5-2019

Adult Attention-Deficit/Hyperactivity Disorder (ADHD): Relationship Between Parental Symptomatology, Child Behaviors, and Parenting Behaviors

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ADULT ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD): RELATIONSHIP BETWEEN PARENTAL SYMPTOMATOLOGY, CHILD BEHAVIORS, AND PARENTING BEHAVIORS

by

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A thesis submitted in partial fulfillment
of the requirements for the degree

of

EDUCATIONAL SPECIALIST

in

Psychology

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UTAH STATE UNIVERSITY
Logan, Utah

2019

ABSTRACT

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Adults with attention-deficit/hyperactivity disorder (ADHD) experience impairment in cognitive, scholastic/vocational and interpersonal domains. However, research is not clear about how parental ADHD symptoms influence parenting behavior. The purpose of this study was to examine the relationship between ADHD symptoms and parenting behaviors, including parent gender differences and the role child behavior plays in parental behavior. Participants were 109 parents (84 mothers and 25 fathers) of children ages 2-12 years. Participants completed self-report measures assessing parenting behaviors (overreactivity and laxness), ADHD symptoms, and depressive symptoms as well as child ADHD and ODD behaviors. Results of this study found that parental ADHD symptomatology, including inattention and hyperactivity/impulsivity, were significantly correlated with overreactivity, but not laxness. Differences between mothers' and fathers' ADHD symptomatology and parenting behaviors were assessed,

with results indicating no significant differences. The final test performed was a multiple regression analysis assessing if child behavior and parental ADHD symptomatology predicted parenting behavior, while controlling for parental depression. Results of the multiple regression analyses indicated that child behavior and parental symptomatology contributed over and above what depression did for parental overreactive behavior, while this was not the case for parental lax behavior.

(53 pages)

PUBLIC ABSTRACT

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Robyn Jeppson Frandsen

Adults with attention-deficit/hyperactivity disorder (ADHD) experience impairment in cognitive, scholastic/vocational and interpersonal domains. The goal of this study was to gain more information how adult ADHD symptomatology impacts parenting behaviors, specifically, overreactivity and laxness. This study found that parental ADHD symptoms were associated with greater overreactive parenting behavior. Differences between mothers and fathers were assessed and no significant difference in ADHD symptomatology or parenting behaviors were found. The combination of adult ADHD symptoms and child behavior, above and beyond parental depression, was found to be a statistically significant predictor of parental overreactive behavior, while this was not the case for parental lax behavior.

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CHAPTER I

PROBLEM STATEMENT

Attention-deficit/hyperactivity disorder (ADHD) includes pervasive, developmentally inappropriate levels of inattention and/or hyperactivity/impulsivity leading to impairments in personal relationships, social life, academic performance and occupational functioning (Asherson, Manor, & Huss, 2014). The *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition* (DSM-5) defines three subtypes of ADHD: predominantly hyperactive-impulsive type (ADHD-H), predominantly inattentive type (ADHD-I), and combined type (ADHD-C; American Psychiatric Association [APA], 2013a). Unlike previous versions of the DSM, the DSM-5 extended the ADHD criteria to include adults as well as children. A child diagnosis requires six symptoms within a certain subtype, while the adult diagnosis requires five. In addition, the age of symptom onset has changed from age 7 in the DSM-IV to age 12 in the DSM-5 (APA, 2013a).

Historically ADHD was believed to be a disorder that only affected children, but in the past two decades it has become more common for adults to be diagnosed with the disorder. For 50-80% of children with ADHD, the disorder persists into adulthood and epidemiological studies have estimated that 5% of children and 4% of adults in the U.S. have ADHD (Asherson et al., 2014; Johnston, Mash, Miller, & Ninowski, 2012).

Adults with ADHD experience impairment in cognitive, scholastic/vocational, and interpersonal domains including higher rates of family conflict, divorce and less effective parenting (Johnston, Williamson, Noyes, Stewart, & Weiss, 2016; Park, Hudec,

& Johnston, 2017; Wymbs, Wymbs, & Dawson, 2015; Zisser & Eyberg, 2012). Many of these adults may not have been diagnosed as children, and as they move into adulthood, they seek professional care for ADHD comorbid conditions including depression, anxiety, substance abuse, and antisocial behavior (APA, 2013b; Barkley, Fischer, Smallish, & Fletcher, 2004), and in the process discover they have ADHD. Antisocial behaviors, poor social skills and lack of self-awareness are also common difficulties associated with ADHD that effect relationships in the work place, family relationships, and friendships (Asherson et al., 2014; Harpin, Mazzone, Raynaud, Kahle, & Hodgkins , 2013; Voigt et al., 2017; Wasserstein & Wolfe, 2001). Adults who have been diagnosed with ADHD are at greater risk for developing depression and anxiety than individuals in the general population (Anastopoulos et al., 2018: Nelson & Gregg, 2012).

In the last 40 years, information about ADHD has grown substantially with much of the research focusing on children and males specifically. In the last 20 years the research has started to include adults with ADHD, but there is still much less research on adults than children. Until recent years, research has largely ignored how adult/parent ADHD symptoms affect family functioning and parenting. In fact, most research related to ADHD that has included parents has focused on parents of children with ADHD, or on the genetic transmission of ADHD from parent to child (Bidwell et al., 2017; Faraone & Doyle, 2001). By looking at the literature on adults with ADHD, the characteristics and symptoms give some information on how the disorder may impact parenting behaviors. Studies have shown that adults with ADHD experience deficiencies redirecting attention and effectively applying problem-solving strategies, which may contribute to a parent's

difficulty in organizing typical activities of daily living, including parenting responsibilities (Park et al., 2017; Zisser & Eyberg, 2012).

The studies that have been done on parents with ADHD have focused primarily on mothers with ADHD, with very little on fathers. In studies that specified whether or not the parent was male or female, while assessing both parental and child ADHD, the ratio of females to males went as high as 3:1 (Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007). A few studies including both mothers with ADHD and mothers without ADHD found that after controlling for oppositional or conduct disordered behavior in their children, the mothers with ADHD reported significantly poorer parental monitoring and inconsistent parenting than the mothers without ADHD (Banks, Ninowski, Mash, & Semple, 2008; Crandall, Deater-Deckard, & Riley, 2015; Johnston et al., 2012). Other studies have discovered that families where at least one of the parents had ADHD, had higher levels of family conflict and lower levels of family cohesion when compared to families without parents with ADHD (Biederman, Faraone, & Monuteaux, 2002; Bretenstein et al., 2012; Friedrich, Moning, Weiss, & Schlarb, 2017).

