

## ABSTRACT

Title of Thesis: PARENTS OF CHILDREN WITH ADHD: COGNITIONS,  
EMOTIONAL, AND BEHAVIORAL RESPONSES TO ADHD  
SYMPTOMS

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The present study investigated the association between parent's of children with ADHD and their behavioral and emotional responses to their child's symptoms, as well as the parent's emotional and behavioral responses to their own cognitions and coping related traits. Current research on ADHD suggests that diagnosis of this neurodevelopment disorder is rising and parents of children with ADHD face unfavorable outcomes such as increased stress, burdensome of parenting role, and lack of warmth toward their children. However, research investigating the interaction among parent's behaviors, emotions, and cognitions in response to their child's ADHD behavior is lacking. This study collected primary data from 100 parents of children with ADHD that were members of the national organization CHADD. The study examined the association between child gender, child ADHD behaviors, parent coping related traits, and parent negative attributions toward their child. Child ADHD behavior, parent coping related traits, and parent negative attributions were predictive of parent anger, anxiety, authoritarian, and authoritative behaviors. Implications of these findings are discussed.

PARENTS OF CHILDREN WITH ADHD: COGNITIONS, EMOTIONAL, &  
BEHAVIORAL RESPONSES TO ADHD SYMPTOMS

by

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## CHAPTER 1: INTRODUCTION

### Statement of the Problem

The diagnosis of Attention Deficit/Hyperactivity Disorder (ADHD) is the most common neurodevelopmental disorder school-aged children receive (Centers for Disease Control and Prevention [CDC], 2017, American Academy of Pediatrics [AAP], 2011). The ADHD diagnosis is on the rise, with a 42% increase between the years 2003 to 2011 (Visser et al., 2014). ADHD is diagnosed in 5% of children worldwide (Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007), with recent surveys (2011-2013) reporting 9.5% of children between the ages 4-17 years ever receiving an ADHD diagnosis (Visser et al., 2014; Pastor, Reuben, Duran, & Hawkins, 2015).

There are a few possible explanations for the increase in the prevalence of ADHD diagnoses. The Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association has changed the diagnostic criteria for ADHD from Edition IV-TR (APA, 2000) to Edition 5 (APA, 2013), including changes in the age range permitted for symptom-appearance as well as the settings required for the presence of symptoms. The inclusive requirements broaden the range of the population of children who can be diagnosed. The specific language used in the actual definitive criteria for ADHD symptoms, however, has not changed; the nine definitions for symptoms of inattention as well as the nine definitions for hyperactivity/impulsivity are the same in both editions (APA, 2000; APA, 2013). Another explanation is the increasing use of the DSM by mental health care providers nationally and internationally. Compared to the International Classification of Diseases (ICD), the DSM has a broader definition of ADHD (WHO, 1993; APA, 2013). Another widely accepted explanation is that both parents and teachers

have access to unlimited information via the Internet, bringing greater awareness of the symptoms of ADHD and prompting more referrals to child psychiatrists (Hinshaw, 2014). In addition, the frequencies of adolescents and adults diagnosed with ADHD have increased, even if it is outside of the formal diagnostic criteria (Castle, Aubert, Verbruugge, Khalid, & Epstein, 2007). Viewing ADHD as a childhood disorder can result in the under diagnosis and mistreatment of ADHD in adults (Castle et al., 2007).

This neurodevelopmental disorder has marked characteristics, including inattention, hyperactivity, and impulsivity (APA, 2013). Although symptom severity varies among children, research suggests that a variety of negative outcomes can occur for children who experience ADHD, especially those who carry the diagnosis into adolescence and adulthood (Modesto-Lowe, Yelunina, & Hanjan, 2011). Children with ADHD are susceptible to negative behaviors and cognitions beyond impulsivity and hyperactivity. Common negative outcomes for children include aggression, social immaturity, academic underachievement, family conflicts, problems with peers, and emotional dysregulation (Biederman, 2005; Rich, Loo, Yang, Dang, & Smalley, 2009; Kendall, Leo, Perrin, & Hatton, 2005). Teens with ADHD may engage in risk-taking behaviors such as substance use and intentional injury (Barkley, Fischer, Smallish, & Fletcher, 2004; Modesto-Lowe et al., 2011).

Children with ADHD who display signs of emotion dysregulation are at a great risk for comorbid conditions including internalized disorders such as anxiety and depression and externalized disorders such as oppositional defiant disorder and conduct disorder (Deault, 2009; Faraone, Biederman, & Monuteaux, 2002; Wells et al., 2006). Caretakers of those diagnosed with ADHD, as well as the individuals themselves, should



be aware of the symptoms of these common comorbid conditions in order acquire a beneficial treatment plan.

Symptoms of ADHD can appear as early as pre-school in some children (DuPaul, McGoey, Eckert, & VanBrakle, 2001), but parents might be able to predict the likelihood of their child being diagnosed with ADHD before enrollment in pre-school begins. A heredity factor in ADHD has been well established through research and is widely accepted as a contributor to the etiology of the disorder (Thaper & Stergiakouli, 2008; APA, 2013). Biological relatives of persons with ADHD have higher rates of the condition (Thaper & Stergiakouli, 2008), including a 57% heredity rate in a child whose biological parent has ADHD (Barkley, 2015). Environmental factors may also contribute to the likelihood of a child being born with ADHD, including maternal smoking and alcohol consumption during pregnancy (APA, 2013; Thaper et al., 2009).

National surveys have revealed that between one-third and two-thirds of children diagnosed in childhood will continue to carry disabling ADHD symptoms into adulthood (Castle et al., 2007; Kessler et al., 2005; Weiss & Murray, 2003; Wender, Wolf, & Wasserstein, 2001). If ADHD continues into adulthood, the individual will be more likely to have difficulties with forms of psychopathology, social interactions problems, and couple relationship conflicts and divorce (McGough, 2005; Modesto-Lowe et al., 2011). Thus, ADHD is not considered strictly a childhood condition that will be “outgrown”. In fact, the American Academy of Pediatrics recommends that pediatricians recognize ADHD as a chronic condition that must be managed with special health care (AAP, 2011).

With the increasing numbers of children, adolescents, and adults who are diagnosed with this condition that can be significantly debilitating, ADHD has become well known to many families, schools, community based-organizations, and child health-care workers in the United States. In addition, increased attention has been paid to effects that an individual's ADHD symptoms have not only on the person but also on family members who interact with him or her. Publications for both professionals and for family members (e.g. *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment* by Russell Barkley, 2015) have described common symptoms of ADHD, as well as strategies that family members can use to cope with a diagnosed member's symptoms. As trends regarding treatment options and support continue to broaden and improve for individuals diagnosed with ADHD, research needs to continue with significant others who are affected by the individual's ADHD symptoms, particularly nuclear and extended family members.

Given what is known about the individual struggles of children, adolescents, and adults with ADHD, as well as the high likelihood that family members are affected as well, it is important to increase understanding of the effects that ADHD has on parents and their children who have ADHD. Because child ADHD symptoms can be significant stressors in parents' lives, poor parental coping may result in the parent behaving negatively toward the child and potentially exacerbating the child's problems in functioning. Consequently, identifying factors that can contribute to parental resilience in the face of child ADHD can be beneficial in designing treatment options for families that exhibit deficits in resiliency.

Although research has strongly pointed to genetics as the cause of ADHD, the expression of ADHD symptoms may be influenced to a substantial degree by environmental factors (Barkley, 2005; Deault, 2009). ADHD symptoms commonly vary considerably in severity, and the range of severity of symptoms can have a major effect on outcomes for children. Therefore, creating protective factors in the environment of a child, adolescent, or adult with ADHD, such as parents who cope effectively with stressful symptoms, is crucial for symptom management and positive outcomes.

Given the importance of creating a protective environment in order to reduce the symptoms of ADHD, caretakers of children with ADHD need to consider how the home, school, and greater community are influencing their child as they make efforts to manage the child's ADHD symptoms. Parents of children with ADHD commonly feel an overwhelming amount of stress to practice a positive parenting style, administer stimulant medication, find accommodating treatment in the child's school, and acquire support from their extended family and greater community (therapies, support groups, etc.). These caregiving burdens often prove difficult, and ADHD in children has been found to be associated with family dysfunction, strained parent-child relationships, and high family stress (Deault, 2009). Findings from studies have suggested that parents make efforts to foster warm and supportive relationships with their children in order to maximize the children's self-regulation and normal adjustment (Chronis et al., 2007; Modesto-Lowe et al., 2011). Parents find it difficult to adopt these behaviors if their child with ADHD is volatile, disruptive, and prone to impulsive behaviors (Modesto-Lowe, Danforth, & Brooks, 2008; Modesto-Lowe et al., 2011). At present, there is a lack of

research on factors that contribute to parents feeling more competent in their ability to create a positive parent-child relationship in the face of stressful ADHD symptoms.

Family relational problems can develop when there is a child with ADHD, due to difficulties with behavioral management, even when support is present. Currently, families with a child with ADHD use as much health care as they would with a child with asthma, which is the most diagnosed condition in children (Kendall et al., 2005). Families of children with ADHD also tend to utilize more mental health care, psychological testing, tutoring, reading specialists, and prescription drugs than families without a child with ADHD (Kendall et al., 2005). Although these services are utilized for the improvement of the child's condition, they do come at a hefty financial cost, causing more stress for these families (Kelleher, 2001). Even though there are an abundance of available services that can be utilized by families living with ADHD, there are gaps in research regarding the degrees to which families perceive these types of services to be helpful.

Considering the substantial impact that an ADHD diagnosis of a child can have on the whole family, and the need for information to guide the development of effective family-level interventions to reduce stress and manage the symptoms, the amount of research conducted on family responses to ADHD has been quite limited. Little is known about how parents perceive a child with ADHD, their emotional responses to the child, and the degrees to which they behave constructively versus counterproductively toward the child. There is a need for more research on such family responses to child ADHD symptoms, to determine what types of therapeutic interventions can be helpful. In

addition, little is known about how helpful parents experience particular existing types of support/services.

### **Purpose**

The main purpose of this study was to better understand parental cognitive, emotional, and behavioral responses to a child's ADHD symptoms. Given that ADHD is a chronic condition, this study examined factors that can contribute to parents' constructive versus negative responses to their children who exhibit ADHD symptoms, which could be enhanced through targeted interventions at the family level. Even with the condition affecting as many as 5.1 million children (CDC, 2017), much is still to be learned about the effects that a child's ADHD symptoms have on parents, and the processes through which parents respond to children with ADHD symptoms.

## CHAPTER 2: REVIEW OF LITERATURE

### A Rise in Child and Adolescent ADHD Diagnosis

Attention-Deficit/Hyperactivity Disorder (ADHD) diagnosis in children, adolescents, and adults has been on the rise in recent decades. The most recent numbers on ADHD diagnostic statistics come from a study reported by the Centers for Disease Control and Prevention (CDC) from data collected in a national survey of parents' self-reports between the years 2003 and 2011 (Blumberg et al., 2007; Visser et al., 2014). Self-reports from parents concluded that the diagnosis of ADHD increased 21.8% between 2003 and 2007 (Blumberg et al., 2007) and increased 42% between 2003 and 2011, with a predicted annual increase of 5% per year (Visser et al., 2014). Approximately 5-11% (over 1 in 10) of children and adolescents worldwide are currently diagnosed with ADHD (Barkley, 1998; Polanczyk et al., 2007; Visser et al., 2014). In the year 2011, there were 2 million more children diagnosed with ADHD than in 2003, and 1 million of those children began taking ADHD medications. The number of children who have ever received an ADHD diagnosis tops at 6.4 million, or 9.5%, of children between the ages of 4-17 (Visser et al., 2014).

The increase in diagnosis of ADHD is different among boys and girls. By 2011, 1 in 5 high school boys had been diagnosed with ADHD in comparison to 1 in 11 girls of the same demographic having been diagnosed (Visser et al., 2014). A popular consensus to explain the disparity of diagnosis numbers between boys and girls is that boys tend to display more of the hyperactivity behavioral symptoms of ADHD, whereas girls display symptoms of inattentiveness (Rucklidge, 2010). Because of boys' tendencies to show externalizing symptoms that attract adults' attention, they are more likely to be referred

for treatment than girls (Rucklidge, 2010), and they are three times more likely than girls to receive an ADHD diagnosis (CDC, 2017; Visser et al., 2014). Diagnosis of children at young ages has increased over the years, with 5.7% of children between ages 4 and 10 being diagnosed with ADHD in 2003, compared to 7.7% of children between the ages of 4 and 10 in 2011 (Visser et al., 2014). The average first age for a child to be diagnosed with severe ADHD is age 5 (Visser et al., 2014).

Although rates of ADHD diagnosis have increased, it should not be assumed that this has been caused by increased genetic predisposition to this neurodevelopmental condition. Alternative and better explanations for the increase in ADHD diagnosis are described below.

