2014

Mothers' Temperament and Personality: Their Roles in Parenting Behaviors, Parent Locus of Control, and the Outcomes of Young Children

Jayme Puff
University of Central Florida

MOTHERS' TEMPERAMENT AND PERSONALITY: THEIR ROLES IN PARENTING BEHAVIORS, PARENT LOCUS OF CONTROL, AND THE OUTCOMES OF YOUNG CHILDREN

by

JAYME PUFF
B.S., University of Central Florida, 2010

A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Science
in the Department of Psychology
in the College of Sciences
at the University of Central Florida
Orlando, Florida

Spring Term
2014

ABSTRACT

Many researchers have used the terms ‘temperament’ and ‘personality’ interchangeably when describing parents’ behavioral styles. Although individual relationships among parents’ temperament and personality, parenting behaviors, other parent characteristics, and young children’s outcomes have been documented in the literature, parents’ temperament and personality have not been examined collectively in conjunction with parenting and child outcome variables. As part of this study, 214 culturally diverse mothers with young children who ranged in age from 2- to 6-years rated their own temperament and personality, their parenting characteristics, and their young child’s functioning (i.e., temperament and emotional and behavioral functioning). When examining mothers’ temperament and personality together, factor analyses revealed a three-factor solution (i.e., General Life Approach, Rhythmicity, and Sticktoitiveness) and suggested that temperament and personality generally were separate but related constructs. Hierarchical and mediation regression analyses suggested the importance of examining both temperament and personality in the context of parenting behaviors and the outcomes experienced by young children. Overall, these findings suggested that mothers’ temperament and personality play a significant role in parenting young children and optimizing young child outcomes. These findings are particularly helpful for professionals working with families experiencing difficulties dealing with their young child’s difficult temperament styles as well as difficult emotional and behavioral functioning.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE: INTRODUCTION

Research suggested that parents' temperament and personality both contribute to parenting behaviors, parenting beliefs and practices, and children's outcomes, with each of these variables impacting family systems (Coplan, Reichel, & Rowan, 2009; Prinzie, Stams, Dekovic, Reijntjes, & Belsky, 2009; Rettew, Stanger, McKee, Doyle, & Hudziak, 2006). Given that genetic inheritance may account for as much as 50 percent of the variance in personality traits (Schultz & Schultz, 2009), many researchers have used the terms 'temperament' and 'personality' interchangeably when describing parents' behavioral styles. Others noted that temperament and personality are related but different constructs. For example, Rothbart (2007) suggested that, although temperament and personality traits are correlated, "[i]t is important to remember, however, that temperament theory goes beyond a list of unrelated traits or broad dimensions" (p. 208). Schultz and Schultz (2009) also suggested that "[t]he various components of personality remain products of both our genetic makeup and the experiences of our life. The task for psychologists remains to determine the relative importance of each" (p. 293).

Thus, the extent to which parents' temperament and personality are related but different constructs still remains to be determined. Although there have been some research and hypotheses developed in this area (e.g., Aluja & Blanch, 2011; De Pauw, Mervielde, & Van Leeuwen, 2009; MacDonald & Holland, 2002; Mehrabian & O'Reilly, 1980; Stelmack, Kruidenier, & Anothony, 1985), it is still uncertain whether there is complete or only partial overlap between the two constructs (Angleitner & Ostendorf, 1994). Also, given that temperament traits (e.g., biological systems) remain present throughout adulthood and may shape personality development (Buss & Plomin, 1984; Kagan & Snidman, 2004; Rothbart &

Ahadi, 1994; Thomas & Chess, 1977), further research is needed to understand the differential importance of these constructs for parenting behaviors and the outcomes experienced by young children. Although individual relationships among these variables were documented, parents' temperament and personality were not examined collectively in the context of parenting behaviors, other parent characteristics, and young child outcomes. As a result, this study sought to extend the research literature by examining collectively mothers' temperament and personality in conjunction with these parenting and young child outcome variables. These variables will be discussed here.

Parents' Temperament

Temperament generally is conceptualized as an innate predisposition in reactivity and self-regulation. It reflects individual differences in arousability or excitability of behavioral and physiological systems as well as emotional reactivity and the regulation of this reactivity (Komsi et al., 2008; Rothbart & Bates, 2006). Temperament is considered to be relatively consistent over time, having a strong genetic component (Goldsmith, Buss, Plomin, & Rothbart, 1987; Zetner & Bates, 2008). Further, temperament provides process-oriented models by establishing associations between individual differences in behavior and their biological and psychological bases (Eysenck, 1997; Rothbart, Ahadi, & Evans, 2000). Specifically, all individuals have their own unique temperament and particular behaviors that affect their social world and subsequent functioning (Lerner, 1993; Thomas, Chess, Birch, Hertzig, & Korn, 1963).

Thomas and Chess (1977) also suggested that "temperament can be equated to the term *behavioral style"* (pg. 9), as temperament models frequently lead to distinct predictions of how the individual and environment interact (Rothbart et al., 2000). Thus, temperament

can be influenced by the environment, particularly when new behaviors or personality attributes emerge with age (Thomas & Chess, 1977). For example, in adults, temperament can interact complexly with motivations and abilities (Thomas & Chess, 1977); however, according to Thomas and Chess (1989), temperament is not motivational in origin (i.e., determined by individuals' subjective goals and determinations), but rather is an expression of a general attribute.

In describing temperament, nine dimensions of temperament were identified by the New York Longitudinal Study, which began in 1956 and examined parent interviews about their children (Rothbart, 2007; Thomas, Chess, & Birch, 1968). This description of temperament included the following dimensions. *Activity Level* referred to a motor component and included both active and inactive periods, mobility in daily activities, and the sleep-wake cycle. *Rhythmicity (Regularity)* was categorized as the predictability and/or unpredictability of behavior over time. It measured bodily functions, such as hunger, feeding pattern, elimination, and sleep-wake cycle. *Approach or Withdrawal* referred to initial responses to new stimuli and could be positive or negative, as measured by motor activity and mood expression. *Adaptability* was the response to new or changed situations. *Threshold of Responsiveness* denoted the intensity level of stimulation needed to induce a marked response, and *Intensity of Reaction* represented the energy level of responses. *Quality of Mood* referred to the amount of pleasant, joyful, and friendly behavior compared to the amount of unpleasant, crying, and unfriendly behavior. *Distractibility* denoted the success with which extraneous stimuli interfere with ongoing behavior. Finally, *Attention Span and Persistence* referred to the length of time an individual pursued an activity and the persistence that the individual endured in the face of obstacles (Thomas et al., 1968).

The aforementioned dimensions constituted three constellations of temperament. Those characterized by an *Easy Temperament* had a positive approach response to new stimuli, high adaptability to change, and a mild or moderately intense mood (which was generally positive; Thomas & Chess, 1977). On the contrary, a *Difficult Temperament* was exemplified by negative withdrawal responses to new stimuli, intense mood (which was predominantly negative), limited flexibility with regard to change, and irregularity in biological functions. The final notable temperamental constellation was the *Slow-To-Warm-Up Temperament.* These individuals displayed mild intensity of reactions (positive or negative) with a slow adaptability to new stimuli. These individuals also demonstrated fewer propensities to show irregularities in biological functions (Thomas & Chess, 1977).

Clark and Watson (2008) introduced another model of temperament that emphasized three broad superfactors. The *Big Three* model consisted of Neuroticism/Negative Emotionality, Extraversion/Positive Emotionality, and Disinhibition versus Constraint. *Neuroticism/Negative Emotionality* referred to how much an individual perceived the world as threatening, distressing, and challenging. High scores reflected more problems and negative emotions, whereas low scores indicated emotional stability and serenity. *Extraversion/Positive Emotionality* reflected how willing an individual was to engage in their surrounding environment. High scores on this dimension reflected an active approach to life and interpersonal relationships; however, those who scored low on this trait tend to be reserved with lower levels of energy. Finally, *Disinhibition Versus Constraint* referred to an individual's propensity towards undercontrolled versus overcontrolled behavior and was related to an individual's style of overall affective regulation. Individuals who were more disinhibited also were impulsive and oriented toward feelings in the moment, whereas those

who were more constrained also avoided danger and were more constrained by future consequences of their behavior (Clark & Watson, 2008).

Given that temperament can be defined only in the context within which behaviors occur (Thomas & Chess, 1977), temperament in the context of parenting posits a unique situation. For example, parents' temperament affects greatly the manner in which mothers and fathers parent their children. In fact, Lengua (2006) proposed that temperament and parenting predict changes in each other, suggesting a transactional relationship. Much research on how parents' temperament affects parenting behaviors and children's outcomes use personality measures of traits and characteristics (rather than measures of temperament). Specifically, much of today's personality research highly overlaps with attributes of temperament (e.g., biological foundations, temporal stability and predictiveness, appearance early in life; Zentner & Bates, 2008). Thus, little research dismantled these constructs to determine their comparative importance for predicting parenting behavior. The aforementioned research highlighted the gap between temperament and personality, emphasizing the importance of research in this area.

Although there was little research on how parents' temperament can affect children's functioning, Thomas and Chess (1977) proposed that parents' attitudes and practices may be influenced by their own response and adaption styles. For example, parents' temperament characteristics (e.g., activity level, approach or withdrawal to new situations, distractibility, attention span, persistence) may affect greatly decisions that they make and the parenting behaviors that they choose (Thomas & Chess, 1977). Parents who were responsive and sensitive to their children's needs tended to establish secure attachments with their children and to foster positive emotional and behavioral functioning in their children (Bowlby, 1982;

Calkins, Hungerford, & Dedmon, 2004). In addition, parents' ability to effectively communicate their attitudes to their children may be shaped by their own temperament characteristics. For example, Thomas and Chess (1977) suggested that it is possible for parents to be empathetic and have affectionate feelings toward their children, but traits such as low intensity of mood expression and frequent reactions of negative mood may hinder adequate communication. These researchers suggested that it is essential to examine how parents' temperament was related to effective expression of communication and expectations toward children in future research.

Additionally, research indicated that both parents' and children's temperament affect family systems through a bidirectional relationship that shapes parenting behaviors and children's outcomes (Lengua & Kovacs, 2005; Rettew et al., 2006). For example, research suggested that parents who are higher on dimensions of negative temperament show less effective parenting skills, as exemplified by inconsistent discipline and corporal punishment (Latzman, Elkovitch, & Clark, 2009). It was proposed that these parents focus much attention on their own distress, making them less able to provide sensitive, effective, and consistent parenting behaviors. Comparably, Manian, Papadakis, Strauman, and Essex (2006) suggested that mothers with a temperamentally-based vulnerability towards negativity (e.g., negative affectivity) are more likely to practice greater control and less adaptive parenting. In contrast, parents who are higher on dimensions of positive temperament engage in more positive parenting practices and take a more involved approach, as these parents likely enjoy engaging with their children (Latzman et al., 2009). Further, mothers with a temperamentally-based proclivity toward positivity (e.g., positive affectivity) are more likely to be warm and nurturing (Manian et al., 2006).

Further, Thomas and Chess (1989) suggested that "the child's psychological development is not determined by the parent's style alone, or by the child's style alone, but by the match or mismatch between the two" (p. 53). Specifically, when parents' expectations for behavior do not agree with their children's temperament, it results in anxiety, acting out, and defiance, amongst other problematic behaviors (Kristal, 2005). For example, Rettew and colleagues (2006) found that the interactions between parents' and children's temperament significantly predict children's internalizing and externalizing behavior problems. Further, van den Boom and Hoeksma (1994) reported that, when a temperament mismatch occurs, mothers are less physically affectionate with their children and display fewer positive vocalizations relative to parents and children with a more adaptable match. Additionally, recent research suggested that, when matched with young children's difficult temperament, mothers' difficult temperament is related to higher levels of parenting stress and a decreased likelihood that mothers would use positive parenting practices (Middleton & Renk, 2012). Given that little is known about mothers' temperament as it is related to child temperament, more research in this area was warranted.

To summarize, Thomas and Chess (1977) proposed that adults' temperament characteristics contribute to their personal and social functioning as well as to their adaptation to change. These temperament characteristics form intricate associations with parenting behaviors and children's adjustment (Lengua & Kovacs, 2005). Research suggested that parents' temperament traits, values, standards, and goals have a significant influence on a children's behavioral functioning at all ages (Rettew et al., 2006; Thomas & Chess, 1977). For example, Rettew and colleagues (2006) suggested that parents' own temperament characteristics play an important role in parents' communication of their

attitudes and expectations toward their children. The aforementioned associations emphasized the importance of examining parenting behaviors in the context of mothers' temperament.

Although there is a plethora of research regarding parents' personality as it is related to children's temperament, less is understood about how parents' temperament interacted with children's temperament. Accordingly, this study aimed to fill the gap in the literature regarding the relationships among mothers' temperament, specific parenting behaviors, and young children's outcomes. Also, given that temperament is conceptualized as biological or genetic behavioral traits (Buss & Plomin, 1984) and that personality is conceptualized as the more complex behavioral style that emerged later in life, these variables deserved to be studied collectively. Additionally, given that temperament traits likely influence the development of personality by impacting the way in which individuals interact with their environment (Costa et al., 2000), it was beneficial to examine the processes (e.g., temperament traits) underlying personality (Ahadi & Rothbart, 1994). Thus, this study examined the relationship between mothers' temperament and personality, which will be discussed next.

Parents' Personality

Personality traits often were presumed to be assimilated patterns of thought and behavior that determined each individual's unique adaptation to the environment (McCrae et al., 2000; Rothbart et al., 2000). Although research suggested that personality developed from temperament (Buss & Plomin, 1984; Clark & Watson, 2008; Thomas & Chess, 1977), personality also included cognitive structures as well as expectations and attitudes towards the self and others (Rothbart, 1989). According to Clark and Watson (2008), the major

personality traits all characterized the rudimentary "biobehavioral dimensions of temperament" (p. 276). In particular, these authors proposed that every trait examined in temperament and personality research has a considerable genetic component that is responsible for stability in temperament and personality. Thus, temperament and personality are similar but unique constructs (Thomas & Chess, 1989).

Further, individual differences in personality manifest themselves in a variety of behaviors and may affect directly or indirectly social relationships (Belsky & Barends, 2002). Given that parenting young children has the potential to influence parents' self-concept (Cowan, Cowan, Heming, & Miller, 1991) and personality traits over time (Komsi et al., 2008; Roberts, Wood, & Smith, 2005), parenting in the context of personality is an essential topic (Prinzie et al., 2009). In fact, social learning theory suggested that children model and imitate behaviors, such as those exhibited by their parents, and subsequently learn behaviors that extended across many years (Oliver, Guerin, & Coffman, 2009).

In accordance with Belsky's (1984) general model for the determinants of parenting, parenting may be affected by three primary influences: parents' personality, children's individual characteristics, and related sources of stress and support. Belsky (1984) deemed parents' personality to be the most important determinant (Belsky & Barends, 2002). Accordingly, parents with mature personalities are able to behave in responsive and sensitive ways, can control their impulses, are able to take the perspective of others, and are able to find ways to have their needs met. These qualities are particularly critical in parenting because parents must remain supportive, nurturing, and firm, even in response to children's challenging behavior (Belsky & Barends, 2002). Mothers' personality also is related to

parenting cognitions and practices, stressing the importance of personality on parenting (Bornstein, Hahn, & Haynes, 2011).

Heinicke (1984) proposed a second model examining the effect of parents' personality on parenting behaviors. This model was based on the theory that children's behaviors may impact significantly parents' personality characteristics and marital relations. Heinicke (1984) proposed that parents' personalities should be assessed before having children and suggested that there are three major qualities of parents' personality functioning (i.e., adaptation competence, the ability to develop and maintain positive sustained relationships, and self-development). It was posited that, if parents could cope with arduous situations prior to having children, they would be able to competently handle the demands of parenting. It also was believed that, if parents are able to develop and continue positive relationships and establish autonomy and confidence in themselves before their children are born, they then would be more likely to use positive parenting practices towards their children (Belsky & Barends, 2002).

Seminal works in personality and parenting began with psychoanalytic theorists who studied parents' character and how it was related to child psychopathology (Belsky & Barends, 2002). The understanding of personality since evolved and now is conceptualized widely through the Big Five taxonomy of personality (or the five-factor model; Costa & McCrae, 1992a). These traits consist of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience and will be discussed in greater length below. According to Prinzie and colleagues (2009), "personality can be considered an inner resource that contributes to parenting" (p. 358). They also suggested that parenting in the context of personality deserves more attention.

Given the support for the Big Five taxonomy of personality (Costa & McCrae, 1992a), these variables were examined in this study. *Extraversion*, or surgency, describes "the quantity or intensity of interpersonal interaction, activity level, need for stimulation, and capacity for joy that characterize individuals" (p. 427). Individuals who score high on extraversion are talkative, vigorous, optimistic, affectionate, and assertive. Those with a low score are considered to be quiet, reserved, languid, and aloof (Belsky & Barends, 2002; Tupes & Christal, 1961). Research suggested that parents who are high on this construct are more responsive, perceptive, emotionally engaged, nurturing, and encouraging (Belsky & Barends, 2002; Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990; Metsäpelto & Pulkkinen, 2003). In accordance with this research, Smith and colleagues (2007) suggested that parents who are high on extraversion exhibit more positive affect, positive emotional expressions, and more maternal sensitivity when observed during interactions with their toddlers. A separate study conducting home observations of boys who were 15- to 21-months of age suggested that mothers and fathers who are high on extraversion scales exhibit more cognitive stimulation, sensitivity, and positive affection (Belsky, Crnic, & Woodworth, 1995).

Additionally, research suggested that mothers who score higher on measures of extraversion rate themselves as more competent and involved and report engaging more often in dyadic interactions and conversations with their children (Bornstein et al., 2011; Oliver et al., 2009). Research also suggested that extraversion may relate to more enjoyment of interactions and activities (Belsky & Barends, 2002). This finding supported much research in the field linking high levels of extraversion with positive parenting practices. In contrast, Smith (2010) suggested that mothers with higher levels of extraversion exhibit more maternal

controlling behaviors. With regard to specific parenting styles and personality traits, Metsäpelto and Pulkkinen (2003) found that authoritative and permissive parents are high in extraversion but that authoritarian parents are low in extraversion. Huver, Otten, de Vries, and Engels (2010) found similar results, indicating that extraverted parents are more supportive (Loyosa, Callor, Rowe, & Goldsmith, 1997) and more likely to employ an authoritative parenting style. These findings suggested that these parents are raising their children in a more positive manner (Belsky & Barends, 2002).

Agreeableness (also called trustworthiness) describes individuals' interpersonal direction along a continuum from antagonistic to compassionate in thoughts, feelings, and actions (Belsky & Barends, 2002; Tupes & Christal, 1961). Individuals high on agreeableness are good-natured, trustworthy, forgiving, straightforward, and helpful. In contrast, those scoring low on this construct are rude, cynical, vengeful, uncooperative, manipulative, and irritable (Belsky & Barends, 2002). Belsky and Barends (2002) proposed that research on this particular personality trait and parenting is sparse, with few studies examining this relationship. According to previous research, individuals who are higher on agreeableness display a more positive affect, positive expressions, and sensitivity as well as lower levels of negative affect and over-controlling, intrusive parenting behaviors (Belsky et al., 1995; Smith, 2010). Consistent with this finding, Smith and colleagues (2007) found that parents who are high on agreeableness display more sensitive parenting behaviors and maintain more positive parent-child relationships. Parents who are high on agreeableness and extraversion also show higher levels of warmth and lower levels of overreactivity (de Haan, Prinzie, & Dekovic, 2009). This finding was consistent with those indicating that parents who are higher on agreeableness are more supportive of their children's autonomy (Huver et

al., 2010; Prinzie et al., 2009). Further research indicated that mothers who are high on agreeableness are more likely to utilize authoritative parenting styles and less likely to employ authoritarian or uninvolved parenting styles (Huver et al., 2010), whereas mothers who are low on agreeableness are more likely to employ coercive parenting strategies, especially when faced with a difficult child (Coplan et al., 2009).

Conscientiousness signifies the extent to which individuals have high standards and are well organized. Individuals who score high on conscientiousness tend to reach their goals and to be reliable, whereas individuals who score low on conscientiousness are careless, are easygoing, and do not prefer to make plans (Belsky & Barends, 2002; Tupes & Christal, 1961). According to Oliver and colleagues (2009), conscientiousness is an understudied personality trait as it relates to parenting; however, some of the traits incorporated under conscientiousness (e.g., being organized, altruistic, and skillful in social interactions) should facilitate positive parenting behaviors (Clark, Kochanska, & Ready, 2000).

Belsky and Barends (2002) proposed that parents who are too high on conscientiousness may be too demanding for their children. In contrast, parents who are too low on conscientiousness may ensue chaos and disorder, thereby devaluing positive support of children's functioning. Research on personality traits and adolescent behaviors suggested that more conscientious mothers report greater involvement and communication and have adolescents with fewer externalizing problems (Oliver et al., 2009). Further, research suggested that conscientiousness is associated with supportiveness and sensitivity and that mothers who are high on this trait are more responsive to their children (Clark et al., 2000; Huver et al., 2010; Smith et al., 2007). Consistent with these findings, Loyosa, Callor, Rowe, and Goldsmith (1997) found that parents who are more conscientious are more likely to

practice positive support and less likely to use negative control. Based on parent report, Bornstein and colleagues (2011) found that mothers who are high on conscientiousness have more parenting knowledge and engage in more symbolic and exploratory play with their children.

Neuroticism measures emotional stability and adjustment versus negative affectivity and maladaptive coping responses. This construct evaluates individuals' proclivity to experience distress and hostility, unrealistic beliefs, and excessive urges. Individuals who have a high score on neuroticism worry a lot, feel inadequate, and are nervous and emotional. Individuals who score low on neuroticism are calm, confident, unemotional, and relaxed (Belsky & Barends, 2002; Tupes & Christal, 1961). In some ways, this construct relates much to the work examining depression, anxiety, hostility, and negative affect in the field of parenting and developmental psychology (Belsky & Barends, 2002). Research further suggested that mothers who score higher on neuroticism are more likely to be overprotective, practice harsh or forceful patterns of controlling parenting behaviors, and are less authoritative in their parenting (Clark et al., 2000; Coplan et al., 2009; Huver et al., 2010; Smith, 2010). These parents also are more likely to engage in less positive and less responsive relationships with their young children (Kochanska, Friesenborg, Lange, & Martel, 2004; Koenig, Barry, & Kochanska, 2010). This association was found to become stronger with children who were especially shy.

Further, parents who are higher on neuroticism rate themselves as less satisfied and less competent in their parenting but more invested in their parenting role (Bornstein et al., 2011). Additionally, these parents are less supportive of their children. This characteristic, in turn, is related to higher levels of externalizing behaviors (e.g., aggression, hyperactive and

inattentive problems) in children (van Aken, Junger, Verhoeven, van Aken, & Deković, 2007b). Parents who are high on neuroticism may be more focused on their own distress rather than on the needs of their children. As a result, they subsequently may be less sensitive, less consistent, more intrusive, and more power assertive in their parenting (Bornstein et al., 2011; Latzman et al., 2009). Research also suggested that parents who are lower on neuroticism exert less strict control and less overreactive discipline with their children (de Haan, Dekovic, & Prinzie, 2012). Given that parents who are lower on neuroticism are less prone to anxiety, it was proposed that they remain calm when their children or adolescents display behavior problems (de Haan et al., 2012).

Openness to experience, or intellect, measures the extent to which individuals are unique and imaginative (Belsky & Barends, 2002; Tupes & Christal, 1961). Individuals who score high on this trait have broad interests and enjoy new experiences, whereas individuals who are low on this trait are practical, traditional, and set in their own ways (Belsky & Barends, 2002). Previous research indicated that parents who are high on openness to experience are less likely to use negative control (Karreman, Tuijl, van Aken, & Dekovic, 2008). It was proposed that these parents may be more creative in dealing with maladaptive child behaviors and choose positive parenting practices to discipline their children (Karreman et al., 2008; Koenig et al., 2010).

Bornstein and colleages (2011) reported that openness to experience is related to mothers' parenting knowledge as well as to their reported competence and investment in their parenting role and their positive interactions and symbolic play with their children. Research also suggested that parents who are high on this trait are warmer towards their adolescents and are more likely to utilize an authoritative parenting style (Metsäpelto &

Pulkkinen, 2003). Given that these parents are more likely to have a wider range of emotional experiences, they may give more careful consideration to their parenting practices and subsequently may acknowledge their children's needs and sensitivity (Metsäpelto & Pulkkinen, 2003). Smith and colleagues (2007) proposed that parents who are higher on openness to experience are more likely to display positive expressions within their families and display more sensitivity with their 30-month old toddlers.

Each of the aforementioned personality traits play a significant role in the way in which parents behave toward their children (Bornstein et al., 2011). For example, personality is perceived to antecede cognitions and practices in parenting (Bornstein et al., 2011). According to Belsky and Barends (2002), the core theoretical concept that directs current research on personality and parenting is grounded in the proposition that, to parent efficiently, individuals must be able to view the world from their children's perspective, regulate their emotions effectively, and subsequently be patient and tolerant of their children (Belsky, 1984; Belsky & Barends, 2002). It was theorized that the most competent parents are those who are high in extraversion, conscientiousness, and openness of experience and low in neuroticism (Bornstein et al., 2011). The available research on personality and parenting is limited, however, and all five traits merit more attention (Prinzie et al., 2009). Thus, this study aimed to add to previous research and examined how mothers' temperament and personality traits were related to subsequent parenting behaviors.

Parenting Behaviors

Early relationships are imperative for both parents and their children (Kochanska et al., 2004). According to Thomas and Chess (1977), researchers were in agreement regarding "the crucial significance of the parents or parent surrogates for the child's development in the

early years of life. This is the period in which the young child masters the initial demands for socialization within the family" (p. 66). According to Belsky's (1984) Process Model, individuals' enduring features or characteristics that arise from their developmental history influence their parenting. Healthy child development (including emotional security, social competence, intellectual achievement, and behavioral independence) is promoted by parents' warm, stimulating, responsive, attentive, and nonrestrictive behaviors (Belsky, 1984; Smith, 2010). For example, parents who are sensitive to the needs of their children and who encourage their children to explore and express their emotions foster identity development in their children (Brown, Mangelsdorf, Neff, Schoppe-Sullivan, & Frosch, 2009).

Baumrind (1991) identified four distinct constellations of parenting styles that have a significant impact on child rearing and development (i.e., authoritarian, permissive, authoritative, and rejecting-neglecting parenting). *Authoritarian* parents are highly demanding and non-responsive and tend to exercise control by requiring conformity to rules. In contrast, *Authoritative* parents are highly responsive, demanding, and assertive but are not intrusive or restricting. They promote autonomy and are supportive but expect mature behavior. Parents with a *Permissive* parenting style are lenient and avoided confrontation. They do not expect mature behavior and are more responsive than demanding. Finally, parents who are not demanding and who lack structure and support are called *Rejecting-Neglecting* parents. These parents avoid childrearing responsibilities and are disengaged from the relationship completely (Baumrind, 1991).

Previous research suggested that the aforementioned parenting styles influence the outcomes of children. For example, research indicated that children with authoritative parents (i.e., those who provide both support and discipline) experience more positive emotional and

behavioral functioning (Baumrind, 1989, 1991). These children are confident about their abilities, more competent in areas of achievement, better adjusted, and less likely than their peers to have behavioral difficulties (Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Children of authoritative parents understand and learn about boundaries and limits through possessing personal autonomy over certain issues (Smetana, 1994) and are better at following directions when compared to peers (Kristal, 2005). They also experience a more positive self-concept and are better adjusted in general (Kristal, 2005) when compared to children with authoritarian and permissive parenting styles (McClun & Merrell, 1998).

Further, a longitudinal study by Steinberg, Lamborn, Dornbusch, and Darling (1992) indicated that children who describe their parents as more authoritative (i.e., warm, predictable, and democratic) exhibit better performance and engagement in school, suggesting that positive parenting leads to school success. These authors suggested that parents' authoritativeness is related to higher levels of involvement in school and more encouragement to succeed academically, with these characteristics playing a direct role in the adolescents' academic achievement. Further, McClun and Merrell (1998) indicated that adolescents with authoritative parents have a more internal locus of control orientation when compared to peers of parents with authoritarian and permissive parents. In turn, internal locus of control may be related to better emotional and behavioral functioning.