Although there is evidence that ADHD symptoms impair parenting skills, research has been conducted with mostly mothers. More information on adult ADHD and the effects its symptomatology has on parenting behaviors, for both mothers and fathers, is needed to develop programs and strategies, as well as awareness, to aid parents who themselves are struggling with ADHD. Therefore, the purpose of this study was to examine the relationship between ADHD symptoms and parenting behaviors.
The following research questions were addressed.

1. What is the relationship between parental ADHD symptomatology and parenting behavior?

2. Does ADHD symptomatology and parenting behavior differ between mothers and fathers?

3. Does child behavior and parental symptomatology, including both ADHD and depression, predict parenting behavior?

CHAPTER II

LITERATURE REVIEW

General Symptoms of Attention-Deficit/Hyperactive Disorder

To better understand adults with ADHD and the possible challenges they may face in their role as parents, taking an in depth look at the symptomatology of ADHD is critical. In The DSM-5 (APA, 2013a), ADHD is defined as "a persistent pattern of inattention, impulsivity and/ or hyperactivity impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development" (DSM-5; APA, 2013a). The DSM-5 requires that certain criteria be met before a diagnosis of Adult ADHD can be made. For the diagnosis of ADHD/predominantly inattentive type, an adult must experience five of nine symptoms of inattention as outlined in the DSM-5. For the diagnosis of ADHD/predominantly hyperactive-impulsive, an adult must experience five of nine symptoms of hyperactivity and impulsivity as outlined in the DSM-5. For an individual to be diagnosed with ADHD/Combined Type, criteria must be met for both inattention and hyperactivity-impulsivity. ADHD symptoms must be present before the age of 12 (APA, 2013b).

It is important to note that some of the articles included in this literature review are based on the symptom criteria set forth by the American Psychiatric Association in *The Diagnostic and Statistical Manual of Mental Disorder, 4th Edition* (DSM-IV; APA, 2000). In this earlier version of the DSM, criteria for adult ADHD required six of the same nine criterion symptoms (as identified in both the DSM-IV and DSM-5) to be

present for diagnosis and be present before the age of 7.

Adult Attention-Deficit/Hyperactive Disorder

The expression of ADHD varies from person to person causing a wide range of ways that symptoms may affect behavior. Individuals with ADHD typically have trouble getting organized, staying focused, making realistic plans, thinking before acting and are unable or struggle to adapt to changing situations (APA, 2013a). One of the hallmark symptoms of ADHD is inattention, which includes impairment in paying close attention to details, sustaining attention during tasks, difficulty listening when spoken directly to, distractibility, and often being forgetful in daily activities (APA, 2013b).

Neurocognitive Functioning

Deficits in neurocognitive functioning specifically executive functioning have been observed in both children and adults with ADHD (Barkley & Murphy, 2010; Sansosti, Cimera, Koch, & Ramrill, 2017; Seidman 2006; Voigt et al., 2017; Willcutt, Doyle, Nigg, Faraone, & Pennington, 2005). Executive functioning is a term that includes various cognitive functions such as planning, working memory, attention, inhibition, time-management, self-monitoring, self-regulation, and initiation (Naglieri & Goldstein, 2014). Deficits of executive functioning can have significant negative effects on adaptive, social and leisure functioning in addition to negative effects on school functioning, social class, educational and occupational attainment (Barkley & Murphy, 2010; Voigt et al., 2017).

Impairment

The characteristics of ADHD trait-like symptoms are pervasive, developmentally inappropriate levels of inattention, hyperactivity and impulsivity that lead to impairments in family life, social life, academic performance and occupational functioning (Asherson et al., 2014). The following studies and systematic reviews identify and describe, the various impairments adults with ADHD, both treated and untreated, may experience.

Shaw et al. (2012) reviewed studies that examined outcomes of adult participants with untreated ADHD and participants with treated ADHD. Treatment, for the purpose of the review, included pharmacological, non-pharmacological, and multimodal, or a combination of pharmacological and non-pharmacological treatments. The studies included for the review had been published between January of 1980 and December of 2010. Nine major categories of impairment in adults with ADHD were identified with the top three being: (1) nonmedicinal drug use/addictive behavior; including the use, abuse, and dependence on alcohol, cigarettes, marijuana, stimulants, or illicit drugs, multiple substance use and gambling; (2) academic; including lower achievement test scores, lower grade point average, more repeated grades, fewer years of schooling, and less degrees earned; and (3) antisocial behavior; including school expulsion, delinquency, self-reported crimes, arrests, detainment, incarceration, and repeat convictions.

Harpin et al. (2013) conducted a systematic review of the long-term outcomes of ADHD focusing on self-esteem and social function. They reviewed 127 studies published between January of 1980 and December of 2011 and included the outcomes of individuals with untreated and treated ADHD (including pharmacological, non-

pharmacological, and multimodal treatments). Across childhood, adolescence, and adulthood, untreated ADHD was associated with poorer long-term social functioning and self-esteem when compared with a non-ADHD control group. Individuals with untreated ADHD had poorer results on 57% of self-esteem outcomes and 71% of social functioning outcomes compared to individuals in the non-ADHD group. Those with treated ADHD, had poorer results on 29% of self-esteem outcomes and 39% of social functioning outcomes compared to the non-ADHD group.

A more recent study by Pitts, Mangle, and Asherson (2015) sampled a group of 189 adults, 89 females and 94 males, between the ages of 20-60 with and without ADHD. Participants answered questions in reference to their current and past experiences regarding (1) screening and classification, (2) impairment and general well-being in childhood/adolescence, (3) impairment in adulthood, and (4) ADHD diagnosis and treatment. Results from the impairment and symptoms scales showed that adults with ADHD reported greater difficulty (mean range 2.0-3.6) than adults without ADHD (mean range 1.1-2.4). Adults with ADHD reported a greater amount of impairments than adults without ADHD in involvement, work activities (difficulties getting things done on time, concentrating at work, following directions, making careless mistakes, and feeling overwhelmed by responsibilities), financial matters (difficulties saving money, paying bills on-time, managing personal finances, and poor credit ratings), perceived impact (perceived negative impact of ADHD on daily life), and perceived impairment, with significant impairment ($p < 0.001$) in the areas of social functioning (often make mistakes or act in ways others see as inappropriate), partnership relationships (losing temper often

with partner, difficulty providing the support partner needs, and feeling that partner would be better off without them), personal finances, mood/temper control, self-organization and planning, and rule-breaking behavior.