*Increasing ADHD research and changes in diagnostic criteria.* Changes in trends on research for ADHD are shown in Timeline 1 below, courtesy of the Centers for Disease Control and Prevention (CDC, 2017). The figures in Timeline 1 show the following three subject areas: (1) Estimates of the percentage of children diagnosed with ADHD in the United States across the decades; (2) Changes in diagnostic criteria for ADHD across the decades; (3) Food and Drug Administration (FDA) approval of medication treatment for ADHD. According to Timeline 1, ADHD was first described in the early 1900s; however, empirical research on the neurodevelopmental disorder did not begin until the 1970s. It was not until 1997 that the first national survey for parents' self-reports of their children's ADHD was distributed. Researchers then began valuing the information gathered from these parents, and the surveys continued. With this mass gathering of data, adjustments in the percentage of children diagnosed with ADHD

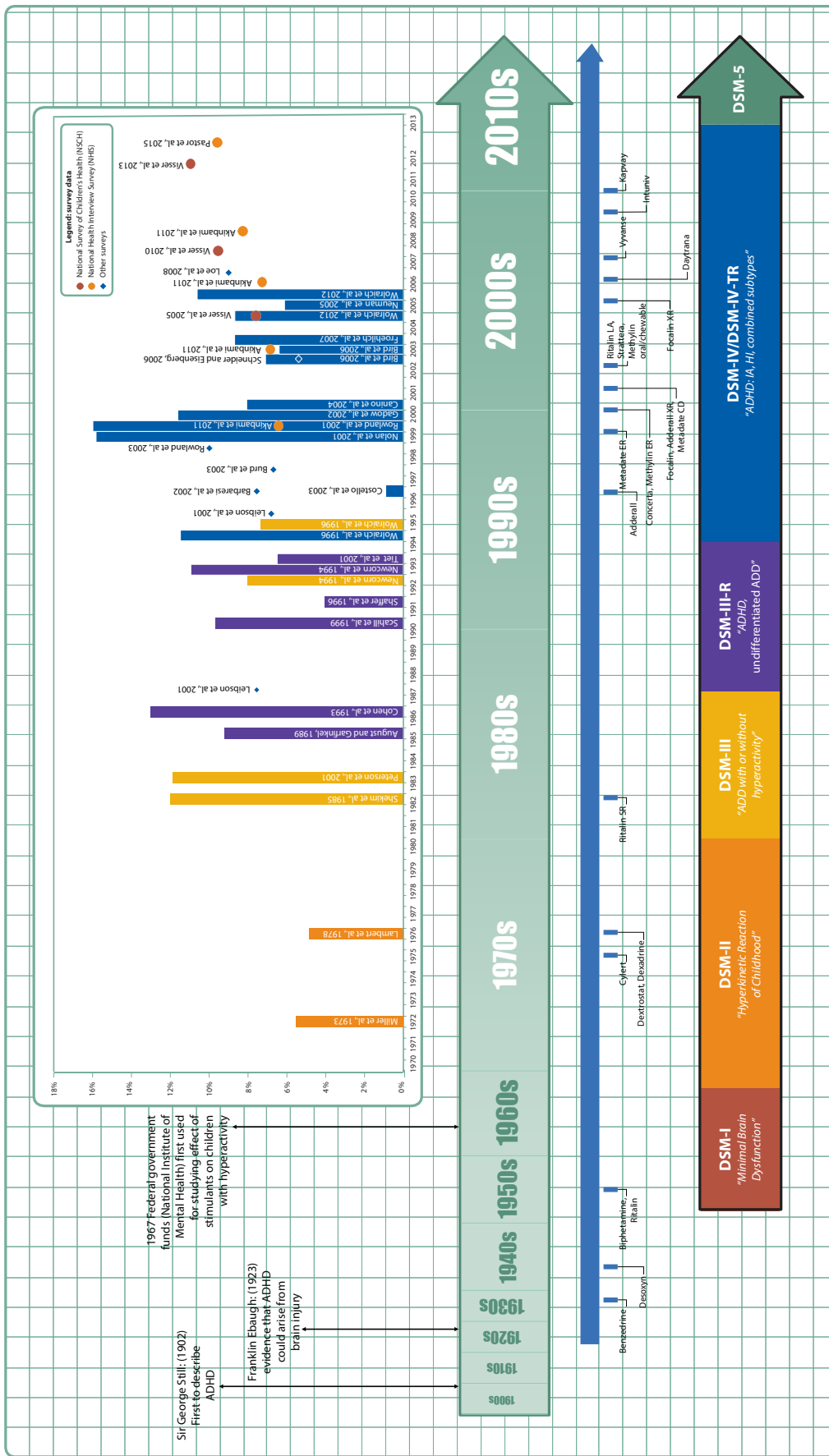
increased as researchers expanded their sample population (CDC, 2017; Visser et al., 2014).

With an increase in research and knowledge on ADHD came influential change in the diagnostic criteria for the condition. The Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> Edition (APA, 1994) was used between the years 1994 and 1999; revisions in 2000 led to the publication of the DSM-IV-TR. Diagnostic criteria for ADHD were less inclusive in the DSM-IV and were restricting to clinicians who were looking to catch the condition earlier in their clients (Visser et al., 2014). The DSM-IV-TR was still not inclusive of research findings reported by psychiatrists, clinicians, and parents, and proposed changes appeared in the 2013 publication of the DSM-5. The DSM-IV-TR restricted symptom-appearance to the age of 7, whereas the DSM-5 allows symptom-appearance to the age of 12 (APA, 2000; APA, 2013). In the DSM-IV-TR, symptoms needed not only to appear in two or more settings, but they must also cause impairment in the child's functioning in all settings in which they appear. Changes in the DSM-5 allowed for symptoms only *appearing* in two or more settings, but not requiring that the symptoms result in impairment in those settings.

***The use of the DSM to diagnose ADHD.*** The Diagnostic and Statistical Manual of Mental Disorders (DSM) is published by the American Psychiatry Association (APA) and targets clinicians in the United States, whereas the International Statistical Classification of Diseases and Related Health Problems (ICD) is published by the World Health Organization and targets medical professionals around the globe. The DSM-5 and the ICD-10 are the latest editions of those publications, and the two manuals vary significantly on their criteria for ADHD. The ICD-10 (1993) uses the term Hyperkinetic



Figure 1. ADHD Through the Years.



Disorder (HKD) when in reference to ADHD, since that is the term that is used more widely by European clinicians. Compared to the ADHD criteria in the DSM-5, HKD criteria in the ICD-10 are narrower with more severe symptom descriptions and a larger number of minimum symptoms required being present across all three dimensions (inattention, hyperactivity, and impulsivity) (WHO, 1993). As the DSM grows in popularity by clinicians internationally, the increase in prevalence of individuals diagnosed with ADHD seems likely to continue to grow.

*Diagnosing outside of the formal criteria.* Even more changes to diagnostic criteria are expected to come as more clinicians begin diagnosing older adolescents and adults with ADHD. The idea of ADHD being restricted to a “childhood disorder” has shifted to include possibilities of a diagnosis beyond of childhood. The frequencies of individuals receiving their first diagnosis of ADHD in adolescence or even in adulthood have increased (Castle et al., 2007). An explanation for this trend is that symptoms of ADHD may not interfere with a young person’s life when they have support, resources, and structure from their families and school. As these young people age, the accelerating demands of work and school increase, creating an environment in which symptoms may become unmanageable (Bren, 2004; Castle et al., 2007). This may explain why some individuals do not receive a formal diagnosis until late adolescence or adulthood, even if their symptoms were present but were not resulting in impairment at a younger age.

An increase in ADHD prevalence can also be explained by increased self-reports of the condition. Tests like the *ADHD Self-Report Scale (ASRS)* are considered highly reliable and valid in evaluating ADHD in adults (Adler et al., 2006). The ASRS is brief (18 items) and easy to interpret, giving non-professionals the ability to determine their

diagnosis without the assistance of a professional (Adler et al., 2006; Kessler et al., 2005). Self-reporting from parents on their child's ADHD symptoms and diagnosis has also increased. Self-report surveys from the National Health Interview Survey (NHIS) and National Survey of Children's Health (NSCH) grew in popularity since their initial distributions to collect data on ADHD in 2001 and 2005, respectively (see Timeline 1). These surveys allow for a larger population to report on their children, leading to a higher statistical rate of children diagnosed with ADHD. However, these larger samples sometimes cannot be reached by researchers due to the anonymity of the data collection.

*Parent and teacher knowledge.* Next to parents, teachers spend the most time with a child during their developmental years. Children are most likely to show symptoms of ADHD at home or at school, where they are constantly observed. In recent decades, parents and teachers have gained unlimited access to materials on normal and abnormal development via universal Internet access (Hinshaw, 2014). Parents and teachers have the resources to become experts on abnormal development in their children, allowing them to refer themselves to a specialist who can assess with more thorough and accurate screenings. In the past, parents would have to wait for a referral from a teacher or school psychologist in order to receive treatment; parents can now take their own initiative in seeking assistance. Parents have also acquired better detection of underlying prevalence of ADHD due to health initiatives to bring awareness of the condition to schools and communities (Visser et al., 2014).

### **ADHD Symptoms in Children**

According to the DSM-5 (APA, 2013) there are three dimensions that characterize ADHD: (1) inattention; (2) hyperactivity; and (3) impulsivity. The latter two dimensions

are commonly seen together. In order to meet diagnostic criteria, the pervasiveness of these dimensions must cause impairment for the individual in everyday function and normal development, but need only appear in one setting.

***Inattention.*** According to the DSM-5 (APA, 2013), symptoms of inattention include the following nine characteristics (abbreviated):

- a) Failing to give close attention to details; making careless mistakes
- b) Difficulty sustaining attention during tasks
- c) When spoken to directly, the individual does not seem to listen
- d) Does not follow through on responsibilities and duties like school work and chores
- e) Difficulty organizing tasks due to disorganization, time management, management, etc.
- f) May avoid activities or tasks that require mental focus for a sustained amount of time
- g) Often loses pertinent items needed to complete tasks and activities
- h) Is easily distracted by external stimuli
- i) May be forgetful of daily, pertinent tasks and activities

***Hyperactivity/impulsivity.*** According to the DSM-5 (APA, 2013), symptoms of hyperactivity and impulsivity include the following nine characteristics (abbreviated):

- a) May fidget, tap, or squirm when trying to sit still
- b) May leave their seat or place when they are otherwise expected to stay
- c) Feels restless or chooses to run around in situations where that behavior is inappropriate

- d) Inability to engage in leisure activities quietly
- e) May seem as though they are “driven by a motor”
- f) Excessive talking
- g) Before a question is completed, they blurt out the answer
- h) Difficulties with waiting their turn
- i) Intrudes on or interrupts others

*Social and emotional development.* ADHD is considered a risk factor for negative social and emotional developmental outcomes (Deault, 2009), usually impairment in the contexts of home, school, and social situations (APA 2000; APA, 2013; CHADD, 2015). Children diagnosed with ADHD are more susceptible to adverse academic, behavioral, social, and emotional outcomes than peers without ADHD (Hechtman, 1991; Modesto-Lowe, 2011; Molina et al., 2009; Steele, Jensen, & Quinn, 2006).

Social issues that potentially arise for children and adolescents with ADHD include problems with peers, substance use and abuse, delinquency, incarceration, anti-social behaviors, conduct symptoms, engagement in risky behaviors, family stress, and difficulties with romantic relationships leading to higher rates of divorce. Emotional developmental issues potentially include mood swings, intentional injury, accidental injury, and other psychological comorbidities (Barkley et al., 2004; Biederman & Faraone, 2005; Fischer et al., 2002; McGough et al., 2005; Xiang, Stallones, Chen, Hostetler, & Kelleher, 2005). Potential academic issues include delays in language and motor skills, academic difficulties, school failure, and truancy (Barkley et al., 2004; Biederman & Faraone, 2005; CHADD, 2015; Fischer et al., 2002; McGough et al., 2005;

Xiang et al., 2005). ADHD persists from childhood to adolescence at a rate of 50-80%, emphasizing the importance of understanding developmental issues that begin in childhood and advance into adolescence (CHADD, 2015).

Children with ADHD have comorbidity rates of 87% with at least one other condition, and 67% have comorbidity with two other conditions. The most common comorbidities include mood, anxiety, and conduct disorders, including depression, bipolar disorder, and oppositional defiant disorder (APA, 2013). A comorbid condition should be considered the rule, not the exception, for children with ADHD (Tannock, 2003).

### **Parental Stress with ADHD-diagnosed Children**

Raising a child with ADHD leads to elevated rates of stress for parents (Johnston & Mash, 2001). Children with ADHD often display symptoms that involve non-compliance, making parenting very difficult and sometimes maladaptive (Barkley, 2006; Modesto-Lowe et al., 2008; Tancred & Greeff, 2015). Children with ADHD commonly show behaviors of volatility, belligerence, inflexibility, and disruption, leading to increased difficulties for their parents (Daley, Jones, Hutchings, & Thompson, 2009; Modesto-Lowe et al., 2008). Parents of children with ADHD report feeling overwhelmed or depressed with their role of parenting their child (Miranda, Grau, Rosel, & Meliá, 2009; Modesto-Lowe et al., 2011). They are more likely to experience multiple stressors related to child rearing compared to parents raising children without ADHD, and associated anxiety and depression (Lin & Chung, 2002; Modesto-Lowe et al., 2011).

Increased parent stress has been associated with decreased levels of parental warmth toward their child with ADHD. Warmth of a parent toward their child with

ADHD is associated with higher peer acceptance, lower peer rejection, and lower problematic social behavior (Hurt, Hoza, & Pelham, 2007). Parents of children with ADHD are often perceived as less responsive, less rewarding, and more critical of their child (Modesto-Lowe et al., 2008; Modesto-Lowe et al., 2011). Parents of a child with ADHD tend to use a stricter tone of voice, give more verbal commands, and place more limits on behavior than parents of children without ADHD (Alizadeh & Andries, 2002; Mano & Uno, 2007; Tancred & Greeff, 2015).