The work of Lamborn and colleagues (1991) suggested that children with authoritarian parents (i.e., those who are demanding and provide little support) show a mixture of positive and negative traits. These children demonstrate obedience and conformity to the ideals of adults, perform well in academic settings, and are less likely than their peers to participate in deviant activities. Children with authoritarian parents significantly lack self-

confidence and self-reliance and maintain low perceptions of their academic and social abilities, however (Lamborn et al., 1991; McClun & Merrell, 1998). Children of authoritarian parents also react with hostility towards their peers when upset and tend to not be independent (Kristal, 2005). These findings were consistent with those of McClun and Merrell (1998), who found that adolescents who perceive their parents as more authoritarian report the highest levels of external locus of control orientation. Xu, Farver, and Zhang (2009) also suggested that children experiencing harsh parenting engage in reactive aggression. Research also indicated that preschoolers with authoritarian parents are more likely to experience internalizing problems (Williams et al., 2009).

Permissive parents (who are responsive but lenient and not demanding) faultily abandon their socializing and guidance roles by granting their children autonomy over many issues. This autonomy granted to children is often more than children are able to manage. This scenario results in children's problem behaviors (Smetana, 1994). Williams and colleagues (2009) reported that permissive parenting is associated with greater internalizing problems in young children. Specifically, Lamborn and colleagues (1991) reported that children who experience permissive parenting report greater somatic distress. Research also demonstrated, however, that permissive parenting is related to children's externalizing problems and immature behaviors (Kristal, 2005). For example, adolescents with permissive parents display a high frequency of involvement in deviant behaviors (e.g., substance use, school misconduct) and are more likely to engage in proactive aggression (Williams et al., 2009; Xu et al., 2009). Further, these children and adolescents are disconnected from academics (Williams et al., 2009), have little impulse control, and are demanding (Kristal, 2005).

Research also suggested that children of neglecting-rejecting parents exhibit lower levels of cognitive competency and overall functioning when compared to children with parents using other parenting styles (Baumrind, 1991). For example, Lamborn and colleagues (1991) reported that adolescents with neglecting-rejecting parents exhibit less competence, lower self-perceptions, and poorer school achievement when compared to peers (Kristal, 2005). Additionally, children of rejecting-neglecting parents experience more behavior problems, poor emotion regulation, and greater psychological distress (Kristal, 2005; Lamborn et al., 1991). Research also indicated that negative or inconsistent parenting behaviors are associated with low self-esteem in children, which may trigger acting out behaviors (Barry, Dunlap, Lochman, & Wells, 2009).

Although the general parenting styles of mothers and fathers may provide useful descriptions, these parenting styles should be comprised of specific parenting behaviors. Thus, it would prove beneficial to identify parents' specific positive and negative parenting behaviors that affect children's outcomes. Darling and Steinberg (1993) suggested that, rather than studying general clusters of parenting styles, examining specific parenting behaviors would provide insight into specific precursors to children's emotional and behavioral functioning. As such, this study examined specific parenting behaviors (i.e., parents' warmth, supportive involvement, positive reinforcement, yelling, ignoring, corporal punishment, monitoring and supervision and inconsistent discipline) as they relate to young children's emotional and behavioral functioning.

With regard to positive parenting practices, previous research suggested that high levels of involvement, warmth, and positive communication in parenting are related to better coping skills and outcomes in children (Kochanska, 1993). For example, parents who are

aware of their own emotions and those of their children may promote the development of emotion regulation in their children (Gottman et al., 1996). Further, Loeb (1975) reported that suggestive parents who are involved but less directive promote the development of autonomy in their children. These children learn that their decisions are important to the outcomes that they experience. Additionally, parents' monitoring increases the feeling of family connectedness and subsequently the amount of support felt by children (Jacobson & Rowe, 1999).

Much of the research on parenting behaviors focuses on negative parenting practices and children's outcomes. For example, research suggested that parents' psychological control is related positively to attention problems and aggressive behaviors as well as internalizing and externalizing behavior problems (Hagekull, Bohlin, & Hammarberg, 2001; van Aken, Junger, Verhoeven, van Aken, & Deković, 2007a). Further, parent overprotection is associated with children's later internalizing behavior problems (e.g., ruminating, worrying; Manfredi et al., 2011). Additionally, Patterson (1986) suggested that punitive parenting behaviors (e.g., nagging, yelling) and corporal punishment are related to aggression, defiance, and low self-esteem in children. Research also suggested that negative parenting behaviors (e.g., aggression, coercion) elicit anger, depression, and low self-esteem (Patterson, 1986) as well as increased emotional and conduct problems (Conger, Elder, Lorenz, Simons, & Whitbeck, 1994) in children. Further, Loeb (1975) found that parents who are highly directive make decisions for their children and inhibit their children from forming a sense of autonomy. These children are likely to attribute personal outcomes to luck or fate and to develop an external locus of control. Thus, negative parenting behaviors have a

harmful effect on children's emotional and behavioral functioning as well as on their development of cognitions as they proceeded through adolescence.

Further, research suggested that the parent-child relationship plays a vast role in how parents behave toward their children (Deater-Deckard, 2004), which may affect how children behave toward their parents. For example, Lengua and Kovacs (2005) found a bidirectional relationship between irritability in children and inconsistent discipline. Such behaviors may elicit negative reactions from parents, causing a struggle for control through the use of aversive interactional practices and resulting in children's poor outcomes (Conger et al., 1994; Patterson, 1982, 1986). Additionally, research suggested that temperamentally difficult children may be more likely to respond to punitive parenting by acting out, thus contributing to coercive parenting styles (Patterson, 1986). This bidirectional nature between negative parenting behaviors and children's poor outcomes also may affect academic achievement, as parents set the stage for children's early school experiences through parenting practices and laying the foundation for the development of children's schemas (Taylor, Clayton, & Rowley, 2004). For example, children with difficult temperaments who experience negative parenting have poorer adjustment in First Grade relative to children with difficult temperaments and positive parenting practices (Stright, Gallagher, & Kelley, 2008).

Overall, parenting behavior, as well as its bidirectional relationship with children's behavior, plays a significant role in children's development and subsequent emotional and behavioral functioning. Such behaviors may impact the way in which parents view their parenting role and subsequently the parenting behaviors that they choose to utilize. This relationship highlights the importance of studying parents' cognitions (particularly locus of control) in the context of parenting behaviors. Given that parents may acquire an external

locus of control in response to their children's difficult behaviors (McCabe, Goehring, Yeh, & Lau, 2008), parenting behaviors and locus of control deserved to be examined collectively.

Parents' Locus of Control

Locus of control (LOC) was a concept that first was introduced by Rotter (1966). It is defined as a "generalized attitude, belief or expectancy regarding the nature of the causal relationship between one's own behavior and its consequences" (p. 2). Individuals with an *external locus of control* attribute events to the result of luck, fate, or chance. McClun and Merrell (1998) suggested that an external locus of control orientation is related to a low self-concept. Those with an *internal locus of control* believe that events are contingent upon their own behaviors or qualities (Rotter, 1966). Individuals can have different loci of control for different aspects of their lives, where some loci are internal and others are external (Janssesns, 1994).

For example, parents' locus of control (PLOC) refers to parents' perceived influence over their children's behaviors (Campis, Lyman, & Prentice-Dunn, 1986; Meunier & Roskam, 2009). Accordingly, parents with an internal locus of control believe that their children's behaviors and development are the result of their parenting efforts, whereas parents with an external locus of control believe that their children's behavior and development are out of their control (Campis et al., 1986; Freed & Tompson, 2011; Meunier & Roskam, 2009). Previous research suggested that parents' locus of control is a significant factor in many areas of children's development (Campis et al., 1986). Given that parents' locus of control and parenting behaviors are related (Rotter, 1966), these variables were examined collectively in this study.

Parents' locus of control is found to play a significant role in parenting behaviors and children's outcomes. Research suggested that the effects of parents' external locus of control are subtle and can occur through negative forms of parenting behavior (Guzell & Vernon-Feagans, 2004). For example, research indicated that parents with a more external locus of control practice more authoritarian parenting styles when controlling children's difficult behaviors (Janssens, 1994; Loeb, 1975) and demonstrate less effective parenting skills when compared to parents with a more internal locus of control (Bugental & Shennum, 1984; Loeb, 1975).

For example, Guzell and Vernon-Feagans (2004) suggested that parents with an external locus of control participate in adult-centered play rather than a child-centered style of interaction (i.e., they remind, question, urge, restrain, and correct their infants during play). These parents also exhibit less sensitivity and directive behavior during play with their infants, which is associated with negative child outcomes (e.g., externalizing behavior problems). Additionally, Roberts, Joe, and Rowe-Hallbert (1992) suggested that parents who have a more external locus of control and who have coercive children may cease trying to socialize their children and are more likely to engage in poor parenting behaviors.

With regard to communication in parent-child interactions, Bugental, Caporael, and Shennum (1980) found that parents with an external locus of control verbalize more task directives and respond with greater intensity to difficult children when compared to parents with an internal locus of control. Using the Personal Survey Interview (Galejs, Pease, & Wolins, 1984) and a Q-sort inventory, Galejs and Pease (1986) reported that mothers with a more external locus of control define the presence of intellectual games and good nutrition as

the best parenting practices, rather than utilizing positive reinforcement, displaying affection, and maintaining positive interactions.

In addition to negative parenting behaviors, previous research linked parents' external locus of control to behavior problems and oppositional behaviors in young children (Campis et al., 1986; Freed & Tompson, 2011; Roberts et al., 1992). Additionally, children of parents with an external locus of control are reported to have more difficult behaviors to handle as well as lower achievement scores (Janssens, 1994; Ollendick, 1979). A separate study by Mouton and Tuma (1988) compared clinic and control mothers on stress, locus of control, and role satisfaction. Results suggested that clinic mothers show a more external locus of control, higher levels of stress, and less role satisfaction than control mothers and are more likely to have children with behavior problems. Research also demonstrated the association between parents' external locus of control and internalizing behaviors in children. For example, Ollendick (1979) suggested that children who have both a mother and father with an external locus of control are more anxious than children who have parents with an internal locus of control. These results denoted the importance of having at least one parent with an internal locus of control (Ollendick, 1979).

Research on parents' internalization of locus of control is sparse but generally suggested that an internal locus of control is essential for healthy psychological functioning and good child-rearing practices (Nowicki & Segal, 1974). For example, MacDonald (1971) found an association between internal locus of control, nurturance, and warmth in parent-child relationships. Results of this study additionally described parents with an internal locus of control as consistent, predictable, and encouraging towards their children. According to Galejs and Pease (2001), mothers with a more internal locus of control identify affection and

verbal interaction with their children as ideal parenting practices. Locus of control also has been related to parent communication in the literature. For example, Bugental and colleagues (1980) found that parents with an internal locus of control do not differ from those with an external locus of control in the expression of verbal affect for cooperative, responsive children; however, with uncooperative, unresponsive children, the expression of parents with an external locus of control become more assertive. Further research associated parents' internal locus of control with higher intelligence and higher achievement scores for their young boys (Ollendick, 1979)

Although parents' locus of control is regarded commonly as preceding and/or exacerbating children's disruptive behaviors (Roberts et al., 1992), parents also could acquire an external locus of control in response to their children's difficult behaviors (McCabe et al., 2008). McCabe and colleagues (2008) suggested that the relationship between parents' locus of control and children's behavior problems is bidirectional. Specifically, results suggested that mothers of children with significant clinical behavior problems display a more external locus of control. Further, Morton (1997) found that mothers who report more behavior problems on the Child Behavior Checklist for their children tend to have a more external locus of control.

The related work of Freed and Tompson (2011) suggested that externalizing behaviors in children are correlated with parents' external locus of control and higher levels of depression. Additionally, Roberts and colleagues (1992) indicated that children who disobey, tantrum, talk back, and resist discipline have parents with relatively higher external locus of control scores. Comparably, research suggested that mothers of children with difficult temperaments have a more external locus of control when compared to mothers with

a temperamentally easy child (Leenders, 1985, as cited in Janssens, 1994). It may be that parents view these children as more difficult to influence and subsequently employ a more external locus of control (Roberts et al., 1992). Roberts and colleagues (1992) proposed that parents with a more external locus of control and highly coercive children may not seek help and may even withdraw and cease their own efforts to help and socialize their children.

Of particular interest to this study, research suggested that locus of control is related to different aspects of personality. For example, Kuypers (1972) suggested that those with an internal locus of control are more likely to be flexible, purposive, and open. Additionally, they are more likely to be less defensive, less sensitive, and more intellectually superior. Further, Bledsoe and Baber (1978) found that individuals with a more internal locus of control are more likely to be emotionally stable, conscientious, trusting, and sociable. In contrast, individuals with a more external locus of control are more likely to be excitable and insecure. Szmigielska (1980) reported that female college students who have a more internal locus of control are more responsible and independent in their activities and experience an overall better social adjustment. Although research reported a relationship between personality and locus of control (albeit scarce), this relationship has yet to be established with temperament. Thus, this study also considered the construct of temperament when measuring locus of control.

Overall, parents' locus of control plays an important role in parenting behaviors and children's outcomes. The literature demonstrated a clear link between parents' external locus of control and children's later behavior problems (Campis et al., 1986; Freed & Tompson, 2011; Roberts et al., 1992), whereas internal locus of control is related positively to parenting practices and children's functioning (Galejs & Pease, 1986; MacDonald, 1971; Nowicki &

Segal, 1974). Although there were evident relationships between parents' locus of control and the aforementioned variables, there were gaps in the literature regarding the role of parents' temperament and personality in the development of their locus of control and the subsequent outcomes experienced by their children. Additionally, research has not yet examined the role of mothers' locus of control and subsequent outcomes for young children, particularly when taking mothers' temperament and personality into account. Thus, this study aimed to examine these variables collectively in an effort to better predict children's outcomes.

In addition to parents' locus of control, core self-evaluations were identified as playing a role in an individual's behavior. Specifically, Judge, Locke, and Durham (1997) defined core self-evaluations as a higher order trait comprised of self-esteem, neuroticism, generalized self-efficacy, and locus of control (Judge et al., 2003). This construct suggested that these core four traits are separate and unique but related significantly. Research suggested that core self-evaluations are different from the Big Five model (specifically neuroticism) because core self-evaluations are a much broader construct (Erez & Judge, 2001). Additionally, core self-evaluations describe traits that are evaluations of the self (e.g., self-worth), whereas other personality traits (e.g., agreeableness) describe a set of behaviors (Johnson, Rosen, & Levy, 2008).

At its basic level, core self-evaluations are individuals' evaluations or judgments about their effectiveness, worthiness, and competency as people (Judge et al., 2003). Core self-evaluations are proposed to be the most central appraisals that individuals hold, reflecting a baseline evaluation that is present in all beliefs about the self (Chang, Ferris, Johnson, Rosen, & Tan, 2012). Higher scores on core self-evaluations indicated that an

individual is positive, well adjusted, self-confident, efficacious, and emotionally stable (Judge et al., 2003). Judge, Locke, and Durham (1997) proposed that core self-evaluations can have a direct effect on an individual's outcomes through emotional generalization (i.e., self-views influencing other areas of functioning) as well as an indirect effect by influencing an individual's cognitions or the actions in which an individual engages (Chang et al., 2012). It also was proposed that how an individual reacts to situations may be related to their view of themselves (i.e., core self-evaluations).

Given this information, it was important to examine core self-evaluations in the context of parenting. Although a relationship between mothers' core self-evaluations, parenting behaviors, and young children's outcomes has not yet been established, core self-evaluations may be valuable in predicting young children's outcomes. For example, research suggested that parents' neuroticism (Kochanska et al., 2004), locus of control (Campis et al., 1986; Meunier & Roskam, 2009), and self-efficacy (Meunier, Roskam, & Browne, 2011) all individually and significantly predict parenting behaviors and children's outcomes. Thus, it is likely that mothers' core self-evaluations also may add more information regarding the outcomes of young children (i.e., temperament and emotional and behavioral functioning). Therefore, this study examined the relative contribution of mothers' core self-evaluations on young children's outcomes while taking parents' temperament, personality, parenting behaviors, and parenting locus of control into account.

Young Children's Temperament and Behavior

As previously stated, temperament is "a term used to describe the characteristic tempo, rhythmicity, adaptability, energy expenditure, mood, and focus of attention of a child, independent of the content of any specific behavior" (Thomas et al., 1968, p. 4). Thomas and

Chess (1977) proposed that temperament is established considerably by 2- to 3-months of age and is reasonably stable. Temperament may affect the way in which young children acquire autonomy as well as social, motor, and cognitive skills (Kristal, 2005). Further, temperament plays a significant role in how individuals perceive children and how children develop their own self-perception (Thompson, Winer, & Goodvin, 2011). Thus, temperament continues to have an effect on children's development and behavior as well as on those around them (Kristal, 2005). Therefore, examining the characteristics of young children's temperament is important for understanding the parent-child relationship and young children's subsequent outcomes.

Research suggested that temperament and later emotional and behavioral functioning are connected, with young children's early temperament predisposing or predicting later emotional and behavioral problems (Karreman, de Haas, Tuijl, van Aken, & Dekovic, 2010; Zentner & Bates, 2008). Specifically, Zentner and Bates (2008) suggested that negative emotionality or irritability is linked to later internalizing behavior problems. Research also suggested that early characteristics of inhibition or fearfulness predict later internalizing behaviors (i.e., behaviors directed inward, such as anxiety and depression; Achenbach, 1978; Zentner & Bates, 2008). Additionally, Mezulis, Hyde, and Abramson (2006) reported that, when children who have a temperament that is high on withdrawal negativity are confronted with negative life events, they are more likely to develop a depressogenic cognitive approach to future negative occurrences. Zentner and Bates (2008) also suggested that early unmanageable temperament tendencies likely predict externalizing behaviors (i.e., behaviors directed outward onto the environment, such as aggression and rule-breaking problems; Achenbach, 1978; Patterson & Sanson, 1999). For example, temperamentally difficult

children with mothers who lack sensitivity and exert more control are more likely to experience externalizing behavior problems (van Aken et al., 2007a). Temperamentally difficult boys also are observed to be less assertive with adults when compared to boys who are temperamentally easy (Gordon, 1981).

In addition to temperament playing a significant role in emotional and behavioral functioning, Thomas and Chess (1977) also proposed the notion of *Goodness of Fit,* which can influence significantly children's functioning. Goodness of fit occurs when the environment and its expectations and demands correspond to children's own characteristics, capacities, and styles of behaving. When there is agreement between children and their environment, optimal development in a progressive direction can occur. In contrast, if there is dissonance between children and their environment, altered development and maladaptive functioning can occur. For example, Van den Boom and Hoeksma (1994) suggested that innately difficult children are likely to have mothers who engage in less physical contact. Additionally, when mothers engage in contact with their temperamentally difficult children, it is likely to be in response to their behaviors and in an attempt to ease their distress; however, when these children are not distressed, their mothers are less responsive. Thus, goodness of fit can have particular implications for the parent-child relationship. Specifically, when a poor goodness of fit occurs, parents and their children are at risk for negative interactions.

Given the aforementioned relationships, it is important to consider how parenting behaviors may play a role in children's outcomes as well. Belsky's (1997, 2005) differential susceptibility hypothesis suggested that children vary in the degree to which parenting behaviors affect their emotional and behavioral functioning. Given that temperamentally

difficult children are particularly sensitive to external stimuli, Belsky (1997, 2005) proposed that, when exposed to negative parenting behaviors, these children have poorer emotional and behavioral outcomes relative to children who are temperamentally easy. When temperamentally difficult children experience positive parenting, however, these children may have better emotional and behavioral outcomes. Thus, this hypothesis suggested that children who are temperamentally difficult are more sensitive to the effects of both positive and negative parenting behaviors. This hypothesis was supported by a number of studies.

For example, research suggested that children with difficult temperaments are more affected by the way in which they are parented and specifically evoke adverse parenting behaviors. Such parenting behaviors, in turn, could evoke more child difficulties, such as externalizing behavior problems (Bradley & Corwyn, 2008; van Zeijl et al., 2007). These authors suggested that children with difficult temperaments generally benefit from parents who are sensitive and exhibit behaviors that support emotional security. Additionally, Tschann, Kaiser, Chesney, Alkon, and Boyce (1996) reported that children with difficult temperaments display more behavior problems, especially when involved in high conflict families. With regard to children with easier temperaments, they tend to be resistant against the negative effects of high levels of family conflict and have lower rates of behavior problems. This research highlighted the importance of examining parenting and family dynamics in the context of temperamentally difficult children. Accordingly, young children's temperament should be considered in the relationship between parenting behaviors and young children's outcomes.

Consistent with the abovementioned hypothesis, children's temperament is important in shaping family systems (e.g., parenting behaviors; Schoppe-Sullivan, Mangelsdorf,

Brown, & Sokolowski, 2007; Webster-Stratton & Eyberg, 1982). Specifically, Thomas and Chess (1977) indicated that "the child's temperament influences his responses to parental practices and attitudes and helps to shape his parents' judgments and feelings towards him" (p. 183). As a result, temperament and parenting simultaneously could affect one another (Lengua & Kovacs, 2005). For example, children who are temperamentally easy exhibit more smiling and laughter, which may be experienced as more enjoyable and rewarding by parents (Lengua & Kovacs, 2005). Collectively, research generally suggested that children with easy temperament styles are likely to elicit positive parenting behaviors (Calkins et al., 2004; Schoppe-Sullivan et al., 2007), whereas children with difficult temperament styles are likely to elicit negative discipline and poor parenting behaviors (van den boom & Hoeksma, 1994; van Zeijl et al., 2007). For example, Calkins and colleagues (2004) reported that mothers of easier infants display considerably less intrusive behaviors and more physically stimulating behaviors when compared to mothers of infants with highly irritable temperaments. Mothers of infants with difficult temperaments engage in significantly less effective stimulation and physical contact. Additionally, children with positive emotionality predict greater maternal acceptance (Lengua & Kovacs, 2005), suggesting that children with easy temperaments contribute more positively to parent-child interactions.

Goodness of fit proves to be important across settings. Research suggested that children's temperament could impact greatly their performance in academic settings through their interactions with peers and teachers as well as their approaches toward learning tasks (Chess, 1968). For example, children who have a difficult temperament negatively respond to new stimuli, they adapt slowly, and their reactions are disruptive to peers. In contrast, children who have an easy temperament adapt quickly to change and show a predominantly

positive mood. These children adapt easily to standards and expectations of the classroom and less often develop problem behaviors. The third constellation (i.e., slow-to-warm-up children) adapt at their own tempo with the encouragement of teachers and peers; however, if they are pressured, these children feel stressed and are likely to withdraw. Temperament also affects peer relationships. Billman and McDevitt (1980) reported that easy and difficult children have similar social interactions (e.g., smile, verbalize, play, and touch); however, children with an easy temperament are less likely to engage in aggressive behavior and rough play. Palisin (1986) reported that children who ease into new situations (as measured by the Approach/Withdrawal scale of the Parent Questionnaire) perform well in testing situations.

Thus, overall, children's temperament contributes a considerable amount to their development and behavior (e.g., academic achievement) as well as to caregiver-child relationships (Kristal, 2005). Specifically, temperamentally easy children seem to influence positively the interactions between themselves and their environment, whereas temperamentally difficult children contribute negatively to interactions with their environment and parent-child relationships (Billman & McDevitt, 1980). For example, children who are more temperamentally active with a low attention span tend to have mothers who have negative affect as well as non-accepting and submissive parenting behaviors with their children (Webster-Stratton & Eyberg, 1982). These relationships subsequently could affect children's emotional and behavioral functioning (Karreman et al., 2010; Zentner & Bates, 2008).

The aforementioned research highlighted the importance of examining variables that impact children's emotional and behavioral problems (Karreman et al., 2010; Webster-Stratton & Eyberg, 1982; Zentner & Bates, 2008). In the current study, young children's

internalizing and externalizing problems were measured via ratings provided by their parents. Internalizing problems are exemplified by feelings that are directed inward, such as those exhibited by children who are withdrawn, depressed, or anxious (Achenbach, 1978; Achenbach & Rescorla, 2001). In contrast, externalizing problems are characterized by behaviors directed outward onto the environment (Achenbach, 1978; Achenbach & Rescorla, 2001), such as aggression, impulsivity, hyperactivity, and temper tantrums.

With regard to children's internalizing and externalizing behavior problems, there appears to be several risk factors that could affect the occurrence of such difficulties. For example, previous research suggested that children with difficult temperaments are more likely to experience internalizing and externalizing behavior problems (Thomas et al., 1968). Specifically, research suggested that children with difficult temperaments may be less successful at self-regulating their emotions. Thus, this difficulty may play a role in the development of emotional and behavioral problems in children (Rubin, Burgess, Dwyer, & Hastings, 2003). Research also suggested that the stability of internalizing and externalizing behavior problems is greater among children who experience an adverse home environment (Tschann et al., 1996), an earlier onset of symptoms (Deater-Deckard, 2004), and a more difficult temperament (Campbell, Shaw, & Gilliom, 2000). These variables also place these children at later risk for academic difficulties as well as other psychiatric problems (Reid, 1993), such as substance abuse (Blackson, Tarter, Martin, & Moss, 1994). Accordingly, difficult temperaments appear to play a significant role in the development of internalizing and externalizing problems that children experience throughout early childhood (Thomas et al., 1968), especially for children in families with high conflict.

Given the continuity of children's temperament and their internalizing and externalizing problems, it is important to consider the role of parent's characteristics in the development and exacerbation of such symptoms. For example, although research on the effect of parent temperament on children's outcomes is sparse, there is some research indicating that parents' temperament may affect greatly the decisions parents make, their parenting skills (Latzman et al., 2009), and how they communicate their attitudes to their children (Thomas & Chess, 1977). These characteristics, in turn, may contribute to children's experiences of emotional and behavioral difficulties. Further, research also indicated that parents' personality is related significantly to children's outcomes through parenting behaviors. For example, research suggested that parents' specific personality traits (e.g., high/low levels of Openness to Experience, Neuroticism, Extraversion) may be related substantially to how parents behave toward their children (e.g., warmth, positivity; Bornstein et al., 2011). Additionally, research indicated that parents' own psychopathology may contribute to the symptoms of their children. In fact, higher levels of maternal depression and paternal mental health problems are related to children's externalizing behavior symptoms (Mantymaa et al., 2012). Thus, parents' unique characteristics may shape their children's temperament as well as their children's development of internalizing and externalizing problems.

Given the aforementioned relationships, it is imperative to examine how parents' temperament and personality are related to their parenting behaviors and their children's subsequent outcomes. For example, Patterson (1986) suggested that poor parenting behaviors may elicit poor self-esteem, rejection, anger, and depression in children. High levels of coercion and aggression by parents also may increase emotional and behavioral problems in

children (Conger et al., 1994). Further, aggressive behaviors in children may elicit negative responses from parents, causing a power struggle between parents and children through the use of aversive interactional techniques (Conger et al., 1994; Patterson, 1982, 1986). Previous research also indicated that parents' low involvement, inconsistent discipline, and corporal punishment all are related to children's internalizing and externalizing problems (e.g., Frick et al., 1992; Patterson, 1986). Taken together, this study aimed to extend the research on the various predictors of young children's emotional and behavioral problems. Given these relationships and the theory that parents' temperament and personality are related to parenting behaviors (Thomas & Chess, 1977), it was important to examine young children's temperament and emotional and behavioral functioning in the context of mothers' temperament and personality as well as their parenting behaviors. Accordingly, the present study aimed to examine these relationships.

The Present Study

Given the impact that parenting behaviors have on children's functioning, the present study focused on how mothers' temperament and personality were related to parenting behaviors, parental locus of control, mothers' core self-evaluations, and young children's temperament and behavior problems. Prior research examined these variables independently (e.g., Latzman et al., 2009; Manian et al., 2006; Prinzie et al., 2009); however, no one study combined these variables to examine them collectively. Given that temperament is correlated with personality, past research focused more specifically on the relationships among parents' personality, parenting behaviors, and children's outcomes (Belsky & Barends, 2002; Huver et al., 2010). Less research examined the role of parents' temperament in the relationship between parenting behaviors and young children's outcomes, however.

Thus, this study sought to address this gap in the literature and provided a further understanding of how mothers' temperament and personality are related to each other as well as to parenting behaviors and young children's temperament and behavior problems. By identifying the potential links among these variables, this study enhanced our understanding of the most important predictors of parenting behaviors as well as young children's temperament and internalizing and externalizing problems.

The first purpose of this study was to investigate the relationship between mothers' temperament and personality. In particular, it was postulated that mothers' temperament and personality would be related significantly but still would be separate constructs. Specifically, based on previous research (e.g., Angeleitner & Ostendorf, 1994), it was hypothesized that Approach-Withdrawal and Mood Quality would correlate highly with Extraversion, Activity Level-General would correlate highly with Agreeableness, Flexibility-Rigidity would correlate highly with Openness to Experience, and Distractibility and Persistence would correlate highly with Conscientiousness. Finally, it was postulated that the Rhythmicity attributes of temperament (i.e., sleep, eating, and daily habits) as well as Activity Level-Sleep would form an additional specific factor. Nonetheless, mothers' temperament and personality would compose separate but related factors when examined with factor analysis.

