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Utilizing Parent Support Groups to Improve Parenting Efficacy and Relationships for Parents of Inattentive, Hyperactive, or Non-Compliant Children

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by

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This dissertation has been approved in partial fulfillment of the requirements for the degree of

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Dr. Stephen Sherblom, Chair — 4-20-18 — Date

Dr. Robert Steffes, Committee Member — 4-20-18 — Date

Dr. Janis Freeman, Committee Member — 4-20-18 — Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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had that I devoted myself to research which might enrich the relationships of parents and children.

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Abstract

School age children with ADHD suffer functional impairment in social development, show signs of emotional dysregulation, and have learning difficulties. Other psychological disorders may present, and some children may have one or more co-morbid disorders. Studies demonstrated that the best practice was combined treatment. It was recommended that a pharmacological and behavioral approach be utilized.

ADHD also affects the family. Parents of children with ADHD often neglect their own health caring and advocating for their child. The amount of parent involvement raising a child with ADHD can lead to reactive parenting, strained relationships with spouses, social and emotional isolation, depression, and anxiety.

Prevailing research demonstrated far-reaching impacts of ADHD on the child and the family, but little was published on parent support groups for this parent population or on the benefits of yoga for improving the child's ability to self-monitor.

This research sought to demonstrate that improvement in parenting efficacy, parenting stress, and the parent-child relationship could be achieved through a parent support group.

The researcher utilized a parent support group because parents of children with ADHD were often socially and emotionally isolated. Through the parent support group, parents revealed the daily challenges and shared parenting strategies. Sharing success stories was shown to promote a greater sense of parenting efficacy. While the sample was small, common themes emerged which further illustrated the parenting challenges of raising a child with ADHD. Positive outcomes of this study were a greater sense of parenting skills, social support, and enhanced parent-child relationships.

This research also sought to demonstrate that regular practice of yoga would lead to improvement in the child's self-monitoring. Although parents and children attended the weekly session with fidelity, parent-taught or parent-led practice at home was commonly missed due to parents' other commitments and the child's sports or summer activities. The effectiveness of yoga to improve the child's ability to self-monitor could not be validated.

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Definitions

Behavioral parent training - (BPT) behavioral parent training is a programmed intervention strategy for parents who have a child with the symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD). The programs were designed to help parents learn positive responses to their child's appropriate behaviors and to reinforce these while training parents in ways to respond to and minimize inappropriate behavior to help extinguish negative behaviors.

Co-morbid - the simultaneous presences of two (or more) chronic diseases or conditions in a patient; implies interactions between the illnesses that affect the course and prognosis of both ("Co-morbidity: Addiction and Other Mental Illnesses," 2010)

Conduct Disorder - (CD) behavior characterized by a pattern of disruptive and violent behavior, that violates the rights of others or major societal norms. At least 3 symptoms must be present in the past 12 months with one symptom having been present in the past 6 months. To be diagnosed with conduct disorder, the symptoms must cause significant impairment in social, academic, or occupational function. DSM-V adds a limited prosocial specifier with applies to those individuals with a more serious pattern of behavior characterized by callous and unemotional interpersonal style across multiple settings and relationships (Conduct Disorder, 2013).

Conjoint Behavioral Therapy - an emerging model of therapy which is collaborative between home and school; utilized to provide high quality consultation and intervention services to students, teachers, and parents in real world setting (Wilkinson, 2006).

Diagnostic and Statistical Manual IV, V - (DSM) is the standard classification of mental disorders recognized and used by mental health professionals in the United States. The DSM also lists the diagnostic criteria for every mental health disorder recognized by the healthcare system in the United States (American Psychiatric Association [APA])

Emotional Dysregulation - characterized by severe and recurrent temper outbursts that are grossly out of proportion in intensity or duration to the situation. These occur three or more times each week for one year or more (https://www.nimh.nih.gov/health/topics/disruptive-mood-dysregulation-disorder-dmdd/disruptive-mood-dysregulation-disorder.shtml).

Oppositional Defiant Disorder - (ODD) a pattern of behavior that includes at least four symptoms from the categories of angry and irritable mood; argumentative and defiant behavior; or vindictiveness lasting at least 6 months as evidenced by at least four symptoms from these categories and exhibited during interaction with at least one individual who is not a sibling. Behaviors cause significant impairments at work, school, social activities, and with family (Oppositional Defiance Disorder, 2017).

Chapter One: Introduction

In 1798, Crichton first identified the problem of inattention, which was an observed rarity. Crichton (1798) concluded through his observations that attention was interrupted by thoughts, as well as external stimuli. This led to his description of attending as the ability to persist with one task focus only because it was the strongest stimuli, and as the strongest stimuli, it negated all other stimuli (p. 254). James (1899) stated, "[t]he attentive process, therefore, at its maximum may be physiologically symbolized by a brain-cell played on in two ways, from without and from within" (p. 87).

More recent research clarified that Attention-Deficit Disorder (ADD) and Attention-Deficit with Hyperactivity Disorder (ADHD) went far beyond this. Brown (2013) described ADD/ADHD as a developmental impairment of the brain's self-management systems or an impairment of Executive Function (EF). Spencer et al., (2013) explained that "Attention-Deficit/Hyperactivity Disorder (ADHD) is a common neurobiological disorder estimated to affect up to 10% of children and 5% of adults worldwide" (p. 903). While some children exhibited the externalizing behaviors of Attention-Deficit, such as loss of focus or forgetfulness, other children also had the hyperactive component. Brown (2013) stated that the EF worked as a control system where information was regulated, managed, integrated, prioritized, and connected. When EF was fully activated, and age-appropriately developed, it was responsible for motivating, planning, organizing, and maintaining focus. In addition, the EF helped the individual to examine the task complexity, determine components which needed to be addressed, and then prioritize and set goals or deadlines for completion (Brown, 2013).

Processing a task was very difficult for individuals with ADD/ADHD. Things that required sustained effort often went uncompleted.

To better understand the process and tasks of the EF, Brown (2013) provided an explanation based on driving a car. He pointed out that as drivers traveled from point A to point B, there were a myriad of stimuli. Rarely was the route devoid of external happenings, which meant all trips involved the brain in processing and determining to what the driver should attend. Stop lights, pedestrians, other vehicles, sounds, and sights along the way bombarded the senses throughout the journey, but the EF determined what information was necessary and what was discarded.

For the majority of people, EF worked without consciously thinking about the process, but Brown's (2013) patients explained what it is like for them. The information was then compiled into a series of processes: Attention, Focus, Effort, Emotion, Memory, and Action. When someone with ADD/ADHD was attempting something that held no personal value or interest, their attention was more likely to be unfocused or scattered (Brown, 2013). Barkley (1997) explained that "the cognitive deficits in ADHD may best be understood as a motivational deficit or as arising from poor stimulus control…or deficient rule-governed behavior (p. 66). However, given a task that was personally relatable or enjoyable, there was no significant decline in attention, focus, or motivation (Brown, 2013).

ADHD "is characterized by pervasive and developmentally inappropriate levels of inattention, hyperactivity, and/or impulsiveness which result in impairment" (Taylor et al, 2015, p. 2, para. 1). Children and adults who suffered from ADD had difficulty focusing their attention and retrieving or recalling information, because they could not

self-regulate the impulses being received and all stimuli, whether internal or external, diverts focus (Crichton 1798; James, 1899). This made it exceptionally difficult for children in school.

ADD/ADHD affected other aspects of daily life and included the regulation of alertness and the ability to sleep. People with ADD/ADHD had difficulty shutting down or quieting their minds for sleep. Their thoughts run rampant and uncontrolled shifting swiftly from one idea to another, and they often required substantial time to fall asleep. Once asleep, they entered such a deep sleep that they were difficult to rouse and had significant difficulty awaking on their own (Brown, 2013).

According to the Center for Disease Control (CDC) there was a significant increase in the number of children between the ages of two and five years diagnosed with ADHD (as cited in "Facts about ADHD," 2016). The impact of ADHD did not only impair student learning during the school years but also was a contributing factor to high school drop-out rates, drug or alcohol abuse, anxiety, conduct disorder, increased injuries in the home and on the job, as well as poor job performance as adults. Adults with ADHD also tended to change jobs more frequently and have difficulty with relationships (de Graaf et al., 2008; "Facts about ADHD," 2016; Jacob, Srinath, Girimaji, Seshadri, & Sagar, 2016).

"Chemicals manufactured in the brain manage the communication of messages from one neuron to another" (Brown, 2005, p. 62). The brain's ability to process information relied on a series of electrical impulses which relay signals. Neurons transported these signals across a complex network. For each signal to be processed, it must travel across the synaptic gap between these neurons. Important neurotransmitters

norepinephrine and dopamine were key components in this process (Brown, 2005, p. 61). Norepinephrine helped the brain focus and remain focused. Studies on brain activity suggested that neurotransmitter reuptake disrupted the processing of information. Thus, stimulant medication allowed for the neurotransmitter to remain in place until the message or messages were passed between the synapses. Dopamine was identified as the neurotransmitter responsible for making the brain aware of stimuli that were highly important, particularly those that resulted in a pleasurable outcome. (Brown, 2005). Brain research revealed that the messages also must be passed to various locations in the brain. A portion of the brain's neural networks "monitor, coordinate, and manage the other neural networks" (Brown, 2005, p. 64). This process supported the EF of the brain, which was responsible for working memory. Working memory received, held, and integrated information allowing the brain to make connections between what was being experienced and what had been experienced and allowing the individual to take action. Lack of norepinephrine prevented signals from being processed in a manner which allowed the individual to react. This was a primary feature of inattention. (Brown, 2005, pp. 66, 77).

Background

Then-current research found that children with attention issues attended to high-interest activities with some success, but these children had difficulty maintaining task focus when asked to complete something which was uninteresting, or which contained multiple steps. In addition, children with attention issues faced constant struggles to block out extraneous noise or movement of peers in the classroom (Brown, 2013).

Parents reported that their children struggled with organization and task completion at home, as well (Barkley 1997; Brown, 2013).

Additionally, the preschool and elementary school years were difficult for children with ADD/ADHD because of their impulsivity, which caused them to shout out and dart out or be on-the-go at inappropriate times. Moreover, children with ADD/ADHD tended to rush to be first. This was particularly true when looking at classroom work habits. Children with ADD/ADHD were more often identified by parents and teachers as those who sped through work, making careless mistakes or skipping steps/problems because they lacked the ability to self-monitor (Brown 2013). Brown (2013) sited emotional instability in people with ADD/ADHD. He surmised that emotions were controlled by EF and children and adolescents who had impairment in this area were unable to put feelings aside and were likely to be overly emotional. This was suggested to be a contributing factor to separation anxiety, social phobia, or anxiety disorders, which were reported by Jacob, Srinath, Girimaji, Seshadri, and Sagar (2016) in 44.4% of study participants (p.151). Of the 2,595 children between the ages of 9 and 16 registered for service through the National Institute of Mental Health, 10.5 % were diagnosed with ADD/ADHD (p. 150).

The research of Jacob et al. (2016) demonstrated the percent of the population of school age children diagnosed with ADD/ADHD. This figure supported the finding of the Center for Disease Control who reported that the number of children diagnosed with ADD/ADHD between 2003 and 2007 rose to 9.5% and between 2007 and 2011 reached 11% (“Attention-Deficit/Hyperactivity Disorder,” 2017). With the growing understanding of co-morbid neurological and psychiatric disorders, such as Oppositional

Defiance Disorder, Conduct Disorder, and Anxiety Disorder with ADD/ADHD it became apparent that the treatment must be multifaceted and must place emphasis on the child and the family. As Brown (2013) stated, those affected by ADD/ADHD had impaired executive functioning, which often interfered with concentration and emotional regulation. Mediating the effects of ADD/ADHD and impaired EF by teaching parents and children strategies to minimize anxiety, improve focus, decrease hyperactivity, and improve self-monitoring was important for the development of the child and the relationship between parent and child (Barkley, 2013). Yoga and mindfulness or meditation training may lead to overall well-being of the child and improved social relationships with peers and family.

Purpose of the Dissertation

The purpose of this study was to examine the benefits of a parent support group to enhance parenting self-efficacy and parent-child relationships between the parents and the inattentive, hyperactive, and/or non-compliant child(ren). This study focused on children attending a Catholic elementary school in the Mid-West. The researcher sought to demonstrate improvement in parents' perceived level of parenting competence and stress as a result of the program. The study further hoped to investigate the effects of yoga or martial arts for improving self-monitoring behavior, maximizing task-focus, and reducing anxiety of both parents and children.

Rationale

According to The Center for Disease Control, in 2013 6.4 million children between the ages of 4 and 17 were diagnosed with ADHD in 2011 (as cited in "Facts about ADHD," 2016, para. 4). This number was a significant upsurge from data collected

between 2003 and 2011, and according to the CDC reflected a rise of 42% (as cited in "Facts about ADHD," 2016, para. 4). Further, many children were not diagnosed with ADHD yet presented symptoms of inattention, hyperactivity, and non-compliant behavior. "Raising a child with ADHD can be incredibly challenging for any parent" (Barkley, 2013, p. 5). For these parents and children daily tasks were a challenge. Students with these tendencies had poor school performance, difficulty interacting with peers in social settings, and difficulty building relationships with siblings and family members (Barkley, Fischer, Smallish, & Fletcher, 2004). "These children are very inattentive, impulsive or uninhibited, overactive, and demanding" (Barkley, 2013, p. 5). As adolescents, these individuals were more likely to engage in risky behaviors which may have led to drug use or conflicts with law enforcement. Adolescents with ADHD were also more likely to drop out of high school and adults had lower paying jobs and more difficulty remaining steadily employed than their peers who did not have ADHD ("Attention-Deficit/Hyperactivity Disorder," 2014). For many, regulation of symptoms through pharmacological protocol required time, monitoring, and frequent adjustments to dosage. Furthermore, the plethora of side-effects, including decreased appetite, physical growth disruption, weight loss, sleep disturbance, and irritability, etc., indicated that this means of treatment alone was not necessarily the best practice (Johnson & Proctor, 2004). A mind-body connection combined with pharmacological treatment was believed to provide the most optimal results with cross-setting presence. Additionally, parents dealing with a child's inattention and/or hyperactive and often non-compliant behavior were increasingly likely to have feelings of despair and inadequacy in regard to their parenting skills and style. The combination of child behaviors and parental feelings added to normal daily stress and

created volatile dynamics in the home. Children had difficulty not only with family relationships but also those relationships with peers at school and in social settings (Brown, 2013). While the research on this was abundant, a gap existed in the research on improving parenting self-efficacy through parent-led support groups.

Questions

The research design for this study addressed the following questions:

RQ1. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children reduce parenting stress?

RQ2. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children improve parenting self-efficacy?

RQ3. Does participation is a support group for parents of inattentive, hyperactive, and/or noncompliant children improve parent-child relationships?

RQ4. Do the parents perceive that the parent-taught yoga or parent-taught martial arts activities for their children with symptoms of inattentive, hyperactive, and/or non-compliant behavior improve the child's ability to use self-monitoring techniques in the classroom to reduce his/her inattentive behavior?

RQ5. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for their children with inattentive, hyperactive and/or non-compliant behavior improve the child's ability to use self-monitoring techniques in the classroom to reduce his/her periods of hyperactive behaviors?

RQ6. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for children with inattentive, hyperactive and/or non-complaint behavior improve the child's ability to self-monitor and reduce behaviors across settings?

Limitations

Limitations to this study were created through a single school design. The research for this study was limited to one school in an Archdiocese in the Midwest. Further, limitation was that this research was conducted in the evening rather than during the school day, and parents had to commit the time to this study, had to be proactive, and could have felt embarrassed or intimidated in admitting they needed help dealing with the functional impairments their child had due to inattention.

Summary

The purpose of the research was to examine the benefits of a parent support group to enhance the parenting efficacy and parent-child relationships between the parent and the inattentive, hyperactive, and/or non-compliant child(ren). The study focused on parents of children attending a Catholic elementary school located in the Midwest. The researcher hoped to demonstrate improvement in parents' perceived levels of parenting competence and stress as a result of the program. The study further sought to investigate the parent perceptions of the effects of parent-taught yoga or parent-taught martial arts to their children for improving self-monitoring behavior, maximizing task focus, and enhancing self-esteem with improvement demonstrated across settings for children defined by parents as inattentive, hyperactive, and/or non-compliant.

Chapter Two: The Literature Review

Description and Prevalence

Identifying problems of attention was dependent on common criteria which were assessed, observed, and evaluated. Regarding attending, Crichton (1798) postulated on the process in, *An Inquiry into the Nature and Origin of Mental Derangement Comprehending a Concise System of the Physiology and Pathology of the Human Mind and a History of the Passions and their Effects,* and adduced attention varied based on the time of day and the state of fatigue of the individual. Attending was not the result of freewill but rather of stimuli that aroused a desire to attend. Johnson and Proctor (2004) further identified the theory of attention as information processing. They proposed the process began with a perceived stimulus or something that gained attention. This stimulus was then processed, a response selected, followed by execution of the response. "In order to fully describe human performance, this framework would, of course, have to be supplemented with an attentional system that selects some sources of information for processing over others" (Johnson & Proctor, 2004, p. 30, para. 2). Brown (2005) reported that for his patients, attending was difficult regardless of how hard they tried (p. 29). For several years previous to this writing, biological and environmental factors were examined as potential causes of this deficit in the ability to attend to tasks (Singh, 2003). "In this disease of attention, if it can with propriety be called so, every impression seems to agitate the person, and gives him or her an unnatural degree of mental restlessness" (Crichton, 1798, p. 272). Crichton concluded that attention was interrupted by thoughts, as well as external stimuli, and this was postulated by Brown (2013). Crichton's (1798)

description of attending was the ability to persist with one task focus only because it was the strongest stimuli, and as the strongest stimuli, it negated all other stimuli (p. 254).