Tancred and Greeff (2015) conducted a study on parenting styles of mothers with a child diagnosed with ADHD to determine coping strategies and family adaptation styles. Results indicated that warm and supportive parents who take the time to understand their child's emotional needs are better able to reframe stressful family events and in turn improve family adaptation. Parents adhering to "regulation," or the style of consistently explaining rules and carrying out discipline with their child, lower stress in the home and improve the child management outcomes (Mash & Barkley, 2006).

Studies also showed that parents reported needing support in other aspects of their lives before they can focus on effective parenting for their child with ADHD (Miranda et al., 2009; Modesto-Lowe et al., 2011). Burnout is prevalent among these parents who spend more time and energy on parenting and care than other parents (Dos Reis & Myers, 2008; Tancred & Greeff, 2015). Parents are faced with new challenges in child rearing at every developmental stage, requiring refinement of their skills and exertion of more energy (Deault, 2009). Studies revealed a repetitive cycle in which increased parenting stress negatively effects the parent-child relationship, increasing maladaptive parenting

styles, which in turn exacerbates ADHD symptoms in the child, resulting in a poor outcomes for both the parent and child (Theule, Weiner, Rogers, & Marton, 2011).

*Emotional and behavioral responses.* In the context of a family, having a child with ADHD can cause impairments to family functioning, greater family stress, conflicting parent-child relationships, and higher rates of parental psychopathology. Parents' behaviors contribute to behavioral outcomes of their children, making the family context a vital factor in predicting developmental trajectories for children with ADHD (Deault, 2009). For children with ADHD, emergence of symptoms proves challenging for parents, inducing punitive parenting behaviors such as "intense hostility and negative emotionality" (Deault, 2009; Johnston & Jassy, 2007), and in turn the negative parenting behavior leads to exacerbation of problematic child behavior over time.

Problems within the home are exacerbated when the child has a comorbid behavioral condition such as conduct disorder or oppositional defiant disorder. Studies show an association between higher parenting stress and family conflict when a child has a comorbid ADHD and defiant disorder, compared to ADHD alone (Deault, 2009; Edwards, Barkley, Laneria, Fletcher, & Metevia, 2001; Wymbs, Pelhem, Molina, & Gnagy, 2008).

Parents' emotional stability is correlated with outcomes for children with ADHD. Some parenting stress is normal, but parents with extreme stress levels can suffer psychologically (Kazdin, 1995). Consequently, studies have investigated various forms of parent psychopathology associated with their children's ADHD symptomology. Chronis and colleagues (2007) researched the relationship of parental psychopathology and child ADHD. The diagnosis of ADHD in children was associated with higher rates of maternal



and paternal ADHD, as well as with mothers having more psychological problems (mood and anxiety disorder, substance use and abuse, and childhood conduct disorders). Pfiffner, McBurnett, Rathousz, and Judice (2005) found that fathers had higher rates of antisocial personality disorders and depression symptoms when their child had comorbid ADHD and conduct disorder diagnoses. Therefore, interventions that improve parents' abilities to cope with negative child behaviors can reduce parents' own stress and symptoms. In addition, because research has uncovered a bilateral relationship between child ADHD and parent psychopathology, another strategic point for clinical intervention can include guiding parents with psychopathology symptoms such as depression in implementing better coping styles, which can reduce their role in the negative patterns with their children with ADHD.

*Parental cognitive responses to child ADHD.* Beyond parents' emotional and behavioral responses to child ADHD are parental cognitions about their child with ADHD. Studies show that parents' attributions about their child's behavior can directly influence their approach to parenting, therefore affecting child outcomes, and ultimately affecting the parent-child relationship (Bugental & Johnston, 2000; Johnston, Chen, & Ohan, 2006).

Currently, studies of parents' cognitions about their child with ADHD have been limited. A study by Johnston et al. (2006) explored mothers' attributions about their sons with ADHD or ADHD and ODD. Of the boys with both ADD and ODD, mothers made more negative attributions about causes of the child's behavior, seeing them as more enduring and pervasive when compared to mothers of boys with normal development. Regarding the boys with only ADHD, the mothers' attributions fell midway between the

two groups, reflecting a mix of negative and neutral or positive cognitions about the child behavior. The researchers suggested that negative attributions might be linked more closely to ODD symptoms than to ADHD alone. There were limitations to the study discussed by the authors, including a sample that was small (38 mothers) and excluded girls with ADHD as well as fathers, making the findings non-generalizable to this population.

### **Family Stress with ADHD-diagnosed Children**

The overall family system is comprised of the spousal subsystem, the parental subsystem, the sibling subsystem, and all of the relationships across those boundaries. Co-occurring factors of ADHD in children include disturbances in family function (Deault, 2009; Johnston & Mash, 2001) and possibly disruption of normal family development. Families of children with ADHD might experience significant stressors unique to the condition, causing disruptions in normal power and hierarchy (parents being leaders) in the family structure.

Increased stressors require families to build resilience through adjustment and adaptation. Parents become responsible for withstanding disruptions to their family system, regaining balance and harmony in their family unit, and continuing to ensure the growth of all members in the unit (Tancred & Greeff, 2015; Walsh, 2012). Finding balance and harmony requires unity in the parental subsystem and participation from the sibling subsystem. This can prove difficult when mothers show less warmth and support than fathers in families of children with ADHD (Tancred & Greeff, 2015; Peris & Hinshaw, 2003). During an observation study of families interacting with their child/sibling with ADHD, the families were rated as showing less warmth and less

engagement as well as poorer communication skills while completing tasks that were considered more challenging (Tripp et al., 2007).

Parents of children with ADHD who put forth effort to consistently maintain an authoritative parenting style promote family adaptation (Modesto-Lowe et al., 2008; Tancred & Greeff, 2015). Qualities of authoritative parenting include positive connection to one's child, re-framing negative situations, and firm but non-aggressive guidance of child behavior. Building adaptation and resilience can prove difficult for these families; many families have stressors beyond those specific to their child with ADHD, depleting energy that is needed to keep a consistent authoritative profile.

### **Internal Resources for Parents**

Parents of children with neurodevelopmental disorders are more vulnerable to stressors due to increased demands to care for the special needs of their child (Jones & Passey, 2004). Internal coping mechanisms can assist parents in moderating stress levels during difficult parenting situations. Parents and families have shown various outcomes in adaptation to stressors depending on responses over time (Donovan, 1988; Jones & Passey, 2004). Internal resources for parents to utilize include an *internal locus of control* and styles of *resilience*.

***Internal locus of control.*** *Internal locus of control* is defined as an individual's belief that one has the ability to influence and control the outcome of a situation. A parent's locus of control has been identified as an influential predictor of parental stress levels (Jones & Passey, 2004). For families of children with developmental disabilities, research has shown that a family's perception of their internal locus of control results in greater positive adjustment as well as reduced stress levels (Hastings & Brown, 2002;

Rimmerman, 1991). A study by Jones and Passey (2004) revealed that a parent's internal locus of control combined with their family's coping style were the strongest predictors of parental stress. The results also concluded that parents who do not believe they are controlled by their child's disabilities showed lower overall stress.

***Resilience.*** *Resilience* has been given inconsistent definitions among researchers; some define resilience as a response to a stressful or traumatic event whereas others define resilience as a stable internal coping style (Modesto-Lowe et al., 2011; Luthar, Cicchetti, & Becker, 2000). Editors of the Resilience Scale (Lundman, Standberg, Eisemann, Gustafson, & Brulin, 2007; Wagnild & Young, 1993) define resilience as “a personality characteristic that moderates negative effects of stress and promotes adaptation”. Resilience is comprised of five characteristics: (1) a balanced life perspective; (2) a sense of purpose; (3) the ability to “keep going”, even despite setbacks; (4) recognition of a unique path in life; and (5) the belief in one's capabilities (Wagnild & Young, 1993). Individuals with higher resilience have traits such as high self-confidence and self-discipline, courage and optimism, and higher cognitive capacities (Lundman et al., 2007). In families of children with ADHD, resilience can be a protective factor for parents whom strive to obtain normal functioning for their family unit as well as give special support to their child with ADHD (Tancred & Greeff, 2015).

### **Theoretical Model and Gap in Current Knowledge about Family Responses to ADHD**

Although there have been studies on parenting behavioral styles with children diagnosed with ADHD and outcomes in child behavior, there has been little research on parents' cognitive responses as factors that can influence parental behavioral responses to

child ADHD symptoms, as well as parental emotional responses. A basic premise of stress and coping theory (Lazarus, 1993; Lazarus & Folkman, 1984) is that individuals' negative emotional and behavioral responses to life stressors depend on the individuals' subjective interpretations of the stressors. According to this model, two individuals who have different cognitions about the same stressor likely experience different emotional and behavioral responses.

On the one hand, a cognitive *interpretation that occurs in the moment* when a parent is exposed to ADHD behavior can *mediate* the parent's emotional and behavioral responses. For example, a parent who interprets a child's failure to follow instructions as a sign that the child lacks respect for the parent may become angry and behave punitively toward the child. On the other hand, a parent's *pre-existing cognitive style* (e.g., a belief in one's internal locus of control over life events) might *moderate* his or her negative responses to child ADHD symptoms. For example, the more strongly a parent believes that she or he can influence stressful life experiences (a higher internal locus of control) the weaker the association between the child's level of ADHD symptoms and the parent's negative emotions and behavior. This study applied stress and coping theory to understand how parents cope with child ADHD. Although it did not focus on parents' cognitions as mediators or moderators of the association between degree of exposure to child ADHD symptoms and parents' negative emotional and behavioral responses to the child, it began the process of investigating such cognitive processes (in terms of attributions and cognitively-oriented coping styles of locus of control, equanimity, and perseverance) as direct predictors of parents' emotional and behavioral responses to their children with ADHD.

To date, there has been very little research investigating how parents' cognitions about their child's ADHD symptoms influence their emotional and behavioral responses to the child. There is a need for more research on the relationships among cognitions, emotions, and behaviors of parents as they respond to their child's ADHD. A better understanding of the links among parents' cognitions, emotions and behavioral responses to child ADHD will have implications for developing a more comprehensive approach to clinical interventions for this population of families. Thus, the present study focused on potential associations of parental cognitive factors on parental emotional and behavioral responses to child ADHD symptoms.

### **Hypotheses**

After reviewing literature on family stressors associated with a member's ADHD and the cognitive, emotional and behavioral responses that parents of children with ADHD commonly experience, this investigator proposed the following hypotheses that were tested in this study:

Research question 1: How will child gender, child negative ADHD behaviors, parent coping traits, and parent negative attributions towards child relate to parent authoritative behaviors?

*Hypothesis 1:* Parents reporting about a son will report lower levels of authoritative behavior toward their child compared to parents reporting about a daughter.

*Hypothesis 2:* The more the child exhibits negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention), the less the parent will report authoritative behavior toward the child.

*Hypothesis 3:* Higher coping related traits of the parent (perseverance, equanimity, locus of control) will be associated with higher reports of parental authoritative behavior toward the child.

*Hypothesis 4:* The more the parent reports negative attributions about the child, the less the parent will report authoritative behavior toward the child.

Research question 2: How will child gender, child negative ADHD behaviors, parent coping traits, and parent negative attributions towards child relate to parent authoritarian behaviors?

*Hypothesis 5:* Parents reporting about a son will report higher levels of authoritarian behavior toward their child compared to parents reporting about a daughter.

*Hypothesis 6:* The more the child exhibits negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention), the more the parent will report authoritarian behavior toward the child.

*Hypothesis 7:* Lower reports of coping related traits (perseverance, equanimity, locus of control) of the parent will be associated with the more authoritarian behavior toward the child.

*Hypothesis 8:* The more the parent reports negative attributions about the child, the more the parent will report authoritarian behavior toward the child.

Research question 3: How will child gender, child negative ADHD behaviors, parent coping traits, and parent negative attributions about the child relate to the parent's level of anger toward the child?

*Hypothesis 9:* Parents reporting about a son will report higher levels of anger toward their child compared to parents reporting about a daughter.

*Hypothesis 10:* Higher levels of the child's negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention) will be associated with higher levels of anger in the parent toward the child.

*Hypothesis 11:* Lower reports of coping related traits of the parent (perseverance, equanimity, locus of control) will be associated with higher levels of anger in the parent toward the child.

*Hypothesis 12:* Higher reports of negative attributions about the child will be associated with higher levels of anger in the parent toward the child.

4. How will child gender, child negative ADHD behaviors, parent coping traits, and parent negative attributions about the child relate to the parent's level of anxiety?

*Hypothesis 13:* Parents reporting about a son will report higher levels of anxiety toward their child compared to parents reporting about a daughter.

*Hypothesis 14:* Higher levels of the child's negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention) will be associated with higher levels of anxiety in the parent from interacting with the child.

*Hypothesis 15:* Lower reports of coping related traits of the parent will be associated with higher levels of anxiety in the parent from interacting with the child.

*Hypothesis 16:* Higher reports of negative attributions towards the child will be associated with higher levels of anxiety in the parent from interacting with the child.