The second aim of this study was to examine the relationships among mothers' temperament and personality, parenting behaviors (including parents' locus of control and core self-evaluations), and young children's temperament and behavior problems. For the purposes of this study, temperament traits (e.g., activity level, flexibility/rigidity, mood quality) were examined on a continuum, with scores ranging from difficult to easy. Based on the aforementioned findings, it was hypothesized that mothers' moderate levels of

extraversion, agreeableness, and conscientiousness; low levels of neuroticism; and high levels of openness to experience would be related positively and significantly to mothers' positive parenting behaviors (e.g., emotion coping), mothers' internal locus of control, mothers' high levels of core self-evaluations, and young children's positive outcomes (i.e., easy temperament and lower levels of internalizing and externalizing behavior problems). Further, it was hypothesized that mothers' easy temperament would be associated positively and significantly with positive parenting behaviors (e.g., emotion coping), mothers' internal locus of control, mothers' high levels of core self-evaluations, and young children's positive outcomes (i.e., easy temperament and low levels of internalizing and externalizing behavior problems).

Further, this study aimed to examine whether the relationship between mothers' temperament and parenting behaviors would be mediated by mothers' personality. In other words, it was expected that mothers' temperament (e.g., activity level, flexibility/rigidity, mood quality) would predict significantly mothers' personality (i.e., extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism). In turn, mothers' personality would predict significantly parenting behaviors (i.e., positive parenting, negative/inconsistent parenting, and punitive parenting).

Finally, to examine the final aim of this study, a hierarchical regression analysis was used to determine the relative contributions of mothers' temperament (i.e., greater activity level, flexibility/rigidity, or mood quality), mothers' personality (i.e., extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism), and parenting behaviors (including parents' locus of control and core self-evaluations) in predicting young children's temperament and behavior problems. Accordingly, mothers' temperament

variables (i.e., activity level, flexibility/rigidity, or mood quality) were entered in Block 1, mothers' personality (i.e., extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism) were entered in Block 2, the quadratic terms for mothers' personality (to account for curvilinear relationships) were entered in Block 3, and parenting behaviors were entered in Block 4 to predict young children's temperament.

Further, a separate hierarchical regression was conducted to determine the relative contributions of the aforementioned variables on young children's internalizing and externalizing problems. Thus, mothers' temperament variables (i.e., activity level, flexibility/rigidity, and mood quality) were entered in Block 1, mothers' personality (i.e., extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism) was entered in Block 2, the quadratic terms of mothers' personality were entered in Block 3, parenting behaviors were entered in Block 4, and young children's temperament variables (i.e., activity level, flexibility/rigidity, or mood quality) were entered in Block 5 to predict young children's behavior problems. These analyses shed light on the relative contributions of each of these variables in predicting young children's temperament and internalizing and externalizing behavior problems.

CHAPTER TWO: METHODOLOGY

Participants

As part of this study, 214 young children who ranged in age from 2- to 6-years were rated by their mothers. Mothers were recruited from a national sample, with 11.7% being recruited from preschools in the Orlando area, 3.7% being recruited from the University of Central Florida community (e.g., via the Sona system extra credit system), 74.3% being recruited from Craigslist (e.g., via announcements in various cities), and 10.3% being recruited from Facebook (via posted announcements). There were 460 parents who opened the survey online, and 222 parents who completed it. Additionally, there were 13 packets sent to parents via postal mail, with 11 parents completing the questionnaires and returning the packets, and 7 packets that were completed online in the presence of the researchers (i.e., Sona systems participants). Given the low response rate from fathers, 26 fathers were removed from the sample, leaving 214 mothers in the sample. The suggested sample size for a multiple regression analysis ($p < .05$) with seventeen independent variables (i.e., the most complex analysis proposed for this study) and a statistical power of .80 is 146 participants in order to detect a medium (R = .36) effect size (Cohen, 1992). As a result, the sample collected for this study should have been large enough to complete the proposed analyses.

For the 214 mothers included in this study, their mean age was 31.45-years (*SD*= 7.13-years). The majority of these mothers were Caucasian (77.1%), whereas the remainder of these mothers varied in their ethnic backgrounds (i.e., 9.3% were African American, 8.9% were Hispanic, 2.8% were Asian American, 1.4% were Native American, and 0.5% were from some other ethnicity). With regard to education, the majority of these mothers had attained at least a college degree (43.3%) or some college (37.2%), whereas the remainder of

the mothers endorsed having vocational training (7.9%), a high school diploma (8.8%), some high school (1.4%), less than a high school education (0.5%), or did not respond (0.9%).

Pertaining to the young children who were rated, 99 were males (46.3%), and 115 were females (53.7%). These young children had a mean age of 3.85-years (*SD*=1.38-years). In addition, the majority of these young children had parents who were married (59.8%), whereas the remainder of these young children lived in families with a different parent relationship status (i.e., 15.0% of the young children had parents who were never married, 15.0% of the young children had parents who were living together, 5.1% of the young children had divorced or separated parents, 2.8% of the young children's parents were remarried, 1.9% of the young children's parents were widowed, and 0.5% of the young children's parents did not indicate their marital status). With regard to yearly income, the majority of families made more than $70,000 (27.0%). The remainder of the mothers endorsed that their families fell within other income brackets (i.e., 6.0% made less than $10,000 yearly, 12.6% made $10,000-$20,000 yearly, 14.4% made $20,000-$30,000 yearly, 14.0% made $30,000-$40,000 yearly, 10.3% made $40,000-$50,000 yearly, 7.4% made $50,000-$60,000 yearly, 7.4% made $60,000-$70,000 yearly, and 0.9% did not respond).

Proposed Procedure

Following IRB approval from the University of Central Florida, the directors of several Orlando preschools were contacted to explain the study and request permission for their schools' participation. Once consent was obtained from directors, flyers were placed in each classroom for parents to contact the Young Child and Family Research Clinic if they were interested in participating. Additionally, advertisements were posted on Facebook, the

Good Morning UCF newsletter, Craigslist, and Sona Systems for parents to contact the Young Child and Family Research Clinic if they were interested in participating.

Attempts were made to administer the research packet of questionnaires via an online survey. For those participants who completed the questionnaires online, a link was provided that allowed access to the study. Once parents accessed this link, they were first asked to review a consent form and indicate agreement to participate (see *Appendix A*). Parents then gained access to the questionnaires and were asked to complete ratings on each of the respective questionnaires described above. Following the completion of the questionnaires, a debriefing form was displayed on the screen. As noted above, 229 parents completed the questionnaires online.

For parents who could not complete the questionnaire online, a paper version of the research packet of questionnaires was provided. In this case, a consent form was administered, and participants were assured anonymity. They then were asked to complete the provided questionnaires, which were followed by a debriefing form that explained the purpose of the study and provided references to the relevant research literature about the topic area covered by this study (see Appendix J). Seven parents completed the questionnaires in the presence of the researcher (e.g., Sona systems participants), and thirteen were asked to return the questionnaire packet via postal mail.

Each packet of questionnaires required approximately one hour for parents to complete. One of the investigators was available in person or via telephone to answer any questions that arose while completing the questionnaires. Once paper questionnaire packets were returned, this information was stored securely in a locked cabinet inside the faculty supervisor's laboratory. Similarly, the database that was generated from online data

completion was stored on a password-protected computer in the faculty supervisor's laboratory. To ensure anonymity, no personally identifying information was required as part of the questionnaire packet, and all consent forms and contact sheets were separated immediately from the paper packets and online data. Finally, all data was analyzed in group format, and no individual packet was singled out for examination.

Measures

First, parents completed a brief questionnaire regarding demographic information. The demographics questionnaire asked parents to provide information regarding themselves and their children on various variables, such as age, ethnicity, occupation, sex, and other related characteristics. See *Appendix B* for a sample of the demographics questionnaire.

The *Dimensions of Temperament Scale-Revised for Adults* (*DOTS-R Adult*; Windle & Lerner, 1986) was used to assess parents' reports of their own temperament. This 54-item questionnaire measured nine attributes of temperament (the Cronbach alphas are from Windle & Lerner, 1986): Activity Level-General (.84), Activity Level-Sleep (.89), Approach-Withdrawal (.85), Flexibility-Rigidity (.78), Mood Quality (.89), Rhythmicity-Sleep (.78), Rhythmicity-Eating (.80), Rhythmicity-Daily Habits (.62), Distractibility (.81), and Persistence (.74; Windle & Lerner, 1986). When completing the DOTS-R Adult, participants rated the questionnaire's items using a 4-point Likert scale ranging from *Usually False* (1) to *Usually True* (4). High scores on the temperament scales indicated higher activity level; more adaptability or greater tendency to approach new situations, people, or events; greater flexibility in the external environment; greater level of positive quality of mood; highly regular sleep patterns; highly regular eating habits; highly regular daily activities and habits; lower distractibility; and a higher persistence for activity, respectively.

All nine dimensions were used in this study. In this study, the Cronbach alphas of Activity Level-General (.86), Activity Level-Sleep (.91), Approach-Withdrawal (.80), Flexibility-Rigidity (.81), Mood Quality (.91), Rhythmicity-Sleep (.82), Rhythmicity-Eating (.88), Rhythmicity-Daily Habits (.63), Distractibility (.76), and Persistence (.71) were good. See *Appendix C* for a sample of the DOTS-R Adult.

The *NEO Five-Factor Inventory-3, Form S* (*NEO-FFI-3*; Costa & McCrae, 1992b) was used to assess parents' reports of their own personality characteristics. The NEO-FFI-3 was derived from the original *NEO Personality Inventory-Revised* (NEO-PI-R; Costa & McCrae, 1992b) and is a 60-item self-report questionnaire. Items were rated using a 5-point Likert scale ranging from *Strongly Agree* (1) to *Strongly Disagree* (5). The NEO-FFI-3 measures the Five Factor Model of trait personality. The five factors or dimensions of personality measured by this inventory included (the Cronbach alphas noted are from Costa & McCrae, 1992b): Neuroticism (.86), Extraversion (.79), Openness to Experience (.78), Agreeableness (.79), and Conscientiousness (.82). Cronbach alphas for this study were good for Neuroticism (.87), Extraversion (.85), Openness to Experience (.81), Agreeableness (.75), and Conscientiousness (.85) as well. All five factors of this inventory were used in this study. See *Appendix D* for a sample of the NEO-FFI-3.

The *Alabama Parenting Questionnaire-Preschool Revision* (APQ-PR; Clerkin, Marks, Policaro, & Halperin, 2007) was used to measure parenting behaviors. The APQ-PR was derived from the original *Alabama Parenting Questionnaire* (APQ; Frick, 1991; Shelton, Frick, Wootton, 1996) and is a 32-item self-report measure of parenting behavior. This measure had three factors including Positive Parenting (i.e., parents' warmth, support, involvement, and positive reinforcement), Negative/Inconsistent Parenting (i.e., parents' poor

monitoring/ supervision and inconsistent discipline), and Punitive Parenting (i.e., parents' ignoring, yelling, and corporal punishment). All items were rated on a 5-point continuum from *Never* (1) to *Always* (5). Therefore, higher scores on the three factors indicated more positive parenting behaviors, more negative/inconsistent parenting behaviors, and more punitive parenting behaviors, respectively. Cronbach alphas for this study were good for Positive Parenting (.80), Negative/Inconsistent Parenting (.73), and Punitive Parenting (.70). In this study, the overall composite scores for each of the three factors (i.e., Positive Parenting, Negative/Inconsistent Parenting, and Punitive Parenting) were used. See *Appendix E* for a sample of the Alabama Parenting Questionnaire-Preschool Revision.

The *Parental Locus of Control Scale- Short Form* (*PLOC-SF*; Rayfield, Eyberg, Boggs, & Roberts, 1995a) was used to measure the degree to which parents believed that they could impact their young children's behavior. The PLOC-SF is a shortened form that was derived from the original *Parental Locus of Control Scale* (PLOC; Campis et al., 1986). The PLOC-SF correlated .92 with the original Parental Locus of Control Scale (Rayfield et al., 1995a). The PLOC-SF is a 25-item questionnaire that asked parents to rate items using a 5-point Likert scale that ranged from S*trongly Disagree* (1) to S*trongly Agree* (5). Higher scores on the PLOC indicated a more internal locus of control (i.e., higher perceived control). Rayfield, Eyberg, Boggs, and Roberts (1995b) reported a Cronbach alpha of .79, which was comparable to the .80 coefficient provided by Campis and colleagues (1986) for the original Parental Locus of Control Scale. In this study, the Cronbach alpha for the overall PLOC-SF (i.e., the score used in this study) was good (.84). See *Appendix F* for a sample of the Parental Locus of Control Scale.

The *Core Self-Evaluations Scale* (Judge et al., 2003) was used to measure the construct of core self-evaluations. Specifically, this construct assessed self-esteem, generalized self-efficacy, neuroticism, and locus of control and provided one general score. The Core Self-Evaluations Scale consists of 12 items. Parents rated these items on a 5-point Likert scale that ranged from *Strongly Disagree* (1) to *Strongly Agree* (2). According to the developers (e.g., Judge et al., 2003), reliability was consistently good across four different samples (e.g., Cronbach alpha of .87). The Cronbach alpha in this study was excellent (.90). *See Appendix G* for a sample of the Core Self-Evaluations Scale.

The *Dimensions of Temperament Scale-Revised for Children* (DOTS-R Child; Windle & Lerner, 1986) was used to assess parents' report of their young children's temperament. The DOTS-R Child is a 54-item questionnaire. Parents rated items using a 4-point Likert scale that ranged from *Usually False* (1) to *Usually True* (5). This questionnaire measured nine attributes of temperament (the Cronbach alphas noted are from Windle & Lerner, 1986): Activity Level-General (.84), Activity Level-Sleep (.87), Approach-Withdrawal (.84), Flexibility-Rigidity (.79), Mood Quality (.91), Rhythmicity-Sleep (.80), Rhythmicity-Eating (.80), Rhythmicity-Daily Habits (.70), and Task Orientation (.79). High scores on these scales indicate higher activity level; more adaptability or greater tendency to approach new situations, people, or events; greater flexibility in the external environment; greater level of positive quality of mood; highly regular sleep patterns; highly regular eating habits; highly regular daily activities and habits; lower distractibility; and a higher persistence for activity, respectively. According to previous literature (e.g., Billman & McDevitt, 1980), the child temperament characteristics of Activity Level-General, Flexibility/Rigidity, and Mood Quality are most likely to distinguish between difficult and

easy temperament. Therefore, these three dimensions were used in this study. The Cronbach alphas of Activity Level-General (.89), Flexibility/Rigidity (.85), and Mood Quality (.84) were good in this study. See *Appendix H* for a sample of the DOTS-R Child.

The *Child Behavior Checklist* (CBCL; Achenbach & Rescorla, 2000, 2001) was used to assess young children's emotional and behavioral functioning based on parents' reports. Based on the age of the child, parents completed either the 1.5- to 5-year old version or the 6- to 18-year old version. Both CBCL versions contained over 100 items and asked parents to indicate whether the statements were *Very or Often True* (2), *Somewhat or Sometimes True* (1), or *Not True* (0) of their young children during the past two months. Raw scores on both versions of the Child Behavior Checklist were converted to *T* scores. In this study, the Internalizing Problems and Externalizing Problem scales were used to measure young children's emotional and behavioral functioning. The Internalizing Problems score reflects problems within the self, such as emotional reactivity, somatic complaints, anxiety, depression, and withdrawal from social contacts, and the Externalizing Problems score reflects attention problems and aggressive behaviors. The CBCL demonstrated good validity and reliability. Specifically, in previous studies, the CBCL had a Cronbach alpha of .89 for the Internalizing Problems scale and .92 for the Externalizing Problems scale (Achenbach & Rescorla, 2000). See *Appendix I* for a sample of each CBCL version.

CHAPTER THREE: RESULTS

Descriptive Statistics

The results of this study were put into context by calculating and examining the descriptive statistics (i.e., means and standard deviations) of the variable of interest. With regard to the parent temperament measure used in this study, mothers reported relatively moderate levels of activity level-general (*M*=17.00, *SD*=4.86; as scores were able to range from 7 to 28), activity level-sleep (*M*=10.49, *SD*=3.75; as scores were able to range from 4 to 16), mood (*M*=16.56, *SD*=3.26; as scores were able to range from 7 to 28), distractibility (*M*=11.93, *SD*=2.92; as scores were able to range from 5 to 20), rhythmicity-daily habits (*M*=12.01, *SD*=3.22; as scores were able to range from 5 to 20), and persistence (*M*=8.35, *SD*=1.94; as scores were able to range from 3 to 12). In addition, mothers reported relatively high levels of approach/withdrawal (*M*=18.93, *SD*=4.11; as scores were able to range from 7 to 28), flexibility/rigidity (*M*=14.15, *SD*=3.49; as scores were able to range from 5 to 20), rhythmicity-sleep (*M*=16.27, *SD*=4.42; as scores were able to range from 6 to 24), and rhythmicity-eating (*M*=14.16, *SD*=3.98; as scores were able to range from 5 to 20).

With regard to the parent personality measure used in this study, mothers reported relatively high levels of neuroticism (*M*=34.12, *SD*=7.79; T=65). Additionally, mothers reported very high levels of extraversion (*M*=39.42, *SD*=8.20; T=66), openness to experience (*M*=44.05, *SD*=7.46; T=74), agreeableness (*M*=44.69, *SD*=7.06; T=68), and conscientiousness (*M*=44.27, *SD*=7.69; T=67), as raw scores were able to range from 12 to 60.

In terms of the parenting variables used in this study, mothers reported relatively high levels of positive parenting (*M*=53.32, *SD*=4.95; as scores were able to range from 12 to 60),

relatively moderate levels of inconsistent parenting (*M*=15.55, *SD*=4.22; as scores were able to range from 8 to 40), and relatively low levels of punitive parenting (*M*=7.37, *SD*=2.23; as scores were able to range from 5 to 25). Additionally, on average, parents reported relatively external parental locus of control (*M*=55.14, *SD*=11.14; as scores were able to range from 25 to 125) and relatively high levels of core self-evaluations (*M*=44.45, *SD*=7.79; as scores were able to range from 12 to 60).

With regard to young children's temperament, parents reported relatively high levels of activity level-general (*M*=20.31, *SD*=4.77; as scores were able to range from 7 to 28), flexibility/ rigidity (*M*=14.42, *SD*=3.41; as scores were able to range from 5 to 20), and mood (*M*=26.34, *SD*=2.62; as scores were able to range from 7 to 28) for their young children. Finally, in terms of young children's emotional and behavioral functioning, mothers reported Nonclinical levels of internalizing problems (*M*= 49.20, *SD*=10.20; with 6.0% falling at or above the Clinical range and 10% falling in the Borderline range) and externalizing problems (*M*= 50.17, *SD*=11.78; with 9.5% falling at or above the Clinical range and 10% falling in the Borderline range) on average for their young children.

Preliminary Analyses

Preliminary analyses were conducted on the variables in this study to explore the relationships between mothers' temperament and personality, parenting behaviors (including parenting locus of control and core self-evaluations), and young children's outcomes (i.e., temperament and internalizing and externalizing problems). Specifically, these analyses assessed for multicollinearity between variables, nonlinear relationships, and differences between groups.

Multicollinearity

Given that the variables in this study have been related significantly in previous research (Bornstein et al., 2011), multicollinearity between variables was assessed. The evaluation of multicollinearity revealed that these variables did not exhibit multicollinearity. Specifically, the Variance Inflation Factor (VIF) for each predictor variable was less than 7 (i.e., as scores ranged from 1.19 to 2.25) and relatively low variance proportions (i.e., less than .50) were revealed (Field, 2009; Myers, 1990).

Nonlinear Relationships

Given the findings in previous research that parents' personality demonstrated a nonlinear relationship with parenting practices (Bornstein et al., 2011), curvilinear relationships were assessed. With regard to the Big Five and parenting variables, results revealed that neuroticism was associated with positive parenting ($p < .03$) in a negative and nonlinear fashion, such that mothers with low and high neuroticism had higher scores on positive parenting. Results also revealed a curvilinear relationship between neuroticism and inconsistent parenting ($p < .002$), such that mothers with low and high levels of neuroticism demonstrated lower levels of inconsistent parenting. Additionally, conscientiousness showed a negative curvilinear association with positive parenting ($p < .001$), such that mothers with low and high levels of conscientiousness revealed higher levels of positive parenting behaviors. Conscientiousness also was related nonlinearly to inconsistent parenting ($p < .001$), such that mothers with low and high levels of conscientiousness showed lower levels of inconsistent parenting. Finally, Extraversion demonstrated a negative curvilinear relationship with positive parenting ($p < .01$), such that mothers with low and high levels of extraversion showed higher levels of positive parenting.

In terms of the Big Five with other parenting variables, neuroticism ($p < .001$) and extraversion ($p < .001$) demonstrated a nonlinear association with core self-evaluations, such that mothers with low and high levels of neuroticism and extraversion had lower scores on core self-evaluations. Additionally, agreeableness ($p < .05$) and conscientiousness ($p < .001$) demonstrated negative curvilinear associations with core self-evaluations, such that mothers with low and high agreeableness and conscientiousness showed higher levels of core self-evaluations. Finally, neuroticism ($p < .001$), conscientiousness ($p < .001$), and extraversion ($p < .01$) all revealed curvilinear relationships with parental locus of control, suggesting that mothers who were low and high on these personality variables demonstrated lower levels of parental locus of control. Thus, squared terms for the personality variables were included in the regression analyses that were conducted for this study and that used these variables.

Multivariate Analysis of Variance (MANOVA)

Given the different modes of administration (i.e., Facebook, Craigslist, preschools, and UCF community), analyses were conducted to examine if there were differences between groups on the variables in this study. The results of the Multivariate Analysis of Variance indicated that there were significant differences between groups. Specifically, Wilk's statistic suggested that there was a significant difference in temperament, personality, and parenting behaviors based on the recruitment source, $\Lambda = .61$, $F(66, 520.47) = 1.44$, $p < .02$. In an effort to assess specifically which variables exhibited differences between groups, Scheffe post hoc analyses were conducted. The results of these analyses are presented below.

Specifically, Scheffe post hoc analyses indicated that mothers who completed the questionnaires from Facebook and from preschools differed significantly on activity level-general ($p < .05$). Further, mothers who completed the questionnaires from Facebook and

from Craigslist differed significantly on rhythmicity–daily habits ($p < .03$). Finally, mothers who completed the questionnaires from Facebook and from the UCF community differed significantly on inconsistent parenting ($p < .01$) and punitive parenting ($p < .05$).

Although these differences were considered in terms of contextual factors, they were not considered further in the remaining analyses that were conducted for this study. In particular, according to Miller and Chapman (2001), covariates make biased adjustments on the dependent variable and may remove some effects or produce a spurious effect on the dependent variable. Specifically, because some of the temperament traits were related significantly, the group variance potentially would result in poor construct validity for temperament if these variables were removed (Miller & Chapman, 2001). Further, it is likely that some of the differences present in parenting behaviors (i.e., inconsistent and punitive parenting behaviors) were inherent to the individuals sampled (e.g., college students versus general community members) and added to the diversity of the sample. Given that there were not significant differences between groups on ratings of the dependent variables (i.e., young child variables) and consistent with the suggestion of Harris, Bisbee, and Evans (1971; who suggested that these variables should be included as substantial variables rather than covaried out), covariates were not used in the other analyses examined here.

Correlational Analyses

To examine the relationships among mothers' temperament and personality variables, parenting behaviors, parental locus of control, core self-evaluations, young children's temperament, and young children's emotional and behavioral functioning, correlations among these variables were calculated. Given that not all of the variables demonstrated

curvilinear relationships, Pearson correlations also were examined to assess relationships among the variables. Refer to Table 1 for these correlations.

Mothers' temperament and personality variables were correlated highly. Specifically, mothers' flexibility/rigidity was related positively and significantly to their openness to experience and extraversion and negatively and significantly to their neuroticism. Thus, higher levels of mothers' flexibility/rigidity were related to higher levels of mothers' openness to experience and extraversion and to lower levels of mothers' neuroticism. In addition, mothers' mood and approach/withdrawal were related positively and significantly to their extraversion, openness to experience, and agreeableness and negatively and significantly to their neuroticism. In other words, higher levels of mothers' mood and approach/withdraw were related to higher levels of mothers' extraversion, openness to experience, and agreeableness and to lower levels of mothers' neuroticism. Mothers' approach/withdrawal also was related positively and significantly to their conscientiousness, such that higher levels of approach/withdraw were related to higher levels of conscientiousness. Additionally, mothers' activity level-general was related positively and significantly to their neuroticism and extraversion. Thus, higher levels of mothers' activity level-general were related to higher levels of mothers' neuroticism and extraversion. Further, mothers' activity level-sleep was related positively and significantly to their neuroticism, such that higher levels of activity level-sleep were related to higher levels of neuroticism.

In addition, mothers' rhythmicity-daily habits was related positively and significantly to their extraversion and conscientiousness and negatively and significantly to their neuroticism. Thus, higher levels of mothers' rhythmicity-daily habits were related to higher levels of mothers' extraversion and conscientiousness and to lower levels of mothers'

neuroticism. Mothers' rhythmicity-sleep and rhythmicity-eating were related positively and significantly to their conscientiousness and negatively and significantly to their neuroticism. In other words, higher levels of mothers' rhythmicity-sleep and rhythmicity-eating were related to higher levels of mothers' conscientiousness and to lower levels of mothers' neuroticism. Further, mothers' persistence was related positively and significantly to their agreeableness, extraversion, and conscientiousness and negatively and significantly to their neuroticism. Therefore, higher levels of mothers' persistence were related to higher levels of mothers' agreeableness, extraversion, and conscientiousness and to lower levels of mothers' neuroticism. Finally, mothers' distractibility was related positively and significantly to their conscientiousness and negatively and significantly to their neuroticism, such that higher levels of distractibility were related to higher levels of conscientiousness and lower levels of neuroticism.

In terms of mothers' temperament and parenting behaviors, mothers' activity level-general was related negatively and significantly with their core self-evaluations, such that higher levels of activity level-general were related to lower levels of core self-evaluations. Mothers' flexibility/rigidity was related positively and significantly to their core self-evaluations and negatively and significantly to their locus of control. In other words, higher levels of mothers' flexibility/rigidity were related to higher levels of mothers' core self-evaluations and lower levels of mothers' locus of control. Further, mothers' mood was related positively and significantly to their positive parenting and core self-evaluations, such that higher levels of mood were related to higher levels of positive parenting and core self-evaluations. Mothers' mood also was related negatively and significantly to their locus of control, such that higher levels of mood were related to lower levels of locus of control.

Mothers' approach/ withdrawal was related positively and significantly with their core self-evaluations, such that higher levels of approach/withdraw were related to higher levels of core self-evaluations. Additionally, mothers' rhythmicity-sleep was related positively and significantly to their core self-evaluations and negatively and significantly to their inconsistent parenting and locus of control. Thus, higher levels of mothers' rhythmicity-sleep was related to higher levels of mothers' core self-evaluations and lower levels of mothers' inconsistent parenting and locus of control.

Additionally, mothers' rhythmicity-eating was related positively and significantly to their positive parenting and core self-evaluations and negatively and significantly to their locus of control. In other words, higher levels of mothers' rhythmicity-eating were related to higher levels of mothers' positive parenting and core self-evaluations and to lower levels of mothers' locus of control. Further, mothers' rhythmicity-daily habits was related positively and significantly to their positive parenting and core self-evaluations and negatively and significantly to their inconsistent parenting. Therefore, higher levels of mothers' rhythmicity-daily habits were related to higher levels of mothers' positive parenting and core self-evaluations and to lower levels of mothers' inconsistent parenting. Mothers' distractibility was related positively and significantly to their core self-evaluations and negatively and significantly to their locus of control, such that higher levels of distractibility were related to higher levels of core self-evaluations and lower levels of locus of control. Finally, mothers' persistence was related positively and significantly to their positive parenting and core self-evaluations and related negatively and significantly to their inconsistent parenting and locus of control. Thus, higher levels of mothers' persistence were related to higher levels of

mothers' positive parenting and core self-evaluations and to lower levels of mothers' inconsistent parenting and locus of control.