Students who exhibited behaviors symptomatic of ADHD and who were diagnosed with this disorder were shown to benefit from treatment which prevented neurotransmitter reuptake (Brown, 2005). In individuals with ADHD, dopamine and norepinephrine were identified as the neurotransmitters which affected the ability to concentrate on stimuli. The decreased levels of these neurotransmitters resulted in a failure to facilitate the passage of messages to various parts of the brain.

Brown (2005) suggested that when dopamine was released, the brain was attempting heightened sensitivity to stimuli. Dopamine was primarily associated with the pleasure response and when sent to the frontal cortex, allowed the brain's executive function to perceive a pleasurable outcome and to be called upon to take action (Brown, 2013). Because dopamine helped interpret rewards as they were happening, which in turn kept the individual focused on the activity, students whose reception of dopamine was inhibited were less likely to be motivated to work even when the rewards were very positive. Brown (2005) explained rewards processed by the brain through the release of dopamine encouraged a pleasure-release cycle. The anticipated pleasure stimulated dopamine release; dopamine release helped to sustain the activity (Brown, 2005, p. 75). Researchers also discovered that the affected areas of the brain included the basal ganglia, the right frontal cortex, and the cerebellum (see Figure 1).

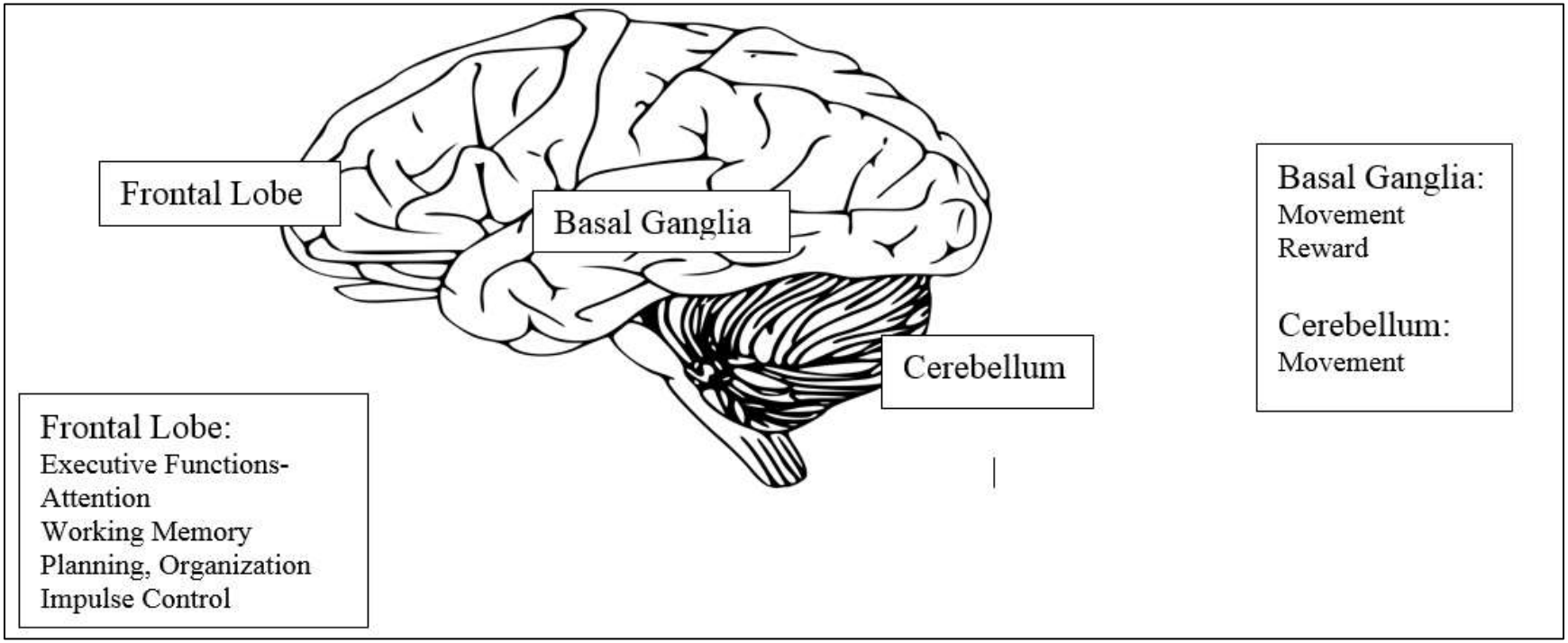

Figure 1. The Frontal Lobe image (Pin Art, 2017).

Additionally, these areas appeared to be much larger in children who did not have ADHD (Tannock & Martinussen, 2001, p. 22). “Alterations in brain structure were found in unmedicated ADHD vs. control groups in all six structural MRI studies . . . medication was associated with attenuation of abnormalities” (Spencer et al., 2013, p. 903).

Brown (2005) pointed out that animal studies on brain chemistry showed that when dopamine was blocked, animals ceased to eat p. 75). They simply did not work to get food. Norepinephrine worked to create a sense of urgency; it put the body in a state of acting and reacting. Without it, animals and humans experienced more feelings of lethargy and became inattentive (p. 77). Brown (2013) also revealed that activation of executive function was a guiding factor in motivation, planning, organization, and task focus.

Based on diagnosed cases, the Centers for Disease Control and Prevention revealed in 2011 that as many as six million children were affected by ADHD. This equated to roughly 11% of school age children and was a demonstrated increase over findings in 2008 (as cited in “Key Finding,” 2017, p. 1). Between the years 2003 and 2011 the diagnosed cases of ADHD rose approximately five percent (Figure 2). In 2013 it was estimated based on health care records that 13.5 % of boys and 5.5% of girls were diagnosed with ADHD (“Facts about ADHD,” 2016, p. 2).

The Center for Disease Control and Prevention stated that difficulty focusing was present in young children and some continued to have difficulty maintaining task focus as adults (“Attention-Deficit/Hyperactivity Disorder,” 2017).

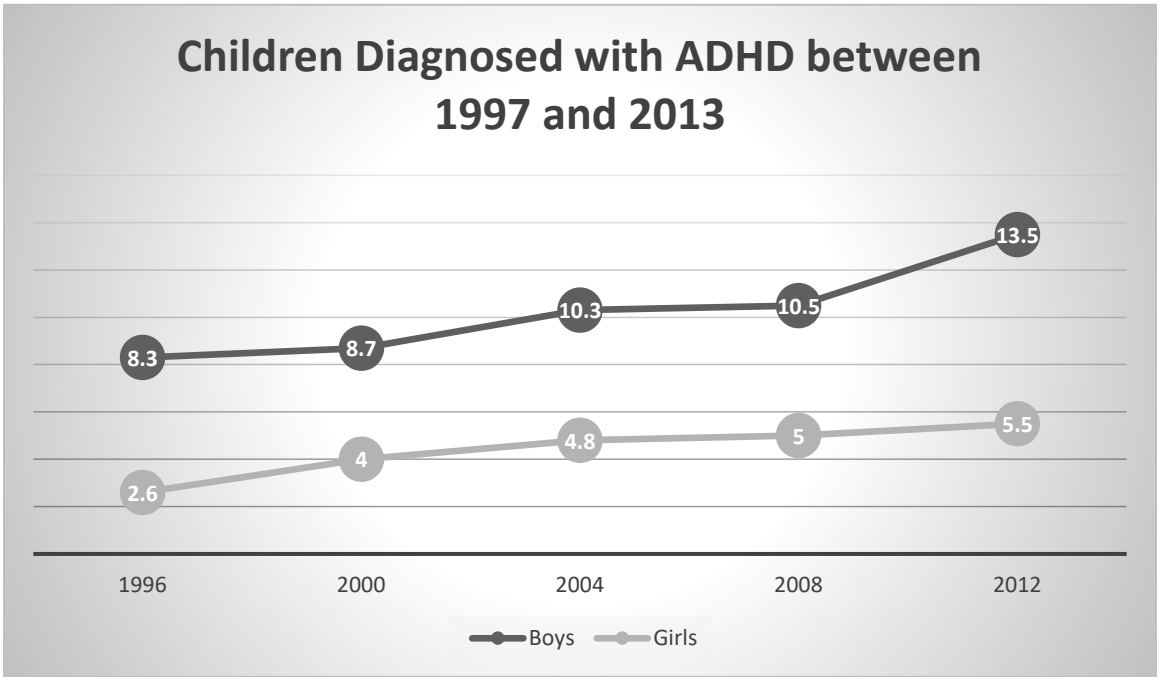

Figure 2. Prevalence and Rate of Increase. The chart shows the rise in diagnosed cases of boys and girls with ADHD between the years 1997 and 2013 ("Key Finding," 2017).

ADHD was also reported as a condition affecting only children in the United States or affecting significantly more children in the United States than anywhere else in the world. However; the meta-analysis by Farone, Sergeant, Gillberg, and Biederman (2003) demonstrated that ADHD did affect children throughout the world, and this finding was supported by research of Traver, Daley, and Sayal (2014) and by research conducted in Bangalore, India by Jacob et al. (2016). Jacob et al. (2016) found 10.5% of 2595 children receiving service from National Institute of Mental Health were diagnosed with ADHD (p. 150). In their work, Farone et al. (2003) proposed that some of the difference in prevalence was due to the difference in diagnostic tools; and therefore, their meta-analysis relied on studies which used the DSM criteria.

The meta-analysis conducted by Faraone et al. (2003) suggested that only 20% of children with ADHD outgrew it by adolescence. Although once thought to subside by mid or late adolescence, researchers discovered that ADHD persisted into adulthood (Barkley, 1997; Brown, 2005). The American Psychiatric Association reported in 2013 that 20 years of research on ADHD revealed for many children with ADHD, symptoms were still prevalent in adulthood (APA, 2013). Weiner, Biondie, Grimbos, and Herbert (2016), in agreement with Barkley (1997), suggested that "[a]pproximately 30 – 50% or more of children with ADHD continue to show symptoms in adulthood" (p. 563). When identified in childhood and left untreated, students, especially the youngest learners, missed foundational skills, which were the building blocks for all future learning.

ADHD's Impact on Individuals and their Families

Farone et al. (2003) suggested that, if not addressed and remedied in some fashion during childhood, ADHD had lasting impact on the individual through adolescence and often into adulthood. They defined several areas in which negative impact of ADHD would be prominent. Barkley (2013) suggested, "Their problems can place a burden on your role as a parent that you never thought possible" (p. 5). Areas which presented a challenge for children and adolescents with ADHD included social functioning with family, as well as friends, and career attainments. Wehmeier et al. (2011) ascertained these deficits in their study by administering the KINDL_R, a health-related quality of life scale for children, to 180 school age children, which revealed low quality of life scores for children and adolescents with attention-deficit/hyperactivity. Their investigation also confirmed co-morbid Oppositional Defiance Disorder or Conduct Disorder in approximately half of the study participants (Wehmeier et al., p. 691, para. 5).

Jacob et al. (2016) identified 273 patients diagnosed as having ADHD and 63 were included in the study. Of those 63 who participated, 34% had disruptive behavior disorders, such as Oppositional Defiance Disorder or Conduct Disorder (p. 151, para. 2). As reported in the *British Medical Journal*, the evidence for conduct problems or impulsivity was further demonstrated by researchers in Sweden who reported that at least 10% of inmates had ADHD (Wiener, Tannock, Jenkins, 2012, p. 1, para. 7). It was also reported in a four-year study that adults who took prescription medication for ADHD reduced criminal behavior. Reducing impulsivity and improving attention could lead adults with ADHD toward better job retention and productivity. This work, along with Wehmeier et al. (2011), corroborated the findings of Barkley, Fischer, Smallish, and Fletcher (2004) who examined the impact of ADHD on behavior during young adulthood. Barkley et al. (2004) followed individuals for a period of 13 years and compared the frequency of antisocial behaviors of those diagnosed with ADHD to a control group. Two-hundred and twenty children from the age of seven through the age of 20 participated. Of this sample 147 were diagnosed with ADHD and 73 children were selected for the control group. Barkley et al. (2004) compared the two groups for antisocial behavior, such as fist fights, stealing, assault, drug abuse, alcohol abuse, and arrests. Females and males were included, and the control group, when compared to the hyperactive group (H group), did not have a significant difference in population make up. The researchers revealed that of 20 anti-social behaviors evaluated, those identified as hyperactive had higher rates of involvement in criminal action than the non-hyperactive ADHD control group. In fact, three times as many participants diagnosed with ADHD hyperactive type revealed having been arrested two or more times, and twice as many as

the ADHD control group had been arrested three or more times (Barkley et al., 2004, p. 201). McConaughy, Volpe, Antshel, Gordon, and Eiraldi (2011) "found that almost half (49%) of our ADHD sample had other co-morbid DSM-IV-TR diagnoses including ODD, CD" (p. 221, para. 1). The population of adolescents with ADHD also had higher rates of run-aways (Barkley et al., 2004, p. 201). Loe and Feldman (2007) supported these findings (see Figure 3).

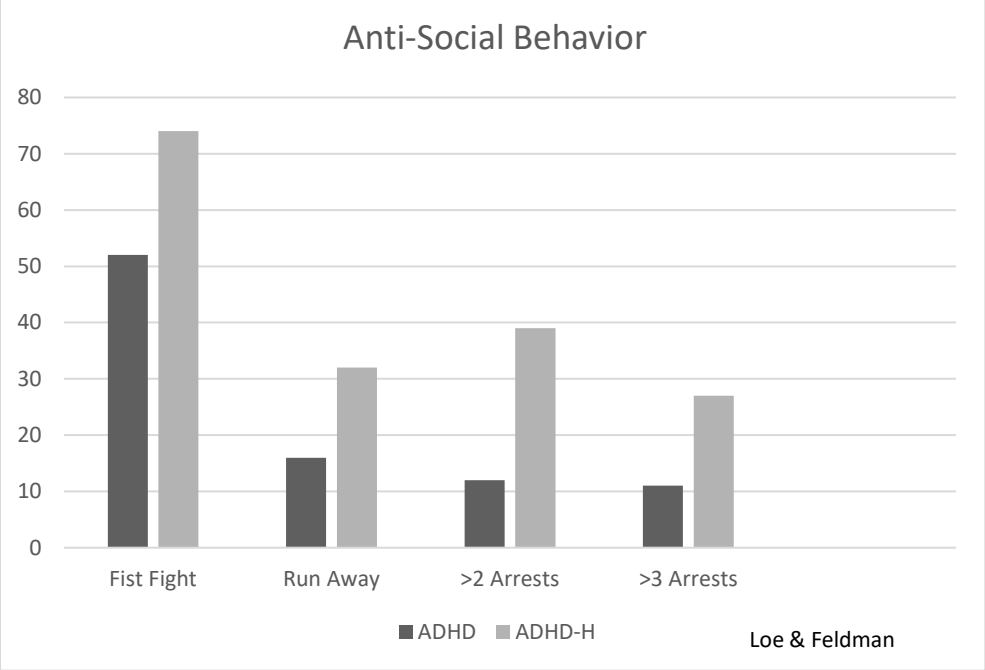

Figure 3. Comorbid Antisocial Behavior in Adolescents with ADHD and ADHD combined type (Loe & Feldman. 2007).

Loe and Feldman (2007) distinguished the areas in which children with ADHD had the most difficulty functioning. The three categories they identified included, "problems of body functions and structures called impairments . . . problems of daily living are called limitations. Problems of social participation are called restrictions" (Loe & Feldman, 2007, p. 643, para. 4). According to the KINDL-R administered by Wehmeier et al. (2011), these impaired areas were suggested to relate to self-esteem, peer

and family, both psychological and physical well-being, and academics. Loe and Feldman (2007) found that students with ADHD were more likely to receive severe academic consequences, such as expulsion, and suspension rates were higher for this group of students. Taylor et al. (2015) noted that adolescents and adults with ADHD experienced other mental health impairments, including anxiety, depression, oppositional deviance or conduct problems, anti-social behavior, and difficulties learning. By adolescence, those affected by ADHD were more likely to struggle with academics, social-emotional issues, and peer-relationships. Although some of these individuals did not demonstrate the hyperactive and impulsive behaviors they exhibited at younger ages, adolescents with ADHD continued to experience negative effects, which were less prominent and often led health care professionals and parents to incorrectly assess the ADHD as having terminated (Abdolahzadeh, Mashhadi, & Tabibi, 2017). Impairments in reading, language, and mathematics were also reported (McConaughy, Volpe, Antshel, Gordon, & Eiraldi, 2011). Together these findings illustrated a bleak picture of the social and educational opportunity for children and adolescents with ADHD.

Of additional significance in the Barkley et al. (2004) work was the comparison of demographics (see Figure 4). A larger portion of the H (ADD plus Hyperactive component) group were working than those of the control group; from analysis of the control population demographics, it was discovered that 47% were enrolled in college classes and employed. In contrast, Barkley et al. (2004) found only 5% of the H group held a job while in post-secondary education.