### **CHAPTER 3: METHOD**

This study involved the collection of data through an original online survey that was distributed to families who are members of the non-profit organization Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) in the U.S. CHADD is an organization “providing education, advocacy and support for individuals with ADHD” (CHADD, 2017). CHADD has over 12,000 members nationwide; a majority of members are families of children, adolescents, and adults with ADHD, but about 2,000 are professionals who provided therapeutic and other clinical services to these families. Janette Patterson, M.S.W., who is a member of CHADD, distributed the survey through the national listserv for CHADD.

The announcement directed participants to a website where they accessed the Google Forms survey and responded to its items anonymously. They agreed to an implied consent document before beginning the survey. The website provided contact information for Jaimeleigh Salazar so that any participants who wish to receive a summary of the thesis study’s overall results (not any information about the individual participant’s responses) can email Ms. Salazar and provide the email address to which they want the report sent. This contact information provided by the participant was in no way linked to the participant’s survey responses.

#### **Participants**

The sample for this study included 128 participants drawn from a convenience sample of members of CHADD who chose to participate by completing the online survey anonymously, in response to an announcement about the study that was posted on the CHADD listserv by Ms. Patterson. Although 128 individuals participated in this survey,

only data from 100 participants will be used for this study due to that many of them meeting the study's eligibility criteria (particularly that the respondent was a parent reporting about his or her responses to a child with ADHD). The text of the announcement appears in Appendix 1. Of the 100 eligible participants, females ( $n = 94$ ) and males ( $n = 6$ ) responded about their emotional, cognitive, and behavioral responses towards their sons ( $n = 70$ ) and daughters ( $n = 30$ ) diagnosed with ADHD. Participants identified as mothers ( $n = 88$ ) and fathers ( $n = 6$ ), with data about relationship role missing from the other 6 participants. The mean age of the adult participants was 48.6 ( $SD=8.1$ ; range: 22 – 64); the mean age of their children was 14.9 ( $SD = 5.5$ ; range: 6 – 35). Geographically, participants were from Virginia (27%), Maryland (26%), Pennsylvania (14%), Ohio (6%), California (4%), New York (4%), Massachusetts (3%), Arizona (2%), Florida (2%), New Jersey (2%), Texas (2%), Colorado (1%), D.C. (1%), Michigan (1%), Nebraska (1%), New Hampshire (1%), New Mexico (1%), North Carolina (1%), and Utah (1%). Almost a quarter of participants (24%) reported that they had been diagnosed with ADHD themselves. Over half of participants (60%) knew 2 or more members in their family diagnosed with ADHD, not including self. 97% of participants lived with their child diagnosed with ADHD.

*Inclusion criteria.* Any family member age 18 or older was eligible to participate in the survey, with that minimum age set in order to obtain a sample of adults who have family members diagnosed with ADHD. No attempt was made to restrict the characteristics of the sample in any other way. The goal of the data collection was to obtain a diverse sample of family members of individuals who have been diagnosed with ADHD, so a number of studies can be conducted to investigate family members'

cognitive, emotional, and behavioral responses to a member's ADHD symptoms. This study used subsample of the data collected through the survey, focused on respondents who are parents (of any age and gender) of a child (of any age and gender) with ADHD. The statistical analyses controlled for gender of the child when examining parental responses to child ADHD symptoms.

*Exclusion criteria.* This survey was available to any person with a family member diagnosed with ADHD. For the purpose of this study, participants who responded about any family member besides their children were excluded from the study (n = 28).

### **Measures**

The survey was designed by the research team of Janette Patterson, M.S.W., Jaimeleigh Salazar, B.S., and Norman B. Epstein, Ph.D. Janette Patterson is the coordinator of the Montgomery County, Maryland chapter of the non-profit Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) organization, and in that role she had access to contact information for all of the other local coordinators of the CHADD chapters across the U.S. listserve, where she sent an announcement of this study.

The survey (see Appendix 2) took participants between 10 and 15 minutes to complete. There were 48 quantitative items and 1 open-ended item that was designed to generate text responses from participants that could be subjected to qualitative analyses. However, only the quantitative items were used in this thesis project. The survey is comprised of six sections: (1) Demographic information; (2) Interacting with your family member with ADHD; (3) Experiences with financial strain; (4) ADHD resources; (5) Resilience; (6) An open-ended question asking the respondent to "Please share any

memories or anecdotes you have of your family member with ADHD in which you noticed that their behavior influenced the interaction/event in a positive or negative way.” Question types include multiple-choice (e.g., “What services are utilized to better understand your family member with ADHD? Check all that apply.”), dichotomous questions (“Yes/No”), semantic differential scales (“Never ... Very Often”), Likert scales (“Disagree ... Agree”; “Not at all helpful ... Very helpful”), and specific questions about demographic characteristics (e.g., gender, age).

All of the variables used to test this study’s hypotheses were derived from items in the online survey. The following are the study variables and the corresponding survey items that were used to measure them.

#### **Predictor Variable: ADHD Behaviors of the Child**

Survey participants were asked to report the degrees to which the child exhibits specific types of behavior that are symptomatic of ADHD (Appendix I, Item 21). Each of the eight sub-items of Item 21 is coded into one of two subscales assessing ADHD behaviors of the child: (1) *Hyperactivity/Impulsivity* (“Says things without thinking”; “Tends to interrupt conversation”; “Struggles with respecting boundaries of others/intrusive”; “Becomes easily irritated”), and (2) *Inattention* (“Struggles with time management and punctuality”; “Struggles with following through on projects and/or commitments”; “Struggles with staying organized”; “Doesn’t appear to be listening when spoken to.”). These two types of behaviors are the criteria used for the ADHD neurodevelopment diagnosis in the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM-5; APA, 2013). For each item, the respondent indicates the extent to which the behavioral pattern is exhibited by the child with ADHD, from 1 (Not

At All) to 5 (Very Often) on a 5-point scale. The Cronbach alpha for the 4-item *Hyperactivity/Impulsivity* subscale was .82 in this study's sample. The Cronbach alpha for the 4-item *Inattention* subscale was .83 for this sample.

### **Predictor Variable: Parent's Coping-Related Traits**

The parent's overall sense of *internal locus of control* in coping with the child's ADHD symptoms was assessed with survey Item 27 ("How confident do you feel in your ability to influence the behavior that your family member with ADHD exhibits toward you?"). For this item, the respondent indicates the extent to which he or she feels confident, from 1 (Not At All) to 5 (Very Much) on a 5-point scale.

The parent's level of *Equanimity*, a sub-scale of Wagnild and Young's (1993) Resiliency Scale (RS), is measured using survey Items 35, 38, 39, 46, 47, and 48; however, only items 35, 39, 46, and 47 were used to measure *equanimity* in this sample due to higher internal consistency reliability for that set of items ("I usually take things in stride"; "I take things one day at a time"; "I do not dwell on things I can't do anything about"; and "When I'm in a difficult situation, I can usually find a way out of it"). For each item, the respondent indicates the extent to which he or she believes the statement to be true, from 1 to 7 on a 7-point scale. The Cronbach alpha for the *Equanimity* measure was .71 in this study's sample.

The parent's level of *Perseverance* sub-scale of Wagnild and Young's (1993) Resiliency Scale (RS) is measured using Items 40, 44, and 45 ("I can get through difficult times because I've experienced difficulty before"; "I can usually look at a situation in a number of ways"; and "Sometimes I make myself do things whether I want to or not"). For each item, the respondent indicates the extent to which he or she believes the

statement to be true, from 1 to 7 on a 7-point scale. The Cronbach alpha for the *Perseverance* measure was .57 in this study's sample. Although this level of internal consistency is fairly low compared to the generally acceptable standard of .70, this investigator decided to use the measure, given its conceptual importance regarding parental coping with a child's chronic and pervasive ADHD symptoms.

### **Predictor Variable: Parent's Attributions Regarding the Child's Behavior**

Parents participating in the survey are asked to reflect on their cognitions about their child and his/her behaviors (see Appendix I, Items 22). Item 22 includes six sub-items describing *negative attributions* about factors causing the child's negative behavior. Only five of the six sub-items were used for the *parent negative attribution* measure ("He/She is rude, lazy, and manipulative"; "He/She is not trying hard enough"; "He/She purposefully provokes me with frustrating behavior"; "He/She acts like it is impossible to control the ADHD symptoms, but I know he/she could do better"; "He/She does not listen to me because of their lack of respect for me"). For each item, the respondent indicates the extent to which he or she believes the statement to be true, from 1 (Not At All) to 5 (Very Much) on a 5-point scale. The sixth item ("He/She would have more control over their ADHD if they cared about me") was not used because of its low item-total correlation (.31) compared to the other five items in the measure. The Cronbach alpha with that sixth item included was .83, but it was .85 for the 5-item *Parent Negative Attribution* measure in this study's sample.

Table 1  
*Descriptive Statistics for the Independent Variables*

	<i>n</i>	<i>Potential Range</i>	<i>Actual Minimum</i>	<i>Actual Maximum</i>	<i>Mean</i>	<i>SD</i>
Hyperactivity/ Impulsivity	100	4 – 20	5	20	12.8	4.15
Inattentiveness	100	4 – 20	4	50	14.9	3.84
Parent's Negative Attributions	100	5 – 25	5	13	7.9	3.34
Perseverance	99	3 – 21	11	21	17.88	2.5
Equanimity	99	4 – 28	8	28	19.9	4.36
Internal Locus of Control	100	1 – 5	1	5	2.84	1.16

### **Dependent Variables: Parent's Authoritative and Authoritarian Behavior**

*Parent's authoritative behavior* toward the child's ADHD behavioral symptoms was assessed with survey Item 25. Item 25 consists of 7 sub-items; however, only two were used to measure *parent's authoritative behavior* ("Do my best to stay calm and talk reasonable with them" and "Coach them on behavior skills"), based on relatively low item-total correlations for the other items. For each item, the respondent indicates the frequency in which they engage in these behaviors, from 1 (Not At All) to 5 (Very Much) on a 5-point scale. The Cronbach alpha for the *Parent's Authoritative Behaviors* measure was .62 in this study's sample. Although this level of internal consistency is fairly low, compared to the generally acceptable standard of .70, this investigator decided to use the measure, given its conceptual importance regarding parenting styles that parents may

commonly use to attempt to manage a child's chronic and pervasive ADHD symptoms, , as well as a Cronbach alpha of .62 for only two items is a reasonable amount of internal consistency for such a brief measure..

*Parent's authoritarian behavior* toward the child's ADHD behavioral symptoms was assessed with other sub-items of survey Item 25. Three sub-items were used to measure *parent's authoritarian behavior* ("Argue with them"; "Physical punishment [spanking, slapping, etc.]", and "Other forms of punishment [taking away privileges, time-out, etc.]). For each item, the respondent indicates the frequency in which they engage in these behaviors, from 1 (Not At All) to 5 (Very Much) on a 5-point scale. The Cronbach alpha for the *Parent's Authoritarian Behaviors* measure was .58 in this study's sample. Although this level of internal consistency is fairly low, compared to the generally acceptable standard of .70, this investigator decided to use the measure, given its conceptual importance regarding parenting styles that parents may commonly use to attempt to manage a child's chronic and pervasive ADHD symptoms.

### **Dependent Variables: Parent's Emotional Responses to Child's ADHD Behavior**

Parent's emotional responses to their child with ADHD were measured in two emotional categories: anger and anxiety. For *Parent's Emotion – Anger*, survey Items 17 and 24 were used. Item 17 consisted of ten sub-items, five of which were used to measure *Parent's Emotion – Anger* ("Annoyed"; "Impatient"; "Frustrated"; "Angry"; "Intolerant"), based on the item content. Item 24 consists of 22 sub-items regarding moods felt while interacting with the child who has ADHD. The items are derived from the Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988) that are used widely to assess individuals' positive and negative mood states. Four of these



sub-items were used to measure *Parent's Emotion – Anger* (“Distressed”; “Upset”; “Hostile”; and “Irritable”). Respondents indicated the extent to where they felt each mood from 1 (Not At All) to 5 (Very Much) on a 5-point scale. The Cronbach alpha for the 9-item *Parent's Emotion – Anger* measure was .90 in this study's sample.

For *Parent's Emotion – Anxiety*, six sub-items from Item 24 were used (“Distressed”; “Scared”; “Irritable”; “Nervous”; “Jittery”; and “Afraid”). Respondents indicated the extent to where they felt each mood from 1 (Not At All) to 5 (Very Much) on a 5-point scale. The Cronbach alpha for the 9-item *Parent's Emotion – Anxiety* measure was .82 in this study's sample.

Table 2  
*Descriptive Statistics for the Dependent Variables*

	<i>n</i>	<i>Potential Range</i>	<i>Actual Minimum</i>	<i>Actual Maximum</i>	<i>Mean</i>	<i>SD</i>
Parent Authoritative Behavior	100	2 – 10	3	10	7.53	1.82
Parent Authoritarian Behavior	100	4 – 20	3	11	7.680	2.37
Parent Emotion Anger	100	9 – 45	9	40	21.82	6.78
Parent Emotion Anxiety	100	6 – 30	6	27	13.7	5.09

## Procedure

### Survey Distribution

The data for the present study were collected using an online survey titled *ADHD in a Systemic Context* that was hosted by Google Forms. First, an informational email was sent to each CHADD chapter president in the United States informing them of the purpose of the research and how the survey data would be used. The chapter presidents were instructed to send a link to the survey via email to the members of their respected chapters. Once members received the email informing them of the survey and how the data would be used, willing participants clicked a link taking them to the survey. Participants were prompted by an informed consent agreement before entering into the actual survey; only participants agreeing to the anonymity of the study were able to proceed. Participants were informed many times through the survey not to reveal any specific information about themselves or their family members in order to keep the survey anonymous. The survey was open for 19 days. Once the survey was closed to participants, the results (with no participant identifiers) were sent to the survey creator and lead researcher (Jaimeleigh Salazar). The researchers did not know participants' personal identifying information, including names and email addresses. Data specific for the purpose of this study were extracted from the larger survey and coded for statistical analyses. After the conclusion of the survey, seven participants emailed Ms. Salazar directly to ask for results of the study.