With regard to mothers' personality and parenting variables, mothers' neuroticism was related positively and significantly to their inconsistent parenting and locus of control, such that higher levels of neuroticism were related to higher levels of inconsistent parenting and locus of control. Mothers' neuroticism also was related negatively and significantly to their positive parenting and core self-evaluations, such that higher levels of neuroticism were related to lower levels of positive parenting and core self-evaluations. Further, mothers' conscientiousness was related positively and significantly to their positive parenting and core self-evaluations, such that higher levels of conscientiousness were related to higher levels of positive parenting and core self-evaluations. Conscientiousness also was related negatively and significantly to their inconsistent parenting and locus of control, such that higher levels of conscientiousness were related to lower levels of inconsistent parenting and locus of control. In addition, mothers' extraversion was related positively and significantly to their positive parenting and core self-evaluations and negatively and significantly to their locus of control. Thus, higher levels of mothers' extraversion were related to higher levels of mothers' positive parenting and core self-evaluations and to lower levels of mothers' locus of control. Finally, mothers' agreeableness was related positively and significantly to their core self-evaluations, such that higher levels of agreeableness were related to higher levels of core self-evaluations.

With regard to mothers' temperament and young children's functioning, mothers' activity level-general was related positively and significantly to young children's activity level-general, such that higher levels of mothers' activity level-general were related to higher

levels of young children's activity level-general. Mothers' activity level-sleep was related positively and significantly to young children's externalizing behavior problems, such that higher levels of mothers' activity level-sleep were related to higher levels of young children's externalizing behavior problems. Further, mothers' flexibility/rigidity was related positively and significantly to young children's flexibility/rigidity, such that higher levels of mothers' flexibility/rigidity were related to higher levels of young children's flexibility/rigidity. Additionally, mothers' mood was related positively and significantly to young children's mood and flexibility/rigidity and negatively and significantly to their internalizing behavior problems. In other words, higher levels of mothers' mood were related to higher levels of young children's mood and flexibility/rigidity and to lower levels of young children's internalizing problems. Mothers' rhythmicity-sleep was related negatively and significantly to young children's activity level-general as well as to their internalizing and externalizing behavior problems. Thus, higher levels of mothers' rhythmicity-sleep were related to lower levels of young children's activity level-general, internalizing behavior problems, and externalizing behavior problems.

Further, mothers' rhythmicity-eating was related negatively and significantly to young children's activity level-general as well as to their internalizing and externalizing behavior problems, such that higher levels of mothers' rhythmicity-eating were related to lower levels of young children's activity level-general, internalizing behavior problems, and externalizing behavior problems. Mothers' rhythmicity-daily habits was related negatively and significantly to young children's externalizing behavior problems, such that higher levels of mothers' rhythmicity-daily habits were related to lower levels of young children's externalizing behavior problems. Finally, mothers' distractibility was related negatively and

significantly to young children's activity level-general, such that higher levels of mothers' distractibility were related to lower levels of young children's activity level-general.

In terms of mothers' personality and young children's functioning, mothers' neuroticism was related positively and significantly to young children's activity level-general as well as to their internalizing and externalizing behavior problems. In other words, higher levels of mothers' neuroticism were related to higher levels of young children's activity level-general, internalizing behavior problems, and externalizing behavior problems. Mothers' neuroticism also was related negatively and significantly to young children's flexibility/rigidity, such that higher levels of mothers' neuroticism were related to lower levels of young children's flexibility/rigidity. Additionally, mothers' extraversion was related positively and significantly to young children's flexibility/rigidity and negatively and significantly to their externalizing behavior problems. Thus, higher levels of mothers' extraversion were related to higher levels of young children's flexibility/rigidity and to lower levels of young children's externalizing behavior problems. Further, mothers' agreeableness was related positively and significantly to young children's flexibility/rigidity and mood, such that higher levels of mothers' agreeableness were related to higher levels of young children's flexibility/rigidity and mood. In addition, mothers' conscientiousness was related positively and significantly to young children's flexibility/rigidity and mood and negatively and significantly to their internalizing and externalizing behavior problems. Therefore, higher levels of mothers' conscientiousness were related to higher levels of young children's flexibility/rigidity and mood and to lower levels of young children's internalizing behavior problems.

In terms of young children's outcomes, mothers' positive parenting was related positively and significantly to young children's mood and flexibility/rigidity and negatively and significantly to their internalizing and externalizing behavior problems. In other words, higher levels of mothers' positive parenting were related to higher levels of young children's mood and flexibility/rigidity and to lower levels of young children's internalizing and externalizing behavior problems. Mothers' inconsistent parenting was related negatively and significantly to young children's mood and flexibility/rigidity and positively and significantly to their internalizing and externalizing behavior problems. Thus, higher levels of mothers' inconsistent parenting were related to lower levels of young children's mood and flexibility/rigidity and to higher levels of young children's internalizing and externalizing behavior problems. Additionally, mothers' punitive parenting was related negatively and significantly to young children's mood and positively and significantly to their internalizing and externalizing behavior problems. Thus, higher levels of mothers' punitive parenting were related to lower levels of young children's mood and to higher levels of young children's internalizing and externalizing behavior problems.

Further, mothers' core self-evaluations was related positively and significantly to young children's mood and flexibility/rigidity and negatively and significantly to their activity level-general and internalizing and externalizing behavior problems. In other words, higher levels of mothers' core self-evaluations were related to higher levels of young children's mood and flexibility/rigidity and to lower levels of young children's activity level-general, internalizing behavior problems, and externalizing behavior problems. Mothers' locus of control was related positively and significantly to young children's activity level-general and internalizing and externalizing behavior problems, such that higher levels of

mothers' locus of control were related to higher levels of young children's activity level-general, internalizing behavior problems, and externalizing behavior problems. Finally, mothers' parental locus of control was related negatively and significantly to young children's flexibility/rigidity, such that higher levels of mothers' locus of control were related to lower levels of young children's flexibility/rigidity.

In general, these results supported the hypotheses for this study. Specifically, mothers' temperament and personality variables were related significantly but did not demonstrate multicollinearity, suggesting two separate constructs. Further, in support of our hypotheses, mothers' easy temperament was associated positively and significantly with their positive parenting behaviors, their internal locus of control, their high levels of core self-evaluations, and their young children's positive outcomes (i.e., easy temperament and low levels of internalizing and externalizing behavior problems). Additionally, in partial support of our hypotheses, mothers' personality was related significantly to their parenting behaviors, their locus of control, their core self-evaluations, and their young children's outcomes (i.e., temperament and internalizing and externalizing behavior problems). Overall, these findings supported the suggestion that both mothers' temperament and personality are important predictors of their parenting behaviors and their young children's outcomes.

Factor Analyses

To further examine the relationship between mothers' temperament and personality, an exploratory factor analysis utilizing an oblique rotation (direct oblimin) was conducted. These analyses included the nine mother temperament variables (e.g., mood quality, activity level-general, flexibility/rigidity) and the five personality variables (e.g., extraversion, agreeableness, conscientiousness) measured in this study. The Kaiser-Meyer-Olkin measure

verified the sampling adequacy for the analysis, KMO = .74 (considered 'good' according to Field, 2009; Kaiser, 1974). Additionally, Bartlett's test of sphericity, X^2 (105) = 897.28, p < .001, was statistically significant and supported the factorability of the correlation matrix. Thus, correlations between items were sufficiently large for a maximum likelihood exploratory factor analysis (Bartlett, 1954; Field, 2009). Chi-square analyses indicated that the model was not a good fit, χ^2 (63) = 150.36, p < .001. According Tobachnik and Fidell (2012), however, researchers should retain enough factors for an adequate fit, but not so many, that parsimony or theory is lost when conducting an EFA.

An initial analysis was run to obtain eigenvalues for each component of the data. Four components had eigenvalues over Kaiser's criterion of 1 and in combination explained 58.38% of the variance. Nonetheless, the scree plot was ambiguous and showed inflexions that would justify retaining both components 3 and 4. Given the convergence of the scree plot and Kaiser's criterion and variance on three components, three components were retained in the final analyses. The three factor solution, which explained 50.49% of the variance, was chosen because of its theoretical support, the leveling off of eigenvalues on the scree plot after three factors, and the insufficient number of primary loadings and difficulty interpreting the fourth factor (which accounted for only 7.89% of the variance) and subsequent factors. Table 2 shows the factor correlations with other study variables, and Table 3 shows the factor loadings after rotation.

Specifically, Factor 1, accounting for 24.07% of the variance, included eight subscores (i.e., Neuroticism, Extraversion, Openness to Experience, Agreeableness, Activity Level-General, Flexibility/Rigidity, Mood Quality, and Approach/Withdrawal). The subscores that clustered on this component suggested that Factor 1 represented an

individual's *General Life Approach*. Factor 2, accounting for 16.30% of the variance, included four subscores (i.e., Activity Level-Sleep, Rhythmicity-Sleep, Rhythmicity-Eating, and Rhythmicity-Daily Habits). These items suggested that Factor 2 represented an individual's *Rhythmicity* in activities. Finally, Factor 3, accounting for 10.11% of the variance, included three subscores (i.e., Conscientiousness, Distractibility, and Persistence). These items suggested that Factor 3 characterized an individual's *Sticktoitiveness*.

Given the aforementioned findings, the three-factor model was selected. Taken together, these findings suggested that although temperament and personality are related, they appear to be separate constructs. Although many of the factors of temperament and personality loaded together in these analyses (i.e., factors 1 and 3), a distinct temperament factor emerged (i.e., factor 2). These results suggested that, although these constructs are similar and related, temperament retains an additional factor that is not present amongst the personality constructs.

Given the curvilinear relationships noted above, analyses were conducted to determine the relationship between these three factors and parenting variables. Specifically, Factor 1 (i.e., general life approach) demonstrated a negative curvilinear relationship with positive parenting ($p < .001$), such that mothers with low and high levels of general life approach showed higher levels of positive parenting. Further, Factor 1 showed a nonlinear relationship between mothers' locus of control ($p < .002$) and core self-evaluations ($p < .001$), such that mothers with low and high levels of general life approach demonstrated lower levels of locus of control and core self-evaluations.

Further, results revealed a negative curvilinear relationship between Factor 2 (i.e., rhythmicity) and positive parenting ($p < .02$), such that mothers with low and high

rhythmicity showed high levels of positive parenting. Factor 2 also was related nonlinearly to inconsistent parenting ($p < .006$), locus of control ($p < .001$), and core self-evaluations ($p < .001$), such that mothers with low and high levels of rhythmicity demonstrated lower levels of inconsistent parenting, locus of control, and core self-evaluations. Finally, Factor 3 (i.e., sticktoitiveness) revealed a nonlinear relationship with positive parenting ($p < .007$), such that mothers with low and high levels of sticktoitiveness showed lower levels of positive parenting. Factor 3 also demonstrated negative nonlinear relationships with inconsistent parenting ($p < .03$), locus of control ($p < .001$), and core self-evaluations ($p < .001$), such that mothers with low and high levels of sticktoitiveness showed high levels of inconsistent parenting, locus of control, and core self-evaluations.

Mediation Analyses Predicting Parenting Behaviors

To examine the next aim of this study, mediation analyses were conducted to examine further the relationship between mothers' temperament, personality, and parenting behaviors. In these analyses, the factors derived in the exploratory factor analysis were used: General Life Approach (i.e., neuroticism, extraversion, openness to experience, agreeableness, activity level-general, flexibility/rigidity, mood quality, and approach/withdrawal), Rhythmicity (i.e., activity level-sleep, rhythmicity-sleep, rhythmicity-eating, and rhythmicity-daily habits), and Sticktoitiveness (i.e., conscientiousness, distractibility, and persistence). The factors derived in this study were used (in place of the temperament and personality factors) to produce cleaner analyses, to account for more variance in the analyses, and to examine the specific role of the rhythmicity factor in predicting parenting behaviors. Specifically, Rhythmicity was used as the temperament variable, and General Life Approach and Sticktoitiveness were used as personality variables. It should be noted that the curvilinear

relationships between the factors and parenting variables could not be accounted for in these analyses.

According to Baron and Kenny (1986), establishing a mediation model requires several findings. In a series of regression equations, mothers' temperament (i.e., rhythmicity) must predict their personality (i.e., general life approach and sticktoitiveness; path a) as well as parenting behaviors (i.e., positive, inconsistent, and punitive parenting; path b). In an additional regression equation, mothers' personality must predict parenting behaviors (path c). With the inclusion of mothers' personality in a final regression equation, the relationship between mothers' temperament and parenting behaviors should decrease to non-significance, indicating the mediational role of mothers' personality.

Mothers' Temperament, Personality, and Positive Parenting Behaviors

When examining the mediational role that mothers' general life approach plays in the relationship between mothers' temperament and positive parenting behaviors, the first regression equation revealed that mothers' ratings of their rhythmicity did not predict significantly their ratings of general life approach, F (1, 211) = .77, $p < .40$. As this regression equation was not significant, mediation was not possible. As a result, meditational analyses were not analyzed further for these variables.

When examining the mediational role that mothers' sticktoitness plays in the relationship between mothers' temperament and positive parenting behaviors, the first regression equation revealed that mothers' ratings of their rhythmicity predicted significantly their ratings of sticktoitiveness, F (1, 210) = 45.45, $p < .001$. In the second regression equation, mothers' ratings of rhythmicity predicted significantly their ratings of positive parenting behaviors, F (1, 209) = 4.34, $p < .04$. Then, collectively, mothers' ratings of

rhythmicity and sticktoitiveness predicted significantly their ratings of positive parenting behaviors, F (2, 208) = 5.55, $p < .005$. In particular, when entered first, mothers' ratings of rhythmicity predicted significantly their ratings of positive parenting behaviors ($p < .04$). When mothers' ratings of sticktoitiveness were added to this equation, however, rhythmicity decreased in significance ($p < .42$), and only mothers' ratings of sticktoitiveness was a significant predictor of positive parenting behaviors. Thus, mothers' ratings of sticktoitiveness mediated the relationship between their ratings of rhythmicity and positive parenting behaviors. The mediational value of sticktoitiveness was confirmed with a significant Sobel Test (z = -2.91, $p < .004$). These results are presented in Table 4.

Mothers' Temperament, Personality, and Inconsistent Parenting Behaviors

When examining the mediational role that mothers' general life approach plays in the relationship between mothers' temperament and inconsistent parenting behaviors, the first regression equation revealed that mothers' ratings of their rhythmicity did not predict significantly their ratings of general life approach, F (1, 211) = .77, $p < .40$. As this regression equation was not significant, mediation was not possible. As a result, meditational analyses were not analyzed further for these variables.

When examining the mediational role that mothers' personality plays in the relationship between mothers' temperament and inconsistent parenting behaviors, the first regression equation revealed that mothers' ratings of their rhythmicity predicted significantly their ratings of sticktoitiveness, F (1, 211) = 45.45, $p < .001$. In the second regression equation, mothers' ratings of rhythmicity predicted significantly their ratings of inconsistent parenting behaviors, F (1, 210) = 9.27, $p < .003$. Then, collectively, mothers' ratings of rhythmicity and sticktoitiveness predicted significantly their ratings of inconsistent parenting

behaviors, F (2, 210) = 6.05, p < .004. In particular, when entered first, mothers' ratings of rhythmicity predicted significantly their ratings of inconsistent parenting behaviors (p < .003). When mothers' ratings of sticktoitiveness were added to this equation, however, rhythmicity decreased in significance (p < .05) but continued to be the only significant predictor of inconsistent parenting behaviors. Thus, mediation was not occurring. These results are presented in Table 5.

Mothers' Temperament, Personality, and Punitive Parenting Behaviors

When examining the mediational role that mothers' general life approach plays in the relationship between mothers' temperament and punitive parenting behaviors, the first regression equation revealed that mothers' ratings of their rhythmicity did not predict significantly their ratings of general life approach, F (1, 211) = .77, p < .40. As this regression equation was not significant, mediation was not possible. As a result, meditational analyses were not analyzed further for these variables.

When examining the mediational role that mothers' sticktoitness plays in the relationship between mothers' temperament and punitive parenting behaviors, the first regression equation revealed that mothers' ratings of their rhythmicity predicted significantly their ratings of sticktoitiveness, F (1, 211) = 45.45, p < .001. In the second regression equation, mothers' ratings of rhythmicity did not predict significantly their ratings of punitive parenting behaviors, F (1, 210) = 1.34, p < .30. As this regression equation was not significant, mediation was not possible. As a result, meditational analyses were not analyzed further for these variables. These results are presented in Table 6.

Regression Analyses Predicting Young Children's Outcomes

Mothers' Temperament and Personality, Parenting Behaviors, and Young Children's Temperament

To examine the predictive relationships among mothers' temperament and personality, parenting behaviors (including parenting locus of control and core self-evaluations), and young children's temperament, a series of regression analyses was conducted. In these regression analyses, mothers' temperament, personality, and parenting behaviors served as predictor variables, and young children's temperament (i.e., mood, flexibility/rigidity, and activity level-general) served as the criterion variables. In particular, mothers' temperament variables were entered in Block 1, mothers' personality variables were entered in Block 2, the quadratic terms of mothers' personality variables were entered in Block 3 (to determine the incremental variance of the quadratic relationship), and parenting behaviors, locus of control, and core self-evaluations were entered in Block 4 so that incremental variance could be examined. For these analyses, the individual temperament and personality variables were utilized (rather than the factors) in an effort to account for the curvilinear relationships between the variables as well as to examine the incremental variance of temperament and personality traits in young children's outcomes. See Tables 7, 8, and 9, respectively.

For young children's mood, mothers' temperament predicted significantly young children's mood, F (8, 202) = 3.62, $p < .002$, $R^2 = .13$, in Block 1. In particular, mothers' endorsements of their own mood ($p < .001$) served as a significant individual predictor. When mothers' personality was entered into Block 2, the regression equation remained significant, F (13, 197) = 3.29, $p < .001$, $R^2 = .18$. Specifically, mothers' endorsements of mood quality ($p < .001$), neuroticism ($p < .05$), and conscientiousness ($p < .008$) served as

significant individual predictors. When the quadratic terms for mothers' personality were entered in Block 3, the regression equation remained significant F (17, 193) = 2.81, $p < .001$, $R^2 = .20$. Specifically, mothers' endorsements of mood quality ($p < .001$) served as a significant individual predictor. When parenting behaviors were entered in Block 4, the regression equation remained significant, F (22, 188) = 3.21, $p < .001$, $R^2 = .27$. In this case, mothers' endorsements of mood quality ($p < .001$) and inconsistent parenting ($p < .001$) served as significant individual predictors. Thus, mothers' mood quality and inconsistent parenting provided unique incremental variance in predicting young children's mood quality.

For young children's flexibility/rigidity, mothers' temperament predicted significantly young children's flexibility/rigidity, F (8, 202) = 3.32, $p < .002$, $R^2 = .12$, in Block 1. In particular, mothers' endorsements of their own mood ($p < .03$) and flexibility/rigidity ($p < .002$) served as significant individual predictors. When mothers' personality was entered into Block 2, the regression equation remained significant, F (13, 197) = 2.92, $p < .002$, $R^2 = .16$. Specifically, mothers' endorsements of flexibility/rigidity ($p < .002$) served as a significant individual predictor. When the quadratic terms for mothers' personality were entered in Block 3, the regression equation remained significant F (17, 193) = 2.72, $p < .001$, $R^2 = .19$. Specifically, mothers' endorsements of flexibility/rigidity ($p < .002$) and distractibility ($p < .04$) served as significant individual predictors. When parenting behaviors were entered in Block 4, the regression equation remained significant, F (22, 188) = 3.15, $p < .001$, $R^2 = .27$. In this case, mothers' endorsements of flexibility/rigidity ($p < .02$) and positive parenting ($p < .009$) served as significant individual predictors. Thus, mothers' flexibility/rigidity and positive parenting provided unique incremental variance in predicting young children's flexibility/rigidity.

For young children's activity level-general, mothers' temperament predicted significantly their young children's activity level-general, F (8, 202) = 2.88, $p < .006$, R^2 = .10, in Block 1. In particular, mothers' endorsements of their own activity level-general ($p <$ .02) served as a significant individual predictor. When mothers' personality was entered into Block 2, the regression equation remained significant, F (13, 197) = 4.66, $p < .001$, $R^2 = .24$. Specifically, mothers' endorsements of neuroticism ($p < .001$), openness to experience ($p <$ .05), and agreeableness ($p < .03$) served as significant individual predictors. When the quadratic terms for mothers' personality were entered in Block 3, the regression equation remained significant F (17, 193) = 3.73, $p < .001$, $R^2 = .25$. Specifically, mothers' endorsements of openness to experience ($p < .03$) served as a significant individual predictor. When parenting behaviors were entered in Block 4, the regression equation remained significant, F (22, 188) = 3.08, $p < .001$, $R^2 = .27$. In this case, mothers' endorsements of openness to experience ($p < .02$) served as a significant individual predictor. Thus, openness to experience provided unique incremental variance in predicting young children's activity level-general.

Mothers' Temperament and Personality, Parenting Behaviors, and Young Children's Emotional and Behavioral Functioning

To examine the predictive relationships among mothers' temperament and personality, parenting behaviors (including parenting locus of control and core self-evaluations), young children's temperament, and young children's emotional and behavioral functioning, a series of regression analyses was conducted. In these regression analyses, mothers' temperament, personality, parenting behaviors, and young children's temperament (i.e., mood, flexibility/rigidity, and activity level-general) served as predictor variables, and young children's internalizing and externalizing behavior problems served as the criterion

variables. In particular, mothers' temperament variables were entered in Block 1, mothers' personality was entered in Block 2, the quadratic terms of mothers' personality variables were entered in Block 3 (to determine the incremental variance of the quadratic relationship), parenting behaviors, locus of control, and mothers' core self-evaluations were entered in Block 4, and young children's mood, flexibility rigidity, and activity level-general were entered in Block 5 so that incremental variance could be examined. Ratings of young children's internalizing and externalizing behavior problems served as criterion variables. See Tables 10 and 11, respectively.

For internalizing problems, mothers' temperament predicted significantly their young children's internalizing behavior problems, F (8, 190) = 2.04, $p < .05$, $R^2 = .08$, in Block 1. In particular, mothers' endorsements of their own mood ($p < .02$) served as a significant individual predictor. When mothers' personality was entered into Block 2, the regression equation remained significant, F (13, 185) = 2.13, $p < .02$, $R^2 = .13$. Specifically, mothers' endorsements of neuroticism ($p < .03$) served as a significant individual predictor. When the quadratic terms for mothers' personality were entered in Block 3, the regression equation remained significant F (17, 181) = 2.47, $p < .003$, $R^2 = .19$. Specifically, mothers' endorsements of conscientiousness ($p < .004$) and the quadratic term for conscientiousness ($p < .003$) served as significant individual predictors. When parenting behaviors were entered in Block 4, the regression equation remained significant, F (22, 176) = 2.71, $p < .001$, $R^2 = .25$. In this case, mothers' endorsements of openness to experience ($p < .04$), conscientiousness ($p < .02$), the quadratic term of conscientiousness ($p < .02$), and positive parenting ($p < .03$) served as significant individual predictors. When young children's temperament was entered in Block 5, the regression equation remained significant, F (25, 173) = 5.04, $p < .001$, $R^2 =$

.42. In this case, mothers' endorsements of flexibility/rigidity ($p < .05$), conscientiousness ($p < .03$), the quadratic term of conscientiousness ($p < .02$), agreeableness ($p < .02$), the quadratic term of agreeableness ($p < .02$), punitive parenting ($p < .03$), and young children's flexibility/rigidity ($p < .001$) served as significant individual predictors. Thus, mothers' flexibility/rigidity, conscientiousness, agreeableness, and punitive parenting as well as young children's flexibility/rigidity provided unique incremental variance in predicting young children's internalizing behavior problems.

For externalizing problems, mothers' temperament predicted significantly their young children's externalizing behavior problems, F (8, 190) = 2.42, $p < .02$, $R^2 = .09$, in Block 1. In particular, mothers' endorsements of their own activity level-sleep ($p < .08$) and rhythmicity-daily habits ($p < .08$) served as marginal individual predictors. When mothers' personality was entered into Block 2, the regression equation remained significant, F (13, 185) = 2.85, $p < .002$, $R^2 = .17$. Specifically, mothers' endorsements of neuroticism ($p < .01$) served as a significant individual predictor. When the quadratic terms for mothers' personality were entered in Block 3, the regression equation remained significant F (17, 181) = 2.74, $p < .001$, $R^2 = .20$. Specifically, mothers' endorsements of rhythmicity-daily habits ($p < .05$), conscientiousness ($p < .02$), and the quadratic term for conscientiousness ($p < .01$) served as significant individual predictors. When parenting behaviors were entered in Block 4, the regression equation remained significant, F (22, 176) = 3.69, $p < .001$, $R^2 = .32$. In this case, mothers' endorsements of activity level-sleep ($p < .03$), rhythmicity-daily habits ($p < .04$), openness to experience ($p < .03$), conscientiousness ($p < .04$), the quadratic term for conscientiousness ($p < .04$), locus of control ($p < .005$), and punitive parenting ($p < .02$) served as significant individual predictors. When young children's temperament was entered

in Block 5, the regression equation remained significant, F (25, 173) = 6.80, $p < .001$, R^2 = .50. In this case, mothers' endorsements of their own activity level-sleep ($p < .02$), rhythmicity-daily habits ($p < .03$), parenting locus of control ($p < .04$), punitive parenting ($p < .005$), young children's activity level-general ($p < .001$), and young children's flexibility/ rigidity ($p < .006$) served as significant individual predictors. Thus, mothers' activity level-general, activity level-sleep, rhythmicity-daily habits, locus of control, and punitive parenting as well as young children's activity level-general and flexibility/rigidity provided unique incremental variance in predicting young children's externalizing behavior problems.

CHAPTER FOUR: DISCUSSION

The primary objective of this study involved examining the relationships among mothers' temperament and personality, parenting behaviors (including locus of control and core self-evaluations), and young children's temperament and emotional and behavioral functioning. Given previous findings that parents' temperament and personality may be important predictors of children's outcomes (Belsky & Barends, 2002; Thomas & Chess, 1977) and that parenting behaviors and parental locus of control may be related significantly to children's emotional and behavioral functioning (Baumrind, 1991; Bugental & Shennum, 1984; Kochanska, 1993; Loeb, 1975), this study sought to address the need for research that investigates the collective connections among these variables. Overall, the results of this study suggested that there are important relationships among mothers' temperament and personality, parenting behaviors, locus of control, core self-evaluations, and young children's outcomes (i.e., temperament and emotional and behavioral problems).

With regard to parenting variables, mothers' easy temperament (i.e., a low activity level, a more flexible behavioral style, and a more positive quality of mood) was related significantly to positive parenting behaviors, locus of control, and high levels of core self-evaluations. These findings were consistent with the hypotheses for this study as well as previous research suggesting that parents' temperament characteristics affect greatly the decisions that they make when parenting their children (Thomas & Chess, 1977). This study's findings were in line with those of Latzman and colleagues (2009), who suggested that parents with easier temperaments engage in more positive parenting behaviors. In contrast with the hypotheses for this study, mothers' activity level-sleep was not related significantly with parenting behaviors, locus of control, or core self-evaluations. This finding

was contrary to other findings in the literature (Manian et al., 2006; Thomas & Chess, 1977) and suggested that certain dimensions of temperament were particularly important for predicting parenting behaviors.

With regard to other parent characteristics, mothers' easy temperament (i.e., a low activity level, a more flexible behavioral style, and a more positive quality of mood) was related significantly to young children's easy temperament (i.e., a low activity level, a more flexible behavioral style, and a more positive quality of mood). In addition, mothers' difficult temperament (i.e., a high activity level and a less positive quality of mood) was related significantly to higher levels of young children's internalizing and externalizing behavior problems. This finding was consistent with the hypotheses for this study as well as the outcomes in previous literature (e.g., Calkins et al., 2004). Specifically, research proposed that parents' temperament traits and other characteristics have a significant relationship with children's functioning at all ages (Rettew et al., 2006; Thomas & Chess, 1977).

Additionally, it was hypothesized that mothers' moderate levels of extraversion, agreeableness, and conscientiousness, low levels of neuroticism, and high levels of openness to experience would be related positively and significantly to mothers' positive parenting behaviors. This hypothesis was supported partially. In particular, mothers' agreeableness was related negatively and significantly to punitive parenting. This finding was consistent with previous literature suggesting that high levels of agreeableness were associated with lower levels of negative, over-controlling, or intrusive parenting behaviors (Belsky et al., 1995; Smith, 2010). Further, neuroticism, conscientiousness, and extraversion demonstrated negative curvilinear relationships with positive parenting. Additionally, neuroticism and conscientiousness demonstrated positive curvilinear relationships with inconsistent parenting.