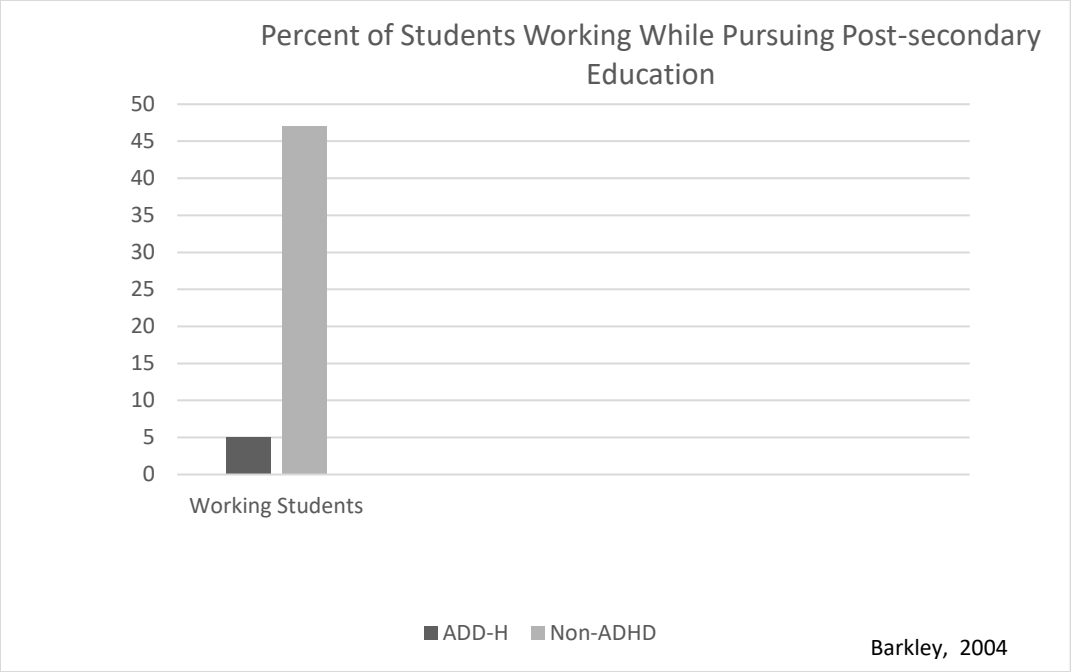

Figure 4. Percent of students working while pursing post-secondary education shows a comparison of students with and without ADHD who were able to work while attending classes (Barkley, 2004).

Given the functional impairment of children and adolescents with ADHD, found and identified by Loe and Feldman (2007) and Wehmeier et al. (2011), these data would not be unexpected, since both school and work involved social participation and a well activated executive function (Brown 2013), which would be necessary for managing and organizing time and tasks (Figure 5).

Research by Able, Johnston, Adler, and Swindle (2006) further supported the findings of Barkley et al. (2004) and Loe and Feldman (2007) and indicated, "[u]ndiagnosed ADHD patients also reported lower levels of highest educational attainment (high school diploma or less, 28.0% v. 20.6%, $p< 0.01$; advanced degree 14.8% v 22.7%, $p<0.001$) than non-ADHD controls" (Able, Johnston, Adler, & Swindle, 2006, p. 100, para. 5).

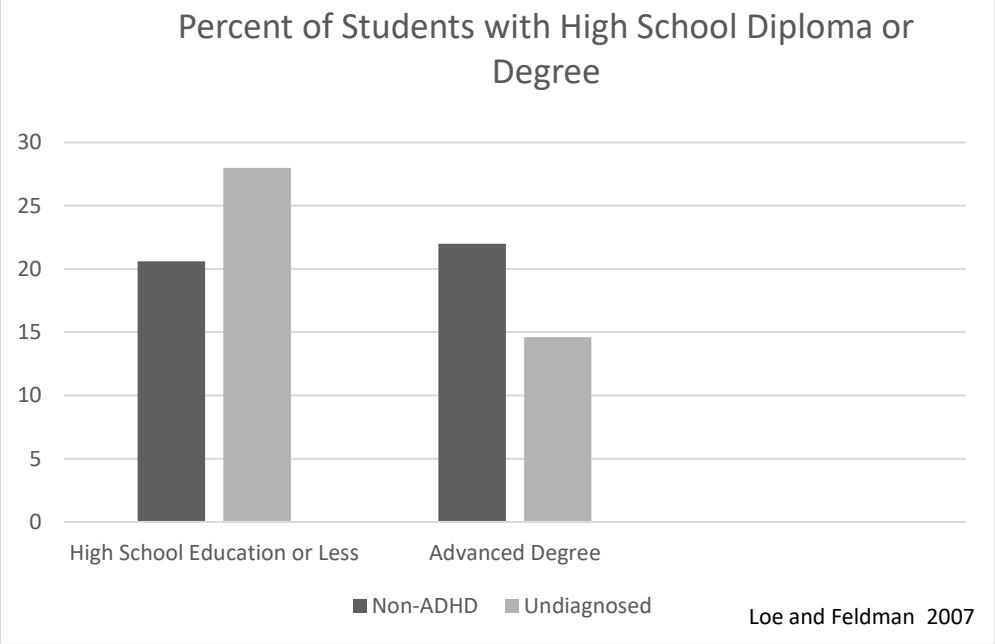

Figure 5. High school completion comparison of undiagnosed students and non-ADHD peers (Loe & Feldman, 2007).

The work of McConaughy et al. (2011) corroborated this body of literature. Using the WISC-IV, McConaughy et al. (2011) revealed significant deficiencies in academic abilities of children with ADHD when compared to peers who did not have ADHD. Impairments were noted in the areas of math, reading, and language (McConaughy et al., 2011, p. 210). Later work by Brown (2005, 2013) identified learning difficulties in children with ADHD in the areas of language. Drop-out rates of students were not provided by Barkley et al. (2004), Able et al. (2006), or McConaughy (2011). The importance of these studies was that all illuminated the problems faced by children and young adults with ADHD and further evinced the life-long impact of ADHD. Hart et al. (2010) stated, "ADHD is predictive of lower future academic achievement in both mathematics and reading, even after controlling for intelligence" (p. 1708).

Self-reporting revealed that non-ADHD controls saw their lives more favorably than those determined to have ADHD symptoms. Adults with ADHD, in self-reported

surveys, indicated greater numbers of accidents in the home, on the job, and when driving than those in the non-ADHD group (de Graaf et al., 2008), and the full effects of adult symptoms on workplace functioning further evidenced the findings of Able et al. (2007) and Barkley et al. (2004), demonstrating long-term performance problems of adults who identified themselves for ADHD by completing a self-evaluation symptom checklist. Findings by the CDC ("Facts about ADHD," 2016) also confirmed that adults with ADHD were at significantly higher risk of injury than non-ADHD peers (as cited in "Key Finding," 2017).

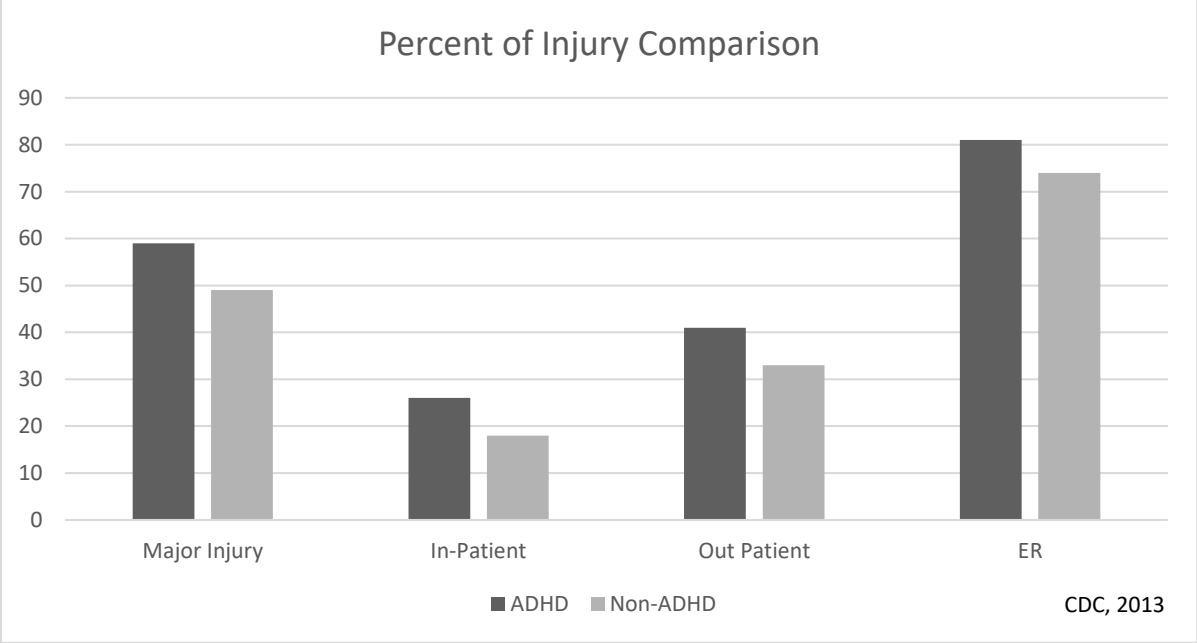

Figure 6. Comparison of injury and severity between ADHD and Non-ADHD adults. (CDC, 2013), as cited in "Facts about ADHD," 2016).

In 2004, Barkley et al. did not look at the effect of co-morbid disorders on employee performance; however, Kessler, Land, Stang, and van Brunt (2009) did assess co-morbid disorders and found no significant impact on employee performance when compared to ADHD alone. De Graaf et al. (2008) indicated that across countries studied, nearly150 million days were lost due to employee absenteeism or under-performance

while at work due to ADHD. For adults reporting on their ADHD symptoms, many reported under-performances on the job, as well as lost days/sick leave (de Graaf et al., 2008). Although not mentioned in this study, Kessler et al. (2009) noted that because screening and diagnoses of ADHD, along with the symptom criteria contained in the DSM, was based on children, subtleties of adult ADHD may be missed and a portion of the adult population thus undiagnosed.

De Graaf et al. (2008) confirmed previous analyses which demonstrated a disparity in the number of cases across genders and professions; however, Kessler et al. (2009) found no significance in gender prevalence. Also, worthy of mention was that individuals who held professional careers were less likely to have symptoms of ADHD (de Graaf 2008; Kessler et al., 2009). Work by Brod, Johnston, Able, and Swindle (2006) revealed that adults completing the Adult Quality of Life Scale who had a diagnosis of ADHD were more likely to have better earnings and more education than those individuals who were self-reported and/or interviewer determined as having attention issues. "The . . . [undiagnosed] ADHD subjects . . . had attended college without graduating and …[a] majority of subjects earned less than $35,000/year" (Brod, Johnston, Able, & Swindle p. 121, para. 2). The work of Kessler et al. (2009) supported this finding and established that ADHD symptoms were far more prevalent among laborers with raw talents while the occurrence of ADHD symptoms in employees holding technical jobs or executive positions was markedly decreased when compared to those holding blue-collar jobs. Researchers theorized this was due to the difference in required tasks and the need for more critical thinking in professional roles than in those involving labor or the service industry (Brod et al., 2006; Kessler et al., 2009).

Limitations of the Kessler et al. (2009) and de Graaf et al. (2008) studies included the lack of second or third-party evaluations of employees screened for ADHD. Because only the employee reported on his or her symptoms, the validity of each survey was dependent on honest and forthcoming answers. Without a comparison analysis by an objective observer, these results may not have been a completely accurate picture of the individual completing the survey. A further limitation throughout the research on adult ADHD stemmed from the fact that the DSM guidelines and, therefore, many screening tools were based on child behavior patterns and symptoms. Thus, adult behaviors that were less frequent and/or of lower intensity may be missed leading to greater prevalence of undiagnosed ADHD in adult populations.

Although Able et al. (2007) relied on self-reported classification of indicator frequency, the findings coincided with what was known about ADHD in children and young adults. Academic failure, difficulty maintaining personal relationships with family and friends, and challenging social characteristics in children also persisted into adulthood (Able, Johnston, Adler, & Swindle, 2006). McConaughy et al. (2011) argued that difficulties beyond ADHD experienced by children and adolescents included fewer social interactions with their peers, while those children with attention-deficit combined-type leaned toward more aggressive social interactions and were not viewed favorably as playmates (p. 202).

Although the DSM criteria defined the symptoms of ADHD, there was little reported on social and emotional development. McConaughy et al. (2011) sought to demonstrate ADHD had a profound impact on child or adolescent life in ways that extended beyond the symptoms. The researchers used standard measures of intelligence,

including the Wechsler Intelligence Scale for Children-IV Edition (WISC-IV) and the Social Skills Rating System (SSRS). While the WISC-IV was administered directly to children in the study to assess areas of academic potential across the subjects of math, reading, and language, the SSRS was a battery completed by parents and teachers to evaluate the child's overall social skills and behavioral issues. There were no significant differences in impairment in the academic or social function between children or adolescents with ADHD and ADHD-combined type, but when compared to the non-ADHD control group, significant differences between the ADHD groups and control arose (p. 201). This may have been in part due to the underdevelopment of the executive function in those with ADHD (Brown, 2013). In a comparison of social skills behaviors, "the ADHD group scored significantly lower . . . on all six measures" (McConaughy et al., p. 212, para. 3).

Together these findings suggested that when left untreated or unmanaged, ADHD symptoms impacted an individual throughout his or her lifetime across the domains of work, family, social relationships, and academic performance.

> Learning disabilities (LDs) affect approximately 5% of the public school population, which translates to over 2.7 million public school students in the United States. LDs are neurobiological disorders that impact on information processing and more specifically the acquisition, organization, retention, understanding, and application of verbal and visual information." (Milligan, Badali, & Spiroiu, 2015 p. 562)

Loe and Feldman (2007) reported increased prevalence of difficulty with math and reading. Their research revealed a higher percentage of children with ADHD were

retained rather than promoted to the next grade level and more children with ADHD were also given resource assistance or remediation for academic skills. The reason for remediation or resource assistance was made clear in research by Capano, Minden, Chen, Schachar, and Ickowicz (2008), which suggested that,

> One of every 10 children diagnosed with ADHD was also classified as having both an MD [math learning disorder/disability] and an RD [reading learning disorder/disability]; 8% had MD without RD and 16% were singled out as RD exclusive of MD. (p. 394 para. 11)

Capano et al. (2008) explained that students with ADHD had learning disabilities more frequently than peers without ADHD. Tannock and Martinussen (2001) explained the presence of learning difficulties was the result of poor working memory, an offset of reduced levels of dopamine in key areas of the brain (p. 22). Students who had a reading disability also tended to have a disability in math. Capano et al. (2008) focused on the detection and understanding of math disability. In their work, they defined math learning disorder in one or more categories. These included basic recall; the automaticity of recognizing the basic math facts; a deficit in completion of problems through the use of appropriate strategies defined as procedural disability, and the inability to recognize place order, mathematical symbols, and misalignment of numbers defined as visual-spatial. These skills relied on working memory.

It would not be surprising, given the difficulties individuals with ADHD faced from childhood through adolescence and into adulthood to find that they were more disappointed or dissatisfied with their lives. Brod et al. (2006) indicated dissatisfaction ratings on measures of productivity, life satisfaction, relationships, and mental health

were higher for adults with ADHD; participants in the study rated themselves lower in self-satisfaction than the control (non-ADHD) group. These ratings were slightly higher for phone interviews than for those done in person. This difference was believed accurate because expressing negative feelings about one's life, relationships, and mental health was easier with anonymity provided through phone interviews (Brod et al., 2006). Abdolahzadeh, Mashhadi, and Tabibi (2017) revealed through their work that negative learning outcomes combined with social-emotional issues may also play a large part in internalized adolescent behavior leading to restlessness of mind or mood.

> Many youth with LDs may experience feelings of low self-esteem, anxiety or depression, failure, shame, and self-doubt associated with the school challenges they have experienced. To cope with strong emotions, many youth with LDs avoid interactions, activities, thoughts and emotions associated with failure or distress by withdrawing from the stressful situation or engaging in problem behaviors (Milligan et al., 2015, p. 563)

Adolescents with ADHD were more likely than their non-ADHD peers to attempt suicide at a rate of three to one (Abdolahzadeh et al., 2017, p. 31).

Lahey et al. (2004) designed a study to measure the reliability of the criteria for diagnosing children with ADHD. Two-hundred fifty-six children between the ages of four and six took part. Parents of the children completed signed consents and children verbally gave their consent. The study began with a series of rating scales to measure the behavior and attitudes of the children. Parent rating scales measured the child's level of difficulty with relationships between peers, siblings, and family. Teacher rating scales measured the child's level of acceptance by peers, social skills, and school performance.

Parents were also asked to rate the need for treatment to improve the child's relationships with family and peers. Parents provided this rating for areas of the child's self-esteem and academics. "Associated difficulties, such as delayed development, oppositional behavior, and poor social skills, may also be present" (Harpin, 2005, p. 2, para. 4) in children with ADHD. Taylor et al. (2015) noted that traditional school settings were not necessarily the best environment for a child with ADHD who had severe issues with impulse control and focusing attention. Not only were they unable to work in this environment, they also disrupted the learning of others and made classroom management difficult for teachers (Taylor et al., 2015). Harpin's (2005) study reported that over the three-year period, there were very few children whose symptoms subsided. Ratings were obtained from teachers each year, and although the teachers were new in the sense the child and teacher had not had classroom time together, the ratings remained fairly constant and gave validity to the DSM-IV criteria for diagnosing ADHD in early childhood during the preschool through kindergarten years, ages four through six (Lahey et al., 2004).

