Hypothesis 2a), but that parental strictness was not (Hypothesis 2b). This suggests parents who employ authoritative parenting in response to their child's behavior may experience less parenting stress. This finding is not surprising as much of the current literature has shown that parents who convey warmth towards their children when responding to their child's behavior, experience less overall stress (Aunola et al., 1999; Monaghan, Horn, Alvarez, Cogen, & Streisand, 2012; Reitman, Currier, Hupp, Rhode, Murphy, & O'Callaghan, 2001). However, the results showing that parental strictness, which served as a proxy for authoritarian parenting, does not predict subsequent parent stress levels, is surprising. Current literature has illustrated that parents who employ higher levels of authoritarian parenting when responding to their child's behavior often experience higher levels of stress (Calam et al., 2002; Lovejoy et al., 1999; Reitman et al., 2001). This finding could be due to the fact that strictness represents only one aspect of authoritarian parenting. Other studies testing this association have included measures of coercion, such as psychological and behavioral control (Laukkanen et al., 2014; Lee & Bates, 1985). Another possibility for this inconsistency may be due to self-report bias by parents. Self-report bias can occur when parents report answers to questions that are inaccurate due to either their inability to fully recall a past event or due to fear that private or sensitive information will fail to remain fully confidential (Althubaiti, 2016).

The third aim examined was associations between child temperament and parenting styles. Results showed that negative affectivity was not related to parental strictness. This was unexpected as previous studies have shown associations between negative emotionality and authoritarian parenting (Laukkanen et al., 2014; Lee et al., 2013). However, previous studies

may not have controlled for all three demographics: parent White race, parent age and parent education (controlled for in this study), accounting for this discrepancy. EC also did not predict parental warmth (Hypothesis 3a and 3b). Little research has tested the association between EC and parental warmth. While results of the current study were not significant, observing the ability of EC to predict parental strictness may provide an area for further analysis as current literature has shown associations between low EC and parents who employ authoritarian parenting (Laukkanen et al., 2014; Lee et al., 2013).

The last aim of this paper was to test whether or not authoritative and authoritarian parenting styles mediated the association between child temperament variables and parent distress. Authoritative parenting did not mediate the effect of effortful control on parent stress. This may be because the only significant association found in this analysis was between lower parental warmth and greater parental distress. Authoritarian parenting also did not mediate the effect of negative affectivity on parent stress. This may be because the only significant association found in this analysis was between higher negative affectivity and greater parental distress. Although temperament, parenting styles, and parent stress have shown to be related to one another, such observed relationships were not due to mediation in the current study.

Much is known about how high parental stress levels impact the parent's wellbeing and subsequently, both the child's short term and long-term development. Exploring the predictive capabilities of variables such as child temperament and parenting behavior styles can provide further knowledge and insight to why parents might experience high levels of stress while parenting and therefore, possible areas of intervention to lessen such effects. Understanding parent stress and the factors that impact it is important because research has shown that parents are more likely to utilize authoritarian parenting tactics (such as behavioral control,

psychological control and strictness) when responding to their child's behavior when they themselves suffer from high stress (Chen & Luster, 2002; Lim & Loo, 2003; Shaw & Starr, 2019). Children with authoritarian parents have shown to exhibit more negative emotionality with hostile, defiant and aggressive behaviors (Berk, 2012). These children tend to also experience higher levels of anxiety. Such effects can carry on into adolescence as children with parents high in coercive control exhibit high levels of psychological distress (Boudreault-Bouchard et al., 2013).

The understanding that warmer reactions to a child's behavior has shown to lessen the overall stress experienced by parents can aid them in how they decide to parent which will benefit both them and the child overall. Additionally, knowing that a child's negative emotionality can also significantly impact the stress levels of parents, can encourage parents to employ rearing behaviors that will attenuate both their child's low affectivity and their own stress. Studies have shown that children with authoritative parents tend to exhibit more positive affectivity with enhanced abilities in self-control, and cooperativeness (Berk, 2012). Much of these positive effects are seen to continue through adolescence. Long term effects of authoritative parenting have shown adolescents to have higher self-esteem, higher life-satisfaction and less depression (Aunola et al., 2000; Milevsky et al., 2007; Steinberg et al., 1995). Further research should continue to assess the ways in which child temperament impacts parent stress including more focus on effortful control, the components of effortful control and other aspects of temperament such as surgency that may also play a role.