## CHAPTER 4: RESULTS

### Overview of Data Analysis

Data were collected through the online survey from 100 parents, including 94 mothers and 6 fathers. Information about the gender of the parent is unknown for 6 of the participants, due to lack of response. The parents reported about 70 sons and 30 daughters. The mean age in years of the parents was 48.6 (SD = 8.1), and mean age of the children about which the parents responded was 14.9 (SD = 5.5).

Table 3  
Demographic Characteristics of the Sample

	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>Actual Minimum</i>	<i>Actual Maximum</i>
Child Age	100	14.9	5.54	6	35
Child Age of Diagnosis	100	7.6	3.178	3	22
Child Diagnosis – Physician (Diagnostic Age)	25	7.04	3.690	3	20
Child Diagnosis – Psychological Testing (Diagnostic Age)	45	7.822	2.297	4	22
Child Diagnosis – Physician & Psychological Testing (Diagnostic Age)	24	7.667	2.746	5	16
Child Diagnosis – Other (Diagnostic Age)	6	8	3.697	5	13
Parent Age	100	48.78	8.26	22	65

Pearson correlations were computed among the sets of independent and dependent variables. Bivariate correlations for independent variables were computed for the child's

degree of hyperactive/impulsive behaviors, the child's degree of inattentive behaviors, the parent's negative attributions about the child, the parent's characteristic trait of perseverance, the parent's degree of the trait of equanimity, and the parent's degree of the trait of internal locus of control. Bivariate correlations for the dependent variables were computed for parent's degree of authoritative behavior, parental authoritarian behavior, the parent's degree of anger in response to the child's ADHD behavior, and the parent's degree of anxiety in response to the child's ADHD behavior.

Each of the study's hypotheses was tested using a stepwise multiple regression analysis. For each dependent variable, a multiple regression analysis was computed to determine the degrees to which the independent variables statistically predicted scores on the dependent variable. Four blocks of the independent variables were entered into the analysis during the stepwise multiple regression procedure. In step one, the child's gender was entered as a predictor of the dependent variable. In step two, the two types of child ADHD behaviors (hyperactivity/impulsivity and inattentiveness) were entered. In step three, the three parent characteristic traits (perseverance, equanimity, and internal locus of control) were entered. In step four, the parent's negative attributions about the child's ADHD symptoms were entered.

### **Pearson Correlations among Variables**

Table 4 presents the Pearson correlations among the independent variables, including (1) *child hyperactive/impulsive behaviors*, (2) *child inattentive behaviors*, (3) *parent's negative attributions towards child*, (4) *parent's coping related trait of perseverance*, (5) *parent's coping related trait of equanimity*, and (6) *parent's coping related trait of internal locus of control*. The independent variables were later grouped

into three categories for use in the multiple regression analyses: child hyperactive/impulsive behaviors and child inattentive behaviors into *child ADHD behaviors*; parent's negative attributions towards child remained in its own category; and equanimity, perseverance, and internal locus of control into *parent coping related traits*.

Regarding the correlations for the child ADHD behaviors, hyperactivity/impulsivity was significantly positively associated with inattentiveness ( $r = .328; p = .001$ ), though moderately, which was expected due to the different characteristics that make up these two types of ADHD behavioral symptoms. The DSM-5 criteria for a primarily inattentive ADHD diagnostic lists nine criteria characteristics, including failing to give close attention to detail, difficulty with organization, easy distraction by external stimuli, and more. The DSM-5 criteria for a primarily hyperactive/impulsive ADHD diagnostic lists nine criteria characteristics, including feeling restless, excessive talking, difficulties waiting their turn, and more (APA, 2013). Degree of hyperactivity/impulsivity was associated with parents' negative attributions ( $r = .374; p < .001$ ). This association suggests that parents tended to infer that their children had some control over their hyperactive and impulsive behavior. Inattentiveness was also associated with parents' negative attributions ( $r = .265; p = .008$ ) but not as strongly, perhaps due to the relatively "hidden" and subtle occurrence of inattentive behaviors. Hyperactivity/impulsivity was negatively associated with level of parent internal locus of control ( $r = -.343; p < .001$ ), suggesting that the more a child exhibited hyperactive and impulsive behavior the less that parents believe that they had potential to control the child's actions. As more overt and challenging manifestations of ADHD than inattentiveness, it is not surprising that parents viewed hyperactivity/impulsivity as

difficult for them to control. Inattentiveness was also negatively associated with parent internal locus of control ( $r = -.271; p = .006$ ) but somewhat less strongly than hyperactivity/impulsivity, again perhaps due to its more subtle occurrence, which tends to require less focus from the parent. Finally, the inverse correlation between hyperactivity/impulsivity and parents' equanimity ( $r = -.194; p = .006$ ) may reflect a process through which persistent highly intense and impulsive (likely unpredictable) child behavior wears down parents' sense of calm and acceptance.

Second, correlations between parents' negative attributions regarding the child and parents coping characteristics were examined. Negative attributions and internal locus of control were negatively correlated ( $r = -.394; p < .001$ ), indicating that the more the parent attributed child ADHD behavior to negative intentions of the child, the less the parent believed that she or he had the ability to control the child's behavior. There was no association between negative attributions and parental perseverance ( $r = -.086$ ), suggesting that attributing negative child behavior to negative intent or a lack of caring on the child's part did not tend to dissuade parents from persisting in their efforts to solve problems regarding the child's negative behavior.

Third, correlations among the three parent coping related traits were examined. Perseverance and equanimity were positively correlated ( $r = .487; p < .001$ ). This correlation was expected, given that these variables are both sub-scales of Wagnild and Young's (1993) Resiliency Scale. There were no significant correlations found between perseverance and internal locus of control ( $r = .146$ ) or equanimity and internal locus of control ( $r = .073$ ). Thus, although they all are characteristics commonly associated with individuals' abilities to cope with life stresses, they are distinct enough from each other

that it is reasonable to include all of them as potential influences on parents' coping with a child with ADHD.

Table 4  
Pearson Correlations among the Independent Variables

		1	2	3	4	5
1. Child Hyperactive/Impulsive Behaviors	Correlation Sig. (2-tailed) n	-				
2. Child Inattentive Behaviors	Correlation Sig. (2-tailed) n	.328 .001 100	-			
3. Parent's Negative Attributions Toward Child	Correlation Sig. (2-tailed) n	.374 < .001 100	.265 .008 100	-		
4. Parent Trait - Perseverance	Correlation Sig. (2-tailed) n	-.063 .533 99	.117 .249 99	-.086 .400 99	-	
5. Parent Trait - Equanimity	Correlation Sig. (2-tailed) n	-.190 .060 99	-.054 .597 99	-.171 .090 99	.487 < .001 98	-
6. Internal Locus of Control	Correlation Sig. (2-tailed) n	-.343 < .001 100	-.271 .006 100	-.394 < .001 100	.147 .146 99	.181 .073 99

Table 5 presents Pearson Correlations among the dependent variables, including (1) *authoritarian parent behaviors*, (2) *authoritative parent behaviors*, (3) *parent's emotional response of anger to the child with ADHD*, and (4) *parent's emotional response of anxiety to the child with ADHD*.

First, correlates of parent behaviors were examined. There was no significant correlation between authoritarian behaviors and authoritative behaviors ( $r = -.036$ ),

supporting the goal of examining those types of parenting behavior separately in this study. There was a moderate to strong correlation between authoritarian behavior and parent anger ( $r = .659$ ;  $p < .001$ ), indicating that the argumentative and punitive actions assessed with the authoritarian behavior measure were associated with anger toward the child; a common aspect of aggressive behavior in general. Nevertheless, the two variables were not so highly associated that they could be considered to be aspects of the same construct; hence, analyzing them as separate variables in the multiple regression analysis was considered appropriate. There also was a positive correlation between parental authoritarian behavior and parent anxiety in response to the child with ADHD ( $r = .320$ ;  $p = .001$ ), but it was weaker than the association between authoritarian behavior and anger. In contrast, there was a negative correlation between parental authoritative behavior and parent anger ( $r = -.204$ ;  $p = .042$ ), reflecting a tendency for parents who used constructive authoritative parenting approaches to respond calmly. There was no significant association found from parent authoritative behavior and parent anxiety.

Second, the correlation between parents' anger and anxiety responses to the child with ADHD were examined. There was a correlation between parent anger and parent anxiety ( $r = .583$ ;  $p < .001$ ). This association reflects a tendency for those two types of negative emotional arousal to occur simultaneously, yet the magnitude of the correlation was moderate enough that the two variables can be considered two different types of emotional response that can be investigated separately in the multiple regression analyses.



Table 5  
Pearson Correlations among the Dependent Variables

		1	2	3
1. Authoritarian Parent Behaviors	Correlation	-		
	Sig. (2-tailed)			
	n			
2. Authoritative Parent Behaviors	Correlation	-.036	-	
	Sig. (2-tailed)	.725		
	n	100		
3. Parent Emotions - Anger	Correlation	.659	-.204	-
	Sig. (2-tailed)	< .001	.042	
	n	100	100	
4. Parent Emotions - Anxiety	Correlation	.320	-.008	.583
	Sig. (2-tailed)	.001	.939	< .001
	n	100	100	100

### Multiple Regression Analyses Testing the Hypotheses

#### Hypotheses 1, 2, 3, and 4

Hypothesis 1 stated that *parents reporting about a son will report using lower levels of authoritative behavior toward their child compared to parents reporting about a daughter*. Hypothesis 2 stated that *the more the child exhibits negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention), the less the parent will report using authoritative behavior toward the child*. Hypothesis 3 stated that *higher coping related traits of the parent (perseverance, equanimity, locus of control) will be associated with higher reports of parental authoritative behavior toward the child*.

Hypothesis 4 stated that *the more the parent reports negative attributions about the child, the less the parent will report using authoritative behavior toward the child*. These four hypotheses were tested by computing a stepwise multiple regression analysis in which the dependent variable was the *parent's authoritative behavior*. Step 1 had the gender of the child as a predictor, step 2 had the child's two types of ADHD behaviors

(hyperactivity/impulsivity, inattentiveness) as predictors, step 3 had the parent's three types of coping related traits (equanimity, perseverance, locus of control) as predictors, and step 4 had the parent's negative attributions regarding child behavior as a predictor.

Table 6 summarizes the results of this analysis. The effect for child gender (Model 1) was not significant. The effect for the child's ADHD behaviors (Model 2) also was not significant. The effect for the set of parent's coping related traits (Model 3) was significant ( $p < .001$ ). Exploration of the effects for the three individual parental coping traits indicated a significant positive association between locus of control and authoritative parent behavior ( $\beta = .388$ ;  $t = 3.77$ ;  $p < .001$ ), whereas the effects for parental perseverance ( $\beta = .116$ ;  $t = 1.07$ ;  $p = .287$ ) and equanimity ( $\beta = .141$ ;  $t = 1.29$ ;  $p = .200$ ) were not significant. Finally, the effect for parents' negative attributions about the child's behavior (Model 4) was not significant.

Table 6

*Stepwise Multiple Regression Analysis for Child's Gender, Child's ADHD Behaviors, Parent's Coping Related Traits, and Parent's Negative Attributions Regarding Child Behavior as Predictors of Parent's Authoritative Behavior toward Child*

Dependent Variable: Parent's Authoritative Behavior

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>p</i>	Change Statistics				
					<i>R</i> <sup>2</sup> Change	<i>F</i> Change	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>	Sig. <i>F</i> Change
1	.053	.003	0.27	.603	.003	0.27	1	96	.603
2	.134	.018	0.57	.635	.015	0.72	2	94	.489
3	.469	.220	4.28	.001	.202	7.86	3	91	<.001
4	.477	.228	3.79	.001	.008	0.90	1	90	.345

*Note.* Model 1 predictor = child gender. Model 2 predictors = child gender, child inattentiveness and hyperactivity/impulsivity. Model 3 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, and parental equanimity. Model 4 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, parental equanimity, and parent's negative attributions about the child.

### **Hypotheses 5, 6, 7, and 8**

Hypothesis 5 stated that *parents reporting about a son will report using higher levels of authoritarian behavior toward their child compared to parents reporting about a daughter*. Hypothesis 6 stated that *the more the child exhibits negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention), the more the parent will*

*report using authoritarian behavior toward the child.* Hypothesis 7 stated that *lower reports of parents' coping related traits (perseverance, equanimity, locus of control) will be associated with more authoritarian behavior toward the child.* Hypothesis 8 stated that *the more the parent reports negative attributions about the child, the more the parent will report using authoritarian behavior toward the child.* These four hypotheses were tested by computing a stepwise multiple regression analysis in which the dependent variable was the *parent's authoritarian behavior*. Step 1 had the gender of the child as a predictor, step 2 had child's two types of ADHD behaviors (hyperactivity/impulsivity, inattentiveness) as predictors, step 3 had the parent's three types of coping related traits (equanimity, perseverance, locus of control) as predictors, and step 4 had the parent's negative attributions regarding child behavior as a predictor.