Inattention, Hyperactivity, Non-compliance, and Co-Morbidity

For many years, the Diagnostic and Statistical Manual (DSM) was used as a guideline for assessing ADHD in children, but the reliability and validity of the DSM in assessing young children between the ages of four and six was unknown (Lahey et al., 2004). Yet, early diagnosis remained key to intervention and treatment of co-morbid symptoms. Overgaard et al. (2014), followed participants from age 18-months to 42-months (3½ years of age) and found prevailing emotional dysregulation to be a reliable indicator in predicting the likelihood of ADHD at age three. Children who, at 18-months of age displayed characteristics of emotional dysregulation showed signs of attention

problems and the onset of anxiety before the age of four. There was a significant link between ADHD and other psychosocial disorders (Brown 2013; Jacob et al., 2016; Overgaard et al., 2014). Statistical significance was noted in the study, "Both population and clinical studies have found high co-occurrence rates of anxiety and ADHD, estimated to vary from 25- 40% in school children. Similar prevalence rates and patterns of co-occurring psychopathology have been found in preschoolers" (Overgaard et al., 2014, p. 743, para. 2). Research by Gumus, Cakin Memik, and Agaoglu (2015) supported this finding and estimated that anxiety disorder was highly prevalent in children with ADHD and suggested that the rate of co-occurrence was between 15% and 35%. The research of Jacob et al. (2016) revealed co-morbid anxiety rates as high as 44.4% (p. 151). Gumus et al. (2015) relied on the Schedule for Affective Disorders and Schizophrenia for School Age Children, Present and Lifetime Version, the T-DSM-IV-S, and the Wechsler Intelligence Scale for Children Revised for primary data collection. Significant factors, such as parent age, gender of child, and intelligence scores were analyzed for statistical significance. It should be noted that prevalence of Anxiety Disorder in children with ADHD decreased as the parental age at time of birth increased. Older parents seemed to have less anxious children.

Preschoolers who had Bi-Polar Disorder (BPD) were more likely to have at least one other psychiatric disorder. Of 44 preschoolers with BPD who were treated for the disorder between 1993 and 1998, 95% were diagnosed with ADHD, 41% with conduct disorder, 91% with oppositional defiance disorder, and 70% with over anxiousness (Wilens et al., 2003). Able et al. (2007) found that the ADHD group indicated more malaise and mental health issues, such as bipolar disorder or depression. The CDC's

report (as cited in "Attention-Deficit/Hyperactivity Disorder," 2014) further supported the presence of co-morbid symptoms when the CDC revealed that one of every five children diagnosed with ADHD were likely to experience anxiety, and one of seven diagnosed with ADHD experienced depression.

> Depression occurs in youths with ADHD at a significantly higher rate than in youths without ADHD. Youths with ADHD and depression together have a more severe course of psychopathology and a higher risk of long-term impairment and suicide than youths with either disorder alone (Daviss, 2008, p. 565)

Daviss (2008) estimated the prevalence of co-occurring depression and ADHD to be anywhere from 0.12 to 0.50 (p. 565). Taylor et al. (2015) postulated that both children and adults with ADHD were likely to experience mental health impairments, including anxiety, depression, oppositional defiance, conduct problems, and anti-social behavior.

The National Institute on Drug Abuse (NIDA, 2008) revealed a strong correlation between mood or anxiety disorders and drug abuse. NIDA demonstrated that nearly 45% of those with a mood disorder also suffered drug use disorders.

In agreement with research by Barkley et al. (2004), Loe and Feldman (2007) also found the coexistence of conditions in children with ADHD included anxiety, impulse or behavior control, and depression.

The work of Wehmeier et al. (2011) added support to the research indicating the coexistence of other disorders. While the focus of this study was on atomoxetine (Straterra) on improving overall patterns of inattention and behavior or mood, their research did find through the KINDL-R that school-age children and adolescents with ADHD reported more negative impacts of their ADHD in the areas of social adjustment,

relationship with family, academic performance, and both physical and psychological health. Further, their findings suggested that the co-morbid conditions of Conduct Disorder or Oppositional Defiance Disorder were found in nearly half of the children in their study who had ADHD (Wehmeier et al., 2011, p. 693, para. 5). One shortcoming of this research was the length of the study. Patients treated with atomoxetine were followed only for nine weeks. Although positive effects were achieved in the study, long-term maintenance of improvement in conduct, mood, or oppositional behaviors could not be established in this research.

The Impact of ADHD Behavior on Parents

"Parent-child interactions are often affected by many factors, including emotional instability, behavioral disturbances, parent-child conflict, and parenting styles" (Moghaddam, Assareh, Heidaripoor, Rad, & Pishjoo, 2013). The transactional or bi-directional relationship model suggested that child behavior was both a precursor and antecedent to parent reactions (Neece, Green, & Baker, 2012). In a study of 51 children and their mothers conducted by Whalen, Odgers, Reed, and Henker (2011), using electronic diaries to record behaviors and moods during periods when both mother and child were at home, it was revealed that parental stress varied in conjunction with variations in the child's behavior. Maternal stress was also rated higher by mothers of children with ADHD.

Researchers also believed that the parent-child interaction model had an impact on not only the parent-child relationship but the marital relationship, as well. Additionally, this relationship model was both a result of stress and producer of parenting stress. Jahangir and Batool (2017) examined marital relationships of parents whose child

was diagnosed with ADHD. In their work they discussed parenting stress and generalized that parents of children with ADHD experience greater stress, increased relational conflict along with other psychological manifestations. Although Jahangir and Batool (2017) included both mothers and fathers in their work, previously parenting effectiveness and satisfaction research mainly focused on mothers and children (Deater-Deckard & Scarr, 1996). Parenting was often described as stressful, and the most common cause of parenting stress was related to the challenges of providing for daily needs of children (Barkley, 2013; Deater-Deckard, 2004; Deater-Deckard & Scarr, 1996) and feeling there were limited resources available, which provided aid in this role (Mackler et al., 2015). "Parenting stress is a distinct type of stress that arises when a parent's perceptions of the demands of parenting outstrip his or her resources for dealing with them" (Theule, Wiener, Tannock, & Jenkins, 2012, p. 1 para. 3). This was also supported in research by McLaughlin and Harrison (2006). They concluded that mothers who viewed their parenting strategies as unsuccessful had higher perceived levels of stress and feelings of inadequacy. "Fathers and mothers experience significantly more stress when parenting their children with Autism Spectrum Disorder, ADHD, or ASD and ADHD, but normal levels of stress when parenting their unaffected children" (van Steijn, Oerlemans, van Aken, Buitelaar, & Rommelse, 2014, p. 1070, para. 2). Brown (2013) also indicated that parenting a child with ADHD was a difficult task, requiring greater levels of involvement than that of parents of children without ADHD (p. 5). Crnic and Greenberg (1990) suggested parenting stress arose from the daily struggles, which in and of themselves were of little significance, but which overtime served to increase the level of frustration.

Many researchers focused on mothers of children with serious illness or disabilities (Deater-Deckard, 2004), and while major life events, such as a catastrophic illness or accident, would be stressful, researchers believed that the day-to-day challenges of raising a child had a more profound effect on parent perspectives and behaviors than previously believed; further, because these challenges were common among parents, recurred regularly, and persisted over time, frequency and intensity could be used as measures of parenting stress (Crnic & Greenberg, 1990). Parenting confidence was a key predictor of maternal stress. Mothers who lacked parenting confidence were more likely to report parenting stress and reactive parent behaviors when confronted with even typical toddler misbehavior, such as tantrums (Morawska & Sanders, 2007). Parenting responses to a child externalizing behavior were noted to be reciprocal in that parental reaction was likely to produce a child externalizing behavior; however, this relationship was not immediate but was developed over time (Mackler et al., 2015). Negative child behaviors associated with ADHD, including aggressiveness and non-compliance, eroded parenting confidence resulting in negative parenting strategies (McLaughlin & Harrison, 2006). Brown (2013) also reported, "Seeing a situation from a reactive frame of mind can make it seem hopeless . . . your relationship with your child can become hostile, negative, discouraging, stressful, or dysfunctional" (p. 7). Weiner et al. (2016), through direct observation, also identified parent discipline styles as harsher and less positive than those of parents of children or adolescents who did not have ADHD. To determine the amount and level of parenting stress, Deater-Deckard and Scarr (1996) assessed fathers' and mothers' perceptions of stress. They tested the assumption that as dual-earners,

parenting stress should be similar for both sexes, because both worked outside the home and childcare responsibilities would be shared, whether equal or not.

Working parent-couples who had completed a college level degree or who had some college education were recruited. These dual income parents had an average family income of approximately $60,000 annually (Deater-Deckard & Scarr, 1996). The Parenting Stress Index was administered to these married couples, and each parent rated his/her distress, level of functional interaction between self and child, and rated the level of difficulty of the child's behavior. Parents were also asked about their level of satisfaction as a parent, as well as their level of satisfaction with their marital relationship.

Although Deater-Deckered and Scarr (1996) recruited mothers and fathers, Crnic and Greenberg (1990) focused their research on commonly occurring situations experienced by parents, mainly mothers with children five-years old or younger. Their sample population consisted of approximately 75 mothers and their children. Parents in the study were given several rating scales to measure the daily stress, which derived from child behavior, current satisfaction with life, and degree of support, along with several others measures.

After analyzing the results of the various rating scales, a link between parent satisfaction and parent perception of stress was revealed. Parents who reported more parenting stress were more likely to feel less positive about their relationships with their spouse and children (Crnic & Greenberg, 1990). This finding was supported by the work of Deater-Deckard and Scarr (1996) and later by Sevigny and Loutzenhiser (2010), who illustrated that spousal relationship and satisfaction were more predictive of parenting

stress. Deater-Deckard and Scarr (1996) also indicated marital discord was a predictor of parenting stress. In fact, parent responses to stress were shown to "create or exacerbate physical and psychological vulnerabilities whereby the day-to-day strain of caregiving becomes a crucial aspect of mental health functioning of parents and children…and their relationships" (Deater-Deckard, 2004, p. 2). Parents who reported higher levels of stress were more likely to have a lower sense of parenting-efficacy. Further, those parents whose level of stress was higher, as measured by the Parent Stress Index (PSI), tended toward more authoritarian parenting (Deater-Deckard & Scarr, 1996; Wiener et al. 2016). "Marital dissatisfaction was not only more strongly associated with parenting stress among fathers, but it also had a greater impact on the relationships between discipline and child behavior" (Deater-Deckard & Scarr, 1996, p. 57, para. 3). Sevigny and Loutzenhiser (2010) confirmed this and reported that fathers were more likely to have lower Parenting Self-Efficacy (PSE) and depressive symptoms when their relationship with their spouse was unsatisfactory. Greater resilience to stressors was derived from social support than from spouse or partner support; however, child behaviors and parent inabilities to control or redirect problem behaviors led to social withdrawal. Retreating from social interaction created a greater sense of incompetent parenting skills.

The positive effect of social support on perceived levels of stress was primarily due to common experiences (Crnic & Greenberg, 1990). Theule, Wiener, Rogers, and Marton (2011) demonstrated that when parent perception indicated feelings of social isolation and low levels of social support, the Parenting Stress Index revealed higher levels of perceived stress. Jahangir and Batool (2017) concluded that social support was an important aspect in coping with a child with ADHD. Social support was a component

in developing the coping mechanisms, which were essential for dealing with stress and child behaviors. The research of Jahangir and Batool (2017) also suggested that it was important that parents were not isolated.

Deater-Deckard (2004) explained that the parent's perception of his or her abilities to parent and the parent's view of the child were two components that interacted to produce parenting stress. As parenting stress increased, quality interaction between parent and child decreased. When parents felt the increase in stress, they also tended to parent from an authoritarian perspective. Deater-Deckard (2004) defined the bi-directional process of the parent-child relationship and surmised that each was influenced by the other.

> Bi-directional processes evolved over time as the parent-child relationship develops; they are not systematic . . . [c]hildren and parents alike can respond to the others' distress in a wide variety of ways that are sometimes adaptive and sometimes maladaptive." (Deater-Deckard, 2004, p. 55)

Neece, Green, & Baker (2012) suggested that an increase in the child's problem behavior would produce a rise in parenting stress; higher parental stress led to increased problem behavior. Parental stress was highest for parents whose child showed externalizing behaviors (distractibility, attention issues, aggression, or conduct problems). The meta-analyses by Theule, Wiener, Tannock, and Jenkins (2012) revealed that the co-existence of another disorder such as Oppositional Defiance Disorder or Conduct Disorder were factors that drastically added to parenting stress when compared to parents of children who had ADHD alone (Theule et al, 2012, p. 9) and supported the work of Neece et al. (2012) and Deater-Deckard (2004). Gumus et al. (2015) stated that ADHD was a major

health concern not only because of the impact on the child, but due to the impact on the family as well. Because ADHD could also result in impulsive or defiant behavior, there was added stress on the family resulting from the child or adolescent's behaviors and actions. Mackler et al. (2015) illustrated that the child's behaviors greatly impacted a parent's stress.

In 2004, Deater-Deckard suggested that behavior problems present in early childhood remained consistent over time; however, as children became adolescents, the externalizing behavior changed from aggression and was likely to become a serious conduct disorder exhibited by stealing or drug use (Barkley et al., 2004). Weiner et al. (2016) reported similar findings and suggested that adolescents with ODD or externalizing behaviors were more likely than peers without ADHD to find support and social relationships with other adolescents who displayed negative behaviors, including drug use or abuse (p. 562).

Much of this literature has illuminated the relationship between inattentive and externalizing child behaviors, parenting stress, negative parenting outcomes, negative parent-child interactions, and increased tendency toward parent depression. Neece et al. (2012) examined the transactional relationship of 237 parents and children. The study focused specifically on parent stress and child behavior problems. Children selected for the research were at least three-years old, while the oldest participants were under ten-years old. Using a variety of measures including the Stanford-Binet, Family Impact Questionnaire, and Child Behavior Checklist, Neece et al. (2012) assessed development of the child in the areas of IQ and behaviors. The Family Impact Questionnaire was

administered to gain insight into the level of impact the child's behavior had on the family, as perceived by the parents.

The evidence from Neece et al.'s (2012) study supported the transactional model and further demonstrated "that parenting stress is both an antecedent and consequence of child behavior" (Neece et al., 2012, p. 59). Wiener et al. (2016) revealed that parents of adolescents with ADHD experienced difficulties in their relationships with their children. Poor parent-child relationship was indicative of increased conduct disorder (p. 570). While research by van Steijn, Oerlemans, van Aken, Buitelaar, and Rommelse (2014) did not note increases in conduct disorder, their research did reveal that attending to and following directions, difficulty forming relationships, and poor self-monitoring skills produced higher levels of stress for parents dealing with their children who displayed such tendencies.

In studies of bi-directional or transactional relationships, the controversy over nature versus nurture was often addressed by researchers seeking to demonstrate how personality developed as a result of interaction with and between the surroundings or circumstances, others, and self. The ability to cope and be resilient in the face of stress resulted from a combination of experiences with early caregivers and innate programming (Belsky, 1984). The relationship that developed between a parent and child was directly influenced by the response of the parent to the needs of the child. Parental ability and adaptability were key factors impacting the relationship. Barkley (2013) stated "if [parents] rise to the challenge, raising a child with ADHD can provide a tremendous opportunity for self-improvement, fulfillment as a parent, and even heroism in that role" (p. 5). When parents perceived the infant or child to be fussy or difficult to please,

parental nurturing behaviors decreased (Belsky, 1984). Further, Belsky (1984) stated that decreased parental attention over time resulted in fewer opportunities for the child to bond or develop cognitively or socio-emotionally. This transactional model played a significant role in the level of parenting stress throughout much literature. Research by Weiner et al. (2016) supported this. They found that more caring parent responses to adolescent behavior resulted in reduced externalizing or anti-social behavior related to the adolescent's ADHD.

"Raising a child with ADHD can be incredibly challenging for any parent" (Barkley, 2013, p. 5). One's view about self and performance of a role or task was not only based on the feedback received from others but also on one's views regarding possession of the abilities in meeting challenges and performing tasks. Further, much of a person's view on parenting and many parenting philosophies were derived from what was witnessed in childhood as one's parents parented. With such a view of parenting and no training ground it was no surprise that many parents often felt overwhelmed with the task of helping their young children grow socially, emotionally, and academically. Add attention-deficit, emotional issues, or oppositional behavior to the normal daily stress and parenting stress was likely to increase while efficacy decreased (Barkley 2013Heath, David, Fan, & McPherson, 2015; Taylor 2015). In addition, these externalizing behaviors made it likely that parents missed opportunities to praise and reward good behavior, because more often the child acted impulsively (van der Oord, Bogels, & Peijnenburg, 2012). "Hence, caring for a child with ADHD places higher demand on parents' role, has negative influence on parents' emotions, devastates functioning of family, and causes marital discord among parents" (Jahangir & Batool, 2017).