These findings were in line with those of previous research, which suggested that parents who were lower on neuroticism exerted less overreactive discipline and remained calm when their children exhibited behavior problems (de Haan et al., 2012) and that parents who were high on conscientiousness reported greater involvement and communication with their children (Oliver et al., 2009). These findings also were consistent with research suggesting that parents who were higher on extraversion were more responsive, perceptive, and emotionally engaged (Belsky & Barends, 2002; Mangelsdorf et al., 1990; Metsäpelto & Pulkkinen, 2003) and rated themselves as more competent and involved in their parenting role (Bornstein et al., 2011; Oliver et al., 2009). High levels of neuroticism and low levels of conscientiousness have not been related to positive parenting behaviors in previous literature, however (Belsky & Barends, 2002; Kochanska et al., 2004). It may be that mothers who were high on neuroticism and low on conscientiousness displayed skewed self-perceptions of their functioning and over or underreported their own parenting behaviors.

With regard to other parenting variables, mothers' neuroticism, extraversion, and conscientiousness all demonstrated curvilinear relationships with their locus of control. This finding was consistent with the hypotheses and suggested that moderate levels of these personality variables were associated with higher levels of mothers' internal locus of control. Previous research also noted this association and suggested that individuals with a more internal locus of control were more likely to be conscientious, stable, and sociable (Bledsoe & Baber, 1978). Further, agreeableness and conscientiousness displayed negative curvilinear associations with core self-evaluations, whereas neuroticism and extraversion displayed positive curvilinear relationships with core self-evaluations. Unlike previous studies, this study examined core self-evaluations in the context of parenting and suggested that moderate

levels of neuroticism and extraversion and lower and higher levels of agreeableness and conscientiousness were related to higher levels of core self-evaluations.

Also in line with the hypotheses, mothers' personality (i.e., extraversion, neuroticism, agreeableness, conscientiousness, and openness to experience) was related generally to young children's outcomes. In particular, mothers' overall personality was correlated significantly with young children's temperament variables (i.e., activity level-general, flexibility/rigidity, and mood) as well as young children's internalizing and externalizing behavior problems. This finding also was consistent with previous research (Bornstein et al., 2011). For example, research suggested that higher levels of neuroticism were related to higher levels of externalizing behavior problems in their children (van Aken et al., 2007b).

Finally, as hypothesized, the parenting variables used in this study (i.e., positive parenting, inconsistent parenting, punitive parenting, locus of control, and core self-evaluations) were related significantly with young children's temperament variables (i.e., activity level-general, flexibility/rigidity, mood) as well as with young children's internalizing and externalizing behavior problems. This finding also was consistent with previous research suggesting that early relationships (e.g., parenting behaviors, parents' locus of control) prove imperative for young children (Campis et al., 1986; Kochanska et al., 2004; Meunier & Roskam, 2009). Particularly, mothers' positive parenting behaviors were related to more favorable outcomes for their young children and were related significantly with young children's easy temperament.

In an effort to examine whether mothers' temperament and personality variables would be related but separate constructs, an exploratory factor analysis was conducted. The results of this factor analysis supported a three-factor model similar to that proposed in the

hypotheses for this study. This factor analysis suggested that mothers' temperament and personality were related significantly but were generally separate constructs. Specifically, the eight subscale scores that loaded onto Factor 1 included neuroticism, extraversion, openness to experience, agreeableness, activity level-general, flexibility/rigidity, mood quality, and approach/withdrawal. These loadings suggested that this factor described an individual's general life approach. The second factor included activity level-sleep, rhythmicity-sleep, rhythmicity-eating, and rhythmicity-daily habits. The loadings that cluster onto this factor suggested that Factor 2 represented an individual's general rhythmicity. Finally, Factor 3 consisted of conscientiousness, distractibility, and persistence. These items suggested that Factor 3 represented an individual's sticktoitiveness.

Despite the high cross-loadings among the factors, these results supported previous research and suggested that temperament and personality were correlated but unique constructs (Angeleitner & Ostendorf, 1994; Rothbart, 2007; Thomas & Chess, 1989). This conclusion was further supported by the correlations among these variables, as correlations between mothers' temperament and personality did not exceed .70. Although these results did not replicate previous findings in factor analyses, these results provided support for the use of mothers' temperament in future research. Specifically, the rhythmicity factor of temperament did not appear to be captured in the Big Five model of personality, suggesting that mothers' temperament (particularly rhythmicity) and personality variables merit more attention when studying parenting behaviors and young children's outcomes.

Further, mediation analyses were conducted to examine the relationship between the aforementioned factors and parenting behaviors. Specifically, results indicated that mothers' sticktoitiveness fully mediated the relationship between mothers' rhythmicity and positive

parenting behaviors. These results indicated that mothers' positive parenting behaviors rely, in part, on their sticktoitiveness. Further, the mediational role that general life approach played in the relationship between mothers' sticktoitiveness and positive parenting behaviors was examined. Results suggested that general life approach did not mediate the relationship between mothers' rhythmicity and positive parenting behaviors. In other words, rhythmicity is more predictive of positive parenting behaviors, even when controlling for mothers' general life approach. Thus, as mothers successfully manage their own characteristics (e.g., rhythmicity, consistency), they are better able to parent their young children.

Additional mediation analyses were conducted to examine the relationship between temperament and personality variables and inconsistent and punitive parenting behaviors. Results suggested that mothers' sticktoitiveness did not mediate the relationship between mothers' rhythmicity and inconsistent parenting behaviors or the relationship between mothers' rhythmicity and punitive parenting behaviors. Further, mothers' general life approach did not mediate the relationship between rhythmicity and inconsistent parenting behaviors or between mothers' rhythmicity and punitive parenting behaviors. These results suggested that mothers' rhythmicity is important in predicting parenting behaviors in general. This finding was supported by previous research, which highlighted the importance of parents' traits in their parenting behaviors. For example, Bornstein and colleagues (2011) suggested that parents' characteristics are antecedents to cognitions and practices in parenting. Thus, as mothers' struggle with managing their own characteristics, they determine greatly the consistency and way in which they parent their children.

These findings follow a general pattern of the research, which suggested that parents' temperament characteristics and personality may affect parents' attitudes and parenting

behaviors (Belsky & Barends, 2002; Thomas & Chess, 1977). Nonetheless, given that the Big Five of personality traits lacks a rhythmicity facet, this study emphasized the importance of including temperament variables in models predicting parenting behaviors. The results garnered in this study suggested that examining both mothers' temperament and personality in the context of parenting are important.

Further, this study examined several models in which mothers' personality and temperament and parenting behaviors were thought to predict young children's outcomes (i.e., temperament and behavior problems). Consistent with this hypothesis and previous research (Belsky 1997, 2005; Bradley & Corwyn, 2008; van Zeijl et al., 2007), the results of this study provided evidence for a significant relationship between mothers' characteristics and young children's temperament and internalizing and externalizing behavior problems. Thus, mothers' temperament, personality, and parenting behaviors (including locus of control and core self-evaluations) played a significant role in the functioning of their young children. Nonetheless, different facets of mothers' temperament and personality traits predicted different behavior problems in young children.

Interestingly, in a hierarchical regression equation examining mothers' temperament, personality, and parenting behaviors relationship to young children's mood quality, both mothers' mood and inconsistent parenting were significant predictors of young children's mood. Thus, mothers' inconsistent parenting contributed unique incremental variance to the relationship between mothers' mood and young children's mood. These findings suggested that mothers' own mood as well as higher levels of inconsistent parenting behaviors predicted young children's mood. These results suggested that, as mothers experience difficulty regulating their mood, they engage in more inconsistent parenting behaviors. This

combination ultimately was related to the mood of their young child. Therefore, young children may rely on their mothers' mood quality and the consistency of their mothers' parenting as they learn to regulate their own mood.

Further, in a hierarchical regression equation examining mothers' temperament, personality, and parenting behaviors relationship to young children's flexibility/rigidity, mothers' own flexibility/rigidity and positive parenting behaviors were significant predictors of young children's flexibility/rigidity. Thus, mothers' positive parenting behaviors contributed unique incremental variance to the relationship between mothers' and young children's flexibility/rigidity. These results suggested that mothers' flexibility/rigidity as well as high levels of positive parenting behaviors were related to young children's flexibility/rigidity. These findings were consistent with those of previous research, with parents' temperament (Thomas & Chess, 1977) and parenting behaviors (Baumrind, 1991) affecting greatly the functioning of their young children. Specifically, these results highlighted the importance of positive parenting behavior so that young children can experience high flexibility and better overall functioning. This finding may be particularly important to consider in terms of parent and child goodness of fit, which can significantly contribute to children's outcomes (Thomas & Chess, 1977).

Finally, in a hierarchical regression equation examining mothers' temperament, personality, and parenting behaviors relationship to young children's activity level-general, mothers' openness to experience was a significant predictor of young children's activity level-general. These results suggested that mothers' openness to experience was related significantly to young children's activity level-general. These findings were consistent with those of previous research, with parents' personality traits (Metsäpelto & Pulkkinen, 2003)

affecting greatly the functioning of their young children. It may be that mothers who were higher on openness to experience were more tolerant of their young children's activity levels and thus allowed their young children to be active and explore.

The findings in this study were consistent with previous research suggesting that both mothers and their young children bring characteristics to the relationship that may affect young children's development (Lengua & Kovacs, 2005; Rettew et al., 2006; Thomas & Chess, 1977). These findings emphasized the importance of examining mothers' temperament when studying young children. What makes this study unique from previous studies on parents' temperament (Thomas et al., 1968; van den Boom & Hoeksma, 1994) was that the current study's inclusion of both mothers' temperament and personality variables. This inclusion allowed for the examination of mothers' characteristics in the context of young children's functioning and led to the finding that mothers' temperament and personality adds significant variance in the prediction of parenting behaviors and young children's temperament.

When examining the relationship between mothers' temperament and personality, parenting behaviors, young children's temperament, and young children's internalizing behavior problems, significant relationships were revealed. Specifically, when mothers' temperament and personality, parenting behaviors, and young children's temperament were included in a hierarchical regression equation, mothers' flexibility/rigidity, conscientiousness, agreeableness, and punitive parenting as well as young children's flexibility/rigidity were all significant predictors of young children's internalizing problems. Thus, these variables all contributed unique incremental variance to the relationship between mothers' temperament and young children's internalizing problems.

These findings were consistent with those of previous research, with parents' temperament (Thomas et al., 1968; Thomas & Chess, 1977), personality traits (Belsky & Barends, 2002), and young children's temperament (Rubin et al., 2003; Thomas et al., 1968) being related to young children's behavior problems. Specifically, these findings supported previous research, which suggested that children with more difficult temperament traits (e.g., negative emotionality, inhibition) experienced higher levels of internalizing behavior problems (Zentner & Bates, 2008). Additionally, the results from this study added to the research suggesting that moderate levels of certain personality variables were related to better outcomes for their young children (Bornstein et al., 2011). For example, moderate levels of conscientiousness and agreeableness appeared to be better predictors of young children's temperament in the hierarchical regressions.

Interestingly, when mothers' temperament and personality, parenting behaviors, and young children's temperament were entered in a hierarchical regression equation to predict young children's externalizing behavior problems, a number of predictors were found. In particular, mothers' activity level-sleep, rhythmicity-daily habits, parenting locus of control, and punitive parenting as well as young children's activity level-general and flexibility/rigidity all contributed unique incremental variance to the relationship between mothers' temperament and young children's externalizing problems. These findings suggested that both mothers' and young children's temperaments as well as parenting behaviors (including locus of control) played an important role in predicting young children's externalizing problems. This finding was consistent with the hypotheses for this study as well as findings from previous research (Belsky, 1984; Campis et al., 1986; Thomas et al., 1968).

In particular, previous research suggested that parents' temperament and personality and parenting behaviors generally played a significant role in children's functioning (Thomas et al., 1968; Zentner & Bates, 2008). The findings gleaned thus far were particularly important for young children, as research suggested that parents' temperament and personality may affect greatly the way in which they parent their young children (Belsky & Barends, 2002; Thomas & Chess, 1977). These parenting behaviors, in turn, may influence the outcomes of their young children (Belsky, 1984; Smith, 2010).

The evidence gathered in this study suggested that mothers' temperament traits alone may provide a powerful context for mothers' behaviors and young children's functioning (i.e., temperament and internalizing and externalizing behavior problems). For example, the results of this study highlighted the significance of mothers' rhythmicity when parenting, which, in turn, may affect their young children's functioning. As a result, future research should continue to work to better define the effects of mothers' temperament on parenting behaviors and young children's outcomes. Specific therapeutic interventions should be tailored to meet the unique characteristics of the mother and child. Although current interventions have been developed to assist individuals with daily functioning (e.g., behavioral activation), these interventions need to be incorporated into work with parents and families. For instance, research should examine the inclusion of increasing rhythmicity as well as developing conscientiousness or insight into the effects of parents' rhythmicity and consistency on parenting behaviors.

The findings of this study should be interpreted within the context of its limitations. First, the homogeneous sample in this study consisted primarily of Caucasian mothers who had a college degree or at least some college. Additionally, a majority of young children had

mothers who were married and fell within a relatively high-income bracket. Further, given that there was a low response rate from fathers, results can only be generalized to mothers. In addition, mothers' self-report ratings cannot be assumed to be completely accurate, given that socially desirable responses may have been provided. Accordingly, multi-informant ratings and observational research may provide more accurate evaluations of functioning, especially when examining mothers' temperament and personality factors. In addition, data for this study were collected online without observation from the researchers. These factors may decrease external validity, decreasing the generalizability of this study's results to the population of interest. Finally, it should be noted that the personality measure utilized in this study (i.e., NEO Five-Factor Inventory-3) placed a ceiling effect on potential participant responses. In particular, there is a limit on the scale's ability to tap into extreme levels of any given personality trait.

Despite these limitations, the results of this study added to the literature concerning the relationships among mothers' temperament and personality, parenting behaviors, and young children's outcomes (i.e., temperament and internalizing and externalizing behavior problems). Although researchers tend to use parents' personality to predict young children's outcomes, it may be worth recognizing that parents' temperament (particularly rhythmicity) also plays a significant role in parenting their young children. Certainly, the results garnered thus far suggested that mothers' temperament and personality, parenting behaviors, and young children's temperament and behavior problems are important to study collectively (Belsky & Barends, 2002; Huver et al., 2010). Future research should examine further the interrelations among the variables in this study to provide further insight to professionals working with families experiencing difficulties dealing with difficult temperamental styles.

As a result, closer attention should be paid to parents' temperament and personality traits, parenting behaviors, and young children's outcomes so that interventions can be developed for families experiencing difficulties.

APPENDIX A: TABLE

Table 1. **Correlations Among Mothers' Temperament and Personality**

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Mother Activity Level- General	-												
2. Mother Activity Level-Sleep	.23***	-											
3. Mother Approach/Withdrawal	.25***	.05	-										
4. Mother Flexibility/Rigidity	-.03	.03	.52***	-									
5. Mother Mood	.09	.01	.44***	.37***	-								
6. Mother Rhythmicity- Sleep	-.23**	-.37***	-.06	.09	.17*	-							
7. Mother Rhythmicity- Eating	-.17**	-.27***	.07	.01	.24***	.58***	-						
8. Mother Rhythmicity- Daily Wake	-.13*	-.21**	.01	.04	.21**	.58***	.52***	-					
9. Mother Distractibility	-.27***	-.07	.10	.19**	.14*	.12	.07	.12	-				
10. Mother Persistence	-.08	-.03	.19**	.06	.25***	.11	.22**	.23**	.55***	-			
11. Mother Neuroticism	.20**	.19**	-.17*	-.32***	-.37***	-.28***	-.26***	-.21**	-.21**	-.25***	-		
12. Mother Extraversion	.25***	.08	.56***	.38***	.55***	.04	.15*	.18**	.08	.20**	-.34***	-	
13. Mother Openness to Experience	.13	.06	.56***	.12	.18**	-.05	-.02	.01	.00	-.00	.07	.33***	-

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 2. **Correlations Among Mothers' Temperament and Personality, Parenting Behaviors, and Young Child Outcomes**

Variables	14	15	16	17	18	19	20	21	22	23	24	25
1. Mother Activity Level- General	.04	-.05	.03	.06	-.01	.05	-.17*	.25***	-.05	.01	.06	.02
2. Mother Activity Level-Sleep	.05	-.07	-.02	-.01	.01	.04	-.13	.12	-.04	.12	.11	.18*
3. Mother Approach/Withdrawal	.16*	.05	.12	.02	-.03	-.09	.23**	.09	.07	.09	.09	.02
4. Mother Flexibility/Rigidity	.11	.11	.13	-.02	.07	-.30***	.32***	-.06	.29***	.11	-.07	-.06
5. Mother Mood	..34***	.22**	.31***	-.13	-.09	-.23**	.48***	-.02	.23**	.28***	-.20**	-.10
6. Mother Rhythmicity- Sleep	.05	.23**	.09	-.17*	-.06	-.19**	.24***	-.19**	.08	.03	-.16*	-.20**
7. Mother Rhythmicity- Eating	.08	.26***	.14*	-.14*	-.09	-.16*	.35***	-.17*	.05	-.02	-.19**	-.21**
8. Mother Rhythmicity- Daily Habits	.09	.16*	.14*	-.17*	-.02	-.12	.26***	-.13	.06	-.02	-.13	-.24**
9. Mother Distractibility	.05	.34***	.12	-.08	-.13	-.19**	.23**	-.19**	-.02	-.03	.01	-.08
10. Mother Persistence	.18*	.42***	.20**	-.15*	-.07	-.20**	.32***	-.05	-.02	.07	.03	-.05
11. Mother Neuroticism	-.14*	-.35***	-.16*	.25***	.13	.36***	-.71***	.35***	-.27***	-.04	.29***	.30***
12. Mother Extraversion	.27***	.26***	-.16*	.25***	.13	.36***	-.71***	.35***	-.27***	-.04	-.14	-.17*
13. Mother Openness to Experience	.22**	.04	.07	-.02	-.10	-.13	.01	.16*	-.05	.09	.07	.05

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3. **Correlations Among Mothers' Personality, Parenting Behaviors, and Young Child Outcomes**

Variables	14	15	16	17	18	19	20	21	22	23	24	25
14. Mother Agreeableness	-											
15. Mother Conscientiousness	.25***	-										
16. Positive Mothering	.05	.29***	-									
17. Inconsistent Parenting	-.13	-.32***	-.15*	-								
18. Punitive Parenting	-.12	-.13	-.20**	.38***	-							
19. Mother Locus of Control	-.10	-.30***	-.26***	.35***	.27***	-						
20. Core Self-Evaluations	.14*	.52***	.26***	-.21**	-.17*	-.47***	-					
21. Child Activity Level	.10	-.13	-.08	.11	.04	.21**	-.24**	-				
22. Child Flexibility/Rigidity	.20**	.15*	.28***	-.16*	-.05	-.32***	.33***	-.21**	-			
23. Child Mood	.19**	.14*	.22**	-.27***	-.16*	-.12	.14*	.12	.35***	-		
24. Child Internalizing	-.06	-.18*	-.29***	.19**	.19**	.26***	-.31***	-.19**	-.53***	-.21**	-	
25. Child Externalizing	-.08	-.24**	-.24**	.27***	.29***	.37***	-.30***	.49***	-.39***	-.15*	.70***	-

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4. **Correlations Among Mothers' Temperament/Personality Factors, Parenting Behaviors, and Young Child Outcomes**

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Factor 1 (General Life Approach)	-												
2. Factor 2 (Rhythmicity)	-.06	-											
3. Factor 3 (Sticktoitiveness)	-.21**	.42**	-										
4. Positive Parenting	.23**	-.14*	-.22**	-									
5. Inconsistent Parenting	-.07	.21**	.19**	-.15*	-								
6. Punitive Parenting	-.08	.08	.14*	-.20**	.38**	-							
7. Parental Locus of Control	-.24**	.22**	.29**	-.26**	.35**	.27**	-						
8. Core Self-Evaluations	.48**	-.41**	-.46**	.26**	-.21**	-.17*	-.47**	-					
9. Child Mood	.19**	-.02	-.05	.22**	-.27**	-.16*	-.12	.14*	-				
10. Child Flexibility/Rigidity	.20**	-.11	-.07	.28	-.16*	-.05	-.32**	.33**	.35**	-			
11. Child Activity Level	.02	.25**	.23**	-.08	.11	.04	.21**	-.24**	.12	-.21**	-		
12. Child Internalizing	-.11	.23**	.07	-.29**	.19**	.19**	.26**	-.31**	-.21**	-.53**	.26**	-	
13. Child Externalizing	-.12	.28**	.15*	-.24**	.27**	.29**	.37**	-.30**	-.15*	-.39**	.49**	.70**	-

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 5.**Factor Analysis of Mothers' Temperament and Personality**

	Pattern (structure) coefficients		
	Factor 1	Factor 2	Factor 3
Neuroticism	**-.290**	.278	.217
Extraversion	**.826**	-.058	.009
Openness to Experience	**.369**	.056	.071
Agreeableness	**.328**	-.042	-.071
Conscientiousness	.167	-.142	**-.412**
Activity Level-General	**.353**	.195	.301
Activity Level-Sleep	.140	**.415**	.005
Flexibility/Rigidity	**.476**	-.001	-.117
Mood	**.645**	-.180	-.075
Approach/Withdrawal	**.691**	.069	-.032
Rhythmicity-Sleep	-.038	**-.862**	.052
Rhythmicity-Eating	.100	**-.724**	.045
Rhythmicity-Daily Habits	.120	**-.672**	.014
Distractibility	-.056	.148	**-.862**
Persistence	.123	.033	**-.675**

*Table reflects maximum likelihood exploratory factor analysis with direct oblimin rotation.

Table 6. **Mediational Regression Analyses for Positive Parenting**

Regression/Variables	**Beta**	***t***	***p***
Mediators: Sticktoitiveness and General Life Approach			
Rhythmicity and Sticktoitiveness: F (1, 210) = 45.45, $p < .001$, $r^2 = .18$			
Rhythmicity	.41	6.74	.000***
Sticktoitiveness and Positive Parenting: F (1, 209) = 10.44, $p < .002$, $r^2 = .05$			
Sticktoitiveness	-1.22	-3.23	.000***
Rhythmicity and Positive Parenting: F (1, 208) = 5.55, $p < .005$, $r^2 = .05$			
Rhythmicity	-.33	-.81	.004**
Rhythmicity, Sticktoitiveness, and Positive Parenting: F (2, 208) = 5.55, $p < .005$, $r^2 = .05$			
Rhythmicity	-1.07	-2.58	.02*
Sticktoitiveness	-.33	-.82	.41
Rhythmicity and General Life Approach: F (1, 210) = .77, $p < .40$, $r^2 = .00$			
Rhythmicity	-.60	-.88	.38
General Life Approach and Positive Parenting: F (1, 209) = 11.92, $p < .002$, $r^2 = .05$			
General Life Approach	.23	3.45	.001**
Rhythmicity and Positive Parenting: F (1, 209) = 4.34, $p < .04$, $r^2 = .02$			
Rhythmicity	-.14	-2.08	.04*
Rhythmicity, General Life Approach, and Positive Parenting: F (2, 208) = 7.80, $p < .002$, $r^2 = .07$			
Rhythmicity	-.13	-1.88	.06
General Life Approach	.22	3.32	.001**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7. **Mediational Regression Analyses for Inconsistent Parenting**

Regression/Variables	**Beta**	***t***	***p***
Mediators: Sticktoitiveness and General Life Approach			
Rhythmicity and Sticktoitiveness: F (1, 210) = 45.45, p < .001, r^2 = .18			
Rhythmicity	.41	6.74	.000***
Sticktoitiveness and Inconsistent Parenting: F (1, 209) = 7.72, p < .007, r^2 = .04			
Sticktoitiveness	.19	2.78	.006**
Rhythmicity and Inconsistent Parenting: F (1, 209) = 9.27, p < .004, r^2 = .04			
Rhythmicity	.21	3.04	.003**
Rhythmicity, Sticktoitiveness, and Inconsistent Parenting: F (2, 208) = 5.55, p < .005, r^2 = .05			
Rhythmicity	.15	2.06	.04*
Sticktoitiveness	.12	1.66	.10
Rhythmicity and General Life Approach: F (1, 210) = .77, p < .40, r^2 = .00			
Rhythmicity	-.60	-.88	.38
General Life Approach and Inconsistent Parenting: F (1, 209) = .77, p < .30, r^2 = .01			
General Life Approach	-.07	-1.07	.29
Rhythmicity and Inconsistent Parenting: F (1, 209) = 9.27, p < .004, r^2 = .04			
Rhythmicity	.21	3.04	.003**
Rhythmicity, General Life Approach, and Inconsistent Parenting: F (2, 208) = 5.00, p < .009, r^2 = .05			
Rhythmicity	.20	2.97	.003**
General Life Approach	-.06	-.86	.39

Note. * p < .05, ** p < .01, *** p < .001

Table 8. **Mediational Regression Analyses for Punitive Parenting**

Regression/Variables	**Beta**	***t***	***p***
Mediators: Sticktoitiveness and General Life Approach			
Rhythmicity and Sticktoitiveness: F (1, 210) = 45.45, p < .001, r^2 = .18			
Rhythmicity	.41	6.74	.000***
Sticktoitiveness and Punitive Parenting: F (1, 209) = 3.90, p < .06, r^2 = .02			
Sticktoitiveness	.14	1.97	.05
Rhythmicity and Punitive Parenting: F (1, 209) = 1.34, p < .30, r^2 = .01			
Rhythmicity	.08	1.16	.25
Rhythmicity, Sticktoitiveness, and Punitive Parenting: F (2, 208) = 2.00, p < .20, r^2 = .02			
Rhythmicity	.03	.36	.72
Sticktoitiveness	.12	1.63	.10
Rhythmicity and General Life Approach: F (1, 210) = .77, p < .40, r^2 = .00			
Rhythmicity	-.60	-.88	.38
General Life Approach and Punitive Parenting: F (1, 209) = 1.40, p < .30, r^2 = .01			
General Life Approach	-.08	-1.18	.24
Rhythmicity and Punitive Parenting: F (1, 209) = 1.34, p < .25, r^2 = .01			
Rhythmicity	.08	1.16	.25
Rhythmicity, General Life Approach, and Punitive Parenting: F (2, 208) = 1.28, p < .30, r^2 = .01			
Rhythmicity	.07	1.07	.29
General Life Approach	-.20	-1.10	.27

Note. * p < .05, ** p < .01, *** p < .001

Table 9. **Hierarchical Regression Analyses for Young Child Mood**

Variables	***B***	**SE *B***	***β***
Block 1. F (8, 202) = 3.62, p < .002, R^2 = .13			
Mother Activity Level-General	-.03	.04	-.05
Mother Activity Level-Sleep	.09	.05	.13
Mother Flexibility/Rigidity	.02	.06	.02
Mother Mood	.28	.06	.33***
Mother Rhythmicity-Daily Habits	-.08	.07	-.10
Mother Rhythmicity-Eating	-.06	.06	-.10
Mother Rhythmicity- Sleep	.09	.06	.14
Mother Distractibility	-.06	.06	-.07
Block 2. F (13, 197) = 3.29, p < .001, R^2 = .18			
Mother Activity Level-General	-.05	.04	-.09
Mother Activity Level-Sleep	.08	.05	.11
Mother Flexibility/Rigidity	.06	.06	.08
Mother Mood	.31	.07	.36***
Mother Rhythmicity-Daily Habits	-.06	.07	-.08
Mother Rhythmicity-Eating	-.07	.06	-.11
Mother Rhythmicity- Sleep	.07	.06	.11
Mother Distractibility	-.12	.07	-.13
Neuroticism	.06	.03	.18*
Extraversion	-.02	.03	-.07
Conscientiousness	.08	.03	.22**
Agreeableness	.04	.03	.10
Openness to Experience	.03	.03	.07
Block 3. F (17, 193) = 2.81, p < .001, R^2 = .20			
Mother Activity Level-General	-.05	.04	-.09
Mother Activity Level-Sleep	.06	.05	.09
Mother Flexibility/Rigidity	.07	.06	.09
Mother Mood	.32	.07	.37***
Mother Rhythmicity-Daily Habits	-.05	.07	.37
Mother Rhythmicity-Eating	-.07	.06	-.11
Mother Rhythmicity- Sleep	.07	.06	.11
Mother Distractibility	-.12	.07	-.14
Neuroticism	-.01	.19	-.03
Extraversion	-.29	.17	-.87
Conscientiousness	-.03	.21	-.08
Agreeableness	-.10	.26	-.24
Openness to Experience	.02	.03	.06
Neuroticism^2	.00	.00	.22
Extraversion^2	.00	.00	.81
Conscientiousness^2	.00	.00	.28
Agreeableness^2	.00	.00	.34
Block 4. F (22, 188) =3.21, p < .001, R^2 = .27			