In a study done by Knouse et al. (2008) data were collected from 206 college students taken from the general population. Participants with more inattentive symptoms experienced greater indices of general distress, including less positive and more negative mood as well as more concentration problems when compared to the participants with more hyperactivity/impulsivity symptoms. Results showed that ADHD inattentive and hyperactive-impulsive symptoms related differentially to daily experiences. Participants with more hyperactive-impulsive symptoms experienced reduced sensitivity to contextual factors in perceptions of situations when compared to participants with more inattentive symptoms. The findings of this study are important because they give more information regarding the two subtypes of ADHD (inattention and hyperactivity-impulsivity), specifically that they effect different areas of daily life for adults with the disorder.

Parental Psychopathology

Evidence has shown that ongoing parental psychopathology can impact the course and outcome of child psychopathology. Studies have found that children who have at least one biological parent with ADHD are 2-8 times more likely to have ADHD than children of biological parents that do not have the disorder. In addition, 40-55% of children with ADHD have at least one biological parent with a depressive disorder (Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004; Takeda et al., 2010). ADHD and

depression are comorbid disorders and it has been found that major and minor depressive disorders occur 5.5 times more often in people with ADHD than those without (Daviss, 2017). Studies have shown that parents with ADHD and parents with a depressive disorder struggle with interpersonal impairment (specifically communication), social functioning, and negative parenting when compared to parents without either disorder (Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997, 2006, 2016; Wymbs et al., 2017).

A wealth of research regarding parental and child psychopathology has focused on parental depression. Depression is associated with low mood and higher levels of negative, hostile, and disengaged behavior and lower levels of positive interaction (Psychogiou, Daley, Thompson, & Sonuga-Barke, 2008a). Weissman et al. (1997, 2006, 2016) conducted a study with 10-, 20-, and 30-year follow ups of children with parents with and without depression. The latest results of the 30-year follow up remain consistent with the two previous follow ups: the offspring of parents with depression remain at high risk for depression when compared to the offspring classified as low risk of parents without depression (Weissman et al., 2016).

Impact of Parental Attention-Deficit/Hyperactivity Disorder on Family Functioning

For many adults, daily life includes interactions with a spouse and/or child. Adult ADHD may impact family functioning in a variety of ways including interpersonal relationships, parenting behaviors, and child dysfunction.

Parent-Child Relationship

Few studies have concentrated on the impact that parental ADHD may have on the parent-child relationship. The results of one study focusing on the parent-child relationship, found that families with at least one parent with ADHD had higher levels of family conflict and lower levels of family cohesion compared to families without parental ADHD (Biederman et al., 2002). Another study that focused on all family relationships, found that adults with ADHD reported significantly poorer family functioning including their involvement, roles, communication, and problems solving skills when compared to adults without ADHD (Eakin et al., 2004).

Parenting Behaviors

Friedrich et al. (2017) reviewed 14 studies focusing on parenting behaviors. Parent behavior outcomes across these studies indicated that parental ADHD symptoms were negatively associated with parental consistency, involvement and positive behavior, and parental ADHD symptoms were positively associated with lax, over-reactive parenting and negative emotions.

Monitoring and consistency. Monitoring and consistency are the two most common parenting behaviors mentioned in studies regarding parental ADHD. Research has established that parental monitoring and child problem behavior have been linked in the areas of safety and injury, antisocial behavior, and substance abuse (Breitenstein et al., 2012; Dishion & McMahon, 1998). Parental monitoring involves paying attention and tracking where a child is and what the child is doing (Dishion & McMahon, 1998). Monitoring has been found to be the strongest defense against externalizing behaviors

such as rule breaking, impulsive behavior, destruction of property, and physical and/or verbal aggression (Barber, Stolz & Olsen, 2005). Parental consistency refers to how parents choose to deal with child misbehavior and whether or not discipline is consistent (Murray & Johnston, 2006). It has been found that consistent parenting leads to greater reduction in problem behaviors (Breitenstein et al, 2012; Dishion & Mcmahon, 1998).

Four studies involving mothers with and without ADHD, found that mothers with ADHD reported lower levels of monitoring and intraparent consistency (Chronis-Tuscano et al., 2011; Murray & Johnston, 2006; Psychogiou et al., 2008a; Sonuga-Barke, Daley, & Thompson, 2002). Mokrova, O'Brien, Calkins, and Keane (2010) found that both mothers and fathers with ADHD reported having higher levels of inconsistency in imposing limits for their children and lower levels of monitoring compared to mothers and fathers without ADHD.

Lax and over-reactive parenting. Lax parenting includes giving in, allowing rules to go unenforced, and providing positive consequences for misbehavior, while over-reactive parenting includes anger, meanness, and irritability (Banks et al., 2008). Harvey, Danforth, Mckee, Ulaszek, and Friedman (2003) found that inattention and hyperactivity/ impulsivity had an impact on lax parenting and over-reactive parenting. High levels of inattention and impulsivity is related to lax parenting in fathers, while high levels of inattention in mothers is related to more reactive and negative parenting in mothers. Another study found that mothers with higher levels of ADHD symptomatology reported having significantly more parenting dissatisfaction, parent lack of control, laxness, and over-reactivity compared to mothers with low levels of ADHD symptomatology (Banks

et al., 2008). Humphreys, Mehta, and Lee (2012) studied parental ADHD and parental depression and their association with child psychopathology. They found that for parents with ADHD -Predominantly Hyperactive/ Impulsive Type, giving in to their children occurred at a greater rate leading to an increase of child externalizing behaviors than in parents with ADHD- Predominantly Inattentive, parents with depression, and the control group.

Parent and Child Psychopathology

Child Symptomatology and Its Impact On Parenting

Child ADHD symptoms are highly correlated with child oppositional defiant behaviors and it is suggested that parent-child difficulties and family hostility are determined by these associated characteristics rather than ADHD itself (Psychogiou et al., 2008a). Podolski and Nigg (2010) examined parent role distress in relation to child ADHD. Participants included mothers and fathers of 66 children (42 boys, 24 girls) between the ages of 7-11. Parents of children with ADHD Combined and Inattentive subtypes reported feeling more role dissatisfaction than parents of children without an ADHD diagnosis. Child inattention and oppositional-conduct problems but not hyperactivity, contributed to greater maternal role distress, while paternal role distress was associated with child oppositional or aggressive behaviors but not with ADHD symptom severity.