Attention issues such as those associated with ADHD were known to have lasting impact, not only on the child throughout his or her lifetime, but on the family as well. For parents whose child was inattentive, hyperactive, or non-compliant, they faced additional daily struggles, which increased stress (Heath et al. 2015). Parents tried to meet the needs of the inattentive child but found other hurdles existed in the area of behavior. Barkley (2013) observed that children with ADHD had a high need for parent advocates; however, the behavior of children with ADHD often seen as "excessive, demanding, and at times obnoxious" (p. 5) made responding or advocating a challenge (Barkley, 2013). Parent reactivity to externalizing behaviors also caused additional behavioral problems. The cycle of child behavior and parent reaction served to create a perceived increase in parenting stress (van der Oord et al., 2012). Difficulty managing their child's inattentive tendencies along with oppositional or non-compliant behavior created a sense of inadequacy managing daily life and this led to greater parenting stress and a decrease in parenting-efficacy (Heath et al. 2015). In addition, Sochos and Yahya (2015) found that in families where the child's ADHD externalizing behavior was conduct disorder or oppositional defiant disorder, divorce occurred much earlier in the relationship than in families where no ADHD was present. "Some parents succumb to the stress such a child can place on them, winding up with a child or a family in constant crisis, or worse, with a family that breaks apart over time" (Barkley 2013, p. 5). For parents of children with ASD and/or ADHD, it was found that "both fathers and mothers had higher levels of depressive symptoms, which in turn influenced parenting stress" (van Steijn et al., 2014, p. 1073, para. 1). Jahangir and Batool (2017) asserted that the emotions of dealing with a child with ADHD were related to inferior quality in the relationships with spouse. The

feeling of being unable to cope with the child's behaviors often left parents feeling frustrated and hopeless, which was a barrier in their relationship with their spouse or partner. Stress was higher among parents whose child exhibited disruptive behavior and these parents leaned toward an authoritarian style of parenting (Calzada, Eyberg, Rich, & Querido, 2004; Heath et al., 2015). The externalizing behaviors associated with ADHD, such as impulsivity, emotional dysregulation, hyperactivity, and oppositional behavior made caring for children with ADHD challenging, adding to parents' stress (Sochos & Yahya, 2015). Van der Oord, Bogels, and Peijnenburg (2012) suggested that parents were "more rejecting, controlling, and reactive to their child . . . and [this] contribute[s] to parenting problems (p. 140). Parents of children with ADHD were more likely to abuse alcohol (Harpin, 2005) and mothers were more likely than fathers to suffer from depressive symptoms (Calzada et al., 2004). There was a direct relationship between maternal depression and dissatisfaction with the marital relationship reported by fathers (Calzada et al., 2004). Mothers expressed feeling more responsible for the care of their children and described fathers as less involved. This view of parenting roles also led to more marital discontentment and anxiety for mothers (Jahangir & Batool, 2017). Sochos and Yahya (2015) argued that parenting a child with ADHD was problematic for spouses, and there was a significantly higher rate of divorce or dissatisfaction with the spousal relationship than between parents of children who did not have ADHD (2015). This may have been in part due to the demanding needs of the children, which created a sense of ineffectiveness in parents, which in turn caused care-givers to seek emotional and parenting support from their partners. Thus, this cycle also placed strain on the relationship as one partner felt abandoned in the role of parent (Sochos & Yahya, 2015).

Support Groups

The National Resource Center on ADHD (NRCA, 2015) stated that while ADHD was not the result of parenting skills or parenting style, factors within the home could exacerbate the symptoms of ADHD or remediate them. NRCA encouraged parents to seek as much information as they could and to find reliable sources, yet provided very little in the way of suggested sources. Additionally, parents were encouraged to get screening for their child in the areas of academic performance and overall health, as well as a psychological screening to determine whether there were co-morbid disorders present with ADHD. The information provided by NRCA placed parents at the center of responsibility for managing their child's ADHD and finding information (National Resource Center on ADHD [NRCA], 2015). While some links were provided, there was not a comprehensive list of support to help parents minimize stress, anxiety, or improve the quality of life. Parents dealing with an inattentive, hyperactive, or non-compliant child were given few support options. The greater the amount of resources and social support available to parents, the more likely they were to feel less stressed, which results in better parenting behavior (Respler-Herman, Mowder, Yasik, & Shamah, 2012).

In a study of peer support for Japanese parents Fujiwara, Kato, and Sanders (2004) found that those raising more than one child or parents whose economic and financial resources were limited were more likely to feel greater levels of parenting stress and to see themselves as ineffectively disciplining, leaning either toward too harsh or too tolerant.

At the time of this writing, there was little research completed on the benefit of peer support for parents of an inattentive child; however, research on the benefit of peer-

support for patients with serious illnesses was conducted. In their work, Uccelli, Mohr, Battaglia, Zagami, and Mohr (2004) asked patients diagnosed with multiple sclerosis to participate in peer support groups. Participants shared their own subjective experiences and often learned new coping strategies or insights from others in the group. "Utilizing peers as resources has been proposed as an effective means for coping with stressful life experiences and for gaining information and support from others" (Ucceli, Mohr, Battaglia, Zagami, & Mohr, 2004, p. 80). In this study, Ucceli et al. (2004) demonstrated that the peer support model was more beneficial to patients with symptom severity. Patients who rated their quality of life higher prior to the support sessions made less progress in the peer-support groups. Ucelli et al. (2004) supported this conclusion with a statistical analysis of several diagnostic tools, which included the Physical Health Composite Score, Multiple Sclerosis Quality of Life, Mental Health Composite Score, and the Quality of Life scale. Participants were also asked to complete the Beck Depression Inventory. While these tools covered many aspects of mental and physical health, researchers did not interview any participants and no data were collected during or after the peer-support groups. A qualitative analysis may have highlighted some positive aspects of the group meetings and the personal growth of participants.

Ashing-Giwa et al. (2012) investigated the effectiveness of peer support for African American women who were breast cancer survivors. Prior research indicated that cancer survivors greatly benefitted from social support, and those who were involved in a support group had an improved sense of well-being, along with decreased anxiety and depression. The demographic make-up of participants in Ashing-Giwa et al.'s (2012) study revealed the majority were over 60, had only two years of post-secondary

education, and earned under $45,000 (Ashing-Giwa et al., 2012, p. 587). The results of the study revealed several themes, including help gaining useful information, development of positive personal relationships, and a sense of hope, self-esteem, and economic support. The results of this study were largely positive, but a limitation was that participants were invited to the study. It seemed that only those who hoped to gain something from the group participated, and as such, the desire to find support may have directly influenced the positive outcome group members reported. This finding was similar to that of Fujiwara et al. (2011) in their study of parents in Japan. Their research highlighted that those parents who sought intervention through a parent-support group were more likely to have an increase in positive outcomes than non-intervention peers (p. 831).

In a qualitative study focused on parents of youths with extreme healthcare needs, the outcome of peer support was analyzed. The pilot study of Parent-Facilitator support groups was conducted by Kingsnorth, Gall, Beayne, and Rigby (2011). A key precept of this study was to select a facilitator with experiential knowledge who could lead the group sessions, but who also could provide insight and resources (Kingsnorth, Gall, Beayni, & Rigby, 2011). Responses to focus group interviews, field notes from directly observing support meetings, and feedback forms were coded. Based on these methods of data collection researchers found parents' participation centered around gaining awareness of both personal challenges and available resources, and improved views of competence to navigate parenting challenges in the future (Kingsnorth et al., 2011). Although this study was limited in participant numbers and focused solely on parents whose children had extreme healthcare needs, the outcomes reinforced findings on the

benefits of parent support groups for improving parent-efficacy, building awareness, and reducing isolation.

Adding to what was known about the impact of support groups, Shilling, Bailey, Logan, and Morris (2014) further examined the outcome of parent support. Parents in this group had children with a variety of diagnoses, including Autism Spectrum Disorder. From among the selected participants, a group emerged as willing to provide support to others. This group of 23 parents was provided with some training and background information on conducting peer support groups and became befrienders. From the initial sample, another 13 were selected to receive support. Care was taken to match parents and befrienders with similar experiences. The study followed families for periods ranging from initial interview to periods in excess of 18 months (Shilling, Bailey, Logan, & Morris, 2014). Participants from the parent group, as well as the befrienders, reported feeling less isolated, and the structure of the support groups helped create a judgement-free environment in which parents could share their emotions, both negative and positive, related to the on-going care of a disabled child. The sharing of these emotions was also described as the only time parents felt guilt-free for negative emotions. The peer encounters led parents to enhanced skills and insights to deal with all of the emotions associated with caring for their disabled child. Analysis of the befrienders' responses confirmed positive outcomes as well. Befrienders reported feeling less isolated as a result of participation and having a greater sense of efficacy. Their experiences providing support enhanced their skills and adaptability (Shilling et al., 2014). It is important to note that befrienders also experienced negative effects directly related to their roles in the

study. These effects included stress or anxiety in regard to being able to provide adequate support and stress regarding the substantial commitment to the program.

Although Ashing-Giwa et al. (2012) studied the outcome of face-to-face peer support, Beaudoin and Tao (2007) wanted to determine if there were benefits to online support groups for cancer patients. They argued that social support led to "decreases in stress and depression and an increase in coping [which] are potential bridges to cancer recovery" (p. 587). In their study, they identified the benefit of support groups as social capital characterized by the development of trust between group members, emotional support, giving and receiving advice, and connectedness. The results of their study revealed that on-line information seeking behavior alone was a strong predictor for depression, suggesting that "it [information seeking] can also be intimidating, confusing, and frightening" (p. 589). The study did indicate that positive outcomes of online support were reported by study participants, but there were few sites which provided instantaneous communication between cancer survivors. Most online communication was done through message boards; however, the social support derived from an on-line format led to increased social interaction which created a sense of support. Overall, the sense of support was linked to a decrease in negative feelings of stress and depression and increased coping.

Lawton-Smith (2013), former policy director for the Mental Health Foundation, conducted a review of research on peer support for mental health and suggested that key components found throughout the body of works reviewed included "mutuality, solidarity, synergy, sharing with safety and trust, companionship, hopefulness, focus on strengths and potential, equality and empowerment, being yourself, independence and

reduction of stigma" (p. 152). The principles of peer support included becoming a community based on trust and respect, oneness, improved efficacy, and resilience.

Managing Parent Stress and Child Inattention/Hyperactivity, Anxiety, and Depression Through Yoga, Mindfulness, Martial Arts

Myers (2015) a licensed child and adolescent psychologist and Assistant Clinical Professor of Psychiatry and Human Behavior at the University of California revealed that "exercise is known to increase endorphins in the brain that improve mood and may also improve concentration" (para. 2). In as little as 20 minutes per day of moderate exercise, children may see improvement in focus and concentration (Myers, 2015)

Originated by the Hindu culture, yoga has been practiced for over 2,500 years. The word yoga was translated from 'yuj' in Sanskrit meaning unite. The practice of yoga aimed to unite the mind, body, and spirit to create a sense of balance and harmony with oneself and the environment. The poses used in yoga were thought to help prepare the mind for meditation, and some studies of yoga showed it to be a powerful tool to control body functions, such as heart rate and respiration (Diamond, 2012). Eggleston (2015) explained that the asana, or poses, performed during yoga included rhythmic breathing and incorporated a meditative state while "Hatha yoga has been adapted for use with children by describing the postures as animals . . . and guiding their imagery during meditation" (Case-Smith, Sines, Klatt 2010, p. 228). The practice of meditation was shown to improve resting heart rate and blood pressure in adults, as well. Meditation was also shown to reduce anxiety and depression. The result was an improved state of well-being. In a study of children who had learning challenges, such as autism, ADHD, or anxiety, yoga was shown to improve daily functioning for these students (Eggleston,

2015). Case-Smith, Sines, & Klatt (2010) suggested that, "[y]oga programs designed to promote children's physical and behavioral health can benefit students at risk" (p. 227, para. 1). This was affirmed by Ross and Thomas (2010), who concluded, "Yoga has been shown to be effective in relieving symptoms of mental illness including depression, anxiety, obsessive-compulsive disorder" (p. 5). Cohen (2015) stated that among the benefits of practicing yoga were improved quality of live, better health, and increased mindfulness. Although quality of life scales were subjective measures, physiological responses can be objectively measured. These include heart rate and the variance of heart rate under stressful or resting conditions, hormone and immune functioning, and blood pressure (Cohen, 2015).

Those who participated in the research of Eggleston (2015) reported that they felt empowered and more focused. Students also reported being able to use breathing techniques to help focus in class. The findings in this study were the result of research conducted by Eggleston (2015) with students at a suburban school in the mid-west. The program consisted of weekly sessions lasting 30 minutes and ran for the course of the school year. Middle school students were surveyed at the start of the program and after completing the last session. Students' reports of self-esteem showed measurable improvement while measures of stress decreased. Students in the control, non-yoga group, showed no improvement in self-esteem or anxiety over time. Both groups were well matched for age, ethnicity, and gender. A flaw in this study was prior conceptualization of positive outcomes resulting from participation in the yoga program. Because students were given the choice as to which group to join, and those students already had "heard positive things about the guidance counselor's exercise program"

(Eggleston, 2015, p. 5, para. 2), preconceived notions regarding the benefits may have existed. Outcomes of this yoga program may be skewed by participant perspective based on their knowledge regarding the counselor's program, meaning positive outlooks produced more favorable outcomes. However, this research confirmed findings by Case-Smith et al. (2010) in which the researchers stated, "Programs that use both active full-body movement and calming poses and postures can help students become more perceptive of their arousal and learn simple strategies for increasing or lowering their arousal" (p. 236).

Lange et al. (2014) reviewed four studies of yoga for students with ADHD which were available. Although one of the studies did not have a control group comparison, all four reported results which pointed to improvements in attention and a decrease in hyperactive behavior. The greatest improvement was reported for students when yoga was practiced regularly over a 20-week period and included weekly one-hour sessions. Pre-tests and post-tests, such as the Conner's Rating Scale, completed by teachers and parents revealed substantial improvement in focus, hyperactive behaviors and impulse control. Three of the remaining studies reviewed demonstrated improvements even when the training interval was limited to a six-week period (Lange et al., 2014).

Lakes and Hoyt (2004) "investigated the effectiveness of an ancient system of self-discipline training- martial arts training- for promotion self-regulation…in elementary school children" (p. 284) and found "affective, cognitive, social, and behavioral benefits from martial arts training" (p. 285). The benefits they cited included greater sense of self-awareness, confidence, and emotional regulation. Other benefits included mental alertness and improved focus.

Case-Smith et al. (2010) reported, "[y]oga has been linked to improved self-control, attention, and concentration, self-efficacy, and body awareness in children" (p. 228).

In a study on the benefits of yoga to reduce chronic stress, Harkness, Delfabbro, and Cohen-Woods (2016) followed approximately 46 women over eight weeks. All participants reported having chronic stress. Criteria for chronic stress was defined as stress having persisted in an individual's life for extended periods or perhaps from birth or early childhood (Harkness, Delfabbro, & Cohen-Woods, 2016). Work by Wilens et al. (2003), Able et al. (2003) and the CDC (as cited in "Facts about ADHD," 2016) illuminated the presence of co-morbid ADHD and stress in nearly one-in-five children diagnosed with ADHD. Given that it was estimated that childhood ADHD affected over six million children and one-in-five were shown to experience anxiety, then nearly 1.28 million children were at risk of stress or anxiety related illness. Harkness et al. (2016) looked at the body's responses and psychological reactions to stress in middle-aged women and attempted to demonstrate that yoga would be beneficial in reducing physiological indicators of stress among participants. Baseline and post treatment assessments of psychological well-being and level of stress were taken for both yoga participants and control group. Over the course of treatment improvement in negative emotions and stress was not significant for the yoga group, but some improvement in self-reported stress in the control group was noted. A plausible explanation for the outcome of this research might be that chronic stress, having begun in early childhood or having persisted for extended periods of time may require longer periods of intervention. Additionally, some forms of yoga focused on breath and posture "and not as much of the

meditation or spiritual side. This is, of course, in stark contrast with the origins and the purpose of yoga" (Ballen, 2015), and this may account for the lack of improvement in chronic stress over the eight weeks.

In contrast to this study, Wang and Hagins (2016) reported positive outcomes for middle and high school students in an urban public school in New York City. Yoga introduced to students in this study included asana, or seated poses, to aide in calming the mind and preparing for meditation. Instructors also incorporated the regulation of breathing and various standing poses to help center the body. The connection between mind and body aided in reduction of stress, and when introduced to middle and high school students in four of New York City's public schools was shown to aid in stress reduction, mindful thinking patterns, and self-regulating behaviors (Wang & Hagins, 2016). Four schools participated in the study by offering yoga classes once or twice per week for the school year. All yoga classes were taught by a trained yoga instructor who also received continuous professional development in yoga instruction during the year. A series of focus groups were conducted in all four schools and one school participated in a fall focus group to evaluate the yoga pilot program which began in the 2013-2014 school year, prior to the study. Results were coded, and four categories emerged. Categories included the ability to regulate one's reactions and emotions. Specifically, students reported that as a direct result of the yoga program, they could walk away from situations that made them angry. Given that children and adolescents with ADHD often lacked impulse control, the improved ability to walk away from these situations would suggest greater impulse control, and this was validated in the research analysis conducted by Lange et al.(2014). Wang and Hagins (2016) revealed that one student spoke about

difficulty with siblings and identified her participation in yoga as aiding her in calming her emotions in order to talk about them rather than lash out verbally or physically.

The purpose of mindful practice was developed to help quiet the mind, relieve stress, and regain the ability to focus. It has been linked to improved working memory and a decrease in stress (Caughman & Kalyn, 2017). Mindfulness differed from meditation in that the purpose of mindfulness "involve[s] becoming purposefully aware of how you're doing and what you're feeling during everyday activities" (Caughman & Kalyn, 2017, p. 5). It was considered to be useful as an added technique for managing symptoms of ADHD and was not seen as a standalone. It was believed that the process of mindfulness when practiced regularly in small increments could be used anywhere and would produce a better understanding of then-current mental, physical, and physiological functions. Beginning mindful practices focused on breath control, assessing the physical environment, and drawing awareness to the present moment. Focus was kept to short intervals but practiced frequently (Caughman & Kalyn, 2017).

For the purpose of their study Wang and Hagins (2016) defined mindfulness as being able to focus on the present and thinking without judgment. Students who participated in this study identified having a better ability to think logically and clearly, which allowed them to be more open to diversity. They felt they coped with differing opinions and viewpoints and were more tolerant of varying personality traits.