Variables	*B*	SE *B*	*β*
Mother Activity Level-General	-.04	.04	-.07
Mother Activity Level-Sleep	.05	.05	.06
Mother Flexibility/Rigidity	.10	.06	.12
Mother Mood	.29	.08	.34***
Mother Rhythmicity-Daily Habits	-.10	.07	-.12
Mother Rhythmicity-Eating	-.07	.06	-.10
Mother Rhythmicity- Sleep	.07	.06	.12
Mother Distractibility	-.11	.07	-.12
Neuroticism	.03	.18	.09
Extraversion	-.27	.16	-.80
Conscientiousness	.06	.21	.16
Agreeableness	-.24	.26	-.59
Openness to Experience	.02	.03	.05
Neuroticism^2	.00	.00	.15
Extraversion^2	.00	.00	.74
Conscientiousness^2	.00	.00	-.07
Agreeableness^2	.00	.00	.69
Positive Parenting	.06	.04	.10
Inconsistent Parenting	-.18	.05	-.28***
Punitive Parenting	-.04	.09	-.03
Parenting Locus of Control	.02	.02	.08
Core Self-Evaluations	.02	.04	.06

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 10. **Hierarchical Regression Analyses for Young Child Flexibility/Rigidity**

Variables	***B***	**SE *B***	***β***
Block 1. F (8, 202) = 3.32, p < .002, R^2 = .12			
Mother Activity Level-General	-.04	.05	-.06
Mother Activity Level-Sleep	-.03	.07	-.03
Mother Flexibility/Rigidity	.25	.07	.25**
Mother Mood	.19	.08	.17*
Mother Rhythmicity-Daily Habits	-.00	.09	-.00
Mother Rhythmicity-Eating	-.03	.07	-.04
Mother Rhythmicity- Sleep	.04	.07	.05
Mother Distractibility	-.11	.08	-.09
Block 2. F (13, 197) = 2.92, p < .002, R^2 = .16			
Mother Activity Level-General	-.03	.05	-.04
Mother Activity Level-Sleep	-.02	.07	-.03
Mother Flexibility/Rigidity	.24	.08	.24**
Mother Mood	.12	.09	.11
Mother Rhythmicity-Daily Habits	.01	.09	.01
Mother Rhythmicity-Eating	-.05	.07	-.06
Mother Rhythmicity- Sleep	.00	.07	.01
Mother Distractibility	-.17	.09	-.14
Neuroticism	-.05	.04	-.11
Extraversion	-.02	.04	-.04
Conscientiousness	.05	.04	.10
Agreeableness	.07	.04	.13
Openness to Experience	-.04	.03	-.08
Block 3. F (17, 193) = 2.72, p < .001, R^2 = .19			
Mother Activity Level-General	-.03	.06	-.04
Mother Activity Level-Sleep	-.05	.07	-.06
Mother Flexibility/Rigidity	.25	.08	.25**
Mother Mood	.11	.10	.10
Mother Rhythmicity-Daily Habits	.03	.09	.03
Mother Rhythmicity-Eating	-.05	.08	-.05
Mother Rhythmicity- Sleep	-.00	.08	-.01
Mother Distractibility	-.19	.09	-.16*
Neuroticism	-.14	.24	-.31
Extraversion	-.25	.22	-.58
Conscientiousness	-.39	.28	-.84
Agreeableness	-.30	.34	-.58
Openness to Experience	-.05	.03	-.11
Neuroticism^2	.00	.00	.20
Extraversion^2	.00	.00	.55
Conscientiousness^2	.00	.00	.93
Agreeableness^2	.00	.00	.71
Block 4. F (22, 188) = 3.15, p < .001, R^2 = .27			

Variables	*B*	SE *B*	*β*
Mother Activity Level-General	-.02	.05	-.03
Mother Activity Level-Sleep	-.05	.06	-.06
Mother Flexibility/Rigidity	.19	.08	.19*
Mother Mood	.00	.10	.00
Mother Rhythmicity-Daily Habits	-.02	.09	-.02
Mother Rhythmicity-Eating	-.07	.07	-.08
Mother Rhythmicity- Sleep	.01	.07	.02
Mother Distractibility	-.17	.09	-.14
Neuroticism	-.07	.24	-.15
Extraversion	-.16	.21	-.37
Conscientiousness	-.19	.27	-.40
Agreeableness	-.23	.33	-.44
Openness to Experience	-.06	.03	-.12
Neuroticism^2	.00	.00	.14
Extraversion^2	.00	.00	.35
Conscientiousness^2	.00	.00	.34
Agreeableness^2	.00	.00	.61
Positive Parenting	.13	.05	.19**
Inconsistent Parenting	-.06	.06	-.08
Punitive Parenting	.10	.11	.06
Parenting Locus of Control	-.05	.02	-.15
Core Self-Evaluations	.08	.05	.19

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 11. **Hierarchical Regression Analyses for Young Child Activity Level-General**

Variables	***B***	**SE *B***	***β***
Block 1. F (8, 208) = 2.88, p < .006, R^2 = .10			
Mother Activity Level-General	.18	.07	.18
Mother Activity Level-Sleep	.04	.09	.03
Mother Flexibility/Rigidity	-.06	.10	-.04
Mother Mood	.04	.12	.02
Mother Rhythmicity-Daily Habits	-.01	.13	-.01
Mother Rhythmicity-Eating	-.10	.11	-.08
Mother Rhythmicity- Sleep	-.08	.10	-.07
Mother Distractibility	-.19	.12	-.12
Block 2. F (13, 197) = 4.66, p < .001, R^2 = .24			
Mother Activity Level-General	.11	.07	.11
Mother Activity Level-Sleep	-.01	.09	-.01
Mother Flexibility/Rigidity	.08	.10	.05
Mother Mood	.17	.13	.11
Mother Rhythmicity-Daily Habits	-.00	.12	-.00
Mother Rhythmicity-Eating	-.07	.10	-.06
Mother Rhythmicity- Sleep	-.06	.10	-.06
Mother Distractibility	-.20	.12	-.12
Neuroticism	.26	.05	.41***
Extraversion	-.03	.05	-.04
Conscientiousness	.07	.05	.11
Agreeableness	.11	.05	.15*
Openness to Experience	.09	.05	.13*
Block 3. F (17, 193) = 3.73, p < .001, R^2 = .25			
Mother Activity Level-General	.12	.07	.12
Mother Activity Level-Sleep	.01	.09	.01
Mother Flexibility/Rigidity	.07	.10	.05
Mother Mood	.19	.13	.12
Mother Rhythmicity-Daily Habits	-.01	.12	-.00
Mother Rhythmicity-Eating	-.05	.10	-.04
Mother Rhythmicity- Sleep	-.09	.10	-.08
Mother Distractibility	-.19	.12	-.11
Neuroticism	-.09	.33	-.15
Extraversion	.22	.29	.36
Conscientiousness	.56	.37	.85
Agreeableness	.25	.46	.34
Openness to Experience	.10	.05	.15*
Neuroticism^2	.01	.01	.56
Extraversion^2	-.00	.00	-.41
Conscientiousness^2	-.01	.00	-.74
Agreeableness^2	-.00	.01	-.21
Block 4. F (22, 188) = 3.08, p < .001, R^2 = .27			

Variables	*B*	SE *B*	*β*
Mother Activity Level-General	.13	.08	.13
Mother Activity Level-Sleep	.01	.09	.01
Mother Flexibility/Rigidity	.11	.11	.08
Mother Mood	.20	.14	.13
Mother Rhythmicity-Daily Habits	.00	.13	.00
Mother Rhythmicity-Eating	-.05	.10	-.04
Mother Rhythmicity- Sleep	-.07	.10	-.07
Mother Distractibility	-.18	.12	-.11
Neuroticism	-.18	.33	-.19
Extraversion	.16	.30	.26
Conscientiousness	.48	.38	.74
Agreeableness	.25	.47	.34
Openness to Experience	.11	.05	.17*
Neuroticism^2	.01	.01	.62
Extraversion^2	-.00	.00	-.33
Conscientiousness^2	-.01	.00	-.61
Agreeableness^2	-.00	.01	-.21
Positive Parenting	-.06	.07	-.06
Inconsistent Parenting	.01	.09	.01
Punitive Parenting	-.05	.16	-.02
Parenting Locus of Control	.06	.03	.14
Core Self-Evaluations	.05	.07	.08

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 12. **Hierarchical Regression Analyses for Child Internalizing Problems**

Variables	***B***	**SE *B***	***β***
Block 1. F (8, 109) = 2.04, p < .05, R^2 = .08			
Mother Activity Level-General	.11	.16	.05
Mother Activity Level-Sleep	.17	.21	.06
Mother Flexibility/Rigidity	-06	.23	-.02
Mother Mood	-.62	.26	-.19*
Mother Rhythmicity-Daily Habits	.01	.28	.00
Mother Rhythmicity-Eating	-.23	.23	-.09
Mother Rhythmicity- Sleep	-.15	.23	-.06
Mother Distractibility	.24	.26	.07
Block 2. F (13, 185) = 2.13, p < .02, R^2 = .13			
Mother Activity Level-General	.04	.17	.02
Mother Activity Level-Sleep	.14	.21	.05
Mother Flexibility/Rigidity	.05	.24	.02
Mother Mood	-.44	.30	-.13
Mother Rhythmicity-Daily Habits	-.01	.28	-.00
Mother Rhythmicity-Eating	-.16	.23	-.06
Mother Rhythmicity- Sleep	-.08	.23	-.03
Mother Distractibility	.39	.28	.11
Neuroticism	.29	.13	.22*
Extraversion	.02	.12	.02
Conscientiousness	-.10	.12	-.07
Agreeableness	.05	.11	.03
Openness to Experience	.11	.11	.08
Block 3. F (17, 181) = 2.47, p < .003, R^2 = .19			
Mother Activity Level-General	.08	.17	.04
Mother Activity Level-Sleep	.20	.21	.07
Mother Flexibility/Rigidity	.07	.23	.02
Mother Mood	-.36	.30	-.11
Mother Rhythmicity-Daily Habits	-.12	.28	-.04
Mother Rhythmicity-Eating	-.06	.23	-.02
Mother Rhythmicity- Sleep	-.11	.23	-.05
Mother Distractibility	.42	.27	.12
Neuroticism	.25	.76	.19
Extraversion	.27	.67	.44
Conscientiousness	2.70	.89	1.90**
Agreeableness	-1.66	1.03	-1.07
Openness to Experience	.17	.10	.12
Neuroticism^2	.00	.01	.02
Extraversion^2	-.01	.01	-.44
Conscientiousness^2	-.03	.10	-1.99**
Agreeableness^2	.02	.01	1.10
Block 4. F (22, 176) = 2.71, p < .001, R^2 = .25			

Variables	*B*	SE *B*	*β*
Mother Activity Level-General	.09	.17	.04
Mother Activity Level-Sleep	.19	.20	.07
Mother Flexibility/Rigidity	.17	.24	.06
Mother Mood	-.25	.31	-08
Mother Rhythmicity-Daily Habits	.01	.28	.00
Mother Rhythmicity-Eating	.05	.23	.02
Mother Rhythmicity- Sleep	-.16	.23	-.07
Mother Distractibility	.46	.27	.13
Neuroticism	-.14	.75	-.10
Extraversion	.31	.65	.25
Conscientiousness	2.31	.89	1.62*
Agreeableness	-1.77	1.03	-1.15
Openness to Experience	.22	.10	.15*
Neuroticism^2	.00	.01	.23
Extraversion^2	-.00	.01	-.25
Conscientiousness^2	-.03	.01	-1.63*
Agreeableness^2	.02	.01	1.16
Positive Parenting	-.37	.16	-.18*
Inconsistent Parenting	.07	.20	.03
Punitive Parenting	.62	.40	.11
Parenting Locus of Control	10	.07	.11
Core Self-Evaluations	-.08	.15	-.06
Block 5. F (25, 173) = 5.04, p < .001, R^2 = .42			
Mother Activity Level-General	.10	.25	.01
Mother Activity Level-Sleep	.14	.18	.05
Mother Flexibility/Rigidity	.44	.22	.15*
Mother Mood	-.23	.28	-.07
Mother Rhythmicity-Daily Habits	-.07	.25	-.02
Mother Rhythmicity-Eating	-.03	.21	-.01
Mother Rhythmicity- Sleep	-.08	.20	-.03
Mother Distractibility	25	24	07
Neuroticism	.05	.67	.04
Extraversion	-.07	.58	-.06
Conscientiousness	1.84	.79	1.30*
Agreeableness	-.23	.91	-1.44*
Openness to Experience	.11	.09	.08
Neuroticism^2	.00	.01	.07
Extraversion^2	.00	.01	.05
Conscientiousness^2	-.02	.01	-1.35*
Agreeableness^2	.03	.01	1.52*
Positive Parenting	-.14	.15	-.06
Inconsistent Parenting	-.04	.18	-.02
Punitive Parenting	.79	/35	.14*
Parenting Locus of Control	.03	.07	.03
Core Self-Evaluations	.01	.14	.01

Variables	*B*	SE *B*	*β*
Child Activity Level-General	.17	.15	.08
Child Mood	-.23	.28	-.06
Child Flexibility/Rigidity	-1.33	.22	-.45***

Table 13. **Hierarchical Regression Analyses for Child Externalizing Problems**

Variables	***B***	**SE *B***	***β***
Block 1. F (8, 190) = 2.42, p < .02, R^2 = .09			
Mother Activity Level-General	-.14	.18	-.06
Mother Activity Level-Sleep	.42	.24	.13
Mother Flexibility/Rigidity	-.20	.26	-.06
Mother Mood	-.06	.30	-.02
Mother Rhythmicity-Daily Habits	-.58	.32	-.16
Mother Rhythmicity-Eating	-.28	.26	-.09
Mother Rhythmicity- Sleep	-.05	.26	-.02
Mother Distractibility	-.16	.30	-.04
Block 2. F (13, 185) = 2.85, p < .002, R^2 = .17			
Mother Activity Level-General	-.18	.19	-.07
Mother Activity Level-Sleep	.39	.23	.12
Mother Flexibility/Rigidity	.02	.27	.01
Mother Mood	.40	.34	.10
Mother Rhythmicity-Daily Habits	-.57	.32	-.16
Mother Rhythmicity-Eating	-.17	.26	-.06
Mother Rhythmicity- Sleep	.04	.26	.01
Mother Distractibility	.05	.31	.01**
Neuroticism	.38	.14	.24
Extraversion	-10	.14	-.07
Conscientiousness	-.14	.14	-.08
Agreeableness	-.05	.13	-.03
Openness to Experience	.11	.12	.06
Block 3. F (17, 181) = 2.74, p < .001, R^2 = .20			
Mother Activity Level-General	-.15	.19	-.06
Mother Activity Level-Sleep	.46	.23	.14
Mother Flexibility/Rigidity	.01	.26	.00
Mother Mood	.50	.34	.13
Mother Rhythmicity-Daily Habits	-.63	.32	-.17*
Mother Rhythmicity-Eating	-.10	.26	-.03
Mother Rhythmicity- Sleep	.02	.26	.01
Mother Distractibility	.13	.31	.03
Neuroticism	-.04	.87	-.02
Extraversion	.45	.76	.31
Conscientiousness	2.55	1.02	1.56*
Agreeableness	.29	1.18	.17
Openness to Experience	.17	.12	.10
Neuroticism^2	.01	.01	.27
Extraversion^2	-.01	.01	-.38
Conscientiousness^2	-.03	.01	-1.65**
Agreeableness^2	-.00	.01	-.21
Block 4. F (22, 176) = 3.69, p < .001, R^2 = .32			

Variables	*B*	SE *B*	*β*
Mother Activity Level-General	-.12	.18	-.05
Mother Activity Level-Sleep	.50	.22	.16
Mother Flexibility/Rigidity	.17	.26	.05
Mother Mood	.46	.34	.12
Mother Rhythmicity-Daily Habits	-.48	.31	-.13
Mother Rhythmicity-Eating	.04	.26	.01
Mother Rhythmicity- Sleep	.02	.25	.01
Mother Distractibility	.20	.30	.05
Neuroticism	-.49	.83	-.32
Extraversion	.08	.72	.06
Conscientiousness	2.11	1.00	1.29*
Agreeableness	.34	1.13	.19
Openness to Experience	.26	.11	.16*
Neuroticism^2	.01	.01	.46
Extraversion^2	-.00	.01	-.15
Conscientiousness^2	-.02	.01	-1.29*
Agreeableness^2	-.01	.01	-.24
Positive Parenting	-.25	.18	-.10
Inconsistent Parenting	.26	.22	.09
Punitive Parenting	1.04	.44	.17*
Parenting Locus of Control	.24	.08	.23**
Core Self-Evaluations	-.01	.17	-.01
Block 5. F (25, 173) = 6.80, p < .001, R^2 = .50			
Mother Activity Level-General	-.32	.16	-.13
Mother Activity Level-Sleep	.47	.19	.15*
Mother Flexibility/Rigidity	.22	.23	.06
Mother Mood	.43	.31	.11
Mother Rhythmicity-Daily Habits	-.59	.27	-.16*
Mother Rhythmicity-Eating	-.02	.22	-.01
Mother Rhythmicity- Sleep	.16	.22	.06
Mother Distractibility	.20	.26	.05
Neuroticism	-.12	.72	-.07
Extraversion	-.43	.63	-.29
Conscientiousness	1.46	.85	.89
Agreeableness	-.21	.99	-.12
Openness to Experience	.10	.10	.06
Neuroticism^2	.00	.01	.10
Extraversion^2	.00	.01	.23
Conscientiousness^2	-.02	.10	-.95
Agreeableness^2	.00	.01	.06
Positive Parenting	-.04	.16	-.02
Inconsistent Parenting	.11	.19	.04
Punitive Parenting	1.10	.38	.18**
Parenting Locus of Control	.16	.07	.15*
Core Self-Evaluations	.00	.15	.00

Variables	*B*	SE *B*	*β*
Child Activity Level-General	.98	.16	.39***
Child Mood	-.59	.30	-.13
Child Flexibility/Rigidity	-.67	.23	-.20**

APPENDIX B: IRB APPROVAL LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Kimberly D. Renk** and Co-PI: **Jayme L. Puff**

Date: **February 14, 2013**

Dear Researcher:

On 02/14/2013 the IRB approved the following modifications in human participant research until inclusive:

Type of Review:	IRB Addendum and Modification Request Form
Modification Type:	Additional recruitment ad - study link to parenting websites
Project Title:	Parents' Temperament and Personality: Their Roles in Parenting Behaviors, Parent Locus of Control, and Children's Outcomes
Investigator:	Kimberly D. Renk
IRB Number:	SBE-12-08660
Funding Agency:	
Grant Title:	
Research ID:	N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at https://iris.research.ucf.edu .

If continuing review approval is not granted before the expiration date of , approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Patria Davis on 02/14/2013 10:18:56 AM EST

IRB Coordinator

APPENDIX C: EXPLANATION OF RESEARCH

EXPLANATION OF RESEARCH

Title of Project: Parents' Temperament and Personality: Their Roles in Parenting Behaviors, Parent Locus of Control, and Children's Outcomes

Principal Investigator (and Faculty Supervisor): Kimberly Renk, Ph.D.
Principal Co-Investigator: Jayme Puff, B.S., Graduate Student

You are being invited to take part in a research study. Whether you take part is up to you.

- You are being invited to take part in a research study which will include about 146 people in Orlando and surrounding areas in the United States. You have been asked to take part in this research study because you are the parent of a child between the ages of 2- and 6-years old. You must be 18-years of age or older to be included in the research study.
- The purpose of this study is to examine the relationship among parents' temperament and personality, parenting behaviors, and young children's temperament and behavior problems. Research suggested that early relationships prove imperative for both parents and their children (Kochanska, Friesenborg, Lange, & Martel, 2004), Thus, identifying potential variables that may be related to young children's outcomes may provide insight into interventions that may best assist families in need.
- Your participation will consist of completing seven questionnaires regarding parenting and child behaviors and a demographics questionnaire. We expect that you will be in this research study for approximately one hour. Your participation is completely voluntary, and you may choose to withdraw at any time.
- Research for this project will be conducted in one of two ways. Participants may choose to fill out the questionnaires in their own home either via a provided online link or as a mailed packet that participants may return via postal mail. Participants also may choose to complete the questionnaires on the UCF campus in Dr. Kimberly Renk's Understanding Children and Families Laboratory (Room 141 in the Psychology Building).
- Although no risks are anticipated as a result of participating in this study, some participants may be sensitive to the survey questions. If at any time participants experience distress in response to their participation or feel the need for psychological assistance, please contact the Young Family and Child Research Clinic at 407-257-2978, Associates in Psychology and Counseling at 407-523-1213, or Counseling Corner at 407-843-4968.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, please contact Kimberly Renk, Ph.D., University of Central Florida, Department of Psychology, P.O. Box 161390, Orlando, FL 32816; phone: (407) 823- 2218.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the

IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

APPENDIX D: DEMOGRAPHICS QUESTIONNAIRE

DEMOGRAPHICS QUESTIONNAIRE

1. Your Gender: M F

2. Your Age: _____

3. Your Ethnicity: Caucasian Hispanic African-American

Asian-American Native-American Other_____

4. What, if any, is your religious affiliation? _____

On a scale of 1-10 (1 = not strong at all; 10 = very strong) how strong of a religious affiliation would you say you have? _____

5. Your Marital Status: Married Divorced Separated Widowed Single

Remarried (If so, how many previous marriages_____)

6. Does your child's other parent live with you? Yes No

Please list the age and gender of your child(ren) and whether or not they live with you.

Age	Gender	Live with you?
____	M F	Y N
____	M F	Y N
____	M F	Y N
____	M F	Y N

8. Do you live with any extended family members or friends? Y N

9. If yes, who? _____

Your level of education:

Post Doctorate Vocational Training

Graduate Professional Training High School Diploma

College Degree (bachelors) Some High School

Some College Less than High School

Your occupation: _____

Child's other parent's level of education:

Post Doctorate Vocational Training

Graduate Professional Training High School Diploma

College Degree (bachelors) Some High School

Some College Less than High School

Your child's other parent's occupation: _____

Estimated Yearly household income (please circle one):

Less than $10,000 $40,000 - $50,000

$10,000 - $20,000 $50,000 - $60,000

$20,000 - $30,000 $60,000 - $70,000

$30,000 - $40,000 More than $70,000

APPENDIX E: DIMENSIONS OF TEMPERAMENT SCALE- REVISED FOR ADULTS

Dimensions of Temperament Survey- Revised for Adults

HOW TO ANSWER: On the following pages are some statements about how people like you may behave. Some of the statements may be true of your own behavior and others may not apply to you. For each statement we would like you to indicate if the statement is usually true of you, is more true than false of you, is more false than true of you, or is usually false of you. There are no "right" or "wrong" answers because all people behave in different ways. All you have to do is answer what is true for you.

On the line to the left of each statement write an A if the statement is usually false for you, write a B if the statement is more false than true for you, write a C if the statement is more true than false for you, or write a D if the statement is usually true for you.

A = usually FALSE
B= more FALSE than true
C = more TRUE than false
D = usually TRUE

---

1. _____ It takes me a long time to get used to a new thing in the home.
2. _____ I can't stay still for long.
3. _____ I laugh and smile at a lot of things.
4. _____ I wake up at different times.
5. _____ Once I am involved in a task, nothing can distract me from it.
6. _____ I persist at a task until it's finished.
7. _____ I move around a lot.
8. _____ I can make myself at home anywhere.
9. _____ I can always be distracted by something else, no matter what I may be doing.
10. _____ I stay with an activity for a long time.
11. _____ If I have to stay in one place for a long time, I get very restless.
12. _____ I usually move towards new objects shown to me.
13. _____ It takes me a long time to adjust to new schedules.
14. _____ I do not laugh or smile at many things.

A = usually FALSE
B= more FALSE than true
C = more TRUE than false
D = usually TRUE

---

15. _____ If I am doing one thing, something else occurring won't get me to stop.

16. _____ I eat about the same amount for dinner whether I am home, visiting someone, or traveling.

17. _____ My first reaction is to reject something new or unfamiliar to me.

18. _____ Changes in plans make me restless.

19. _____ I often stay still for long periods of time.

20. _____ Things going on around me can not take me away from what I am doing.

21. _____ I take a nap, rest, or break at the same time every day.

22. _____ Once I take something up, I stay with it.

23. _____ Even when I am supposed to be still, I get very fidgety after a few minutes.

24. _____ I am hard to distract.

25. _____ I usually get the same amount of sleep each night.

26. _____ On meeting a new person I tend to move towards him or her.

27. _____ I get hungry about the same time each day.

28. _____ I smile often.

29. _____ I never seem to stop moving.

30. _____ It takes me no time at all to get used to new people.

31. _____ I usually eat the same amount each day.

32. _____ I move a great deal in my sleep.

33. _____ I seem to get sleepy just about the same time every night.

34. _____ I do not find that I laugh often.

35. _____ I move towards new situations.

36. _____ When I am away from home, I still wake up at the same time each morning.

A = usually FALSE
B= more FALSE than true
C = more TRUE than false
D = usually TRUE

---

37. _____ I eat about the same amount at breakfast from day to day.

38. _____ I move a lot in bed.

39. _____ I feel full of pep and energy at the same time each day.

40. _____ I have bowel movements at about the same time each day.

41. _____ No matter when I go to sleep, I wake up at the same time the next morning.

42. _____ In the morning, I am still in the same place as I was when I fell asleep.

43. _____ I eat about the same amount at supper from day to day.

44. _____ When things are out of place, it takes me a long time to get used to it.

45. _____ I wake up at the same time on weekends and holidays as on other days of the week.

46. _____ I don't move around much at all in my sleep.

47. _____ My appetite seems to stay the same day after day.

48. _____ My mood is generally cheerful.

49. _____ I resist changes in routine.

50. _____ I laugh several times a day.

51. _____ My first response to anything new is to move my head toward it.

52. _____ Generally, I am happy.

53. _____ The number of times I have a bowel movement on any day varies from day to day.

54. _____ I never seem to be in the same place for long.

APPENDIX F: NEO FIVE-FACTOR INVENTORY-3

[redacted] Age _____ Sex _____ Today's date _____

1. I am not a worrier.
2. I like to have a lot of people around me.
3. I enjoy concentrating on a fantasy or daydream and exploring all its possibilities, letting it grow and develop.
4. I try to be courteous to everyone I meet.
5. I keep my belongings neat and clean.
6. At times I have felt bitter and resentful.
7. I laugh easily.
8. I think it's interesting to learn and develop new hobbies.
9. At times I bully or flatter people into doing what I want them to.
10. I'm pretty good about pacing myself so as to get things done on time.
11. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.
12. I prefer jobs that let me work alone without being bothered by other people.
13. I am intrigued by the patterns I find in art and nature.
14. Some people think I'm selfish and egotistical.
15. I often come into situations without being fully prepared.
16. I rarely feel lonely or blue.
17. I really enjoy talking to people.
18. I believe letting students hear controversial speakers can only confuse and mislead them.
19. If someone starts a fight, I'm ready to fight back.
20. I try to perform all the tasks assigned to me conscientiously.
21. I often feel tense and jittery.
22. I like to be where the action is.
23. Poetry has little or no effect on me.
24. I'm better than most people, and I know it.
25. I have a clear set of goals and work toward them in an orderly fashion.
26. Sometimes I feel completely worthless.
27. I shy away from crowds of people.
28. I would have difficulty just letting my mind wander without control or guidance.
29. When I've been insulted, I just try to forgive and forget.
30. I waste a lot of time before settling down to work.
31. I rarely feel fearful or anxious.
32. I often feel as if I'm bursting with energy.
33. I seldom notice the moods or feelings that different environments produce.
34. I tend to assume the best about people.
35. I work hard to accomplish my goals.
36. I often get angry at the way people treat me.
37. I am a cheerful, high-spirited person.
38. I experience a wide range of emotions or feelings.
39. Some people think of me as cold and calculating.
40. When I make a commitment, I can always be counted on to follow through.

41. Too often, when things go wrong, I get discouraged and feel like giving up.
42. I don't get much pleasure from chatting with people.
43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.
44. I have no sympathy for beggars.
45. Sometimes I'm not as dependable or reliable as I should be.

46. I am seldom sad or depressed.
47. My life is fast-paced.
48. I have little interest in speculating on the nature of the universe or the human condition.
49. I generally try to be thoughtful and considerate.
50. I am a productive person who always gets the job done.

51. I often feel helpless and want someone else to solve my problems.
52. I am a very active person.
53. I have a lot of intellectual curiosity.
54. If I don't like people, I let them know it.
55. I never seem to be able to get organized.

56. At times I have been so ashamed I just wanted to hide.
57. I would rather go my own way than be a leader of others.
58. I often enjoy playing with theories or abstract ideas.
59. If necessary, I am willing to manipulate people to get what I want.
60. I strive for excellence in everything I do.

Enter your responses here—remember to enter responses *ACROSS* the rows.