Table 7 summarizes the results of this analysis. The gender effect (Model 1) was not significant. The ADHD behavior effect (Model 2) proved significant ( $p < .001$ ), and exploration of the effects of the individual types of ADHD behavior indicated that hyperactivity/impulsivity was significantly associated with higher authoritarian parent behavior ( $\beta = .461$ ;  $t = 4.98$ ;  $p < .001$ ), whereas there was a trend for greater child inattentiveness to be associated with higher authoritarian parent behavior ( $\beta = .162$ ;  $t = 1.75$ ;  $p = .083$ ).

The effect for the set of parent coping related traits (Model 3) was not significant. However, the individual effect of equanimity was significant, such that greater parental equanimity was associated with less authoritarian parental behavior ( $\beta = -.232$ ;  $t = -2.29$ ;  $p = 0.024$ ). The effect for parents' negative attributions (Model 4) was significant, such

that higher negative attributions toward the child were associated with higher authoritarian parent behavior ( $\beta = .395$ ;  $t = 4.37$ ;  $p < .001$ ).

Table 7

*Stepwise Multiple Regression Analysis for Child's Gender, Child's ADHD Behaviors, Parent's Coping Related Traits, and Parent's Negative Attributions Regarding Child Behavior as Predictors of Parent's Authoritarian Behavior toward Child*

Dependent Variable: Parent's Authoritarian Behavior

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>p</i>	Change Statistics				
					<i>R</i> <sup>2</sup>	<i>F</i>	<i>df</i> 1	<i>df</i> 2	Sig. <i>F</i>
					Change	Change			Change
1	.005	.000	0.00	.964	.000	0.00	1	96	.964
2	.533	.285	12.46	<.001	.285	18.69	2	94	<.001
3	.569	.324	7.28	<.001	.040	1.78	3	91	.157
4	.665	.442	10.20	<.001	.118	19.06	1	90	<.001

*Note.* Model 1 predictor = child gender. Model 2 predictors = child gender, child inattentiveness and hyperactivity/impulsivity. Model 3 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, and parental equanimity. Model 4 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, parental equanimity, and parent's negative attributions about the child.

### **Hypotheses 9, 10, 11, and 12**

Hypothesis 9 stated that *parents reporting about a son will report higher levels of anger toward their child compared to parents reporting about a daughter*. Hypothesis 10

stated that *higher levels of the child's negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention) will be associated with higher levels of anger in the parent toward the child.* Hypothesis 11 stated that *lower reports of coping related traits of the parent (perseverance, equanimity, locus of control) will be associated with higher levels of anger in the parent toward the child.* Hypothesis 12 stated that *higher reports of negative attributions about the child will be associated with higher levels of anger in the parent toward the child.* These four hypotheses were tested by computing a stepwise multiple regression analysis in which the dependent variable was the *parent's degree of anger* toward the child. Step 1 had the gender of the child as a predictor, step 2 had child's two types of ADHD behaviors (hyperactivity/impulsivity, inattentiveness) as predictors, step 3 had the parent's three types of coping related traits (equanimity, perseverance, locus of control) as predictors, and step 4 had the parent's negative attributions regarding child behavior as a predictor.

Table 8 summarizes the results of this analysis. The gender effect (Model 1) was not significant. The effect for the set of two types of ADHD behavior (Model 2) was significant ( $p < .001$ ). The effects of both hyperactivity/impulsivity ( $\beta = .393$ ;  $t = 4.40$ ;  $p < .001$ ) and inattentiveness ( $\beta = .314$ ;  $t = 3.52$ ;  $p = .001$ ) were both significant, indicating that higher reports of negative ADHD behaviors by the child were associated with higher levels of anger in the parent.

The effect for the set of parental coping traits (Model 3) was significant ( $p < .001$ ). such that the effects of both equanimity ( $\beta = -.196$ ;  $t = -2.21$ ;  $p = .029$ ) and locus of control ( $\beta = -.241$ ;  $t = -2.88$ ;  $p < .001$ ) were significant, indicating that higher levels of the parent coping related traits were associated with lower levels of anger in the parent,

whereas the effects for parental perseverance not significant ( $\beta = -.139$ ;  $t = -1.58$ ;  $p = .118$ ). The effect for parental negative attributions about the child (Model 4) also was statistically significant, such that higher reports of negative attributions from the parent were associated with higher levels of anger in the parent ( $\beta = .262$ ;  $t = 3.18$ ;  $p = .002$ ).

Table 8

*Stepwise Multiple Regression Analysis for Child's Gender, Child's ADHD Behaviors, Parent's Coping Related Traits, and Parent's Negative Attributions Regarding Child Behavior as Predictors of Parent's Emotional Response of Anger*

Dependent Variable: Parent's Emotional Response – Anger

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>p</i>	Change Statistics				
					<i>R</i> <sup>2</sup> Change	<i>F</i> Change	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>	Sig. <i>F</i> Change
1	.001	.000	0.00	.995	.000	.000	1	96	.995
2	.576	.332	15.54	<.001	.332	23.31	2	94	<.001
3	.696	.484	14.25	<.001	.153	9.00	3	91	<.001
4	.733	.537	14.89	<.001	.052	10.12	1	90	.002

*Note.* Model 1 predictor = child gender. Model 2 predictors = child gender, child inattentiveness and hyperactivity/impulsivity. Model 3 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, and parental equanimity. Model 4 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, parental equanimity, and parent's negative attributions about the child.

### **Hypotheses 13, 14, 15, and 16**

Hypothesis 13 stated that *parents reporting about a son will report higher levels of anxiety in response to their child's ADHD behavior compared to parents reporting about a daughter*. Hypothesis 14 stated *higher levels of the child's negative behavioral symptoms of ADHD (hyperactivity/impulsivity and inattention) will be associated with higher levels of anxiety in the parent from interacting with the child*. Hypothesis 15 stated that *lower reports of coping related traits of the parent will be associated with higher levels of anxiety in the parent from interacting with the child*. Hypothesis 16 stated that *higher reports of negative attributions towards the child will be associated with higher levels of anxiety in the parent from interacting with the child*. These four hypotheses were tested by computing a stepwise multiple regression analysis in which the dependent variable was the *parent's emotional response of anxiety*. Step 1 had the gender of the child as a predictor, step 2 had child's set of two types of ADHD behaviors (hyperactivity/impulsivity, inattentiveness) as predictors, step 3 had the set of three parental coping related traits (equanimity, perseverance, locus of control) as predictors, and step 4 had the parent's negative attributions regarding child behavior as a predictor.

Table 9 summarizes the results of this analysis. The gender effect (Model 1) was not significant. There was a trend found for the effect of the set of ADHD behaviors on anxiety (Model 2) ( $p = .075$ ), and examination of the individual effects for the types of ADHD behaviors indicated that such that higher reports of child inattentiveness tended to be associated with higher levels of anxiety in the parent ( $\beta = .184$ ;  $t = 1.73$ ;  $p = .086$ ).

The effect for the set of parent coping traits (Model 3) was significant ( $p = .006$ ), such that both greater equanimity ( $\beta = -.225$ ;  $t = -2.01$ ;  $p = .047$ ) and greater locus of control ( $\beta = -.220$ ;  $t = -2.07$ ;  $p = .041$ ) were significantly associated with lower levels of



anxiety in the parent, whereas perseverance was not significantly associated with parental anxiety ( $\beta = -.053$ ;  $t = -0.47$ ;  $p = .638$ ).

Finally, the effect for parents' negative attributions about the child's ADHD behavior (Model 4) was statistically significant, such that higher reports of negative attributions from the parent were associated with higher levels of anxiety in the parent ( $\beta = .289$ ;  $t = 2.73$ ;  $p = .008$ ).

Table 9

*Stepwise Multiple Regression Analysis for Child's Gender, Child's ADHD Behaviors, Parent's Coping Related Traits, and Parent's Negative Attributions Regarding Child Behavior as Predictors of Parent's Emotional Response of Anxiety*

Dependent Variable: Parent's Emotional Response – Anxiety

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>p</i>	Change Statistics				
					<i>R</i> <sup>2</sup> Change	<i>F</i> Change	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>	Sig. <i>F</i> Change
1	.016	.000	0.03	.873	.000	0.00	1	96	.873
2	.232	.054	1.79	.155	.054	0.05	2	94	.075
3	.416	.173	3.18	.007	.119	4.38	3	91	.006
4	.486	.237	3.99	.001	.063	7.45	1	90	.008

*Note.* Model 1 predictor = child gender. Model 2 predictors = child gender, child inattentiveness and hyperactivity/impulsivity. Model 3 = child gender, child inattentiveness and hyperactivity/impulsivity, parental perseverance, parental locus of control, and parental equanimity. Model 4 = child gender, child inattentiveness and

hyperactivity/impulsivity, parental perseverance, parental locus of control, parental equanimity, and parent's negative attributions about the child.

## CHAPTER 5: DISCUSSION

The aim of this study was to examine the responses of parents to their children with ADHD. More specifically, the study examined parental cognitive, behavioral and emotional responses to child ADHD behavior, including parents' attributions about the child, and their cognitively-oriented coping related traits, their emotions of anger and anxiety, and their authoritative and authoritarian parent behavior. It was hypothesized that greater negative ADHD behaviors from the child would be associated with less positive behavioral responses and more negative behavioral and emotional responses from the parent. It also was hypothesized that greater negative attributions and lower levels of coping related traits from the parent would be associated with less positive behavioral responses and more negative behavioral and emotional responses from the parent. In addition, it was hypothesized that child gender would affect parents' behavioral and emotion responses, given the greater tendency for boys to be identified as displaying hyperactive/impulsive behaviors that are often viewed negatively by parents and others.

### Summary of Findings

#### **Parental Authoritative and Authoritarian Behaviors as Responses to Child ADHD Behaviors, Parent Coping Related Traits, and Parent Cognitive Attributions**

The results indicated that that parental authoritative behaviors were positively related to the set of positive parent coping related traits examined in the multiple regression analysis. Upon further analysis, however, it was only the locus of control trait that had a significant association with parental authoritative behavior. There was no support for any of the other three hypotheses regarding authoritative behavior and gender, degree of child ADHD behavior, and parent negative attributions.

The results indicated that negative child ADHD behavior was positively associated with parental authoritarian behavior. Upon further analysis, hyperactivity/impulsivity had a stronger association with authoritarian parent behavior than inattentive behavior did. The results also indicated that parental authoritarian behavior was positively correlated with parents' negative attributions about the child. Although there was no association found between parental authoritarian behavior and parent coping related traits combined, upon further analysis it was found that greater equanimity was associated with less authoritarian parental behavior. There was no support for the hypothesis regarding gender of the child and parental authoritarian behavior.

**Gender.** The original prediction was that parents of sons with ADHD would report lower levels of authoritative behaviors compared to parents of daughters. The other prediction was that parents with sons would report higher levels of authoritarian behaviors compared to parents with daughters. These predictions were based on the prior finding that boys are more likely to be diagnosed with the type of ADHD that displays hyperactivity/impulsivity (Rucklidge, 2010). It was assumed that sons with hyperactive/impulsive behaviors (e.g., interrupting others while talking; difficulty waiting their turn; feeling restless) would elicit less authoritative responses and more authoritarian responses from parents. Whereas this may be true (and was supported in this study for authoritarian behavior), the incorrect assumption was the boys with ADHD also meet hyperactivity/impulsivity behavioral criteria. This hypothesis may not have been supported because it was assumed that a majority of the boys in the study would display

negative hyperactive/impulsive behaviors and that parents would not have the capacity to respond in an authoritative manner, so they would respond in an authoritarian manner.

A possible explanation for this finding is that some or even many of the sons for whom the parents in this study reported were not displaying hyperactive/impulsive behaviors. Although the data were available from the survey, no analysis was completed to test whether the sons displayed more hyperactive/impulsive behaviors than the daughters. The survey also never asked parents to explicitly specify if their child displayed more hyperactive/impulsive behaviors or inattentive behaviors.

***Child ADHD behaviors.*** Contrary to the assumptions made about gender in this study, when it came to authoritarian behavior, there was a significant association with negative child ADHD behaviors. The original hypothesis indicated that more authoritarian parental behavior would occur in response to children displaying more negative ADHD behavior. More specifically, there was a stronger association between authoritarian behavior and hyperactive/impulsive ADHD behavior than inattentive behavior. This finding is consistent with previous findings that parents of a child with ADHD tend to use a stricter tone of voice, give more verbal commands, and place more limits on behavior than parents of children without ADHD (Alizadeh & Andries, 2002; Mano & Uno, 2007; Tancred & Greeff, 2015), which are all characteristic traits of the authoritarian parenting style.

Even when considering just the behaviors of the child, there were no significant findings for parent authoritative behavior as a response to their child's ADHD behaviors. The original hypothesis theorized less authoritative behavior would be the response to children displaying more negative ADHD behaviors (hyperactivity/impulsivity and

inattention). This hypothesis was based on previous research that indicated parents of children with ADHD are often perceived as less responsive, less rewarding, and more critical of their child (Modesto-Lowe et al., 2008; Modesto-Lowe et al., 2011). It was also based on the idea that parents commonly are not skilled enough to use effective behavioral responses towards their child's negative ADHD behaviors. These parents may very well have knowledge about authoritative behaviors due to education and support from their CHADD organization, an organization that educates parents about effective behavioral responses toward their children (this is also a limitation of the study which will be discussed in more detail below). It may be that an authoritative response is not the first intervention used by parents handling their child with ADHD, or that authoritative parenting behaviors are not used as often as authoritarian parenting behaviors.