Although the study did not discuss the inability to disconnect from news, social media, and text messages through mobile technology and the impact on teens' overall stress or anxiety, participants described ways in which mindfulness and yoga helped to reduce their daily stress. Participants realized that dealing with people and situations and

class periods throughout the day created stress for them and mindfulness practice allowed them to find “mental space for themselves” (Wang & Hagins, 2016, p. 4). Participants also identified the ability to transfer the mindfulness techniques learned to situations beyond the school day and into their personal lives at home and work. High school students reported improvement in their physical well-being and school performance in addition to stress reduction, self-awareness, ability to self-regulate, and an increase in mindful thinking (Wang & Hagins, 2016). "Mindfulness can be a proactive way of counteracting the physiological acts of stress . . . focusing a few minutes on your breathing...may give yourself a chance to settle" (Caughman & Kalyn, 2017, p. 7).

Caution was warranted around Wang and Hagin’s (2016) study in the area of academic performance. Although students reported feeling better able to concentrate, no measure of academic outcomes prior to or after the yoga training was performed. The overall positive view of yoga from student perspectives warranted further study and consideration should be given to incorporating personal interviews to limit social influences during focus groups.

Research on mindfulness training by van der Oord et al. (2012) sought to demonstrate that mindfulness training for children with ADHD would add increased self-control and self-reflection, which would aid the child in task focus and decrease impulsivity. The study also ventured to demonstrate that parent training in mindfulness would improve parenting and parent/child relationships. The focus of the training was on teaching parents to respond to the child’s behavior without judgment by “paying attention to your child and your parenting in a particular way” (van der Oord et al., 2012. P. 143). When mindfulness was practiced regularly, it became a mechanism that allowed the

practitioner time to release negative emotion, choose a better mind-set, and reflect on emotional and situational responses examining patterns of behavior and their impact (Caughman & Kalyn, 2017). In their study, van der Oord et al. (2012) followed the protocol of the Mindful Parenting program and taught parents the four strategies for dealing with their child. Additionally, the children were taught the Mindful Child program to help build self-awareness and control. Parents and children were assigned skills to practice over the course of the week following each session. Of the 24 children in this study only one attended with a father, which supported previous findings which suggested that training was generally attended by mother-child dyads. During van der Oord et al.'s (2012) study, several parent/child dyads dropped out prior to the beginning of treatment, one child's behavior was so disruptive that he could not participate, and one child stopped coming because the meeting time interfered with sports (van der Oord et al., 2012). For the remaining participants, this research revealed a significant decrease in parent stress and child hyperactivity with increased mindful behavior. It should be noted that teacher ratings of child ADHD-related behaviors did not show a significant reduction, but inattention was shown to significantly decrease (van der Oord et al., 2012).

In a study of male college students, mindfulness techniques were taught to 40 participants who were randomly placed in the experimental group. The 40 males in the control group were taught relaxation techniques. The components of mindful training included focus on and regulation of breathing, forming mental images, and relaxation. After the five-day training period, the mindfulness techniques were shown to improve functioning in conflict management for the experimental group when compared to the control group (Tang et al. 2007). The study further reported that participants of

mindfulness training were better able to regulate mood and manage anger than the control group. These results, while promising, occurred after only five sessions, each lasting 20 minutes, and the participants were college students. Although college could be stressful, the daily stress of career and family while raising a child with ADHD would likely be greater. Further study is warranted on this techinque to evaluate the overall benefit to parents of children with ADHD in managing stress, mood, and task performance.

Summary

There was a significant increase in the number of children between the ages of two to five years diagnosed with ADHD ("Facts about ADHD," 2016). The Center for Disease Control and Prevention (2016) stated that difficulty focusing was present in young children, and some children continued to have difficulty maintaining task focus as adults ("Attention-Deficit/Hyperactivity Disorder," 2017). ADHD was also reported as a condition affecting only children in the United States or affecting significantly more children in the United States than anywhere else in the world. However, the meta-analysis by Farone et al. (2003) demonstrated that ADHD did affect children throughout the world.

When identified in childhood and left untreated, students, especially the youngest learners, missed foundational skills which were the building blocks for all future learning. Loe and Feldman (2007) reported increased prevalence of difficulty with math and reading. Their research revealed a higher percentage of children with ADHD were retained rather than promoted to the next grade level and more children with ADHD were also given resource assistance or remediation for academic skills (2007). The reason for

remediation or resource assistance was made clear in research by Capano et al. (2008), which suggested that,

> One of every 10 children diagnosed with ADHD was also classified as having both an MD [math learning disorder/disability] and an RD [reading learning disorder/disability]; 8% had MD without RD and 16% were singled out as RD exclusive of MD. (p. 394 para. 11)

Capano et al. explained that students with ADHD had learning disabilities more frequently than peers without ADHD.

Although once thought to subside by mid or late adolescence, researchers discovered that ADHD persisted into adulthood (Barkley, 1997; Brown, 2005). The American Psychiatric Association reported in 2013 that 20 years of research on ADHD revealed for many children with ADHD, symptoms were still prevalent in adulthood (APA, 2013). Weiner et al. (2016), in agreement with Barkley (1997), suggested that "[a]pproximately 30 – 50% or more of children with ADHD continue to show symptoms in adulthood" (p. 563).

The impact of ADHD did not only impair student learning during the school years, but also was a contributing factor to high school drop-out rates, drug or alcohol abuse, anxiety, conduct disorder, increased injuries in the home and on the job as well as poor job performance as adults. Adults with ADHD also tended to change jobs more frequently and have difficulty with relationships (de Graaf, et al. 2008; "Facts about ADHD," 2016; Jacob et al., 2016).

There was a significant link between ADHD and other psychosocial disorders (Brown 2013; , Jacob et al., 2016; Overgaard et al., 2014). Statistical significance was

noted in the study, “Both population and clinical studies have found high co-occurrence rates of anxiety and ADHD, estimated to vary from 25- 40% in school children. Similar prevalence rates and patterns of co-occurring psychopathology have been found in preschoolers” (Overgaard et al., 2014, p. 743, para. 2). Research by Gumus et al. (2015) supported this finding and estimated that anxiety disorder was highly prevalent in children with ADHD and suggested that the rate of co-occurrence was between 15% and 35%. The research of Jacob et al. (2016) reveal co-morbid anxiety rates as high as 44.4% (p. 151).

Given the difficulties individuals with ADHD faced from childhood through adolescence and into adulthood, it was not surprising to find that they were more disappointed or dissatisfied with their lives. Brod et al. (2006) indicated dissatisfaction ratings on measures of productivity, life satisfaction, relationships, and mental health were higher for adults with ADHD; participants in the study rated themselves lower in self-satisfaction than the control (non-ADHD) group.

ADHD impacted not only the individual, but the family as well. The transactional or bi-directional relationship model suggested that child ADHD externalizing behavior was both a precursor and antecedent to parent reactions (Neece et al., 2012). Researchers also believed that this interaction model had an impact on not only the parent-child relationship but the marital relationship, as well. Additionally, this relationship model was both a result of stress and producer of parenting stress. Jahangir and Batool (2017) examined marital relationships of parents whose child was diagnosed with ADHD. In their work, they discussed parenting stress and generalized that parents of children with

ADHD experience greater stress, increased relational conflict along with other psychological manifestations (Jahangir & Batool, 2017).

Jahangir and Batool (2017) asserted that the emotions of dealing with a child with ADHD were related to inferior quality in the relationships with spouse. The feeling of being unable to cope with the child's behaviors often left parents feeling frustrated and hopeless, which was a barrier in their relationship with their spouse or partner. Stress was higher among parents whose child exhibited disruptive behavior, and these parents leaned toward an authoritarian style of parenting (Calzada et al, 2004; Heath et al., 2015). The externalizing behaviors associated with ADHD, such as impulsivity, emotional dysregulation, hyperactivity and oppositional behavior make caring for children with ADHD challenging adding to parents' stress (Sochos & Yahya, 2015).

Barkley (2013) observed that children with ADHD had a high need for parent advocates; however, the behavior of children with ADHD often seen as "excessive, demanding, and at times obnoxious" (p. 5) made responding or advocating a challenge (Barkley, 2013). Parent reactivity to externalizing behaviors also caused additional behavioral problems. The cycle of child behavior and parent reaction served to create a perceived increase in parenting stress (van der Oord et al., 2012). Difficulty managing their child's inattentive tendencies along with oppositional or non-compliant behavior created a sense of inadequacy managing daily lives, and this led to greater parenting stress.

In a study on the benefits of yoga to reduce chronic stress, Harkness et al. (2016) followed approximately 46 women over eight weeks. All participants reported having chronic stress. A criterion for chronic stress was defined as stress having persisted in an

individual's life for extended periods or perhaps from birth or early childhood (Harkness et al., 2016). Work by Wilens et al. (2003), Able et al. (2003) and the CDC (as cited in "Key Finding," 2017) illuminated the presence of co-morbid ADHD and stress at nearly one-in-five children diagnosed ADHD. Given that it was estimated childhood ADHD affects over six million children and one-in-five were shown to experience anxiety, then nearly 1.28 million children were at risk of stress or anxiety related illness.

The poses used in yoga were thought to help prepare the mind for meditation, and some studies of yoga showed it to be a powerful tool to control body functions, such as heart rate and respiration (Diamond, 2012). Eggleston (2015) explained that the asana, or poses, performed during yoga included rhythmic breathing and incorporated a meditative state while "Hatha yoga has been adapted for use with children by describing the postures as animals…and guiding their imagery during meditation" (Case-Smith, Sines, Klatt 2010, p. 228). The practice of meditation was shown to improve resting heart rate and blood pressure, as well as reducing anxiety and depression. The result was an improved state of well-being.

There was little research on the benefit of peer support for parents of an inattentive child; however, research on the benefit of peer-support for patients with serious illnesses was conducted. "Utilizing peers as resources has been proposed as an effective means for coping with stressful life experiences and for gaining information and support from others" (Ucceli et al., 2004, p. 80).

Chapter Three: Methodology

With a setting of a single Catholic school in Midwest United States, the purpose of this study was to examine the benefits of a parent support group to enhance parenting self-efficacy and parent-child relationships between the parents and the inattentive, hyperactive, and/or non-compliant child(ren).

Questions

The research design for this study addressed the following questions:

RQ1. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children reduce parenting stress?

RQ2. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children improve parenting self-efficacy?

RQ3. Does participation is a support group for parents of inattentive, hyperactive, and/or noncompliant children improve parent-child relationships?

RQ4. Do the parents perceive that the parent-taught yoga or parent-taught martial arts activities for their children with symptoms of inattentive, hyperactive, and/or non-compliant behavior improve the child's ability to use self-monitoring techniques in the classroom to reduce his/her inattentive behavior?

RQ5. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for their children with inattentive, hyperactive and/or non-compliant behavior improve the child's ability to use self-monitoring techniques in the classroom to reduce his/her periods of hyperactive behaviors?

RQ6. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for children with inattentive, hyperactive and/or non-complaint behavior improve the child's ability to self-monitor and reduce behaviors across settings?

The Participants

Six parents participated in the study and were between the ages of 38 and 43. All but one couple had two or more children. Both mothers and fathers attended, but across families the mothers were the contact persons for collecting and disseminating information. Mothers completed the Demographic Survey and Parent Survey. Mothers and fathers completed the weekly meeting surveys and the exit survey.

As reported on the demographic survey, all parents in the group identified their ethnic background as Caucasian. Parents also reported that their children were Caucasian. None of the children were adopted and no complications with the pregnancies or births were divulged.

All parents in the group declared having college or graduate degrees and were working in professional fields. One parent reported working part-time, and all parents except one indicated having consistent work hours. The alleged annual income for all of the families was $100,000 or greater per year.

The children at the time of the study were between the ages of four and eight and were full time students in preschool through second grade. Although parents of boys and girls were invited to participate, the group was comprised of boys. One girl did attend, although she was not diagnosed with issues related to inattention, but was reported as having trouble dealing with stress. No data were collected regarding her participation in conjunction with this study. One child in the group was undiagnosed for issues of

attention, but the parents described the child's behavior and indicated a tendency toward excessive energy and difficulty sleeping, along with non-compliant behavior. This child was not receiving any intervention for hyperactivity or non-complaint behavior at the time of the study; however, he did receive academic support for speech and social communication. The other children had prescriptions for ADHD medication, which he took consistently during the school year, but at the time of the study parents had taken the children off the medications for the summer.

This parent population differed from those in other research studies in that all participants in this study were married and living in the same household with their spouse, all had college or graduate degrees, and all sessions were attended by both mothers and fathers. Group size was purposefully kept smaller than those in other studies to help promote a feeling of connectedness, mentoring, and support.

Although parents attended all sessions with fidelity, one disadvantage of this group size was that the effectiveness of the program was not necessarily transferrable to a larger sample population and could not be generalized to the population of all parents living with a child with difficulty maintaining attention, controlling impulsive behavior or excessive energy, or who was non-compliant. Although the goal was to create a group of highly supportive parents, the intimacy of the small group could be seen as a limitation if parents were still coming to terms with the challenges of having a child struggling with the functional issues related to inattention and hyperactivity. This group size provided no opportunity for parents to self-select discussion partners each, week which may have provided a type of buffer for parents who were not at ease discussing the issues and challenges they faced in their daily struggle managing a child who was inattentive,

hyperactive, or non-compliant. A feeling of partial anonymity was not possible, since the weekly discussion sessions were limited to the same small group.

The Research Site

The research took place on the extended campus of a Catholic parish and elementary school located in the Midwest. Participants met in a large meeting room in one of the parish's buildings. To facilitate regular meetings, the auditorium was reserved in advance to ensure that the space was available and that no changes to the venue would have to be made for each of the eight weekly sessions. Dates and times that were mutually agreeable were selected in advance of the first meeting to make it convenient for participants to plan for the weekly sessions and to maximize the number of sessions attended by the majority of group members.

The auditorium was chosen for the weekly meetings, because it was a large open room which would provide the participants ample space for movement when engaging in yoga or martial arts with their children. There was a small stage which was semi-circular and elevated slightly from the main floor by approximately eight inches, should the yoga instructor feel she would be more visible to participants from this position. To aide participants in getting to the weekly sessions, they were not asked to bring yoga mats or other gear. The room was carpeted, which made seated or prone postures slightly more comfortable. The researcher controlled aspects of light and sound to create a non-threatening environment for the children and parent participants. The auditorium was acoustically well-designed, which was an added benefit, which allowed the instructors to speak to the group without sound equipment and enabled the instructors to demonstrate postures and techniques while remaining in close proximity to the group.

Recruitment

A copy of the prospectus and full IRB were submitted to the secretary for the superintendent of schools. The superintendent read, reflected, and provided feedback, along with his approval to conduct this study. Having gained approval from the Superintendent of Education of the archdiocese in which the school was located, the next step was to gain approval from the pastor of the elementary school in which the study would take place. Approval was granted, and participants were recruited from a Catholic elementary school in the Midwest.

Announcements explaining the research project were sent to school and Parish School of Religion families via email, the weekly church bulletin, and the school newsletter. Teachers in the elementary school who were teaching preschool through eighth grade were provided with a detailed explanation of the purpose for the study and the framework for conducting the parent support group. Follow-up with the preschool through fourth-grade teachers in the school took place approximately two weeks after the initial announcements were made. Because early intervention was shown to have the most positive outcomes, preschool through fourth grade teachers were asked if any of the parents and their children from these classrooms might be interested in or benefit from the study. The teachers were encouraged to ask parents about interest and availability to participate in the study. Purposeful selection was used "to provide information that is particularly relevant to your questions and goals, and that can't be gotten as well from other choices" (Maxwell, 2013, p. 97), and a list of parents who might benefit from the study was compiled and provided to the researcher who then extended personal invitations to parents to participate. Of the 13 families who were personally invited, six

parents chose to participate in the study. Parents who completed consent forms for themselves and their children were provided with an outline of the weekly commitment and time frames for the study.

Table 1

Participation Requirements

Item	Time Required	When
Questionnaire	Approximately 30 minutes	Prior to starting support group
Demographic Information	Approximately 30 minutes	Prior to completion of support group
Weekly Support Sessions 1 Focus Group Weekly Observations	Approximately 60 minutes No Additional Time	8-10 Weekly sessions,
Interview	Approximately 30 minutes	After starting the support group
Exit Survey	Approximately 30 minutes	After completion of 8-week program
Total Time	Approximately 14 ½ hours	

Developing the Intervention

Research on support groups for patients with chronic medical conditions and for parents of seriously ill children showed the positive benefits of group support. Additionally, research on the benefits of yoga to reduce anxiety or stress was promising and significant decreases in heart-rate, diastolic, and systolic blood-pressure measures were noted in several studies. Given that ADHD was associated with anxiety, mood disorder, behavior disorder, stress, and a bi-directional relationship between child conduct and reactive parent behaviors, the researcher believed that providing a network of parents experiencing similar challenges would serve to promote better understanding of the functional impairments these children were experiencing. It was further believed that the parent support group would be a means of sharing parenting tips and techniques

that were implemented in participant's homes, which produced a high degree of success for the child. These components along with the yoga component were believed to minimize parenting stress and improve parenting efficacy; thereby, improving the parent-child relationship.

Yoga. The researcher believed that through the ancient practice of yoga, parents and children would find calming techniques. The focus on parent-taught techniques relied on parents (re)teaching the techniques at home during the week following the instructor-led sessions. These calming techniques of yoga could then be transferred by the student to the classroom or other settings to help minimize anxiety and prevent emotional dysregulation in the classroom or elsewhere. Further, the researcher believed that the child, having a new tool in the toolbox, would be able to utilize the breathing techniques across settings to help reduce anxiety. The focus on self-monitoring learned through breath control and yoga poses for balance could provide students with an added benefit and allow them to regain attention. Incorporation of martial arts was believed to aide in the development of a disciplined mind and body, which could help the student exercise control over distractibility and/or impulsive behaviors in and out of the classroom.