SD = *Strongly Disagree*; D = *Disagree*; N = *Neutral*; A = *Agree*; SA = *Strongly Agree*

ENTER CROSS ⇨

1 (SD) D N A SA	2 SD (D) N A SA	3 SD (D) N A SA	4 SD (D) N A SA	5 SD (D) N A SA
6 (SD) D N A SA	7 SD (D) N A SA	8 SD (D) N A SA	9 SD (D) N A SA	10 SD (D) N A SA
11 SD (D) N A SA	12 SD (D) N A SA	13 SD (D) N A SA	14 SD (D) N A SA	15 SD (D) N A SA
16 (SD) D N A SA	17 SD (D) N A SA	18 SD (D) N A SA	19 SD (D) N A SA	20 SD (D) N A SA
21 SD (D) N A SA	22 SD (D) N A SA	23 SD (D) N A SA	24 SD (D) N A SA	25 SD (D) N A SA
26 (SD) D N A SA	27 SD (D) N A SA	28 SD (D) N A SA	29 SD (D) N A SA	30 SD (D) N A SA
31 SD (D) N A SA	32 SD (D) N A SA	33 SD (D) N A SA	34 SD (D) N A SA	35 SD (D) N A SA
36 (SD) D N A SA	37 SD (D) N A SA	38 SD (D) N A SA	39 SD (D) N A SA	40 SD (D) N A SA
41 SD (D) N A SA	42 SD (D) N A SA	43 SD (D) N A SA	44 SD (D) N A SA	45 SD (D) N A SA
46 (SD) D N A SA	47 SD (D) N A SA	48 SD (D) N A SA	49 SD (D) N A SA	50 SD (D) N A SA
51 SD (D) N A SA	52 SD (D) N A SA	53 SD (D) N A SA	54 SD (D) N A SA	55 SD (D) N A SA
56 (SD) D N A SA	57 SD (D) N A SA	58 SD (D) N A SA	59 SD (D) N A SA	60 SD (D) N A SA

Now answer the three questions labeled A, B, and C below.

A. Have you responded to all of the statements? _____ Yes _____ No

B. Have you entered your responses across the rows? _____ Yes _____ No

C. Have you responded accurately and honestly? _____ Yes _____ No

APPENDIX G: ALABAMA PARENTING QUESTIONNAIRE-PRESCHOOL REVISION

Alabama Parenting Questionnaire-Preschool Version (APQ-PR)

Please indicate how often you do/feel each of the following behaviors/feelings.

Scores range from 1 (*never*) to 5 (*always*).

1. _____You have a friendly talk with your child.
2. _____You volunteer to help with special activities that your child is involved in.
3. _____You play games or do other fun things with your child.
4. _____You ask your child about his/her day in school.
5. _____You help your child with his/her homework.
6. _____You compliment your child when he/she does something well
7. _____You praise your child if he/she behaves well.
8. _____You hug or kiss your child when he/she has done something well.
9. _____You talk to your child about his/her friends.
10. _____You tell your child that you like it when he/she helps around the house.
11. _____You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.
12. _____You let your child know when he/she is doing a good job with something.
13. _____You threaten to punish your child and then do not actually punish him/her.
14. _____Your child talks you out of being punished after he/she has done something wrong.
15. _____You feel that getting your child to obey you is more trouble than it's worth.
16. _____You let your child out of a punishment early (e.g., lift restrictions earlier than you originally said).

APPENDIX H: THE PARENTAL LOCUS OF CONTROL SCALE- SHORT FORM

PLOCSF Parent Questionnaire

[redacted]

Relationship to child _____ Child's Age _____

Date of Rating _____ Child's Sex _____

		(1) Strongly Agree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Disagree
1.	My life is chiefly controlled by my child	1	2	3	4	5
2.	Being a good parent often depends on being lucky enough to have a good child	1	2	3	4	5
3.	I always feel in control when it comes to my child	1	2	3	4	5
4.	When something goes wrong between me and my child, there is little I can do to correct it	1	2	3	4	5
5.	My child does not control my life	1	2	3	4	5
6.	I have often found that when it comes to my child, what is going to happen will happen	1	2	3	4	5
7.	If your child tantrums no matter what you try, you might as well give up	1	2	3	4	5
8.	I feel like what happens in my life is mostly determined by my child	1	2	3	4	5
9.	Fate was kind to me -- if I had a bad child, I don't know what I would have done	1	2	3	4	5
10.	My child usually ends up getting his/her way, so why try	1	2	3	4	5
11.	It is easy for me to avoid and function independently of my child's attempts to have control over me	1	2	3	4	5
12.	Success in dealing with children seems to be more a matter of the child's moods and feelings at the time rather than one's own actions	1	2	3	4	5

	(1) Strongly Agree	(2) Disagree	(3) Neutral	(4) Agree			(5) Strongly Disagree	
13.	I find that sometimes my child can get me to do things I really do not want to do			1	2	3	4	5
14.	No matter how hard a parent tries, some children will never learn to mind			1	2	3	4	5
15.	Neither my child nor myself is responsible for my child's behavior			1	2	3	4	5
16.	My child often behaves very differently from the way I would want him/her to behave			1	2	3	4	5
17.	It is not always wise to expect too much from my child because many things turn out to be a matter of good or bad luck anyway			1	2	3	4	5
18.	Sometimes I feel I do not have enough control over the direction that my child's life s taking			1	2	3	4	5
19.	When my child gets angry, I can usually deal with my child if I stay calm			1	2	3	4	5
20.	When I set expectations for my child, I am almost always certain I can help my child meet them			1	2	3	4	5
21.	The misfortunes and successes I have had as a parent are the direct result of my own behavior			1	2	3	4	5
22.	Heredity plays a major role in determining a child's personality			1	2	3	4	5
23.	I allow my child to get away with things			1	2	3	4	5
24.	Without the right breaks, one can't be an effective parent			1	2	3	4	5
25.	It isn't too difficult to change my child's mind about something			1	2	3	4	5

APPENDIX I: THE CORE SELF-EVALUATIONS SCALE

The Core Self-Evaluations Scale (CSES)

Instructions: Below are several statements about you with which you may agree or disagree. Using the response scale below, indicate your agreement or disagreement with each item by placing the appropriate number on the line preceding that item.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. ____ I am confident I get the success I deserve in life.

2. ____ Sometimes I feel depressed. (r)

3. ____ When I try, I generally succeed.

4. ____ Sometimes when I fail I feel worthless. (r)

5. ____ I complete tasks successfully.

6. ____ Sometimes, I do not feel in control of my work. (r)

7. ____ Overall, I am satisfied with myself.

8. ____ I am filled with doubts about my competence. (r)

9. ____ I determine what will happen in my life.

10. ____ I do not feel in control of my success in my career. (r)

11. ____ I am capable of coping with most of my problems.

12. ____ There are times when things look pretty bleak and hopeless to me. (r)

Notes: r=reverse-scored. This measure is non-proprietary (free) and may be used without permission.

APPENDIX J: THE DIMENSIONS OF TEMPERAMENT SCALE-REVISED FOR CHILDREN

The Dimensions of Temperament Scale- Revised for Children

HOW TO ANSWER: On the following pages are some statements about how children like your own may behave. Some of the statements may be true of your child's behavior, and others may not apply to him or her. For each statement, we would like you to indicate if the statement is usually true of your child, is more true than false of your child, is more false than true of your child, or is usually false of your child. There are no "right" or "wrong" answers because all children behave in different ways. All you have to do is answer what is true or false for your child as well as how important this behavior is to you.

On the first line to the left of each statement write an A if the statement is usually false of your child, write a B if the statement is more false than true of your child, write a C if the statement is more true than false of your child, or write a D if the statement is usually true of your child.

On the second line to the right of each statement write a 0, 1, or 2. Write a 0 if it is a behavior that it not important to you at all, write a 1 if it is a behavior that is somewhat important to you, and write a 2 if it is a behavior that is very important to you.

```
A = usually FALSE                                    0 = NOT important
B = more FALSE than true                             1 = SOMETIMES important
C = more TRUE than false                             2 = VERY important
D = usually TRUE
```

---

1. ___ ___ It takes my child a long time to get used to a new thing in the home.

2. ___ ___ My child can't stay still for long.

3. ___ ___ My child laughs and smiles at a lot of things.

4. ___ ___ My child wakes up at different times.

5. ___ ___ Once my child is involved in a task, nothing can distract him or her from it.

6. ___ ___ My child persists at a task until it's finished.

7. ___ ___ My child moves around a lot.

8. ___ ___ My child can make him/herself at home anywhere.

9. ___ ___ My child can always be distracted by something else, no matter what he or she may be doing.

10. ___ ___ My child stays with an activity for a long time.

11. ___ ___ If my child has to stay in one place for a long time, he/she gets very restless.

A = usually FALSE
B= more FALSE than true
C = more TRUE than false
D = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

---

12. ___ ___ My child usually moves toward new objects shown to him/her.

13. ___ ___ It takes my child a long time to adjust to new schedules.

14. ___ ___ My child does not laugh or smile at many things.

15. ___ ___ If my child is doing one thing, something else occurring won't get him/her to stop.

16. ___ ___ My child eats about the same amount for dinner whether he/she is home, visiting someone, or traveling.

17. ___ ___ My child's first reaction is to reject something new or unfamiliar to him/her.

18. ___ ___ Changes in plans make my child restless.

19. ___ ___ My child often stays still for long periods of time.

20. ___ ___ Things going on around my child can not take him/her away from what he/she is doing.

21. ___ ___ My child takes a nap, rest, or break at the same time every day.

22. ___ ___ Once my child takes something up, he/she stays with it.

23. ___ ___ Even when my child is supposed to be still, he/she gets very fidgety after a few minutes.

24. ___ ___ My child is hard to distract.

25. ___ ___ My child usually gets the same amount of sleep each night.

26. ___ ___ On meeting a new person my child tends to move toward him or her.

27. ___ ___ My child gets hungry about the same time each day.

28. ___ ___ My child smiles often.

29. ___ ___ My child never seems to stop moving.

30. ___ ___ It takes my child no time at all to get used to new people.

31. ___ ___ My child usually eats the same amount each day.

32. ___ ___ My child moves a great deal in his/her sleep.

A = usually FALSE
B= more FALSE than true
C = more TRUE than false
D = usually TRUE

0 = NOT important
1 = SOMETIMES important
2 = VERY important

---

33. ___ ___ My child seems to get sleepy just about the same time every night.

34. ___ ___ I do not find my child laughing often.

35. ___ ___ My child moves toward new situations.

36. ___ ___ When My child is away from home he/she still wakes up at the same time each morning.

37. ___ ___ My child eats about the same amount at breakfast from day to day.

38. ___ ___ My child moves a lot in bed.

39. ___ ___ My child feels full of pep and energy at the same time each day.

40. ___ ___ My child has bowel movements at about the same time each day.

41. ___ ___ No matter when my child goes to sleep, he/she wakes up at the same time the next morning.

42. ___ ___ In the morning, my child is still in the same place as he/she was when he/she fell asleep.

43. ___ ___ My child eats about the same amount at supper from day to day.

44. ___ ___ When things are out of place, it takes my child a long time to get used to it.

45. ___ ___ My child wakes up at the same time on weekends and holidays as on other days of the week.

46. ___ ___ My child doesn't move around much at all in his/her sleep.

47. ___ ___ My child's appetite seems to stay the same day after day.

48. ___ ___ My child's mood is generally cheerful.

49. ___ ___ My child resists changes in routine.

50. ___ ___ My child laughs several times a day.

51. ___ ___ My child's first response to anything new is to move his or her head toward it.

52. ___ ___ Generally, my child is happy.

53. ___ ___ The number of times my child has a bowel movement on any day varies from day to day.

54. ___ ___ My child never seems to be in the same place for long

APPENDIX K: THE CHILD BEHAVIORAL CHECKLIST

Please print. Be sure to answer all items.

CHILD BEHAVIOR CHECKLIST FOR AGES 1½ - 5

For office use only
ID # [redacted]

CHILD'S FULL NAME: First [redacted] Middle Last

CHILD'S GENDER ☐ Boy ☐ Girl | CHILD'S AGE | CHILD'S ETHNIC GROUP OR RACE

TODAY'S DATE: Mo. _____ Date _____ Yr._____

CHILD'S BIRTHDATE: Mo. _____ Date _____ Yr._____

Please fill out this form to reflect *your* view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the space provided on page 2. ***Be sure to answer all items.***

PARENTS' USUAL TYPE OF WORK, even if not working now. *Please be specific—for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.*

FATHER'S TYPE OF WORK: _____

MOTHER'S TYPE OF WORK: _____

THIS FORM FILLED OUT BY: (print your full name)

[redacted]

Your relationship to child:

☐ Mother ☐ Father ☐ Other (specify):

Below is a list of items that describe children. For each item that describes the child ***now or within the past 2 months***, please circle the **2** if the item is ***very true*** or ***often true*** of the child. Circle the **1** if the item is ***somewhat or sometimes true*** of the child. If the item is ***not true*** of the child, circle the **0**. Please answer all items as well as you can, even if some do not seem to apply to the child.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	1	2	1.	Aches or pains (without medical cause; ***do not*** include stomach or headaches)
0	1	2	2.	Acts too young for age
0	1	2	3.	Afraid to try new things
0	1	2	4.	Avoids looking others in the eye
0	1	2	5.	Can't concentrate, can't pay attention for long
0	1	2	6.	Can't sit still, restless, or hyperactive
0	1	2	7.	Can't stand having things out of place
0	1	2	8.	Can't stand waiting; wants everything now
0	1	2	9.	Chews on things that aren't edible
0	1	2	10.	Clings to adults or too dependent
0	1	2	11.	Constantly seeks help
0	1	2	12.	Constipated, doesn't move bowels (when not sick)
0	1	2	13.	Cries a lot
0	1	2	14.	Cruel to animals
0	1	2	15.	Defiant
0	1	2	16.	Demands must be met immediately
0	1	2	17.	Destroys his/her own things
0	1	2	18.	Destroys things belonging to his/her family or other children
0	1	2	19.	Diarrhea or loose bowels (when not sick)
0	1	2	20.	Disobedient
0	1	2	21.	Disturbed by any change in routine
0	1	2	22.	Doesn't want to sleep alone
0	1	2	23.	Doesn't answer when people talk to him/her
0	1	2	24.	Doesn't eat well (describe): _____
0	1	2	25.	Doesn't get along with other children
0	1	2	26.	Doesn't know how to have fun; acts like a little adult
0	1	2	27.	Doesn't seem to feel guilty after misbehaving
0	1	2	28.	Doesn't want to go out of home
0	1	2	29.	Easily frustrated
0	1	2	30.	Easily jealous
0	1	2	31.	Eats or drinks things that are not food—***don't*** include sweets (describe): _____
0	1	2	32.	Fears certain animals, situations, or places (describe): _____
0	1	2	33.	Feelings are easily hurt
0	1	2	34.	Gets hurt a lot, accident-prone
0	1	2	35.	Gets in many fights
0	1	2	36.	Gets into everything
0	1	2	37.	Gets too upset when separated from parents
0	1	2	38.	Has trouble getting to sleep
0	1	2	39.	Headaches (without medical cause)
0	1	2	40.	Hits others
0	1	2	41.	Holds his/her breath
0	1	2	42.	Hurts animals or people without meaning to
0	1	2	43.	Looks unhappy without good reason
0	1	2	44.	Angry moods
0	1	2	45.	Nausea, feels sick (without medical cause)
0	1	2	46.	Nervous movements or twitching (describe): _____
0	1	2	47.	Nervous, highstrung, or tense
0	1	2	48.	Nightmares
0	1	2	49.	Overeating
0	1	2	50.	Overtired
0	1	2	51.	Shows panic for no good reason
0	1	2	52.	Painful bowel movements (without medical cause)
0	1	2	53.	Physically attacks people
0	1	2	54.	Picks nose, skin, or other parts of body (describe): _____

Be sure you have answered all items. Then see other side.

ASEBA, University of Vermont, 1 S. Prospect St., Burlington, VT 05401-3456 Web: http://Checklist.uvm.edu

7-28-00 Edition

[redacted]

Please print your answers. Be sure to answer all items.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	1	2	55.	Plays with own sex parts too much
0	1	2	56.	Poorly coordinated or clumsy
0	1	2	57.	Problems with eyes (without medical cause) (describe): _____
0	1	2	58.	Punishment doesn't change his/her behavior
0	1	2	59.	Quickly shifts from one activity to another
0	1	2	60.	Rashes or other skin problems (without medical cause)
0	1	2	61.	Refuses to eat
0	1	2	62.	Refuses to play active games
0	1	2	63.	Repeatedly rocks head or body
0	1	2	64.	Resists going to bed at night
0	1	2	65.	Resists toilet training (describe): _____
0	1	2	66.	Screams a lot
0	1	2	67.	Seems unresponsive to affection
0	1	2	68.	Self-conscious or easily embarrassed
0	1	2	69.	Selfish or won't share
0	1	2	70.	Shows little affection toward people
0	1	2	71.	Shows little interest in things around him/her
0	1	2	72.	Shows too little fear of getting hurt
0	1	2	73.	Too shy or timid
0	1	2	74.	Sleeps less than most children during day and/or night (describe): _____
0	1	2	75.	Smears or plays with bowel movements
0	1	2	76.	Speech problem (describe): _____
0	1	2	77.	Stares into space or seems preoccupied
0	1	2	78.	Stomachaches or cramps (without medical cause)
0	1	2	79.	Rapid shifts between sadness and excitement
0	1	2	80.	Strange behavior (describe): _____
0	1	2	81.	Stubborn, sullen, or irritable
0	1	2	82.	Sudden changes in mood or feelings
0	1	2	83.	Sulks a lot
0	1	2	84.	Talks or cries out in sleep
0	1	2	85.	Temper tantrums or hot temper
0	1	2	86.	Too concerned with neatness or cleanliness
0	1	2	87.	Too fearful or anxious
0	1	2	88.	Uncooperative
0	1	2	89.	Underactive, slow moving, or lacks energy
0	1	2	90.	Unhappy, sad, or depressed
0	1	2	91.	Unusually loud
0	1	2	92.	Upset by new people or situations (describe): _____
0	1	2	93.	Vomiting, throwing up (without medical cause)
0	1	2	94.	Wakes up often at night
0	1	2	95.	Wanders away
0	1	2	96.	Wants a lot of attention
0	1	2	97.	Whining
0	1	2	98.	Withdrawn, doesn't get involved with others
0	1	2	99.	Worries
0	1	2	100.	Please write in any problems the child has that were not listed above.
0	1	2		
0	1	2		

Please be sure you have answered all items.
Underline any you are concerned about.

Does the child have any illness or disability (either physical or mental)? ☐ No ☐ Yes—Please describe:

What concerns you most about the child?

Please describe the best things about the child:

Please print **CHILD BEHAVIOR CHECKLIST FOR AGES 6-18**

For office use only ID #

CHILD'S FULL NAME First Middle Last

CHILD'S GENDER ☐ Boy ☐ Girl

CHILD'S AGE

CHILD'S ETHNIC GROUP OR RACE

TODAY'S DATE Mo.____ Date____ Yr.____

CHILD'S BIRTHDATE Mo.____ Date____ Yr.____

GRADE IN SCHOOL _____

NOT ATTENDING SCHOOL ☐

Please fill out this form to reflect *your* view of the child's behavior even if other people might not agree. Feel free to print additional comments beside each item and in the space provided on page 2. ***Be sure to answer all items.***

PARENTS' USUAL TYPE OF WORK, even if not working now. *(Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)*

FATHER'S TYPE OF WORK _____

MOTHER'S TYPE OF WORK _____

THIS FORM FILLED OUT BY: (print your full name)

Your gender: ☐ Male ☐ Female

Your relation to the child:

☐ Biological Parent ☐ Step Parent ☐ Grandparent

☐ Adoptive Parent ☐ Foster Parent ☐ Other (specify)_____

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, computers, singing, etc. (Do ***not*** include listening to radio or TV.)

☐ None

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups your child belongs to.

☐ None

	Compared to others of the same age, how active is he/she in each?			
	Less Active	Average	More Active	Don't Know
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

☐ None

	Compared to others of the same age, how well does he/she carry them out?			
	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

Be sure you answered all items. Then see other side.

6-1-01 Edition - 201

Please print. Be sure to answer all items.

V. 1. About how many close friends does your child have? (Do *not* include brothers & sisters)

☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week does your child do things with any friends outside of regular school hours? (Do *not* include brothers & sisters)

☐ Less than 1 ☐ 1 or 2 ☐ 3 or more

VI. Compared to others of his/her age, how well does your child:

	Worse	Average	Better	
a. Get along with his/her brothers & sisters?	☐	☐	☐	☐ Has no brothers or sisters
b. Get along with other kids?	☐	☐	☐	
c. Behave with his/her parents?	☐	☐	☐	
d. Play and work alone?	☐	☐	☐	

VII. 1. Performance in academic subjects. ☐ Does not attend school because _____

_____

Check a box for each subject that child takes		Failing	Below Average	Average	Above Average
	a. Reading, English, or Language Arts	☐	☐	☐	☐
Other academic subjects–for example: computer courses, foreign language, business. Do *not* include gym, shop, driver's ed., or other nonacademic subjects.	b. History or Social Studies	☐	☐	☐	☐
	c. Arithmetic or Math	☐	☐	☐	☐
	d. Science	☐	☐	☐	☐
	e. _____	☐	☐	☐	☐
	f. _____	☐	☐	☐	☐
	g. _____	☐	☐	☐	☐

2. Does your child receive special education or remedial services or attend a special class or special school?

☐ No ☐ Yes—kind of services, class, or school:

3. Has your child repeated any grades? ☐ No ☐ Yes—grades and reasons:

4. Has your child had any academic or other problems in school? ☐ No ☐ Yes—please describe:

When did these problems start? _____

Have these problems ended? ☐ No ☐ Yes–when?

Does your child have any illness or disability (either physical or mental)? ☐ No ☐ Yes—please describe:

What concerns you most about your child?

Please describe the best things about your child.

Be sure you answered all items.

Please print. Be sure to answer all items.

Below is a list of items that describe children and youths. For each item that describes your child ***now or within the past 6 months***, please circle the ***2*** if the item is ***very true or often true*** of your child. Circle the ***1*** if the item is ***somewhat or sometimes true*** of your child. If the item is ***not true*** of your child, circle the ***0***. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 1. Acts too young for his/her age
0 1 2 2. Drinks alcohol without parents' approval (describe):_____
_____
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. There is very little he/she enjoys
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys things belonging to his/her family or others
0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Breaks rules at home, school, or elsewhere
0 1 2 29. Fears certain animals, situations, or places, other than school (describe): _____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe): _____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe): ____
_____
_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy or lightheaded
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired without good reason
0 1 2 55. Overweight
56. Physical problems ***without known medical cause:***
0 1 2 a. Aches or pains (***not*** stomach or headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (***not*** if corrected by glasses) (describe): _____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____

 Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____
_____
0 1 2 59. Plays with own sex parts in public
0 1 2 60. Plays with own sex parts too much
0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy
0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids
0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____
_____
0 1 2 67. Runs away from home
0 1 2 68. Screams a lot
0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe): _____
_____
_____
0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires
0 1 2 73. Sexual problems (describe): _____
_____
_____
0 1 2 74. Showing off or clowning
0 1 2 75. Too shy or timid
0 1 2 76. Sleeps less than most kids
0 1 2 77. Sleeps more than most kids during day and/or night (describe): _____
_____
0 1 2 78. Inattentive or easily distracted
0 1 2 79. Speech problem (describe): _____
_____
0 1 2 80. Stares blankly
0 1 2 81. Steals at home
0 1 2 82. Steals outside the home
0 1 2 83. Stores up too many things he/she doesn't need (describe): _____
_____
_____
0 1 2 84. Strange behavior (describe): _____
_____
0 1 2 85. Strange ideas (describe): _____
_____
0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot
0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe): _____
_____
0 1 2 93. Talks too much
0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much
0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking
0 1 2 99. Smokes, chews, or sniffs tobacco
0 1 2 100. Trouble sleeping (describe): _____
_____
0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy
0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud
0 1 2 105. Uses drugs for nonmedical purposes (***don't*** include alcohol or tobacco) (describe): _____
_____
_____
0 1 2 106. Vandalism
0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed
0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex
0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries
113. Please write in any problems your child has that were not listed above:
0 1 2 _____
0 1 2 _____
0 1 2 _____

Please be sure you answered all items.

APPENDIX L: POST PARTICIPATION INFORMATION

Post Participation Information

PROJECT: Parents' Temperament and Personality
INVESTIGATORS: Jayme Puff, B.S., Graduate Student, & Kimberly Renk, Ph.D.

Thank you for participating in this research project. This project is being conducted so that we may find out more about the relationships among parents' temperament and personality, associated parenting behaviors, parent locus of control, parent core self-evaluations, and young children's temperament and behavior problems. In your packet, you completed several questionnaires inquiring about your own characteristics and characteristics that your child may be exhibiting, as well as your own parenting experiences. The responses to these questionnaires will be used to explore the relationships among your personality and temperament styles, your parenting behaviors, and the ratings that you provided about your child. It may be that parents' temperament and personality, and parenting behaviors play a role in children's temperament and emotional and behavioral functioning and can serve as a point of intervention in those families that are experiencing difficulties.

This research may be helpful in increasing your awareness of your own temperamental and personality characteristics, parenting behaviors, your child's emotions, your child's behaviors, and some of the elements that relate to child development. We also hope that the information collected as part of this study may be used to help families that are not as fortunate as yours when they seek psychological services for their children and/or information regarding parenting.

If you would like more information about parents' temperament and personality, parenting behaviors, and child behavior, please refer to the following sources:

Belsky, J., & Barends, N. (2002). Personality and parenting. In M. H. Bornstein (Eds.), *Handbook of parenting: Vol. 3: Being and becoming a parent (2nd edition)* (pp. 415-438). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Mantymaa, M., Puura, K., Luoma, I., Latva, R., Salmelin, R. K., & Tamminsen, T. (2012). Predicting internalizing and externalizing problems at five years by child and parental factors in infancy and toddlerhood. *Child Psychiatry and Human Development, 43*(2), 153-170. DOI 10.1007/s10578-011-0255-0

Patterson, G.R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Thomas, A., & Chess, S. (1977). *Temperament and development.* New York, NY: Brunner/Mazel, Inc.

Thomas, A., & Chess, S. (1989). Temperament and personality. In G. A. Kohnstamm, J. E. Bates, M. Rothbart, G. A. Kohnstamm, J. E. Bates, & M. Rothbart (Eds.), *Temperament in childhood* (pp. 249-261). Oxford England: John Wiley & Sons.

If you have any further questions about this research study, please contact Kim Renk, Ph.D., by phone (407-823-2218) or e-mail (krenk@mail.ucf.edu). If you have questions regarding psychological or evaluation services, please contact the Young Family and Child Research Clinic at 407-257-2978, Associates in Psychology and Counseling at 407-523-1213, or Counseling Corner at 407-843-4968.

REFERENCES

Achenbach, T. M. (1978). The child behavior profile: I. Boys aged 6-11. *Journal of Consulting and Clinical Psychology, 46*(3)*,* 478-488.

Achenbach, T. M., & Rescorla, L. A. (2000). *Manual for the ASEBA preschool forms and profiles.* Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T. M., & Rescorla, L.A. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

Ahadi, S. A., & Rothbart, M. K. (1994). Temperament, development, and the big five. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 189-207). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Aluja, A., & Blanch, A. (2011). The five and seven factors personality models: Differences and similitude between the TCI-R, NEO-FFI-R, and ZKPQ-50-CC. *The Spanish Journal of Psychology, 14*(2), 659-666.

Angleitner, A., & Ostendorf, F. (1994). Temperament and the big five factors of personality. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 69-90). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Baumrind, D. (1989). Rearing competent children. In W. Damon (Eds.), *Child development today and tomorrow* (pp. 349-378). San Francisco, CA US: Jossey-Bass.

Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence*, *11*(1), 56-95. doi:10.1177/0272431691111004

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Barry, T. D., Dunlap, S. T., Lochman, J. E., & Wells, K. C. (2009). Inconsistent discipline as a mediator between maternal distress and aggression in boys. *Child & Family Behavior Therapy*, *31*(1), 1-19. doi:10.1080/07317100802701186

Bartlett, M. S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of Royal Statistical Society, 16*, 296-298.

Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, *55*(1), 83-96. doi:10.2307/1129836

Belsky, J. (1997). Variation in susceptibility to environmental influence: An evolutionary argument. *Psychological Inquiry*, *8*(3), 182-186. doi:10.1207/s15327965pli0803_3

Belsky, J. (2005). Differential susceptibility to rearing influence: An evolutionary hypothesis and some evidence. In B. J. Ellis, D. F. Bjorklund, B. J. Ellis, & D. F. Bjorklund (Eds.), *Origins of the social mind: Evolutionary psychology and child development.* (pp. 139-163). New York: Guilford Press.