Miranda, Tarraga, Fernandez, Colomer, and Pastor (2015) reported that parents of children with ADHD had higher levels of parenting stress in the areas of depression and

attachment than parents of children with autism spectrum disorder (ASD) and parents of children the neither ADHD or ASD. Van Steijn, Oerlemans, Van Aken, Buitelaar, and Rommelse, (2013) found that fathers and mothers reported more stress when parenting their child with ADHD than their unaffected sibling(s). They found that maternal ADHD symptoms were related to increased parenting stress and paternal ADHD symptoms were related with increased depressive symptoms and parenting stress.

Similarity-Fit and Similarity-Misfit Hypotheses

While much research has focused on parents with ADHD or child ADHD, only a few studies have focused on parenting behaviors and the parent/child relationship when both parent ADHD and child ADHD are present. Psychogiou and colleagues have conducted research regarding parental ADHD symptomatology and the effects it has on parenting, specifically in relation to parenting a child with ADHD (2007; Psychogiou et al., 2008a; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2008b). Two hypotheses were posed as to whether or not parental ADHD symptomatology would ameliorate or exacerbate child ADHD symptomatology, the Similarity-Fit Hypothesis and the Similarity–Misfit Hypothesis, respectively. The Similarity-Fit Hypothesis predicts that parental ADHD symptoms ameliorate the negative effects of child ADHD symptoms on parenting because parent and child share a similar behavioral style. The Similarity-Misfit Hypothesis predicts the opposite, that parental ADHD symptoms exacerbate the negative effects of child ADHD on parenting because managing a child with ADHD adds a significant burden to a parent with ADHD symptoms who already has limited organizational and regulatory resources. Psychogiou et al. (2007) gathered a sample of

278 mothers and 95 fathers of school-age children, with varying levels of parental ADHD symptomatology. Results of the study found that as maternal ADHD symptomatology decreased, and child ADHD symptomatology increased, levels of negative parenting increased. Both the 2007 and 2008 studies found that when maternal ADHD symptomatology was high, higher child ADHD symptomatology was not associated with increased negative parenting. In fact, negative parenting decreased slightly when both maternal and child ADHD symptomatology were high, and these results support the Similarity – Fit hypothesis regarding parental and child ADHD symptomatology. The same cannot be said about the results of paternal and child ADHD symptomatology. The 2007 study found that, for fathers, as child ADHD symptomatology increased, negative parenting significantly increased, no matter the level of parental symptomatology. These results support the Similarity-Misfit hypothesis regarding parental and child ADHD symptomatology.

In a study conducted by Wymbs et al. (2015), researchers assigned a child between the ages of 9-12 who displayed either typical behavior for their level of development or ADHD-like behavior to 90 parent couples and evaluated their interactions. Following interactions with their assigned child, the parent couples reported their partner's parenting and interparental communication behavior, while observers coded parenting and communication behavior during interactions of both partners. Partner and observer ratings were analyzed and found that child and parent ADHD-like behavior was related to an elevation in negative parenting and interpersonal communication, supporting the Similarity-Misfit Hypothesis.

Johnston et al. (2016) studied 156 boys (110 with ADHD, 46 without ADHD) between the ages of 5-13 along with their mothers and fathers. This study specifically assessed parent and child ADHD and its impact on a variety of parenting outcomes including: parental tolerance, empathy, encouragement of child autonomy, and positive parenting. Interactions between parent ADHD and child ADHD revealed that for parents with low level symptoms, child ADHD was associated with less positive parenting attitudes and behavior than parents with more symptoms of ADHD and more child ADHD symptoms. These findings, that more positive parenting is reported when both parent and child have high levels of ADHD symptoms compared to when only one does, support the similarity-fit hypothesis.

Summary

ADHD can have negative impacts on adults in a variety of ways such as increased general stress, concentration problems, reduced sensitivity to contextual factors, low self-esteem, decreased motivation, and ineffective parenting behaviors (Knouse et al, 2008; Primich & Lennaco, 2012; Ratey, Greenberg, Bemporad, & Lindem, 1992). A few studies have found that parental ADHD may have a negative impact on family functioning with parental ADHD associated with higher levels of family conflict and lower levels of family cohesion than families without parental ADHD. Some of the behaviors parents with ADHD struggle with are monitoring child activities and behaviors, and consistency in disciplinary actions. Other prominent behaviors parents with ADHD struggle with include problem solving, procrastination and carrying out the

instrumental and organizational tasks of parenting.

Although there is some evidence linking parental ADHD symptomatology with poor parenting behaviors, more research needs to be conducted to investigate to what extent parenting behaviors are impacted by parental ADHD. In order to find out how much parental ADHD impacts parenting behaviors, other factors that also influence parenting behavior must be evaluated, such as child problem behaviors, child ADHD symptomatology and parental depression. The purpose of this study is to examine the effects that parental ADHD symptomatology, parental depression, child behavior, child ADHD symptomatology, and gender have on parenting behavior.

CHAPTER III

METHODS

Participants

The participants for this study included 109 college students from a large state university. Participants were required to have at least one child between the ages of 2-12, due to age guidelines on measures. Participant characteristics are shown in Table 1. The sample consisted of 84 mothers and 25 fathers. Mother-Father dyads were not specifically targeted nor tracked in this study; it is possible, but unlikely, that both members of a couple completed the study. The majority of the participants were married (70.6%, *n* = 77) and White/Caucasian (86.2, *n* = 94). A little over half of the participants were members of The Church of Jesus Christ of Latter-Day Saints (LDS; a religion prominent in Utah; 53.2% *n* = 58). The average age of participants was 32 (*SD* = 7.87), ranging from 18 to 55. The majority of the sample had either some college or bachelor's degrees. The majority of participants were a biological parent of the child on whom they completed measures (90.8%, *n* = 99). Most of the participants reported that their child had never received mental health services or medication for mental health concerns (75.2%, *n* = 82).

Measures

Demographics

The demographic questionnaire that was created for this study had two sections.