B. Future Considerations

Associations were also found between demographic variables and study variables. Lower level of parent education, parent White race, and younger parent age were all found to be significantly associated with more parent strictness. Further research should investigate why less educated parents, Caucasian parents, and younger parents employ more strictness when parenting and why this association is not found with higher education, other races, and older parents. Both younger parents and less educated parents may experience higher overall stress rooted in work/career search and/or financial issues. Both in turn, may cause parents to react more harshly to their child's behaviors with little patience and understanding as they manage the burdens of everyday life. This would be consistent with previous findings that show that parents who experience high stress employ parenting styles characterized by strictness and harshness (Ajilchi, Kargar, & Ghoreishi, 2013; Deater-Deckard, 2004; Shaw & Starr, 2019). Caucasian parents were also associated with higher strictness than non-Caucasian parents. This was somewhat unexpected as research has shown that African American, Asian, and Hispanic parents tend to employ authoritarian parenting more than Caucasian parents (Chao, 2000; Richman & Mandara, 2013; Varela, Vernberg, Sanchez-Sosa, Riveros, Mitchell, & Mashunkashey, 2004). The association found in this study may be due to influences from other demographic variables such as low SES, low education, and/or young age. Further analysis is needed to investigate this possibility.

Furthermore, parent White race and child White race were found to be significantly negatively associated with child effortful control. This suggests that White children were reported to have lower effortful control abilities than non-White children and that children with White parents tend to have lower EC abilities than children of non-White parents. A possible

reason for this finding could be due to difference in cultural values between White and non-White families. EC is shaped by societal norms and expectations of the culture in which a child is exposed. Asian children that inhibit outward expressions of emotion more often receive positive contingent responses from others because the child is demonstrating compliance and caution, both of which are considered acceptable prosocial behaviors in these cultures (Chen, Yang & Fu, 2012). In contrast, western cultures exhibit less concern with effortful control and are shown to be more accepting of outward displays of emotion (Gartstein, Slobodskaya, & Kinsht, 2003; Porter, Hart, Yang, Robinson, Olsen, Zeng, Olsen, & Jin, 2005). As a result of societal and cultural norm differences in Western and Eastern cultures, overall, children that grow up in Eastern cultures are seen to have higher EC than children of Western cultures (Chen, Yang, & Fu, 2012; Krassner, Gartstein, Park, Dragan, Lecannelier, & Putnam, 2017; Oh & Lewis 2008; Sabbagh, Xu, Carlson, Moses, & Lee, 2006). These differences are important to recognize, especially in the United States, in which a variety of cultures have assimilated into one nation. Further research is needed to confirm the association found between EC and parent and child White race in this analysis.

Future studies may also consider a goodness of fit model when understanding how parent stress is impacted by child temperament and parenting style interactions (Thomas & Chess, 1977). This model refers to the extent to which a child's temperamental characteristics conform to or meet the expectations of their surrounding environment which is formed by both social interaction and cultural influences (Fisher, 1994). This model illustrates an opportunity for further exploration into the bidirectionality of child temperament and parenting behavior styles. For example, child-rearing environments that acknowledge and accept the child's individual temperament disposition and work to encourage adaptive functioning, can produce overall

favorable outcomes in relation to long term temperamental behaviors. In contrast, caregivers that do not accept their child's dispositions and rearing styles that poorly fit their dispositional behaviors, hinder development of self-regulatory abilities and have negative impacts on temperamental emotionality (Berk, 2012). Parent stress may also be increased as well. Additionally, this model addresses the influences of societal expectations and cultural norms in the formation of the rearing environment that the child is exposed to. As previously discussed, culture has a large impact on both temperament characteristics that children develop and the nature of the rearing styles that parents adopt. Understanding both the bidirectionality of the associations found between temperament and parenting styles as well as the impacts of cultural values, would provide even further insight into understanding parent stress and why parents experience it.

Lastly, reversal analyzes could provide another area of further research. Testing whether or not low EC predicts authoritarian parenting and high stress levels and if low NA predicts authoritative parenting and low stress levels would provide further support for the associations found in this study.