***Parent coping related traits.*** In the findings for authoritative behavior, higher parent coping related traits were positively associated with authoritative behavior in parents. This finding aligns with the original hypothesis that predicted that higher coping related traits of the parent would be associated with higher reports of parental authoritative behavior toward the child. Further analysis showed that the greatest (and only significant) correlation between authoritative behavior and coping related traits involved the locus of control trait. Perseverance and equanimity were not significantly associated with parental authoritative behavior. A possible explanation for this finding is that this cognitive trait involves the view that one is empowered to deal effectively with child ADHD via one's parenting skills. According to the literature, for families of children with developmental disabilities, research has shown that a family's perception of their internal locus of control results in greater positive adjustment as well as reduced

stress levels (Hastings & Brown, 2002; Rimmerman, 1991). If parents believe that they have the ability to influence and control the outcome of a situation with their child, they may opt for a more effective behavioral response such as authoritative behavior.

Although the overall hypothesis that parents' three types of positive coping related traits would be associated with less authoritarian behavior toward the child, only the results for equanimity supported the hypothesis. Those who report higher equanimity tend to hold a balanced perspective on their life, take one life challenge at a time and in stride, and stay positive and hopeful during adversarial times (Lundman et al., 2006). These cognitive beliefs are contrary to authoritarian behavior, which often is characterized by rigidity, strictness, and a "my way or the highway" mentality. The significant but modest correlation between these two variables, however, may indicate that it will take more than a balanced life perspective to change the behaviors of an authoritarian parent.

*Negative attributions.* There was no relationship found between parents' negative attributions regarding their children with ADHD and the parents' degree of authoritative behavior. The original hypothesis stated the more the parent reports negative attributions about the child, the less the parent will report using authoritative behavior toward the child. In contrast, the significant positive relationship that was found between negative attributions regarding the child and degree of authoritarian behavior did support the hypothesis. It is interesting that negative attributions are linked more to the presence of negative parenting behavior than they are to the absence of positive parenting behavior. Furthermore, there are other indications from comparing the correlates of authoritative and authoritarian parenting behaviors that seem to indicate that these parenting styles are

fairly mutually exclusive. There were no independent variables in this study that were correlated with both of these two parenting styles (see the multiple regression results for both authoritative and authoritarian behaviors). This suggests that different types of therapeutic interventions may be needed to modify levels of authoritarian and authoritative parenting styles.

### **Parental Emotions as Responses to Child ADHD Behaviors, Parent Coping Related Traits, and Parent Cognitive Attributions**

The results indicate that the parent's emotional response of anger was associated with child negative ADHD behavior, parent coping related traits, and parent negative attributions. Upon further analysis of the parent's emotional response of anger in relation to the three parental coping related characteristics, only equanimity and locus of control were significantly related; there was no significant relationship found between parent's anger and their degree of perseverance. There was no support for the hypothesized relationship between child gender and parent's anger.

For parents' emotional responses of anxiety, the results showed an association with parent coping related traits and negative attributions that were consistent with the hypotheses. Upon further analysis of parents' anxiety and parent coping related techniques, greater equanimity and locus of control were significantly related to lower anxiety, but there was no significant relationship found between parents' anxiety and perseverance. There also was no support for the hypothesized relationship between parental anxiety and child gender. One possible reason for the lack of an association between perseverance and anxiety is that for some individuals the perseverance may be motivated by anxiety (discomfort at not having the child's behavior under control),



whereas for other individuals relative calmness may accompany persistent goal-directed behavior.

Although there was no significant association found between parent's emotional response of anxiety and child negative ADHD behavior, there was a statistical trend. A closer analysis showed that higher levels of anxiety in parents was associated stronger with child inattentive behaviors and was not associated with child hyperactive/impulsive behaviors. Assumptions about these findings are explained more thoroughly below.

**Gender.** As mentioned above in the discussion regarding parent behavioral responses and gender, the hypotheses regarding gender were based on the idea that sons were more likely to display readily visible hyperactive and impulsive behaviors compared to girls. However, child gender was not found to be related to the variables assessed in this study. One possible explanation is that that the researchers made incorrect assumptions about boys being more likely to have hyperactive/impulsive behaviors. Given that these behaviors are more apparent, it was hypothesized that parent's emotional response to these behaviors would be higher than to inattentive behaviors. Another explanation is that parents are responded solely to the behavior of the child and not the gender of the child. The gender of the child is not as influential on the emotional response of the parent, however, the severity of the symptoms of the child are influential. It may be child gender is not predictive of ADHD behavioral symptoms severity.

**Child ADHD behaviors.** There was a relationship between the parent's anger and the child's degree of negative ADHD behavior. This was one of the strongest results found within the study because there was a relationship between anger and both of the behavior traits (hyperactivity/impulsivity and inattentiveness). This finding suggests that

the behavioral nature of ADHD can be quite frustrating for parents. It also dispels the common assumption that hyperactive/impulsive displays of behavior elicit more anger responses in parents compared to inattentive behaviors (Daley, Jones, Hutchings, & Thompson, 2009; Modesto-Lowe et al., 2008). Although inattentive behaviors are known to go “under the radar” (Rucklidge, 2010), the findings from this study indicate that when parents do observe these behaviors their level of anger rises. Understanding this finding is facilitated by considering the characteristics of the sample used in the study. The participants are members of CHADD, so an assumption can be made that these parents are highly aware of their child’s ADHD behaviors. The parents in this sample may have superb insight on their child’s behavior, resulting in more accurate responses on the survey and thus this finding.

Regarding parent levels of anxiety, there was an association found with inattentive child behavior. This finding supports previous research indicating that parents of children with ADHD commonly personally struggle with anxiety (Chronis et al., 2007; Lin & Chung, 2002; Modesto-Lowe et al., 2011). The present finding suggests that the anxiety among parents may be due in part to the effects of interacting with an inattentive child. A possible explanation for this result is that the parent is anxious about his or her ability to effectively engage their child with ADHD. If a parent notices that the child is not listening to their commands or is not turning in their homework at school, this may elicit anxiety about negative consequences of the child’s inattentiveness (e.g., worry about the child earning low grades or being in trouble with the teacher). Another explanation could be that parents do not feel a sense of control over their ability to direct their child who does not pay attention, in turn causing a rise in anxiety levels.

***Parent coping related traits.*** Both anger and anxiety showed significant associations with the same parent coping related traits – equanimity and locus of control, but not perseverance. These results support the original hypotheses that indicated lower reports of coping related traits of the parent would be associated with higher levels of anger and higher levels of anxiety in the parent. These results speak to the importance of understanding the significance of the relationship between anger and anxiety, seen in Table 5 of this study. Anger and anxiety were highly correlated emotions in this sample, and according to these results they are similarly related to parents’ coping responses of equanimity and locus of control. It can be inferred that parents lacking the strong cognitive traits of equanimity (balanced life perspective) and locus of control (ability to influence the outcome of a situation) may feel both a sense of frustration and anxiety regarding their child’s negative ADHD behaviors. The results also suggest that it is important for clinicians to assess for anxiety as well as more obvious anger in parents coping with child ADHD.

***Negative attributions.*** Anger and anxiety showed similar and strong associations with parents’ negative attributions regarding their child with ADHD. Thus the more negative attributions parents make regarding their children with ADHD, the higher their levels of anger and anxiety in response to interacting with the children. These findings are consistent with the hypotheses that indicated higher reports of negative attributions about the child will be associated with higher levels of anger and higher levels of anxiety in the parent. These findings underscore the strong association between individuals’ thoughts and their emotional responses. The more that a parent believe his or her negative attributions about their child with ADHD, the more likely the parent will be to become

angry or anxious when their child begins to display these ADHD behaviors. Thus, parents' negative attributions will be an important target for psychoeducational and therapeutic interventions.

### **Study Limitations and Strengths**

This study has limitations that need to be considered. For one, the participants in the survey were a convenience sample. All participants were members of the organization CHADD. CHADD is known in the ADHD community as an external resource for parents and families of members with ADHD. They provide educational resources and support, and they attract families who are looking to bond with a community of families sharing similar struggles. It can be assumed that members of CHADD are proactive in seeking help for their families and interested in finding new ways of interacting with their family member with ADHD. Further, it must be taken into consideration that the participants of this survey have truly gone above and beyond to help contribute to the knowledge for the ADHD community by completing the survey. This study clearly has a selective sample, so consumers should be cautious in generalizing the results found from this study.

The large majority of the participants in this survey were mothers of children with ADHD. Again, when it comes to generalizability, consumers should use caution in applying these results to "parents". Unfortunately, there seems to be a trend in previous research on families with ADHD in which mothers make up the majority of the sample or mothers are purposefully targeted for research studies. This study aimed to include both mother and fathers but was unable to achieve a balanced sample.

To continue on the topic of gender, a majority of the children reported about in this study were male. This was expected because males tend to display more of the

behavioral symptoms of ADHD, usually prompting families of males to seek additional help from the community (such as the resources of CHADD). Caution should be exercised when generalizing the results regarding the behavioral responses of the children, because sons were the majority of the sample.

This study's sample was relatively small, again prompting caution to the consumer about generalizing the results. Since this was a smaller and specific sample of families with ADHD members, the results may not be representative of the larger population of families with ADHD members.

The language that was used to describe parenting behaviors in the survey items was classified by this researcher as authoritative or authoritarian. Traditionally, authoritative and authoritarian are terms used to describe general parenting styles. Questionnaires like the PAQ (Parental Authority Questionnaire) and the PPQ (Parenting Practices Questionnaire) are fairly reliable and valid measures to assess for these parenting styles. For the survey created in this study, standardized parenting questionnaires were not used to guide the creation of the questions used to assess parenting behaviors. Questions about parenting behaviors for this study were categorized at "authoritative" or "authoritarian" during the analysis stage. The content of the items and their categorization into the two parenting styles should have been considered more thoroughly. Nevertheless, the pattern of associations found for those two measures in this study do provide some evidence of construct validity for them.

Although there are numerous limitations to this study, there are also strengths to consider. For one, many of the measures had solid reliability, adding to confidence in the findings. Secondly, they have potential to be informative to organizations like CHADD

that are looking to share new information with their members. The information from this study has the potential to influence intervention techniques being taught to parents of children with ADHD. Lastly, this study collected information on cognitive responses of parents towards their child with ADHD. There is a current gap in knowledge regarding this aspect of family responses to a member's ADHD symptoms. Cognitions play a critical role in influencing behavioral and emotional responses. Data from this study can be used to better understand the relationships between parents' cognitions and their behavioral and emotional responses.

### **Recommendations for Future Research**

After completing the regression analyses for the three parental coping related traits (perseverance, equanimity, and locus of control), these traits should be tested individually as moderators of the associations between child ADHD behavior and parent emotions and behavior. A moderation analysis may yield stronger results and contribute to better understanding of the process of internal characteristics and behaviors of parents when interacting with their child with ADHD.

Another analysis should be performed in which parents' attributions about the child are examined a mediator between child ADHD behavior and parent behavioral and emotional responses. Again, this stronger statistical analysis could increase understanding of the role of parents' cognitions in influencing their behavior and emotional responses when interacting with their child with ADHD.

Future research also should be designed to target participation from more fathers, so more information can be obtained regarding fathers' cognitions, behaviors, and emotions regarding child ADHD. Although research from mothers is very valuable,

especially when they are the primary caretaker of the child with ADHD, the interactions between fathers and their children are equally important and need to be studied more thoroughly.

Future research could also look at the influence of intervention techniques and outcomes for parents of children with ADHD. This study began to identify correlations among cognitions, emotions, and behaviors of parents with children with ADHD. It would be beneficial to know if cognitive behavioral interventions for parents could have an impact on behavioral and emotional responses to their children with ADHD.

### **Implications for Clinical Practice for Family Members with ADHD**

Within this study, there was evidence that hyperactivity/impulsivity and inattentiveness needed to be examined separately. When looking at the DSM-5 diagnostic criteria for ADHD, the two forms have different characteristics; they also display quite differently for those diagnosed in both categories. After the findings in this study were revealed, however, there are times to look at hyperactivity/impulsivity and inattentiveness as separate, and times to look at them as a more general ADHD diagnosis. Clinicians may find it valuable to know the differences in the diagnoses of their clients, especially if they are evaluating parenting behaviors (authoritarian/authoritative) within the family. Clinicians may also find it valuable to assume that higher displays of *any* ADHD behavior will elicit both anger and anxiety within the parents of children with ADHD.

This study focused on the cognitive, emotional, and behavioral aspects of parents. There are clinical implications for the use of cognitive behavioral therapy for parents of children with ADHD. Couple and family therapists working with families in which one or more members have ADHD should be considerate and observant of the members'

emotional and behavioral responses. Evaluations should also be given to better understand the parenting style of the caretakers of the child with ADHD. Although this study did not examine treatment outcome effects for the child identified as exhibiting ADHD, it can be assumed that parents would like to feel in control of their parenting behaviors as well as their cognitive and emotional responses to their child.