Table 1

Participant and Child/Family Characteristics

Variable	Mean	*SD*	%	*n*
Parent age (total sample)	32.34	7.87		
Female	33.05	7.79		
Male	29.44	7.95		
Parent gender				
Female			77.10	84
Male			22.90	25
Marital status				
Married			70.60	77
Divorced			9.20	10
Separated			3.70	4
Single/never married			14.70	16
Widowed			1.90	1
Race/ethnicity				
Asian			1.80	2
Black/African American			1.80	2
Black/African American, White/Caucasian			.90	1
Latino/Hispanic			2.30	3
Latino/Hispanic, White/Caucasian			.90	1
Native American			.90	1
Pacific Islander			.90	1
White/Caucasian			86.20	94
White/Caucasian, Native American			1.80	2
Other/Not Listed			.90	1
Religion				
Atheistic/Agnostic			11.90	13
Catholic			10.10	11
Jewish			1.80	2
Latter-Day Saint			53.20	58
Muslim			.90	1
Protestant			2.80	3
Other/ Not Listed			19.30	21
Education				
High school graduate/ GED			3.70	4
Some college/trade school/ associate degree			67.90	74
College graduate/ bachelor's degree			20.20	22
Graduate or professional degree			8.30	9

(*table continues*)

Variable	Mean	*SD*	%	*n*
Parent mental health services				
Yes			45.90	50
No			54.10	59
Attended parenting classes				
Yes			42.20	46
No			57.80	63
Number of children in the home	2.36	1.26		
Child age	6.44	3.42		
Annual income				
Less than $15,000			12.80	14
$15,000 - $30,000			22.90	25
$30,000 - $45,000			16.50	18
$45,000 - $60,000			17.40	19
$60,000 - $75,000			9.20	10
More than $75,000			21.10	23
Child mental health services				
Yes			24.80	27
No			75.20	82
Relationship to child				
Adoptive parent			4.60	5
Biological parent			90.80	99
Legal guardian			.90	1
Step parent			3.70	4

The first section was comprised of questions regarding the participants' demographics (i.e., age, ethnicity, education level, and marital status). The second section was comprised of questions regarding the child of the participant and included items such as, age, ethnicity, and if the child had received mental health services and/or medication for behavioral concerns. In addition, more in-depth information was collected such as, the respondent's relationship with the child they answered questions in reference to and if the respondent had ever participated in parenting classes. The demographic questionnaire was created for this study based on demographic information needed to explain the sample of interest.

The Parenting Scale

Parental disciplinary style was assessed using the Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993), a 30-item self-report questionnaire that measures dysfunctional discipline styles. This measure has parents rate their use of specific discipline strategies when responding to child misconduct. Ratings are made using 7-point Likert scales with answers ranging from effective discipline (e.g., when my child misbehaves I do something right away) to ineffective discipline (e.g., when my child misbehaves I do something about it later). Analysis of this measure initially yielded three factors: over-reactivity, laxness, and verbosity (Arnold et al., 1993). This measure was originally assessed using a sample of mothers with children 18-48 months of age, but researchers have examined the PS's factor structure for additional groups including parents of older children (Collett, Gimpel, Greenson, & Gunderson, 2001; Irvine, Biglan, Smolkowski, & Ary, 1999). Verbosity was a factor only found in the initial development of this measure and may only be relevant for samples of very young children and does not seem to characterize the discipline of parents with children over the age of 3 (Rhoades & O'Leary, 2007). For the purpose of this study, scores for laxness and overreactivity were used. Internal consistency was estimated using a sample of 168 mothers with the results being: laxness, .83; overreactivity, .82; verbosity, .63; and total, .84 (Arnold et al., 1993). Test-retest reliability was assessed with a subgroup of 22 mothers over a 2 –week period. The test-retest correlations are as follows: laxness, .83; overreactivity, .82, verbosity, .80; and total, .79 (Arnold et al., 1993). In the current study Cronbach's alpha was .77 for laxness and .77 for overreactivity.

The Adult ADHD Self-Report Scale Symptom Checklist

Adult ADHD symptomatology was assessed using the ADHD Self-Report Scale (ASRS-v1). The ASRS-v1.1 Symptom Checklist is an 18-question instrument designed to assess ADHD symptoms in adults using the diagnostic criteria in the DSM-IV. This version of the ASRS was used because an updated version based on the DSM-5 specifications could not be found, but the symptoms are the same in both versions of the DSM. The ASRS has two subscales that measure inattention and hyperactivity. This measure was adapted from the original ADHD Rating Scale developed by the World Health Organization (WHO). The original scale has been widely used and researched (Adler et al., 2006). This measure uses a Likert scale with 5 possible choices including: never, rarely, sometimes, often, or very often. The ASRS symptom checklist had high internal consistency in the range of .63-.72 and test-retest reliability using Pearson correlations in the range of .58-.77 with high concurrent validity with the standard rater-administered ADHD Rating Scale (Kessler et al., 2007). Internal consistency of this scale was also similar to that seen in the validation of another adult ADHD symptom assessment scale, the Brown ADD Scale (Adler et al., 2006). This measure was chosen for the study because of its validity and consistency as well as its accessibility. In the current study Cronbach's alpha was .89 for Inattention and .79 for Hyperactivity/ Impulsivity.

The Center for Epidemiological Studies Depression Scale Revised

The Center for Epidemiological Studies Depression Scale Revised (CESD-R) is a

20-item measure developed to reflect the DSM-IV criteria for depression. This version of the CESD-R was used because an updated version based on the DSM-5 specifications could not be found. The CESD-R has been found to be an accurate and valid measure of depressive symptomatology in the general population. Validity was established by correlations with other self-report measures and clinical ratings of depression (Radloff, 1997). The CESD-R has high internal consistency (Cronbach's $\alpha = 0.85$), interrater reliability ($r = 0.92 – 0.95$), test-retest reliability ($r = 0.78$), and convergent validity (Poznanski & Mokros, 1996). The CESD-R has four subscales: depressed affect, positive affect, somatic complaints and inhibition, and interpersonal problems. For the purpose of the study the total score was used for this measure. This measure uses a four-point Likert scale from 0-3, 0 representing "Rarely or none of the time (less than one day a week), 1 representing "Some or a little of the time (1-2 days a week)," 2 representing "Occasionally or a moderate amount of time (3-4 days a week)," and 3 representing "Most or all of the time (5-7 days a week)." Factor analyses, assessment of internal consistency and exploration of convergent and divergent validity of the CESD-R all suggest that it has strong psychometric properties and it is a useful tool for assessing depression in the general population (Van Dam & Earleywine, 2011). In the current study Cronbach's alpha for the CESD-R was .93.