C. Strengths and Limitations

This study has many strengths. First, the sample used in the study is diverse and includes minority and low socioeconomic status families that may be underrepresented in parenting research. This provides generalizability of the data as it includes families of varying SES levels and ethnicities and is applicable to a broader population. Additionally, all families, regardless of family structure, were allowed to participate including any legal guardian. While most research

on parent-child interactions includes only mothers, not all households have a mother in the home. Our study also allowed fathers to participate which is beneficial to parent-child research as father-child interactions are studied much less than mother-child interactions. Previous data has also shown that parent and child gender can impact the associations found between temperament and parent distress (McBride, Schoppe, & Rane, 2002). Future studies may examine differences between mother-daughter, mother-son, father-daughter, and father-son dyads.

The ways in which families were recruited also strengthened the sample population used in this study. Research assistants recruited families in person to allow those who did not have constant access to email or a phone a chance to participate in the study. Research assistants also remained incredibly flexible when working with families allowing them to choose participation dates and times that were most convenient for them. For example, research assistants made efforts to schedule sessions during both drop off times and pick up times to provide an opportunity for parents to participate at a time when they were already present at the school. Parents who did decide to participate in the study received compensation for their time and were also entered in a raffle to win 1 of 2 $50 gift cards. Providing compensation and an additional chance to win a prize creates an incentive for families to participate and put forth effort when participating. This both aids in the recruitment process as well as strengthens the data collected during participation.

Apart from the several study strengths, this study also possesses limitations. This study used data collected from parent questionnaires. Therefore, the data collected from questions related to parent behavior styles and parent distress may contain self-reporting bias. This may influence the way parents respond to questionnaires. Additionally, the only measures of temperament used in this study were NA and EC. However, temperament includes a third

component, Surgency/Extraversion. Surgency/Extraversion may be more significantly associated with parenting styles and parent stress than NA and EC. Furthermore, Parent Warmth and Parent Strictness were the only measures used to represent authoritative and authoritarian parenting styles. This could have impacted the associations found between study variables as both parenting styles possess other defining characteristics that were not represented data.

Additionally, this study contains a limited sample size. This could be partly due to the limited hours of participation available to families. Parents who work throughout the day were unable to participate in the study. Extending the hours of participation outside of the normal school hours would have provided more families the opportunity to participate and therefore increased the sample size. In addition, at home sessions were not available to families. Families that rely on public transportation may have been unable to participate. Having at home visits as an option for families to participate would have increased the sample size as well as further diversified the sample population. The limited sample size was also partly due to the Covid-19 pandemic as recruitment stopped due to nationwide shutdowns beginning in March of 2020. Another limitation to this study was the inability for non-English speaking families to participate. Parents who were not proficient in English could not participate. The questionnaires used in this study were not translated into Spanish and the research assistants were not proficient in Spanish to translate the questions for the parents. The participation of these families would have strengthened the generalizability of the data as many families in the United States speak Spanish as their primary language.

Lastly, the data used in this study is cross-sectional. Therefore, the associations found between the study variables may not be attributed to unidirectional affects. For example, the associations found between parent strictness and parent stress may be due to parent stress leading

to higher levels of parent strictness rather than strictness leading to higher experienced parent stress. The same is true for the associations found between negative affectivity and parent stress. Therefore, conclusions about directionality cannot be drawn from the analyses completed in this study. The possible directionality found among these variables is another area for further research.

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Appendices

A. Appendix A

Table 1
Demographic Reports: Race, Income and Education

Race	% Parents	% Children
1. White/Caucasian	41%	35%
2. Black/African American	39%	30%
3. Hispanic/Latino	11%	9%
4. Asian	0%	0%
5. Native American	2%	2%
6. Multiracial	7%	22%
7. Other	0%	2%

Income	% Parents
1. $0-$9,999	24%
2. $10,000-$19,999	13%
3. $20,000-$39,999	24%
4. $40,000-$59,000	15%
5. $60,000-$79,000	9%
6. $80,000- $99,999	4%
7. More than $100,000	11%

Education	% Parents
1. Completed Some High School	15%
2. High School Diploma or GED	35%
3. Some College or University Experience	20%
4. 2-Year College Degree	11%
5. 4-Year College Degree	6%
6. Graduate or Professional Degree	13%