The use of cognitive behavioral therapy with parents could be beneficial in multiple ways. For one, it can provide psychoeducation to parents who do not have a clear understanding of ADHD or a clear understanding of how their cognitions and attributions about their child influence their emotions and behaviors. Through education regarding their child's disorder and awareness of their own cognitive, emotional, and behavioral responses, parents can learn to change or eliminate interaction patterns that are not yielding positive outcomes.

Another clinical implication would be the use of mindfulness meditation for parents of children with ADHD. Mindfulness meditation practice is rooted in the belief that individuals have control only over their thoughts and behaviors, not the thoughts and behaviors of others. Mindfulness meditation teaches individuals to be present and aware of their current environment and not to dwell on past memories or worry about the unknown future. Mindfulness meditation also teaches individuals to be free of their judgmental thoughts and not to cling to self-criticism. Beneficial outcomes of mindfulness meditation include affect tolerance, equanimity, emotional intelligence and being able to find kindness, acceptance, and compassion of others (Walsh & Shapiro, 2006).



These core elements of mindfulness can be highly beneficial to parents who have lower levels of coping related traits such as perseverance, equanimity, and locus of control. Knowing the benefits of having stronger coping related traits, parents can increase these levels through the practice of mindfulness meditation. Couple and family therapists can incorporate mindfulness meditation practice into their intervention strategies for parents who need to improve their coping related traits for more positive interaction outcomes with their child with ADHD.

## Appendix I

Survey – ADHD in a Systemic Context

**ADHD in a Systemic Context****\* Required****1. Gender \*** *Mark only one oval.*

Male

Female

Other:

**2. Age in Years \*** *Mark only one oval.*

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65 or older

**3. What state do you live in? \*** *Mark only one oval.*

Alabama  
Alaska  
Arizona  
Arkansas  
California  
Colorado  
Connecticut  
D.C.  
Delaware  
Florida  
Georgia  
Hawaii  
Idaho  
Illinois  
Indiana  
Iowa  
Kansas  
Kentucky  
Louisiana  
Maine  
Maryland  
Massachusetts  
Michigan

Minnesota  
Mississippi  
Missouri  
Montana  
Nebraska  
Nevada  
New Hampshire  
New Jersey  
New Mexico  
New York  
North Carolina  
North Dakota  
Ohio  
Oklahoma  
Oregon  
Pennsylvania  
Rhode Island  
South Carolina  
South Dakota  
Tennessee  
Texas  
Utah  
Vermont  
Virginia  
Washington (state)  
West Virginia  
Wisconsin  
Wyoming

**4. Have you been diagnosed with ADHD yourself? \*** *Mark only one oval.*

Yes  
No

**5. If yes, how did you receive your ADHD diagnosis?** *Mark only one oval.*

A physician  
Psychological testing  
Self-diagnosis  
Other people have told me  
N/A  
Other:

6.If yes, what was your age of diagnosis? \* *Mark only one oval.*

N/A

Unsure

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 49  
 50 or older

**7. Who in your family has ADHD? Check all boxes that apply, including members you do not live with: *Check all that apply.***

Wife/Partner  
 Husband/Partner  
 Daughter  
 Son  
 Mother  
 Father  
 Sister  
 Brother  
 Grandmother (Maternal)  
 Grandmother (Fraternal)  
 Grandfather (Maternal)  
 Grandfather (Fraternal)  
 Granddaughter  
 Grandson  
 Aunt  
 Uncle  
 Cousin  
 Niece  
 Nephew  
 Other:

**8. Do you live with a family member who has ADHD? \* *Mark only one oval.***

Yes  
 No

**9. Please identify the one person whom you live with whom you will be answering the remainder of the survey about: \* *Mark only one oval.***

Wife/Partner

Husband/Partner  
Daughter  
Son  
Mother  
Father  
Sister  
Brother  
Grandmother (Maternal)  
Grandmother (Fraternal)  
Grandfather (Maternal)  
Grandfather (Fraternal)  
Granddaughter  
Grandson  
Aunt  
Uncle  
Niece  
Nephew

10. **How old is this family member? \*** *Mark only one oval.*

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64  
65 or older

11. **Who are you in relation to this family member?** *Mark only one*



*oval.*

Father  
Mother  
Husband/Partner  
Wife/Partner  
Brother  
Sister  
Son  
Daughter  
Grandfather  
Grandmother  
Aunt  
Uncle  
Cousin (male)  
Cousin (female)

12. **How did this family member receive their ADHD diagnosis?**

*\* Check all that apply.*

A physician  
Psychological testing  
Self-diagnosis  
Other people have told them  
Other:

13. **How old was this family member when they received their diagnosis? \* Mark only one oval.**

Unsure  
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50 or older

14. **Does this family member take prescription medication for their ADHD?** *Mark only one oval.*  
Yes  
No  
I don't know  
Yes, but not regularly
15. **To what extent do you believe the medication helps improve**

their symptoms? *Mark only one oval.*

- Not at all
- Somewhat
- A moderate amount
- Very much
- N/A

16. **Does your family member with ADHD have any other diagnosis?** *Mark only one oval.*

- No
- I do not know
- Yes, but I do not know what it is
- Yes, Anxiety
- Yes, Depression
- Yes, Bipolar Disorder (I or II)
- Yes, Nonverbal Learning Disorder
- Yes, other Learning Disability
- Yes, Oppositional Defiant Disorder
- Yes, Conduct Disorder
- Other \_\_\_\_\_

## Interacting with your family member with ADHD

17. **How do you react to/feel about your family member with ADHD?**

*\* Mark only one oval per row.*

	Not At All	Somewhat	A Moderate Amount	A Lot	Very Much
Annoyed					
Impatient					
Frustrated					
Angry					
Intolerant					
Tolerant					
Understanding					
Patient					
Supportive					

18. **How often do you interact with this family member?** *Mark only one oval.*

	1	2	3	4	5	
Not Often						Often

19. How often do you see this family member (in terms of days/weeks/months/years)? \_\_\_\_\_

20. How often do you or other members "over-function" for your family member with ADHD? (Example: taking over the person's responsibilities, reducing their impact on daily life of the family, speaking for them, etc.) *Mark only one oval.*

	1	2	3	4	5	
Not At All						Very Much

21. To what extent does this family member exhibit the following behavior patterns? \* *Mark only one oval per row.*

	Not At All	Sometimes	A Moderate Amount	A Lot	Very Often
Says things without thinking					
Tends to interrupt a conversation					
Struggles with respecting boundaries of others/intrusive					
Struggles with time management and punctuality					
Struggles with following through on projects and/or commitments					
Struggles with staying organized, whether completing a task or handling personal belongings					
Becomes easily irritated					
Doesn't appear to be listening when spoken to					

22. To what extent do you believe each of the following statements is true of your family member with ADHD? \* *Mark only one oval*

*per row.*

	Not At All	Somewhat	A Moderate Amount	Very Much
He/She has control over their ADHD behaviors.				
He/She is rude, lazy, and manipulative.				
He/She is just not trying hard enough.				
He/She purposefully provokes me with frustrating behavior.				
He/She acts like it is impossible to control the ADHD symptoms, but I know he/she could do better.				
He/She does not listen to me because of a lack of respect for me.				

23. **In some families, the family member with ADHD is recognized for their positive qualities. To what extent is your family member viewed as:** \* *Mark only one oval per row.*

	Not At All	Somewhat	A Moderate Amount	A Lot	Very Much
The life of the party/the "entertainer".					
Full of energy/gets stuff done.					

A mentor to others about ADHD in the extended of family.					
Successful; others in the extended family admirer or envy him/her.					

24. **When interacting with this family member, to what extent do you feel the following moods? \* Mark only one oval per row.**

	Not At All	Somewhat	A Moderate Amount	A Lot	Very Much
Interested					
Distressed					
Excited					
Upset					
Strong					
Guilty					
Scared					
Hostile					
Enthusiastic					
Proud					
Comfortable					
Irritable					
Alert					
Ashamed					
Inspired					
Nervous					
Determined					
Attentive					
Jittery					
Engaged					
Afraid					
Want Revenge					

25. **How do you tend to respond to the ADHD symptoms of your family member? \* Mark only one oval per row.**

	Not At All	Somewhat	A Moderate Amount	A Lot	Very Much
Try to direct their					

actions					
Argue with them					
Try to avoid them					
Do my best to stay calm and talk reasonably with them					
Coach them on behavior skills					
Physical Punishment (spanking, slapping, etc.)					
Other forms of punishment (taking away privileges, time-out, etc.)					

26. **How satisfied are you overall with your relationship with your family member who has ADHD? \*** *Mark only one oval.*

- Not at all
- Somewhat
- A moderate amount
- A Lot
- Very much

27. **How confident do you feel in your ability to influence the behavior that your family member with ADHD exhibits toward you? \*** *Mark only one oval.*

- Not at all
- Somewhat
- A moderate amount
- A Lot
- Very much

## Questions Regarding Financial Strain

Provided by the Consumer Finance Department

[http://files.consumerfinance.gov/f/201512\\_cfpb\\_financial-well-being-user-guide-scale.pdf](http://files.consumerfinance.gov/f/201512_cfpb_financial-well-being-user-guide-scale.pdf)

28. **How well does this statement describe you or your situation? \*** *Mark only one oval per row.*

	Completely	Very	Somewhat	Very	Not at all
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		well		little	
I could handle a major unexpected expense.					
I am securing my financial future.					
Because of my money situation, I feel like I will never have the things I want in life.					
I can enjoy life because of the way I am managing my money.					
I am just getting by financially.					
I am concerned that the money I have or will save won't last.					

29. **How often does this statement apply to you?** *Mark only one oval per row.*

	Always	Often	Sometimes	Rarely	Never
Giving a gift for a wedding, birthday, or other occasion would put a financial strain on my finances for the month.					
I have money left over at the end of the month.					
I am behind on my finances.					
My finances control my life					

## ADHD Resources

30. **What services does your family member with ADHD utilize in**



**order to better assist in handling their condition? Check all that apply:** *Check all that apply.*

- Online educational and professional websites
- Online blogs from other families in similar situations
- Support groups/meetings in the community (CHADD, etc.)
- Mental health specialists (psychiatrists, therapists, social workers, etc.)
- Medical doctors
- School resources (teachers, counselors, IEP meetings)
- Subscription parenting magazines
- Other members in the family
- Additional therapists (art therapy, music therapy, speech therapy, etc.)
- Other: \_\_\_\_\_

**31. Please rate how helpful your family has found the following resources in helping manage your family member's symptoms of ADHD:** *Mark only one oval per row.*

	Not at all helpful	Sometimes helpful	Helpful	Very Helpful	N/A
Online educational and professional websites					
Online blogs from other families in similar situations					
Support groups/meetings in the community (CHADD, etc.)					
Mental health specialists (psychiatrists, therapists, social workers, etc.)					
Medical doctors					
School resources					

(teachers, counselors, IEP meetings)					
Subscription parenting magazines					
Other members in the family					
Medication					
Health insurance (access to affordable care)					
Social support					

32. **What services are utilized to better understand your family members condition? Check all that apply:** *Check all that apply.*

- Online educational and professional websites
- Online blogs from other families in similar situations
- Support groups/meetings in the community (CHADD, etc.)
- Mental health specialists (psychiatrists, therapists, social workers, etc.)
- Medical doctors
- School resources (teachers, counselors, IEP meetings)
- Subscription parenting magazines
- Other members in the family
- Additional therapists (art therapy, music therapy, speech therapy, etc.)
- Other:

33. **How much knowledge have you gained about ADHD (causes, symptoms, treatments, ways family members can cope, etc.) through readings, workshops, support groups, etc.?** \* *Mark only one oval.*

- None
- A little
- A moderate amount
- A lot

## Questions of Resilience

Please select one number that represents the level to which you agree

with the following statements:

34. **When I make plans, I follow through with them.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

35. **I usually take things in stride.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

36. **I feel that I can handle many things at a time.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

37. **I am determined.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

38. **I seldom wonder what the point of it all is.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

39. **I take things one day at a time.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

40. **I can get through difficult times because I've experienced difficulty before.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

41. **I have self-discipline.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

42. **My belief in myself gets me through hard times.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

43. **In an emergency, I'm someone people generally can rely on.**

*Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

44. **I can usually look at a situation in a number of ways.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

45. **Sometimes I make myself do things whether I want to or not.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

46. **I do not dwell on things I can't do anything about.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

47. **When I'm in a difficult situation, I can usually find a way out of it.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

48. **It's okay if there are people who don't like me.** *Mark only one oval.*

	1	2	3	4	5	6	7	
Disagree								Agree

## Short Response

Please share any memories or anecdotes you have of your family member with ADHD in which you noticed that their behavior influenced the interaction/event in a positive or negative way. To help guide your recollection, think of the interaction of your family member in the context of family gatherings, regular family events, special occasions, or moments of interactions with extended family members.

In our original research on the Impact of ADHD on the Extended Family, we received hundreds of "stories" filled with struggles and sadness that so many of us know about. But there were also many stories of success and redemption. In addition to the data we will collect from your responses to the Questionnaire, it is these stories that will touch all of us in the ADHD

community.

PLEASE DO NOT USE IDENTIFYING INFORMATION OF YOUR FAMILY MEMBERS [this is an anonymous survey].

**Please write below:**

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## Contact the Researcher

If you would like results from the completed survey, please feel free to contact the research, Jaimeleigh Salazar at [UMD.ADHDsurvey@gmail.com](mailto:UMD.ADHDsurvey@gmail.com).

Powered by



Google Forms

Screen reader support enabled.

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