Disruptive Behavior Rating Scale—Parent Form (DBRS).

Parental perceptions of child ADHD symptomatology and behavior were assessed using the Disruptive Behavior Rating Scale—Parent Form (DBRS). The DBRS (Barkley,

1997) is a symptom checklist based on the DSM-IV symptoms for ADHD, oppositional defiant disorder, and conduct disorder. For this study, only the items pertaining to ADHD and ODD were used. This version of the DBRS was used because an updated version based on the DSM-5 specifications could not be found, but symptoms for ADHD, ODD, and CD are the same in both versions. This measure has shown good psychometric properties in previous studies, such as an internal consistency for the entire scale of .94 for both mothers and fathers, and evidence supporting convergent validity of both mothers' and fathers' reports of the DBRS with other measures of children's disruptive behavior problems such as, the Infant Temperament Questionnaire, Behavior Assessment System for Children (BASC) and the Modified Parent Daily Report (mPDR; Friedman-Weieneth, Doctoroff, Harvey, & Goldstein, 2009). In the current study Cronbach's alpha was .93 for ADHD and .90 for ODD.

Procedures

An online Qualtrics survey was developed to collect data for the current study. Prior to the survey being launched, approval was sought and obtained from the university's Institutional Review Board. Participants were recruited by identifying and contacting professors of beginning psychology courses. These professors gave information about the study to their students. The survey was accessed through SONA Systems, a software program that provides web-based human subject pool management. Qualtrics Survey Software was used to complete the survey. It was up to the discretion of the professors as to whether or not students were given incentives, such as 0.5 points

extra credit, to participate and complete the survey. The survey was anonymous, with no identifying information.

When accessing the survey, participants first reviewed a Letter of Information and after agreeing to participate in the study, completed the survey with demographics and measures appearing in the same order for all participants. The participants for this study were recruited from April 24, 2015 – June 17, 2016. All participants had at least one child between the ages of 2-12. Recruitment from the general population of students was done in order to examine varying levels of adult ADHD symptomatology. A total of 113 individuals accessed the survey. Only 109 qualified for participation and completed the survey. Of the four who did not qualify, three used a child over the age of 12 to answer survey questions and one did not complete the survey in its entirety. The final sample included for the purposes of this study was 109.

CHAPTER IV

RESULTS

Preliminary Analyses

Means and standard deviations were calculated for all of the measures included in the study. Table 2 presents the means, standard deviations, and ranges for both parenting behavior scores, Overreactivity and Laxness, reported by parents using the Parenting Scale. Table 2 also presents the means, standard deviations, and ranges for the ASRS, CESD-R, and DBRS.

Correlation coefficients were computed to determine the relationship across measures, Table 3 presents the results of the bivariate correlations. All bivariate correlations were positive, and most were statistically significant.

Table 2

Descriptive Statistics

		Total (N = 109)		
Rating scale	Variables	*M*	*SD*	Range
PS	Overreactivity	2.79	.78	1.30-4.70
	Laxness	2.45	.74	.99-4.41
ASRS	Inattentive	24.55	6.03	9.00-44.00
	Hyperactive/ Impulsive	21.89	5.72	10.00-38.00
CESD-R	Depression	14.39	11.94	.00-55.00
DBRS	Child ODD	5.74	5.02	.00-24.00
	Child ADHD	20.13	13.80	1.00-53.00

Table 3

Bivariate Correlations Among Measures

Predictor	Hyp/Imp	Child ODD	Child ADHD	Depression	Overreactivity	Laxness
Inattention	.481**	.270**	.332**	.266**	.205*	.103
Hyp/Imp	-	.224*	.342**	.343**	.296**	.177
Child ODD	-	-	.621**	.185*	.298**	.078
Child ADHD	-	-	-	.343**	.351**	.208*
Depression	-	-	-	-	.197*	.234*
Overreactivity	-	-	-	-	-	.365**

* Correlation is significant at the .05 level.
** Correlation is significant at the .01 level.

Parental Symptomatology and Parenting Behaviors

To answer the first research question on whether there is a relationship between parental symptomatology and parenting behaviors, correlation coefficients were examined to determine the relationships between parenting behavior (overreactivity and laxness) and parental ADHD symptomatology including inattention and hyperactive/impulsive. Table 3 presents the results of the correlational analysis between parental behavior and parental ADHD symptomatology. Both inattention and hyperactive/impulsive were significantly correlated with overreactivity, so that greater ADHD symptoms are associated with more overreactive parenting. Neither inattention nor hyperactivie/impulsive were significantly correlated with laxness. The results suggest that parental ADHD symptomatology, including inattention and hyperactivity, have a stronger relationship with overreactivity than they do with laxness.

Attention-Deficit/Hyperactive Disorder Symptomatology and Parenting Behavior: Differences Between Mothers and Fathers

An independent-samples *t* test was conducted to answer the second research question and evaluate differences in mothers' and fathers' ADHD symptomatology and parenting behaviors. The variables tested included: overreactivity, laxness, inattention, and hyperactivity/impulsivity. Test results indicated no statistically significant differences between mothers and fathers in their parenting behaviors or ADHD symptoms (see Table 4). For this sample, mothers and fathers reported equal levels of ADHD symptomatology and maladaptive parenting behaviors.

Child Symptomatology, Parental Symptomatology, and Parenting Behavior

A multiple regression analysis was used to answer research question three and assess if child behavior and parental ADHD symptomatology predicted parenting behavior, after controlling for depression (see tables 5 and 6). For child behavior, the

Table 4

Means, Standard Deviations, and Independent Samples Test Results for Mothers and Fathers

	Mothers (*N* = 84)		Fathers (*N* = 25)			
Model	Mean	*SD*	Mean	*SD*	*t*	Sig
Overreactivity	2.81	.82	2.67	.63	.799	.203
Laxness	2.45	.78	2.47	.58	-.133	.124
Inattention	24.21	5.88	25.28	6.27	-.784	.922
Hyperactive/Impulsive	21.86	5.72	21.36	5.19	.389	.607

variables assessed were child ADHD and child ODD; variables for parental symptomatology includes inattention and hyperactivity/impulsivity; and variables for parenting behaviors were overreactivity and laxness.