Table 2

Means and Standard Deviations of Demographic Variables and Study Variables

Variable	*M*	*SD*
1. Education	0.50	0.51
2. Parent Age	31.7	7.83
3. Parent White Race	0.41	0.50
4. Parent Black Race	0.40	0.49
5. Child White Race	0.35	0.48
6. Child Black Race	0.30	0.47
7. Negative Affect	4.40	0.79
8. Effortful Control	5.58	0.62
9. Parent Warmth	5.29	0.39
10. Parent Strictness	4.30	0.56
11. Parent Distress	0.00	0.71

Table 3

Means, Standard Deviations, and Correlations of Study Variables

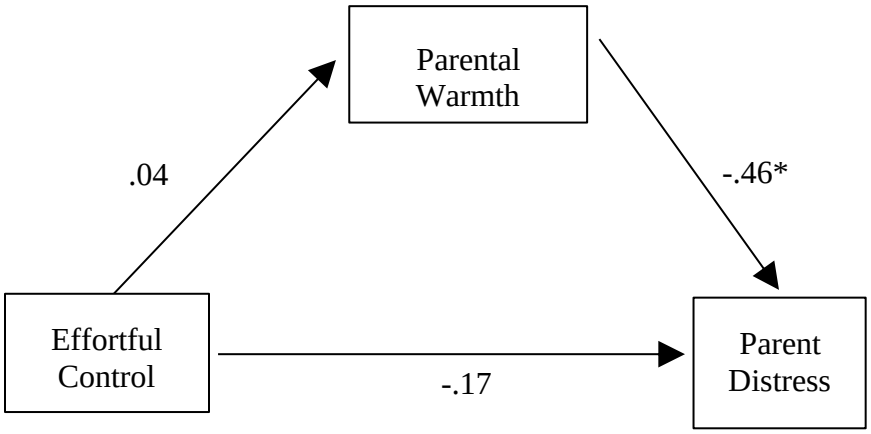
Variable	*M*	*SD*	2	3	4	5
1. Negative Affect	4.40	0.79	-0.20	-0.13	0.22	0.31*
2. Effortful Control	5.58	0.62		0.06	-0.06	-0.11
3. Parent Warmth	5.29	0.39			-0.14	-0.46**
4. Parent Strictness	4.30	0.56				0.13
5. Parent Distress	0.00	0.71				

Note. * $p < .05$. ** $p < .001$, two-tailed.

B. Appendix B

Figure 1

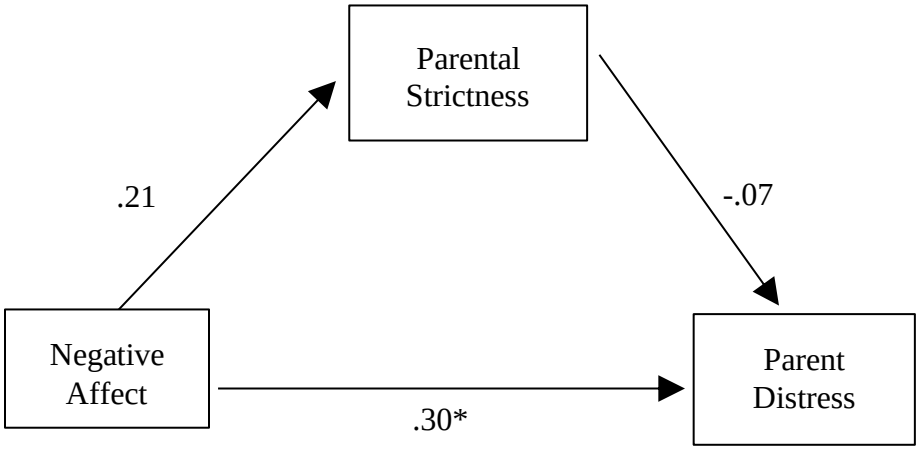
Relations Between Effortful Control, Parental Warmth and Parental Distress



Note. Standardized regression coefficients for the relation between child effortful control, parental warmth, and parent distress are reported. (*$p < .05$)

Figure 2

Relations Between Negative Affect, Parental Strictness and Parental Distress



Note. Standardized regression coefficients for the relation between child negative affect control, parental strictness, and parent distress are reported. (*$p < .05$)