Belsky, J., & Barends, N. (2002). Personality and parenting. In M. H. Bornstein (Eds.), *Handbook of parenting: Vol. 3: Being and becoming a parent (2nd edition)* (pp. 415-438). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Belsky, J., Crnic, K., & Woodworth, S. (1995). Personality and parenting: Exploring the mediating role of transient mood and daily hassles. *Journal of Personality*, *63*(4), 905-929. doi:10.1111/j.1467-6494.1995.tb00320.x

Billman, J., & McDevitt, S. C. (1980). Convergence of parent and observer ratings of temperament with observations of peer interaction in nursery school. *Child Development*, *51*(2), 395-400. doi:10.2307/1129272

Bledsoe, J. C., & Baber, W. C. (1978). Personality correlates of locus of control among college women. *Psychological Reports, 43*(3, Pt 2), 1129-1130.

Blackson, T. C., Tarter, R. E., Martin, C. S., & Moss, H. B. (1994). Temperament mediates the effects of family history of substance abuse on externalizing and internalizing child behavior. *The American Journal on Addictions, 3*(1)*,* 58-66.

Bornstein, M. H., Hahn, C., & Haynes, O. (2011). Maternal personality, parenting cognitions, and parenting practices. *Developmental Psychology*, *47*(3), 658-675. doi:10.1037/a0023181

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment (2nd edition).* New York: Basic Books.

Bradley, R. H., & Corwyn, R. F. (2008). Infant temperament, parenting, and externalizing behavior in first grade: A test of the differential susceptibility hypothesis. *Journal of Child Psychology And Psychiatry*, *49*(2), 124-131.

Brown, G. L., Mangelsdorf, S. C., Neff, C., Schoppe-Sullivan, S. J., & Frosch, C. A. (2009). Young children's self-concepts: Associations with child temperament, mothers' and fathers' parenting, and triadic family interaction. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, *55*(2), 184-216.

Bugental, D. B., Caporael, L., & Shennum, W. A. (1980). Experimentally produced child uncontrollability: Effects on the potency of adult communication patterns. *Child Development*, *51*(2), 520-528. doi:10.2307/1129287

Bugental, D. B., & Shennum, W. A. (1984). 'Difficult' children as elicitors and targets of adult communication patterns: An attributional-behavioral transactional analysis. *Monographs of the Society for Research in Child Development*, *49*(1), 1-79. doi:10.2307/1165910

Buss, A. H., & Plomin, R. (1984). *Temperament: Early developing personality traits.* Hillsdale, NJ: Erlbaum.

Calkins, S. D., Hungerford, A., & Dedmon, S. E. (2004). Mothers' interactions with temperamentally frustrated infants. *Infant Mental Health Journal*, *25*(3), 219-239. doi:10.1002/imhj.20002

Campbell, S. B., Shaw, D. S., & Gilliom, M. (2000). Early externalizing behavior problems: Toddlers and preschoolers at risk for later maladjustment. *Development and Psychopathology, 12*(3)*,* 467-488.

Campis, L. K., Lyman, R. D., & Prentice-Dunn, S. (1986). The Parental Locus of Control Scale: Development and validation. *Journal of Clinical Child Psychology*, *15*(3), 260-267. doi:10.1207/s15374424jccp1503_10

Chang, C. H., Ferris, D. L., Johnson, R. E., Rosen, C. C., & Tan, J. A. (2012). Core self-evaluations: A review and evaluation of the literature. *Journal of Managament, 38*(1), 81-128.

Chess, S. (1968). Temperament and learning ability of school children. *American Journal of Public Health, 58*(12)*,* 2231-2239.

Clark, L., Kochanska, G., & Ready, R. (2000). Mothers' personality and its interaction with child temperament as predictors of parenting behavior. *Journal of Personality and Social Psychology*, *79*(2), 274-285. doi:10.1037/0022-3514.79.2.274

Clark, L., & Watson, D. (2008). Temperament: An organizing paradigm for trait psychology. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research (3rd ed.)* (pp. 265-286). New York, NY US: Guilford Press.

Clerkin, S.M., Marks, D.J., Policaro, K., & Halperin, J.M. (2007). Psychometric properties of the Alabama Parenting Questionnaire-Preschool Revision. *Journal of Clinical Child and Adolescent Psychology, 36*(1), 19-28.

Conger, R. D., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1994). *Families in troubled times: Adapting to change in rural America.* New York: Walter de Gruyter, Inc.

Coplan, R. J., Reichel, M., & Rowan, K. (2009). Exploring the associations between maternal personality, child temperament, and parenting: A focus on emotions. *Personality and Individual Differences*, *46*(2), 241-246. doi:10.1016/j.paid.2008.10.011

Costa, T. P., & McCrae, R. R. (1992a). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological Assessment, 4*(1), 5-13. doi: 10.1037/1040-3590.4.1.5

Costa, P. T., Jr., & McCrae, R. R. (1992b). *Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI): Professional manual.* Odessa, FL: Psychological Assessment Resources.

Costa, P. R., McCrae, R. R., Martin, T. A., Oryol, V. E., Senin, I. G., Rukavishnikov, A. A., & ... Realo, A. (2000). Personality development from adolescence through adulthood: Further cross-cultural comparisons of age differences. In V. J. Molfese & D. L. Molfese (Eds.), *Temperament and personality development across the life span* (pp. 235-252). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Cowan, C. P., Cowan, P. A., Heming, B., & Miller, N. B. (1991). Becoming a family: Marriage, parenting, and child development. In P. A. Cowan & E. M. Hetherington (Eds.), *Family transitions* (pp. 79-109). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113*(3), 487-496.

Deater-Deckard, K. (2004). *Parenting stress.* CT: Yale University Press.

de Haan, A. D., Deković, M., & Prinzie, P. (2012). Longitudinal impact of parental and adolescent personality on parenting. *Journal of Personality and Social Psychology*, *102*(1), 189-199. doi:10.1037/a0025254

de Haan, A. D., Prinzie, P., & Deković, M. (2009). Mothers' and fathers' personality and parenting: The mediating role of sense of competence. *Developmental Psychology*, *45*(6), 1695-1707. doi:10.1037/a0016121

De Pauw, S. S. W., Mervielde, I., & Van Leeuwen, K. G. (2009). How are traits related to problem behavior in preschoolers? Similarities and contrasts between temperament and personality. *Journal of Abnormal Child Psychology, 37*(3), 309-325. doi:10.1007/s10802-008-9290-0

Erez, A., & Judge, T. A. (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology, 86*(6), 1270-1279.

Eysenck, H. J. (1997). Personality and experimental psychology: The unification of psychology and the possibility of a paradigm. *Journal of Personality and Social Psychology*, *73*(6), 1224-1237. doi:10.1037/0022-3514.73.6.1224

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage.

Freed, R. D., & Tompson, M. C. (2011). Predictors of parental locus of control in mothers of pre- and early adolescents. *Journal of Clinical Child and Adolescent Psychology*, *40*(1), 100-110. doi:10.1080/15374416.2011.533410

Frick, P. J. (1991). *The Alabama Parenting Questionnaire*. Unpublished Instrument: University of Alabama.

Frick, P. J., Lahey, B. B., Loeber, R., Stouthamer-Loeber, M., Christ, M. A. G., & Hanson, K. (1992). Familial risk factors to conduct disorder and oppositional defiant disorder: Parental psychopathology and maternal parenting. *Journal of Consulting and Clinical Psychology, 60*(1)*,* 49-55. doi: 10.1037/0022-006X.60.1.49

Galejs, I., & Pease, D. (1986). Parenting beliefs and locus of control orientation. *Journal of Psychology: Interdisciplinary and Applied*, *120*(5), 501-509.

Galejs, I., Pease, D., & Wolins, L. (1984). Personal reaction scale for college and non-college adults: Its development and factorial validity. *Educational and Psychological Measurement, 44*(2)*,* 383-393. doi: 10.1177/0013164484442019

Goldsmith, H., Buss, A. H., Plomin, R., & Rothbart, M. K. (1987). What is temperament? Four approaches. *Child Development*, *58*(2), 505-529. doi:10.2307/1130527

Gordon, B. N. (1981). Child temperament and adult behavior: An exploration of 'goodness of fit.'. *Child Psychiatry and Human Development*, *11*(3), 167-178. doi:10.1007/BF00709381

Guzell, J. R., & Vernon-Feagans, L. (2004). Parental perceived control over caregiving and its relationship to parent-infant interaction. *Child Development*, *75*(1), 134-146. doi:10.1111/j.1467-8624.2004.00659.x

Harris, D. R., Bisbee, C. T. & Evans, S. H. (1971). Further comments: Misuse of analysis of covariance. *Psychological Bulletin, 75,* 220-222.

Hagekull, B., Bohlin, G., & Hammarberg, A. (2001). The role of parental perceived control in child development: A longitudinal study. *International Journal of Behavioral Development*, *25*(5), 429-437. doi:10.1080/016502501316934851

Heinicke, C. M. (1984). Impact of prebirth parent personality and marital functioning on family development: A framework and suggestions for further study. *Developmental Psychology*, *20*(6), 1044-1053. doi:10.1037/0012-1649.20.6.1044

Huver, R. E., Otten, R., de Vries, H., & Engels, R. E. (2009). Personality and parenting style in parents of adolescents. *Journal of Adolescence*, *33*(3), 395-402. doi:10.1016/j.adolescence.2009.07.012

Janssens, J. M. (1994). Authoritarian child rearing, parental locus of control, and the child's behaviour style. *International Journal of Behavioral Development*, *17*(3), 485-501. doi:10.1016/0163-6383(94)90044-2

Johnson, R. E., Rosen, C. C., & Levy, P. E. (2008). Getting to the core of core self-evaluation: A review and recommendations. *Journal of Organizational Behavior, 29*, 391-413.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The Core Self-Evaluations Scale: Development of a measure. *Personnel Psychology, 56*(2), 303-331. doi:10.1111/j.1744-6570.2003.tb00152.x

Judge T. A., Locke E. A., & Durham C. C., (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior, 19,*151-188.

Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika,* 39, 31-36.

Karreman, A., de Haas, S., van Tuijl, C., van Aken, M. G., & Deković, M. (2010). Relations among temperament, parenting and problem behavior in young children. *Infant Behavior and Development*, *33*(1), 39-49. doi:10.1016/j.infbeh.2009.10.008

Karreman, A., van Tuijl, C., van Aken, M. G., & Deković, M. (2008). The relation between parental personality and observed parenting: The moderating role of preschoolers' effortful control. *Personality and Individual Differences*, *44*(3), 723-734. doi:10.1016/j.paid.2007.10.005

Kochanska, G. (1993). Toward a synthesis of parental socialization and child temperament in early development of conscience. *Child Development, 64*(2), 325-347.

Kochanska, G., Friesenborg, A. E., Lange, L. A., & Martel, M. M. (2004). Parents' personality and infants' temperament as contributors to their emerging relationship. *Journal of Personality and Social Psychology*, *86*(5), 744-759. doi:10.1037/0022-3514.86.5.744

Koenig, J. L., Barry, R. A., & Kochanska, G. (2010). Rearing difficult children: Parents' personality and children's proneness to anger as predictors of future parenting. *Parenting: Science and Practice*, *10*(4), 258-273. doi:10.1080/15295192.2010.492038

Komsi, N., Räikkönen, K., Heinonen, K., Pesonen, A., Keskivaara, P., Järvenpää, A., & Strandberg, T. E. (2008). Transactional development of parent personality and child temperament. *European Journal of Personality*, *22*(6), 553-573. doi:10.1002/per.690

Kristal, J. (2005). *The temperament perspective: Working with children's behavioral styles.* Baltimore, MD: Paul Brookes Publishing Company.

Kuypers, J. A. (1972). Internal-external locus of control, ego functioning, and personality characteristics in old age. *The Gerontologist, 12*(2, Pt. 1), 168-173.

Lamborn, S. D., Mounts, N. S., Steinberg, L., & Dornbusch, S. M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, *62*(5), 1049-1065. doi:10.2307/1131151

Latzman, R. D., Elkovitch, N., & Clark, L. (2009). Predicting parenting practices from maternal and adolescent sons' personality. *Journal of Research in Personality*, *43*(5), 847-855. doi:10.1016/j.jrp.2009.05.004

Leenders, F. H. (1985). Responsiviteit van moeders en hun 3 à 4 jarige kinderen in samenhang tot kindkenmerken in het bijzonder het temperament. *Gedrag: Tijdschrift Voor Psychologie, 13*(3-4), 11-33.

Lengua, L. J. (2006). Growth in temperament and parenting as predictors of adjustment during children's transition to adolescence. *Developmental Psychology, 42*(2), 819–832. doi: 10.1037/0012-1649.42.5.819

Lengua, L. J., & Kovacs, E. A. (2005). Bidirectional associations between temperament and parenting and the prediction of adjustment problems in middle childhood. *Journal of Applied Developmental Psychology*, *26*(1), 21-38. doi:10.1016/j.appdev.2004.10.001

Lerner, J. V. (1993). The influence of child temperament characteristics on parent behaviors. In T. Luster & L. Okagaki (Eds.) *Parenting: An ecological perspective* (pp. 101-120). Hillsdale, NJ: Erlbaum.

Loeb, R. C. (1975). Concomitants of boys' locus of control examined in parent-child interactions. *Developmental Psychology*, *11*(3), 353-358. doi:10.1037/h0076584

Macdonald, A. P. (1971). Internal-external locus of control: Parental antecedents. *Journal of Consulting and Clinical Psychology*, *37*(1), 141-147. doi:10.1037/h0031281

MacDonald, D. A., & Holland, D. (2002). Examination of relations between the NEO Personality Inventory-Revised and the Temperament and Character Inventory. *Psychological Reports*, *91*(3, Pt1), 921-930. doi: 10.2466/PR0.91.7.921-930

MacKinnon, D. P., Cheong, J., & Pirlott, A. G. (2012). Statistical mediation analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 313-331). Washington, DC US: American Psychological Association. doi:10.1037/13620-018

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, *58,* 593-614. doi:10.1146/annurev.psych.58.110405.085542

Manfredi, C., Caselli, G., Rovetto, F., Rebecchi, D., Ruggiero, G. M., Sassaroli, S., & Spada, M. M. (2011). Temperament and parental styles as predictors of ruminative brooding and worry. *Personality and Individual Differences*, *50*(2), 186-191. doi:10.1016/j.paid.2010.09.023

Mangelsdorf, S., Gunnar, M., Kestenbaum, R., & Lang, S. (1990). Infant proneness-to-distress temperament, maternal personality, and mother-infant attachment: Associations and goodness of fit. *Child Development, 61*(3), 820-831. doi: 10.2307/1130966.

Manian, N., Papadakis, A. A., Strauman, T. J., & Essex, M. J. (2006). The development of children's ideal and ought self-guides: Parenting, temperament, and individual differences in guide strength. *Journal of Personality*, *74*(6), 1619-1645. doi:10.1111/j.1467-6494.2006.00422.x

Mantymaa, M., Puura, K., Luoma, I., Latva, R., Salmelin, R. K., & Tamminsen, T. (2012). Predicting internalizing and externalizing problems at five years by child and parental factors in infancy and toddlerhood. *Child Psychiatry and Human Development, 43*(2), 153-170. DOI 10.1007/s10578-011-0255-0

McCabe, K. M., Goehring, K., Yeh, M., & Lau, A. S. (2008). Parental locus of control and externalizing behavior problems among Mexican American preschoolers. *Journal of Emotional and Behavioral Disorders*, *16*(2), 118-126. doi:10.1177/1063426608315139

McCrae, R. R., & Costa, P.T. (2007). Brief versions of the NEO-PI-3. *Journal of Individual Differences, 28*(3), 116–12. DOI 10.1027/1614-0001.28.3.116.

McCrae, R. R., Costa, P. R., Ostendorf, F., Angleitner, A., Hřebíčková, M., Avia, M. D., & ... Smith, P. B. (2000). Nature over nurture: Temperament, personality, and life span development. *Journal of Personality and Social Psychology*, *78*(1), 173-186. doi:10.1037/0022-3514.78.1.173

McClun, L. A., & Merrell, K. W. (1998). Relationship of perceived parenting styles, locus of control orientation, and self-concept among junior high age students. *Psychology in the Schools*, *35*(4), 381-390. doi:10.1002/(SICI)1520-6807(199810)35:4<381::AID-PITS9>3.0.CO;2-S

Mehrabian, A., & O'Reilly, E. (1980). Analysis of personality measures in terms of basic dimensions of temperament. *Journal of Personality and Social Psychology, 38*(3), 492-503. doi: 0022-3514/80/3803-0492$00.75

Metsäpelto, R., & Pulkkinen, L. (2003). Personality traits and parenting: Neuroticism, extraversion, and openness to experience as discriminative factors. *European Journal of Personality*, *17*(1), 59-78. doi:10.1002/per.468

Meunier, J., & Roskam, I. (2009). Self-efficacy beliefs amongst parents of young children: Validation of a self-report measure. *Journal of Child and Family Studies*, *18*(5), 495-511. doi:10.1007/s10826-008-9252-8

Meunier, J., Roskam, I., & Browne, D. T. (2011). Relations between parenting and child behavior: Exploring the child's personality and parental self-efficacy as third variables. *International Journal of Behavioral Development, 35*(3), 246-259.

Mezulis, A. H., Hyde, J., & Abramson, L. Y. (2006). The developmental origins of cognitive vulnerability to depression: Temperament, parenting, and negative life events in childhood as contributors to negative cognitive style. *Developmental Psychology*, *42*(6), 1012-1025. doi:10.1037/0012-1649.42.6.1012

Middleton, M., & Renk, K. (2012). *Match between parent and child temperament: Implications for parenting behaviors and young children's behavior problems.* Manuscript in preparation.

Miller, G. A., & Chapman, J. P. (2001). Misunderstanding analysis of covariance. *Journal of Abnormal Psychology, 110* (1), 40-48.

Mouton, P. Y., & Tuma, J. M. (1988). Stress, locus of control, and role satisfaction in clinic and control mothers. *Journal of Clinical Child Psychology*, *17*(3), 217-224. doi:10.1207/s15374424jccp1703_4

Myers, R. (1990). *Classical and modern regression with applications* (2nd ed.). Boston, MA: Duxbury.

Nowicki, S., & Segal, W. (1974). Perceived parental characteristics, locus of control orientation, and behavioral correlates of locus of control. *Developmental Psychology*, *10*(1), 33-37. doi:10.1037/h0035563

Oliver, P. H., Guerin, D., & Coffman, J. K. (2009). Big five parental personality traits, parenting behaviors, and adolescent behavior problems: A mediation model. *Personality and Individual Differences*, *47*(6), 631-636. doi:10.1016/j.paid.2009.05.026

Ollendick, D. G. (1979). Parental locus of control and the assessment of children's personality characteristics. *Journal of Personality Assessment*, *43*(4), 401-405. doi:10.1207/s15327752jpa4304_12

Palisin, H. (1986). Preschool temperament and performance on achievement tests. *Developmental Psychology*, *22*(6), 766-770. doi:10.1037/0012-1649.22.6.766

Patterson, G.R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Patterson, G. R. (1986). Performance models for antisocial boys. *American Psychologist, 41*(4)*,* 432-444.

Paterson, G., & Sanson, A. (1999). The association of behavioural adjustment to temperament, parenting and family characteristics among 5-year-old children. *Social Development*, *8*(3), 293-309. doi:10.1111/1467-9507.00097

Prinzie, P., Stams, G. M., Deković, M., Reijntjes, A. A., & Belsky, J. (2009). The relations between parents' big five personality factors and parenting: A meta-analytic review. *Journal of Personality and Social Psychology*, *97*(2), 351-362. doi:10.1037/a0015823

Rayfield, A., Eyberg, S.M., Boggs, S., & Roberts, M. (1995a). *Parenting Locus of Control-Short Form.* [On-Line]. Available: http://www.phhp.ufl.edu/~eyberg/NewTemplateFolder/Measures.htm

Rayfield, A., Eyberg, S.M., Boggs, S., & Roberts, M. (1995b). *Development and validation of the Parenting Locus of Control- Short Form.* Paper presented at the annual meeting of the AABT Preconference on Social Learning and the Family, Washington, DC.

Reid, J. B. (1993). Prevention of conduct disorder before and after school entry: Relating interventions to developmental findings. *Development and Psychopathology, 5*(1-2)*,* 263-276.

Rettew, D. C., Stanger, C., McKee, L., Doyle, A., & Hudziak, J. J. (2006). Interactions between child and parent temperament and child behavior problems. *Comprehensive Psychiatry*, *47*(5), 412-420. doi:10.1016/j.comppsych.2005.12.008

Roberts, M. W., Joe, V. C., & Rowe-Hallbert, A. (1992). Oppositional child behavior and parental locus of control. *Journal of Clinical Child Psychology*, *21*(2), 170-177. doi:10.1207/s15374424jccp2102_9

Roberts, B. W., Wood, D., & Smith, J. L. (2005). Evaluating five factor theory and social investment perspectives on personality trait development. *Journal of Research in Personality, 39*(1), 166-184. doi:10.1016/j.jrp.2004.08.002

Rothbart, M. (1989). Behavioral approach and inhibition. In J. Reznick & J. Reznick (Eds.) , *Perspectives on behavioral inhibition* (pp. 139-157). Chicago, IL: University of Chicago Press.

Rothbart, M. K. (2007). Temperament, development, and personality. *Current Directions in Psychological Science*, *16*(4), 207-212. doi:10.1111/j.1467-8721.2007.00505.x

Rothbart, M. K., & Ahadi, S. A. (1994). Temperament and the development of personality. *Journal of Abnormal Psychology*, *103*(1), 55-66. doi:10.1037/0021-843X.103.1.55

Rothbart, M. K., Ahadi, S. A., & Evans, D. E. (2000). Temperament and personality: Origins and outcomes. *Journal of Personality and Social Psychology*, *78*(1), 122-135. doi:10.1037/0022-3514.78.1.122

Rothbart, M. K., & Bates, J. E. (2006). Temperament. In N. Eisenberg, W. Damon, R. M. Lerner, N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 3, Social, emotional, and personality development (6th edition)* (pp. 99-166). Hoboken, NJ: John Wiley & Sons, Inc.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, *80*(1), 1-28. doi:10.1037/h0092976

Rubin, K. H., Burgess, K. B., Dwyer, K. M., & Hastings, P. D. (2003). Predicting preschoolers' externalizing behaviors from toddler temperament, conflict, and maternal negativity. *Developmental Psychology, 39*(1)*,* 164-176.

Schoppe-Sullivan, S. J., Mangelsdorf, S. C., Brown, G. L., & Sokolowski, M. (2007). Goodness-of-fit in family context: Infant temperament, marital quality, and early coparenting behavior. *Infant Behavior and Development*, *30*(1), 82-96. doi:10.1016/j.infbeh.2006.11.008

Schultz, D. P., & Schultz, S. E. (2009). *Theories of personality (9th ed.)*. Belmont, CA: Wadsworth/Cengage Learning.

Shelton, K. K., Frick, P. J., & Wootton, J. (1996). The assessment of parenting practices in families of elementary school-aged children. *Journal of Clinical Child Psychology, 25*(3), 317-327.

Smetana, J. (Ed.). (1994). *Beliefs about parenting: Origins and developmental implications*. San Francisco, CA US: Jossey-Bass.

Smith, C. L. (2010). Multiple determinants of parenting: Predicting individual differences in maternal parenting behavior with toddlers. *Parenting: Science and Practice*, *10*(1), 1-17. doi:10.1080/15295190903014588

Smith, C. L., Spinrad, T. L., Eisenberg, N., Gaertner, B. M., Popp, T. K., & Maxon, E. (2007). Maternal personality: Longitudinal associations to parenting behavior and maternal emotional expressions toward toddlers. *Parenting: Science and Practice*, *7*(3), 305-329.

Steinberg, L., Lamborn, S. D., Dornbusch, S. M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, *63*(5), 1266-1281. doi:10.2307/1131532

Stelmack, R. M., Kruidenier, B. G., & Anthony, S. B. (1985). A factor analysis of the Eysenck Personality Questionnaire and the Strelau Temperament Inventory. *Personality and Individual Differences, 6*(5), 657-659. doi: 10.1016/0191-8869(85)90020-0

Stright, A., Gallagher, K., & Kelley, K. (2008). Infant temperament moderates relations between maternal parenting in early childhood and children's adjustment in first grade. *Child Development*, *79*(1), 186-200. doi:10.1111/j.1467-8624.2007.01119.x

Szmigielska, B. (1980). Personality traits and locus of control over reinforcements. *Przegląd Psychologiczny, 23*(2), 271-279.

Taylor, L. C., Clayton, J. D., & Rowley, S. J. (2004). Academic socialization: Understanding parental influences on children's school-related development in the early years. *Review of General Psychology*, *8*(3), 163-178. doi:10.1037/1089-2680.8.3.163

Thomas, A., & Chess, S. (1977). *Temperament and development.* New York, NY: Brunner/Mazel, Inc.

Thomas, A., & Chess, S. (1989). Temperament and personality. In G. A. Kohnstamm, J. E. Bates, M. Rothbart, G. A. Kohnstamm, J. E. Bates, & M. Rothbart (Eds.), *Temperament in childhood* (pp. 249-261). Oxford, England: John Wiley & Sons.

Thomas, A., Chess, S., & Birch, H. G., (1968). *Temperament and behavior disorders in children.* New York, NY: New York University Press.

Thomas, A., Chess, S., Birch, H. G., Hertzig, M. E., & Korn, S. (1963). *Behavioral individuality in early childhood*. Oxford, England: New York University Press.

Thompson, R. A., Winer, A. C., & Goodvin, R. (2011). The individual child: Temperament, emotion, self, and personality. In M. E. Lamb, M. H. Bornstein, M. E. Lamb, M. H. Bornstein (Eds.), *Social and personality development: An advanced textbook* (pp. 217-258). New York, NY: Psychology Press.

Tschann, J. M., Kaiser, P., Chesney, M. A., Alkon, A., & Boyce, W. T. (1996). Resilience and vulnerability among preschool children: Family functioning, temperament, and behavior

problems. *Journal of the American Academy of Child and Adolescent Psychiatry*, *35*(2), 184-192. doi:10.1097/00004583-199602000-00012

Tupes, E. C., & Christal, R. E. (1992). Recurrent personality factors based on trait ratings. *Journal of Personality, 60*(2), 225-251. doi:10.1111/j.1467-6494.1992.tb00973.x

van Aken, C. C., Junger, M. M., Verhoeven, M. M., van Aken, M. G., & Deković, M. M. (2007a). The interactive effects of temperament and maternal parenting on toddlers' externalizing behaviours. *Infant and Child Development*, *16*(5), 553-572. doi:10.1002/icd.529

van Aken, C. C., Junger, M. M., Verhoeven, M. M., van Aken, M. G., Deković, M. M., & Denissen, J. A. (2007b). Parental personality, parenting and toddlers' externalising behaviours. *European Journal of Personality*, *21*(8), 993-1015. doi:10.1002/per.643

van Zeijl, J., Mesman, J., Stolk, M. N., Alink, L. A., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & ... Koot, H. M. (2007). Differential susceptibility to discipline: The moderating effect of child temperament on the association between maternal discipline and early childhood externalizing problems. *Journal of Family Psychology*, *21*(4), 626-636. doi:10.1037/0893-3200.21.4.626

Webster-Stratton, C., & Eyberg, S. M. (1982). Child temperament: Relationship with child behavior problems and parent–child interactions. *Journal of Clinical Child Psychology*, *11*(2), 123-129.

Williams, L. R., Degnan, K. A., Perez-Edgar, K. E., Henderson, H. A., Rubin, K. H., Pine, D. S., Steinberg, L., & Fox, N. A. (2009). Impact of behavioral inhibition and parenting style on internalizing and externalizing problems from early childhood through adolescence. *Journal of Abnormal Child Psychology, 37*(8), 1063-1075. DOI 10.1007/s10802-009-9331-3.

Windle, M., & Lerner, R. M. (1986). Reassessing the dimensions of temperamental individuality across the life span: The revised dimensions of temperament survey (DOTS-R). *Journal of Adolescent Research, 1*(2)*,* 213–230.

Xu, Y., Farver, J. M., & Zhang, Z. (2009). Temperament, harsh and indulgent parenting, and Chinese children's proactive and reactive aggression. *Child Development*, *80*(1), 244-258. doi:10.1111/j.1467-8624.2008.01257.x

Zentner, M., & Bates, J. E. (2008). Child temperament: An integrative review of concepts, research programs, and measures. *European Journal of Developmental Science*, *2*(1-2), 7-37.