As a result of the child's improvement in focus, control over emotional dysregulation, and/or hyperactive behaviors, it was believed that an indirect result would be a decrease in parenting stress. This in turn would lead to a decrease in reactive and often negative parent behaviors, thus improving the parent-child relationship.

To find a certified yoga instructor, the researcher contacted several area yoga studios, one of which was willing to discuss the study. A mutually agreeable date and time was established, a copy of the prospectus was emailed, and the researcher met in

person with the director of Jane's House of Yoga, located in a city in the Midwest, to answer any questions and further explain the purpose of the research. The director was enthusiastic about participating in the study and had a favorable outlook about the positive outcomes of a yoga-based intervention for inattentive/hyperactive behaviors. The studio director provided the researcher with the contact information for a yoga instructor. The researcher then contacted Miss Bridget, the yoga instructor, explained the study, and made arrangements were for weekly on-campus yoga sessions. Miss Bridget was certified in parent/child yoga practices. A weekly stipend equal to the per person studio fee was paid to Miss Bridget.

The researcher and yoga instructor communicated by phone and email to establish the parameters of the weekly sessions. Each session would include the introduction and/or review of poses. Participants would move through the series of poses followed by breathing techniques, and finally move toward relaxation through visualization and mindfulness. Parents were taught calming poses that would help students control or minimize energy and active movements that served to increase energy during periods of listlessness.

To maintain the interest of the children during each of the yoga sessions and from week-to-week, traditional yoga poses were given names which appealed to children. Students were taught the frog, volcano, super-hero, downward dog, tree, bow and arrow, butterfly, cow and camel, rock, washing machine and wringer, bicycle, and stir-the-pot.

The weekly sessions began in June after school dismissed for summer break, and the group continued to meet through August with the last session occurring on the first half-day of school. Participating families said that this timing was ideal for them because

they had fewer nightly obligations and were able to commit to the sessions with fidelity. The group consensus was to meet every Wednesday from 6:30 to 7:30, with the first 30 minutes of each session dedicated to yoga training. Because the parent support sessions followed the yoga sessions, many of the sessions ran longer than 60 minutes. During the weekly parent-child yoga sessions, the researcher had the opportunity to observe the parents and children interact. The arrival of families was generally chaotic, with children running ahead of parents, parents struggling to carry their child's belongings, and children entering the yoga area fully excited and ready. This glimpse into the struggle of parents to control their hyperactive children provided the researcher with the opportunity to observe the child's behavior outside of a controlled setting, such as the classroom.

Miss Bridget began by asking the families and children to gather in a large circle and began the yoga sessions once everyone entered the yoga area. Each session started with a seated pose, which involved parent and child participants sitting with knees bent and out to the sides, soles of the feet touching. After a minute of sitting quietly, participants were guided in deep breathing. The number of repetitive deep breaths varied, depending on how calm or active the children were. During this time, the parents were excellent models of the techniques for their children and offered encouragement. Following deep breaths, Miss Bridget led participants in butterfly wings. This simple exercise released lesser amounts of energy and provided a calming rhythmic movement for children before moving on to the other techniques. Miss Bridget also worked with parents and children to help them understand the level of activity present and the poses or techniques that could be used to reach the desired level of activity or energy in various

situations. She taught parents and students several other poses, along with calming breaths, which would help students combat excessive energy or anxiety.

Martial arts. The researcher also contacted World Martial Arts, a martial arts center located in the city in the Midwest, to provide an on-site session with parents and their children. A copy of the prospectus was emailed prior to meeting with the center, and a mutually agreeable date and time was selected to meet and answer questions regarding the research. The center agreed to participate and sent a trainer experienced in working with young children to work with the group. The martial-arts trainer worked with students on discipline through listening exercises and following directions. His expectations and standards for behavior were lofty. He would not begin a new stance until the children had practiced the previous one and had returned to forward-facing standing position. His demeanor with students was appropriately firm but never harsh or judgmental. He struck a balance for maintaining the focus of the group and having fun.

Parent session. Following active participation in yoga techniques or martial arts, children went to a supervised childcare room allowing time for the parent group to meet and provide support for each other. The first discussion session was opened to parent questions regarding the study and a brief overview was provided in addition to reviewing the information that had previously been sent to the families. A meeting survey form was distributed, and parents were asked to rank seven topics in order of importance with a '1' being the most important topic for discussion and '7' the least. Two nights were pre-planned to include a speaker. The first speaker presentation was given by a professional educator who was living with ADHD. During the second speaker night, a speaker who was living with ADHD and raising a child with ADHD addressed the group and

answered questions. A teacher from the school where participants were recruited was to speak about ways student needs were met daily in the classroom. The researcher believed that parents would benefit from hearing the personal accounts of these well-respected professionals.

Data Collection and Analysis Procedures

Parents and students were observed at random intervals during the weekly sessions. In addition, students were observed in the regular classroom. Parent interaction was observed during the activity portion and group forum of each weekly session and documented through digital voice and video recording, along with anecdotal notes regarding participation during support group activities and discussions. Additional data were collected through a personal interview with each parent.

Students participating in the study were observed at the weekly sessions during child-care, parent-taught yoga or parent-taught martial arts activities, and at school in the classroom during instruction in core subjects. Student on-task and disruptive behavior was recorded. Notes and transcripts for all recordings were coded for recurrent themes, and all identifying information was de-identified to protect the families.

Surveys. Additional data were collected via a Parent Survey. This tool was used to gain insight into the daily challenges parents faced raising a child with issues of inattention, hyperactivity, or non-compliant behavior. Parents were asked to rate common behaviors based on frequency. A simple Meeting Survey was provided at the conclusion of each weekly session to measure overall level of satisfaction, comfort, and knowledge or insight gained. To assess commonalities and differences in group profiles, a demographic survey was used. Parents also completed an exit survey, which focused on

the development of new routines and level of stress as a result of participating in the research. The data from these instruments were coded for themes. The researcher decided on a qualitative method design to analyze data from this study to gain insight into the thoughts and feelings of parents, regarding child behavior, parenting efficacy, support systems outside the parental, and spousal relationship, and daily stress.

Summary

The researcher hoped to gain insight into the daily challenges and levels of stress experienced by parents, whose child exhibited tendencies toward inattention, hyperactivity, and/or non-complaint behavior. This picture was created through documentation of support-group sessions, surveys, personal interviews, and observations. All data collected were de-identified and coded for themes. The results of the data analysis were believed to reveal the benefits of participation in parent-taught yoga or parent-taught martial arts and support-group meetings. The researcher believed that parenting stress and child inattention and hyperactivity would be reduced through yoga practices, and the researcher further contended that participation in a parent support-group would have a positive effect on parenting efficacy and would reduce parenting stress.

The researcher had a background in early childhood and elementary education and had taught pre-school through eighth-grade. In addition, at the time of this research the researcher had a degree and state certification in school administration and was working as a principal at an elementary school, which also had a preschool program.

Chapter Four: Results

The Purpose of the Study

The benefits of participating in support groups has been shown to produce favorable outcomes for participants which stemmed from a feeling of inclusion and cohesion through sharing of common experiences. The researcher believed that through sharing of common experiences, parents would feel less alone and would begin to find strength and encouragement through the support of group members, which would result in reduced stress levels for parents. The researcher further hoped to demonstrate that, as a result of parents sharing their successful techniques for dealing with and managing the daily challenges the family faced when raising a child with functional issues resulting from inattention and hyperactivity combined with non-compliance, these parents would experience an increase in parenting efficacy. The researcher also hoped that the sharing and supporting between group members would be empowering and would naturally work to increase parenting efficacy. Research revealed that when parenting a child with the functional issues of inattention, hyperactivity, or noncompliant behavior, parents often leaned toward authoritarian parenting styles and were often reactive. Brown (2013) reported, “Seeing a situation from a reactive frame of mind can make it seem hopeless… your relationship with your child can become hostile, negative, discouraging, stressful, or dysfunctional” (p. 7). The researcher intended to demonstrate that decreasing parenting stress and increasing parenting efficacy would lead to improved parent/child relationships.

Yoga's benefits were extensively researched and the positive outcomes of improving overall health, decreasing stress, and lowering blood pressure (Eggleston, 2015) were well documented in several studies; however, there was little research on positive outcomes of practicing yoga with children who were inattentive or diagnosed as having ADHD. The researcher hoped to demonstrate that parents perceived the child's participation in a parent-taught yoga program as improving the child's ability to use self-monitoring techniques in the classroom to reduce inattentive or off-task behaviors. Further, the researcher hoped to demonstrate that self-monitoring techniques learned through the parent-taught yoga could be used in the classroom to reduce periods of hyperactivity. The researcher also intended to demonstrate that the parents' perceptions revealed that the self-monitoring techniques learned in the parent-taught yoga were applied across settings.

The Research Questions and Results

RQ1. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children reduce parenting stress?

In this study and throughout the literature on ADHD, parents were the main source of support for their child with ADHD. They were the ones to research and advocate, and for this reason Brown (2013) suggested that parents find time to de-stress or renew themselves and their relationships with their spouses, in addition to finding time to get or maintain good nutrition, exercise, and manage stress. "Too often parents of children with ADHD dedicate so much of their time and energy exclusively to their children that they exhaust themselves" (Brown, 2013, p. 10).

Upon completion of the eight-week study, mothers and fathers were given an exit survey to assess their perceived benefits of participating. Overall, fathers reported feeling less stressed as a result of their participation in the group, while mothers were either uncertain or felt no reduction in stress. This result could largely be the differences in the roles within the families. Mothers were largely responsible for getting children ready for school, while fathers had more responsibilities for after school, homework, and bedtime routines.

Commonly expressed by members of this parent support group was a busy schedule and lack of time for anything additional. Their professional lives and their family lives were organized and scheduled as much as possible. This made looking for any information on ADHD or other resources nearly impossible for them. One parent stated, 'I'd love more resources, and I know I could go online to find some, but I just don't have the time.' This theme recurred throughout the sessions and in conversations with the researcher. One of the positive outcomes for the group was the availability of these resources and links to other sources of information in addition to what they shared as part of the group sessions. As much as was possible, the researcher looked for and shared family friendly sites, which provided information on helping manage ADHD, as well as step-by-step yoga and meditation resources, which were free or relatively inexpensive print or eBooks. Parents expressed that the support from the group and the additional resources provided were helpful to them and gave them a starting point in their search for more information and activities to help manage their child's externalizing behaviors. Several parents expressed, 'I'd be happy to continue receiving emails with information and links to more resources on ADHD or yoga.'

Overall parents worked extensively and spent a great deal of time and energy managing routines and schedules. Only one parent, parent 4, revealed that both she and her spouse were able to make one visit to the gym to exercise during the eight weeks. 'It was great to work out together and have [him] in the childcare center. We haven't been able to do that for a long time.'

RQ2. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children improve parenting self-efficacy?

According to Brown (2013), parenting a child with ADHD was a difficult task requiring greater levels of involvement than that of parents of children without ADHD. A recurrent theme during the group sessions was developing a routine that was manageable for parents, which would promote the child's growth and development toward independence and task focus. Two families revealed that they used a token system to reinforce their child's good behavior and good decision making. However, one family who used this system with fidelity noted that it does require substantial parental involvement and follow-through. The tokens had to be translated into something meaningful after they were earned. 'We just have to get . . . in gear and assign values.' Another parent added that, 'they need visualization [of tokens earned]. We just haven't had time to do it.'

Story time was another routine component in families' routines mentioned as being helpful for initiating the bedtime process. 'The children know that at eight o'clock they have to be in bed if they want to hear a story.' One family shared that bedtime challenges had become, 'so trying we gave up trying to get him to stay in his bed and allowed him to sleep on the couch.'

Parents also revealed that electronic devices produced one of the most substantial challenges and often caused the child to have a melt-down or tantrum when parents tried to navigate the murky waters of device control and limits. One parent, participant 1, shared that he planned to go to more minimal time frames for device use and would be implementing a token or point system where four points or tokens would earn 15 minutes of screen time. Participant 5 agreed that minimizing screen-time was important but added, 'with that system [tokens for minutes] you become the time-keeper and that can take up a lot of your time. It can get especially cumbersome.' Participant 6 revealed that her child liked sports 'if he can be dragged away from screen-time.' Participant 1 shared a program called Magic Desktop that he installed on the family's home computer. This application limited screen time, blocked internet usage, and had a built-in token system, which allowed the parent to assign a token value for playing educational games. In this way, the child was given limited access to screen-time without constant reminders, which often led to tantrums and disruption in the home.

These group sessions allowed parents to share their triumphs, but also helped them understand that change and/or flexibility may be important components in finding a system or routine that worked for each child. Participant 6 shared with the group the necessary adaptations her family had to make to routines to compensate for the move to their new home and an increase in travel time. Before the move, the children ate breakfast as late as 7:25, but when the commute increased from five minutes to 20 minutes, the time for breakfast changed, and the latest the children could eat was 7:00.

> At 7:01, it's grab and go. There are no hot breakfast foods after that. The pancakes or waffles or whatever hot breakfast I made is put away, and he has to grab a bag of mini-muffins to eat in the car.

Participant 5 shared that at second grade, his daughter had a picture chart and digital clock, which helped his child with the morning routine brushing teeth, dressing, and getting backpack, etc., but for the younger child, student 1, it did not work. For a while, the motivation for student 1 was limited screen time. If he was dressed and ready, there might be time to start a video or play a video game, but then it became a problem to get him to put the device down to leave. Participant 6 shared that some mornings were just a challenge, and 'everything is thrown in the car.'

Through sharing of their struggles and triumphs, parents of children with functional issues related to inattention were better able to see that challenges with their daily routines were common among parents in the group. The shared ideas and insights regarding parenting routines and strategies also demonstrated to group members that these could be adapted or modified as one strategy began producing less favorable results. This group format helped parents realize that parenting-efficacy would be dependent on their willingness to grow and change as their child grows and matures. Exit survey results yielded agreement among parents that they felt better equipped to help their child because of their participation in the parent support group.

RQ3. Does participation is a support group for parents of inattentive, hyperactive, and/or noncompliant children improve parent-child relationships?

Through direct observation of the parents and children during the 30-minute yoga sessions over eight weeks, the researcher concluded that the parent-child activity did

serve to strengthen the parent-child relationship, except for one child. Five of the six children interacted with their parents during the yoga sessions. Interactions were light, non-judgmental, and seemed to have a sense of fun and togetherness interwoven in them. Children enjoyed yoga and liked seeing their parents trying to pose and maintain postures of balance. In some instances, a friendly competition arose, but this was always followed by the child or the parent offering encouragement and in some cases the suggestion to practice together at home.

Two families did report that their child(ren) asked them to do some yoga and/or meditation together at home on at least one occasion during the eight weeks. For these families, finding time and working this into their routine was still challenging, but on the occasions when their child asked, the parents did take the time to practice 'favorite poses.'

The families seemed to be enjoying themselves during the yoga instruction. They came regularly, were on time, and participated willingly. Upon their arrival, the researcher observed the demeanor of each family and noted that they seemed to be enjoying the time together. During one session, participant 6 noted, 'Summers are nice because there is just less to do, fewer routines.' There was a good rapport among family members as they entered and moved to the yoga area.

An exception was noted for parent 3, parent 4, and student 2. Their arrival was generally after everyone else and had occasionally been after the start of the yoga session, despite the group agreeing to delay the start for five or ten minutes to wait for their arrival. Student 2 regularly arrived making as much noise as possible and/or running. Neither parent 3 nor parent 4 tried any type of redirection or positive reinforcement to

encourage their child's participation in the yoga sessions. Miss Bridget always extended the invitation to him and to parent 3 and parent 4, but none participated.

For student 2, there was no interaction or participation in the yoga sessions. He generally entered the area running ahead of parents. On one occasion, the yoga session had already begun when the family arrived. Upon entering the yoga area, student 2 ran past all the members of the group, who were in prone positions, ignored Miss Bridget's greeting, and narrowly missed kicking one father in the head. During this interruption to the group session, neither of the child's parents (parent 3 and parent 4) made an attempt to bring student 2 to the yoga group or to control his behavior, possibly due to their fear that exerting such control might result in the child's melt-down or tantrum in front of the group. On this occasion, as on several others, the child ran in circles singing or chanting. Neither the mother nor the father participated in the yoga group and on several occasions, the mother, having come straight from work as had all parents, would eat her dinner. Although both parents were often invited into the circle, both stood outside the circle as observers.

Although the yoga sessions took place over eight-weeks during the summer, the study did include observations of children at school. Over the first several weeks of the new school year, the researcher conducted observations at school during instruction in core subjects, as well as during art and physical education classes. Observations of the parents and children during morning drop-off or while picking up after school revealed that parent 2 and parent 6 had eased into a good morning routine. Student 3 was particularly cheerful upon arrival and had all of his necessary items, which produced a much better start to his day. Student 1 also arrived on time and had no difficulty getting

out of his vehicle for the start of the school day. Neither child arrived with videos running on DVD players or devices in their hands. Both parents and children consistently were in pleasant moods responding to each other and wishing each other well for the day. Parent 4 and her child were consistently 'running late' with the child, student 2, arriving just minutes after the start of the school day.

Although parent 4 did arrive on time for dismissal, she and her child often lingered on the campus. After dismissal one Wednesday, parent 4 and student 2 were found wandering in the school lobby. Parent 4 indicated that they were 'looking at all of the pretty student art.' On several other occasions, the child was climbing or running about in front of the school building, just a few feet away from the driveway. On the afternoon when student 4 was climbing three and a half feet above the sidewalk on the ledge of the main support for the portico, parent 4 made no attempt to get the child down or to give a verbal reminder, despite her comment, 'I know he probably shouldn't be climbing up there.' On still another occasion, parent 4 and student 2 were still milling about the school grounds an hour and 40 minutes after dismissal. The researcher had the opportunity to meet with the student's teacher, who revealed that the child was having increased difficulty at his other school. The teacher also mentioned that the reason this parent and child had been lingering on campus after school was due to the fact that parent 4 no longer felt confident in managing her child alone.