A two-model analysis was conducted for each of the two parenting behaviors. Model 1 consisted of the parenting behavior (either overreactivity or laxness) as the dependent variable and parental depression as the independent variable. Model 2 consisted of the parenting behavior (overreactivity or laxness) as the dependent variable with depression, inattention, hyperactivity/impulsivity, child ADHD, and child ODD as the independent variables.

Overreactivity

The results of Model 1 indicated that the variance accounted for (R^2) with only depression was .049 (adjusted R^2 = .030). Parental depression significantly predicted parental overreactivity, $F(1) = 4.30$, $p = .040$ (see Table 5). The results of Model 2 indicated that the change in variance accounted for (ΔR^2) was equal to .131, which is statistically significant $F(5) = 4.21$, $p = .002$. Table 6 contains the results of the multiple regression analysis. The Model 2 sample multiple correlation coefficient was .41, indicating that approximately 17% of the variance in overreactivity can be accounted for by the linear combination of child behaviors and parental symptomatology. These results indicate that other variables significantly predict parenting behaviors, in addition to parental depression.

Table 5

Results of the Multiple Regression Analysis of the Relationship Between Adult ADHD Symptoms and Child Behavior with Overreactivity, After Controlling for Depression

Model	*SS*	*df*	*MS*	*F*	*p*
Model 1					
Regression	2.542	1	2.542	4.304	.040
Error	63.201	107	.591		
Total	65.743	108			
Model 2					
Regression	11.146	5	2.229	4.205	.002
Error	54.598	103	.530		
Total	65.743	108			

Note. R^2 = .039 (Adjusted R^2 = .030) for Model 1, R^2 = .170 (Adjusted R^2 = .129) for Model 2.

Table 6

Multiple Regression Analysis of Overreactive Parenting Behavior

MO	*B*	*SE B*	*β*	*t*	*p*
Model 1					
Constant	2.597	.116		22.478	.000
Depression	.013	.006	.197	2.075	.040
Model 2					
Constant	1.806	.335		5.390	.000
Depression	.003	.006	.042	.426	.671
Inattention	.001	.014	.008	.071	.943
Hyperactivity/impulsivity	.026	.015	.183	1.709	.090
Child ADHD	.012	.008	.192	1.564	.121
Child ODD	.020	.018	.128	1.110	.270

Laxness

The results of Model 1 indicated that the variance accounted for (R^2) with only depression equaled .055 (adjusted R^2 = .046). Parental depression significantly predicted parental laxness, $F(1) = 6.173$, $p = .015$ (see Table 7). The results of Model 2 indicated that the change of variance accounted for (ΔR^2) was equal to .028 and is not statistically

significant $F(5) = 1.846$, $p = .110$. The Model 2 sample multiple correlation coefficient was .29, indicating that approximately 8% of the variance in laxness can be accounted for by the linear combination of child behaviors and parental symptomatology. These results indicate that parental depression significantly predicts parenting behavior but adding in additional predictive variables does add additional predictive value (see Table 8).

Table 7

Results of The Multiple Regression Analysis of the Relationship Between Adult ADHD Symptoms and Child Behavior with Laxness, After Controlling for Depression

Model	*SS*	*df*	*MS*	*F*	*p*
Model 1					
Regression	3.219	1	3.219	6.173	.015
Error	55.800	107	.521		
Total	59.019	108			
Model 2					
Regression	4.854	5	.971	1.846	.110
Error	54.165	103	.526		
Total	59.019	108			

$R^2 = .055$ (Adjusted $R^2 = .046$) for Model 1, $R^2 = .082$ (Adjusted $R^2 = .038$) for Model 2.

Table 8

Multiple Regression Analysis of Lax Parenting Behavior

Model	*B*	*SE B*	*β*	*t*	*p*
Model 1					
Constant	2.244	.109		20.676	.000
Depression	.014	.006	.234	2.485	.015
Model 2					
Constant	1.970	.334		5.902	.000
Depression	.0010	.006	.163	1.557	.122
Inattention	-.003	.014	-.021	-.191	.849
Hyperactivity/Impulsivity	.012	.015	.088	.780	.437
Child ADHD	.010	.008	.176	1.368	.174
Child ODD	-.011	.018	-.076	-.625	.534

CHAPTER V

DISCUSSION

In the most recent version of the DSM-5 (APA, 2013a), the APA expanded the ADHD criteria to more clearly include adults in addition to children. Adults with ADHD may experience impairment in cognitive, scholastic/vocational, and interpersonal domains including less effective parenting behaviors (Park et al., 2017). Adults with ADHD are also at greater risk for developing depression and anxiety (Anastopolous et al., 2018). Previous research on ADHD has focused primarily on children and, until recent years, research has largely ignored how adult/parent ADHD symptoms impact family functioning and parenting. Much of the research that has included parents has focused on mothers with ADHD and studies with both mothers and fathers averaged a 3:1 ratio of mothers to fathers. In studies where at least one parent had ADHD, higher levels of family conflict and lower levels of family cohesion were found in comparison to families where neither parent had ADHD (Biederman et al., 2002; Breitenstein et al., 2012; Friedrich et al., 2017).

The purpose of the current study was to examine the relationship between ADHD symptoms and parenting behaviors. Specifically, this study aimed to determine if there is a relationship between parental ADHD symptomatology and parenting behaviors and, if parental ADHD symptomatology and parenting behavior differed between mothers and fathers. Another purpose was to determine if child behavior and parental ADHD symptomatology predicts parenting behavior. Participants in the study included both mothers and fathers who were asked to rate their parenting behavior, specifically

overreactivity and laxness, and rate their symptomatology for both ADHD (inattention and hyperactivity/impulsivity) and depression. Participants were also asked to rate their child's ADHD and ODD symptomatology and behavior.

Parental Attention-Deficit/Hyperactive Disorder Symptomatology and Parenting Behavior

The relationship between parental symptomatology (inattentive and hyperactive/impulsive) and parenting behaviors (overreactivity and laxness) were examined. There was a significant correlation between overreactivity and both inattentive and hyperactive/impulsive symptomatology. The positive significant correlation between overreactivity and ADHD symptoms suggests that greater impairment in the areas of inattention, hyperactivity, and impulsivity are associated with higher levels of maladaptive parenting behavior, specifically overreactivity. There was not a significant correlation between laxness and inattentive or hyperactivity/impulsive symptomatology, suggesting that parental ADHD is not associated with lax parenting behavior.

The positive and significant correlation between overreactivity and parental ADHD symptomatology is consistent with findings from previous research where parents with higher levels of ADHD symptomatology displayed more inconsistency and overreactivity than parents with lower levels of ADHD symptomatology (Johnston et al., 2012). Tung, Brammer, Li, and Lee (2015) found that parental ADHD symptomatology was positively associated with overreactive parenting behavior, including corporal punishment. Maternal ADHD has been positively associated with inconsistent discipline,

including overreactions (Mokrova et al., 2010).

The nonsignificant relationship between laxness and parental ADHD symptomatology is not consistent with findings from previous research. In the meta-analysis done by Park et al. (2017), greater parental ADHD symptoms were associated with less positive and harsher and lax parenting behaviors. Although the strength of the relationship between parental symptoms and lax parenting was moderated by other variables including if the child had ADHD, child gender, and rater/method variance. A study focusing on mothers found that mothers who were categorized as "high ADHD" reported higher levels of laxness than mothers categorized as "low ADHD" and a control group (Banks et al., 2008). In addition, Harvey et al. (2003) found that mothers who reported having high levels of inattention also reported higher levels of lax parenting, and fathers who reported having higher levels of inattention and hyperactivity/impulsivity reported having higher levels of lax parenting.

It is important to note that while most bivariate correlations were statistically significant, they are small in strength. These correlations are similar to the average correlation of .17 found in the Park et al. (2017) meta-analysis.

Rater bias may explain why the results of the current study differ from previous research. For this study, participants were asked to rate themselves and their behavior regarding ADHD symptomatology and their parenting behaviors. To combat this, some of the previous research has used partner ratings in addition to individuals rating themselves (Banks et al., 2008; Johnston et al., 2016; Park et al., 2017; Wymbs et al., 2015).

Gender Differences in Parental Attention-Deficit/Hyperactive Disorder and Parenting Behaviors

Differences between mothers' and fathers' reports of their own ADHD symptomatology and parenting behaviors were examined. There were no significant differences between mothers' and fathers' reports on any of the variables. Previous research regarding differences between parents is not consistent, especially in the most recent research.

The similarity-fit and similarity-misfit hypotheses tested by Psychogiou et al. (2007, 2008a, 2008b) found significant differences between mothers' and fathers' parenting behaviors. Results for mothers in these two studies support the similarity-fit hypothesis, where higher maternal ADHD symptomatology was significantly related to lower levels of negative parenting behaviors when parenting a child with ADHD. The results for fathers in these studies support the similarity-misfit hypothesis, because higher paternal ADHD symptomatology was significantly related to higher levels of negative parenting of children with ADHD than children without. Several studies since have had similar results regarding the similarity-fit and similarity-misfit hypotheses (Friedrich et al., 2017; Williamson, Johnston, Noyes, Stewart, & Weiss, 2017).

Research done by Wymbs et al. (2015) using both mothers and fathers, supports the similarity-misfit hypothesis. This research distinguished parent gender for descriptive statistic purposes but used the overall sample to test the similarity-fit/misfit hypotheses and found that for both mothers and fathers the similarity-misfit hypothesis was

significant. Other research found evidence for both hypotheses, but generally supported the similarity-fit hypothesis (Johnston et al., 2016). The results of these two studies reveal the inconsistencies in research regarding parental ADHD symptomatology and how it may impact parenting behavior.

Child Behavior, Parental Symptomatology, and Parenting Behavior

The potential predictive relationship of child behavior and parental ADHD symptomatology on parenting behavior was assessed, after controlling for parental depression. The two-model analysis assessed parental depression as the predictor variable and parenting behavior, both overreactivity and laxness, as the outcome variables in the first models. Inattention, hyperactivity/impulsivity, child ADHD and child ODD were added as predictor variables in the second models in order to assess the impact of these variables beyond what depression predicted as depression has been linked to parenting behavior (Weissman et al., 1997, 2006, 2016).

The evaluation of child behavior and parental ADHD symptomatology on parental overreactivity, indicated that 4% of the variance in parental overreactivity was due to parental depression in the first of the two-model analysis. In the second model, approximately 17% of the variance in overreactivity was due to the combination of child behaviors and parental ADHD symptomatology. These findings indicate that parental ADHD symptomatology and child ADHD and child ODD behaviors have a significant impact on parental overreactive behavior and are consistent with previous research.

The same two model analysis was completed to assess parental laxness. Results

for model 1 indicated that 5% of the variance in parental laxness was due to parental depression in the first model analysis. The second model indicated that approximately 8% of the variance in laxness was due to the combination of child behavior and parental ADHD symptomatology. These findings indicate that parental ADHD symptomatology and child ADHD and ODD behaviors do not have a significant impact on parental lax behavior above and beyond what depression contribute and are inconsistent with previous research (Knouse et al, 2008; Primich & Lenacco, 2012).

Wymbs et al. (2015) found that child ADHD and ODD-like behavior were associated with increased negative parenting based on parent self-reports, partner reports and observations done by pairs of observers. Parent ADHD symptoms predicted negative parenting, independent of child behavior, based on observations only. A study done by Johnston et al. (2016) showed that parents with fewer ADHD symptoms displayed more negative parenting behavior than parents with more ADHD symptoms regardless of child behavior.

Limitations

Limitations of the current study need to be addressed for the purpose of interpreting the results. The first limitation of note is the very specific population from which this sample was taken. In order to participate, participants had to be enrolled in beginning psychology courses at a large university. Another limitation involving this sample is its size. Participation was lower that researchers initially desired because of challenges in recruitment.

A third limitation is the restricted demographics of the sample. Of the 109 participants, 84 were female and 25 were male. The imbalance of females to males may be due to age differences because women are more likely to return to school later if they have children. The location from which the sample was taken tends to be more religious and educated, with less ethnic and racial diversity than would be found in the general population. Caution should be used when interpreting and/or generalizing results of this study. In addition, the sample may have influenced the outcomes in distinct ways. For example, a large portion of participants were members of the LDS church. The LDS church puts a great deal of focus on the importance of families and the role of parenthood. More research is needed to assess the relationship between LDS church membership and parenting behaviors.

A final limitation is due to rater bias. The participants in this study were asked to rate their own symptomatology and behavior, along with the behavior of their children. It is possible that participants were more positive or negative in their ratings, it is unknown how each individual respondent interpreted questions on the survey and how their interpretations influenced their ratings.

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