Based on these observations and the observations from the yoga and parent support sessions, the researcher believed that the relationship between parent 4 and child 2 had further declined post-intervention as a result of non-engagement in the parent-child

yoga practice and in reluctance to implement strategies gained through the group discussions.

RQ4. Do the parents perceive that the parent-taught yoga or parent-taught martial arts activities for their children with symptoms of inattentive, hyperactive, and/or non-compliant behavior improved the child's ability to use self-monitoring techniques in the classroom to reduce his/her inattentive behavior?

The researcher observed children during the yoga sessions and noticed that on-task focused behavior was occasionally interrupted by off-task behavior or random questions. Parents revealed that this behavior was a common occurrence and that occasionally the thoughts expressed were so random as to make them almost incomprehensible. A frequent theme among all parents was their child's ability to hyper-focus on some tasks, while other times the child had no ability to repeat or follow a direction. Participant 6 stated that when her child, student 1, was in a state of hyper-focus, trying to change the focus 'can lead to a meltdown.' The parents did believe that the deep breathing technique worked well, and children were becoming more aware of their breathing. With practice of the yoga postures and a focus on body position and muscle tension, children could become more self-aware, and this self-awareness of the body could lead to better task focus. Parent 3 and parent 4 said, '. . . he is just too young for the yoga right now, but maybe when he gets older.' Although student 2 was the youngest member of the research group, he was not the youngest child in attendance. When compared with two younger children, who attended with parent and sibling participants and who were able to perform the yoga poses, the researcher surmised that

student 2's inability to perform the yoga exercises was less about age and more about guidance, direction, reinforcement, and parent-child interaction.

All parents also expressed concern and difficulty with the amount of involvement necessary for managing children's schedules, school/summer camp routines, and other after school or sports activities. These daily obligations made it difficult to practice the yoga techniques at home each night.

At the time of classroom observations, the researcher did not witness any of the students practicing the techniques learned during the eight weekly sessions. This may be, in part, due to the fact that student participants had very little practice with the techniques outside of the research setting, so were still too unfamiliar with them or had not yet transferred the positive benefits to other settings, such as the classroom.

RQ5. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for their children with inattentive, hyperactive and/or non-compliant behavior improved the child's ability to use self-monitoring techniques in the classroom to reduce his/her periods of hyperactive behaviors?

Throughout the weekly parent-child yoga sessions, the researcher had the opportunity to observe the parents and children interact. The arrival of families was generally chaotic with children running ahead of parents, parents struggling to carry their child's belongings, and children entering the yoga area fully excited and ready. This glimpse into the struggle of parents to control their hyperactive children provided the researcher with the opportunity to observe the child's behavior outside of a controlled setting, such as the classroom.

Participant 6 noted that her child would practice jumping frog, a pose for helping generate energy by increasing heart rate and blood flow, when at home. Because it involved usage of large muscles, it also seemed to help release excessive energy. Student 2 had not tried any of the poses specifically for calming, and his mother (P6) noted, 'He seems to prefer the ones that create energy to the calming ones.' Participant 6 also noted that her child had to see and experience something several times before trying it. Observing a few minutes of each yoga session provided this time to see that nothing was too hard or would cause him harm. This promoted a willingness to try. Participant 5 felt that the child would more likely use the techniques at school and that it would be helpful if it was part of a routine for everyone, so that the child did not stand out as much.

Participant 1 revealed that his son did try to do some of the routines at home and preferred the 'downward dog; it usually looks more like a kicking mule when he tries it at home. Sometimes [his sister] even tries it with him.'

RQ6. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for children with inattentive, hyperactive and/or non-complaint behavior improve the child's ability to self-monitor and reduce behaviors across settings?

Participant 6 revealed that her child had used the calming breaths at home when a serious cut to the hand needed to be cleaned and disinfected. Participant 4 felt that the techniques would work in multiple settings and would be helpful, but also stated that her child might be too young to really utilize them without someone acting as a guide. Parent 4 stated that they had tried some imagery about outer space, 'but he got hung up asking questions [about the imagery].' The researcher noted that this child did not participate in any of the weekly sessions and although Parent 4 felt that he might be too young, parent 1

did say, '[names omitted to protect identify] were doing the yoga poses at home and even knew some of the names.'

Participant 2 indicated that her child could use the techniques when spending time with grandparents, as well as at bedtime for relaxation. Participant 1 added, 'The children know that at 8 o'clock they have to be in bed if they want to hear a story.' He noted that trying the meditation after story time might be a good way to introduce this technique for relaxation.

'It does have the possibility to work in the car on the way to and from school,' revealed participant 4. Participant 4 felt that the breathing technique could be practiced easily in the car, since her child was in a car safety seat and this was one of the few times he was sitting still. This was also suggested by a parent as one way to reduce the amount of screen time. It should be noted that screen time was a common concern for all parents who participated in this study.

Additional Findings

Results of meeting surveys. At the first meeting, parents were surveyed using a meeting survey form to determine the topics for future discussion during group sessions. All parents ranked positive discipline as the top priority for the group sessions. One parent shared openly that the response to child behavior, 'sometimes depends on how much sleep I've had and whether I've eaten.' Another parent shared that time-out really did not seem to work. Participant 6 responded that they switched from time-out to more natural consequences, and that the consequences needed to be immediately connected to what was happening. Parent 5 shared that the preschool program they had used relied on red, yellow, and green indicators to help students know whether they were acting in

appropriate ways. Reflecting on how this system affected the child, parent 5 told the group, 'red was like game over because [the child] couldn't get perceptually that if I'm good I can raise back up.' Participant 6 shared that when a friend had a consequence and lost sleep-over privileges, it helped her child realize other children had consequences. Participant 4 informed the group that her child's other school could not get any cooperation from him at all. In those times, when he was having a meltdown, the teacher would take him to the Lego table. Parent 4 believed this to be counterproductive, because the child was being allowed to engage in a favorite activity but not being encouraged to have positive behavior.

Although social skills were ranked as a topic of importance for the support sessions, all of the children, except one, were said to have friends and get along fairly well with others. Parents reported that playdates were at first scary, as they were coming to terms with the realization that they could not control their child's behavior all of the time and certainly not when the child was elsewhere. These parents reported having met other parents with similar parenting styles and expectations and whose children faced similar challenges, which made allowing playdates away from home less worrisome. Only one parent reported that their child had not done anything socially with peers from school.

Establishing a routine was a recurrent theme from week-to-week as families dealt with increasing professional responsibilities, child activities, family time, and the approach of a new school year. Bedtime seemed to be an area where most parents experienced greater challenges. This was in line with research by Schneider, Lam, and Mahone (2016). They found that regardless of which tool was used to measure sleep

disturbance in children with ADHD, all measures showed a significant number of children had difficulty sleeping. Some children experienced breathing problems while others had difficulty falling asleep, and still another group would have difficulty remaining asleep. These findings were true whether the child was taking medication for ADHD or not. In the current research, one family indicated that the bedtime routine 'became exhausting for us because of the length of time it took [our child] to fall asleep.' Parent 6 shared that there was a window during which her child needed to fall asleep, and if he was not asleep within that time frame, it could be hours before he would be able to sleep. Interestingly, research by Schneider et al. (2016) indicated that when sleep inventories were analyzed, parents of both medicated and unmedicated children reported sleep disturbances; however, parents of children taking medication for ADHD had fewer disturbances.

Another family's difficulty involved homework routines. They discovered that when the child was told which assignment to start, the oppositional behaviors came out. By providing some choice, more was accomplished. The afterschool routine included changing clothes and getting a healthy snack. 'The children have a homework box which has all the supplies they'd need so there is no distraction looking for things.' One thing the family learned was that any homework which required a device had to be done last; otherwise, this would turn into a struggle because the child would not want to move on to something else like written homework. The importance of these topics did not change between weeks one and three and remained concerns for the group, as was evidenced in their weekly discussions.

Participant 5 indicated that he had spent much time working on establishing a set routine and expectations for behavior. He explained that his child, student 1, now a second-grade student, first began having difficulties in preschool. During the preschool years, parent 5 discovered that his son did not do well with transitions. Participant 5 shared that his son had increased off-task, along with oppositional behaviors, when he was abruptly instructed to change activities. Although the preschool program had a strong academic focus, the preschool day had many transitions from the classroom to other areas for art, music, or physical education. When these transitions were not announced or verbal reminders not provided, student 1 became easily frustrated. In addition, many classroom learning activities were largely center-based. This meant that after the given time working at a center, all children would be directed to move to the next center on the rotation for the day. Without pre-instruction, and again a verbal reminder that time at each center was about to end, the transition produced a degree of frustration, which sometimes led student 1 to a meltdown or tantrum. Participant 5 also explained that recess and lunch were periods which produced a high degree of stress and externalizing behaviors, because they were unstructured. In both situations, this type of externalizing behavior led to a consequence. Both parent 5 and the teacher learned that the child did not do well with an 'all or nothing' behavior management system. The classroom management system was based on a red-yellow-green visible reminder. When student 1 (or any classmate) acted in an inappropriate manner, his (or her) name was moved from green to yellow. Despite gentle reminders and redirection, often student 1's name was placed on red due to a meltdown or other externalizing behavior. Once placed on red, he lost his composure, and the meltdown escalated or a new one ensued. This experience

helped the parents develop a system at home that reinforced positive behaviors, both at school and at home, and as parent 5 indicated, 'It didn't happen overnight, but we did learn very quickly that consistency was important.'

Parent 5 and parent 6 revealed lower stress levels than other members of the group, because they managed to keep routines in place, maintained expectations for behavior which student 1 knew and understood, and used a positive reinforcement system that held meaning for the child. Participant 6 said that for the consequence to work, '[i]t has to be immediate and meaningful.' She explained this as a process of taking some time, usually five to ten minutes to reflect so that she was not reactive. Time allowed both participant 6 and student 1 to 'leave the emotions out of the discussion,' which facilitated addressing the situation to determine better behavior in the future and a consequence that was 'appropriate and fair. The breathing techniques learned in the yoga sessions would help with this process.'

Parent 5 also shared the he learned to facilitate the homework at night which meant that a certain degree of choice needed to be given to his child. In the beginning, parent 5 chose the assignment his child was to do first, but he found that this led to oppositional behavior, stall tactics, and often a melt-down or tantrum. As Brown (2013) revealed, parents needed to approach their child with a win-win strategy. He contended that working with a child with ADHD was always a negotiation, and parents must approach situations not only from a perspective of what they needed but must also think about what gave the child a feeling of winning, too. This applied even when the parent was trying to guide "schoolwork and chores, keep social commitments, and adhere to household rules" Brown 2013, p. 8).

The meeting survey following week four revealed that most families had practiced at least one yoga technique at home, at least once during the week. Two families reported using a bedtime routine that week, while only one family reported that they had not tried any bedtime routine. Of the parents utilizing a bedtime routine, the majority reported doing so most nights that week and that this strategy, when applied regularly, worked for helping their child get to sleep. Parent 6 revealed that sometimes her child was so 'wired' that he could not fall asleep easily. She had learned that if he did not fall asleep within 30 minutes after getting into bed, it was likely he would not fall asleep for hours.

The remainder of the meeting surveys revealed that two-of-the-three families continued to practice some of the yoga techniques a few times per week. One family, whose children ranged in age from three to five years old, participated in weekly sessions and practiced yoga at home, while another family felt their five-year-old was too young for yoga. The observed lack of participation in the group yoga and lack of redirection or consequences for the behavior of child 2 during the yoga sessions led the researcher to surmised that the lack of practice at home for this child was less due to the age of the child, but more likely a result of poor follow-through and parent reluctance to establish routines.

Parents revealed that they were comfortable with the group format and strongly agreed that they could share their experiences with the group. The meeting survey indicated that all parents strongly agreed there was adequate time for discussion each week except for week three. The week three results showed that two of the six participants agreed with this statement, while the remaining four strongly agreed.

In regard to topic relevance, parents strongly agreed that the topics were significant for them during weeks three through six. Views on this were mixed in weeks one, and two.

In week one, parents strongly agreed that they could share their experiences, and this did not change throughout the sessions.

Table 2

Weekly Meeting Survey Results

Results of Weekly Meeting Surveys	Strongly Agree	Somewhat Agree	Unsure	Somewhat Disagree	Strongly Disagree
Comfort level during discussion	100%				
Adequate time for discussion	92%	8%			
Topics were relevant to participant	85%	15%			
Comfortable sharing experiences	100%				

Results of the Parent Survey

At the first group meeting, a parent survey was distributed. All three families participated, and all surveys were returned completed. Consistent with other research, mothers were the primary contact for the family and all three surveys had been completed by the mothers.

In answer to Question 1, *My child follows a daily routine without reminders*, answers varied between often and rarely, but in response to Question 2, *In the morning, my child remembers where he/she put his/her shoes, backpack,* and *coat the night before,*

two of three families reported that the child rarely remembered. Question 6, *My child doesn't need close supervision to complete tasks including homework,* revealed comparable results. Two of three mothers revealed that their child rarely completed tasks without supervision. All of the families reported feeling frustrated by their child's behaviors, two indicated that their relationship with a spouse was sometimes strained, and two reported that they felt anxious or worried about their child's behaviors.

In regard to parent forgetfulness, often a response to added stress, there was no consensus. While one parent reported feeling often forgetful and one sometimes forgetful, a third parent indicated rarely being forgetful.

Two of the three families agreed that their child was fidgety, easily distracted, and all three indicated that the child had difficulty with peer and family relationships.

In response to Question 8, *I arrive late for appointments or work due to difficulty getting my child to cooperate,* two families indicated that this happened often, and one family reported that it was sometimes a problem.

All of the families responded that prior to participating in this research they had tried diet, exercise, or other methods to help their child reduce problem behaviors. These methods included breathing techniques, reducing sugar and eliminating red dye, counseling, prescription medication, and "*One, two, three Magic."* One family reported that nothing consistent had been implemented, but 'Sometimes we count to 3, or tell [the child] I'm going to do it if you don't! We've found he wants to do everything first.'

Results of parent interviews. When asked what it was like to get their child ready to go somewhere, four of the six parents agreed that it could be hectic and much of the struggle depended on the child's mood and where they were going. Participant 3

indicated, ‘Sometimes he is very easy to load up especially if it’s someplace he wants to go . . . other times, it’s not. He’ll fight.’ Participant 2 revealed that getting ready, especially for school was, ‘hectic.’ Participant 1 added, ‘We have to keep the motivation going in the morning.’ Parent 4 stated, ‘It just depends. He generally likes going to school. I think it just depends on if he is really involved in whatever video he is watching or Lego he is building. He doesn’t want to stop that.’ Parent 4 also indicated that her child ‘is obsessive when he is on that device, and he is oblivious to the outside world.’ The use of a device or television before leaving to go somewhere meant that the child had to be told multiple times to get ready, ‘because it just isn’t [brushing teeth or getting shoes, etc.] done.’

For participant 6, the routine for going somewhere was described this way: ‘Honestly, it isn’t too bad. It is just resetting the expectations.’ Parent 5 added that, ‘in the grand scheme of things it is very regimented. It wasn’t at first, but we have been doing this long enough now that we have learned to be more capable with things.’ These parents both agreed that when there was a regiment or schedule, getting the children motivated was much better. Both concurred that having expectations and consequences were important.

When asked what strategies were helpful in getting children out the door to avoid conflicts and frustration associated with going places, four of six parents relied on specific places for children’s things, developing routines, and sticking to the routines. Parent 1 utilized an organizational system for the child’s dresser. Certain drawers contained specific clothing. Shirts were in one drawer and pants in another. ‘Sometimes they will have their clothes out for them.’ Also, helpful for ensuring the family could get

going on time was teaching the child to move his belongings to the right spot, so they were easy to find in the morning. Parent 6 spoke again about the importance of the routine and expectations, adding that if the child was ready to leave on time, there was the possibility to earn screen-time. However, if there was opposition to turning the device off to leave, afterschool screen-time privileges were lost. Both parent 5 and parent 6 indicated that communication with their spouse was key, since they each took responsibility for different parts of the day with one getting children ready for school and the other managing after school routines. Parent 3 indicated that facilitating an outing depended on where they were going, the time of day, whether the child was already dressed or still in pajamas, and 'We just make sure he gets to open the [garage] door. If he's not [the one to open the door] he will have a tantrum. Everyone is in trouble.' Participant 4 added, 'There will be hell to pay.'

In regard to going out for family dinner or a family activity, participants again indicated that time of day, the activity, and whom they would be with made significant differences in the quality of the outing. For Participant 6, going out weekly with a family facing similar challenges and 'who has some of the same rules . . . is really, really helpful.' Participant 5 acknowledged that a few years ago it was different. 'On the occasions when [the child] couldn't sit still, then we spent time in the car . . . and missed the dinner.' This process proved to be a learning experience for the child who then became not only aware of the consequences but also better able to manage the behavior. For participant 3, going out did not include movies, but going out to eat was something that they did often. 'If we do go out to eat he is pretty good, as long as the food comes out pretty quick.' Participant 4 added, 'Occasionally, we will do an outing . . . it can be

difficult with just one person.' Participant 3 also indicated that the child had not had many social outings with peers. Although the child was already five years old, they were still trying to work on making and having play dates with children from school. To a large degree, this hesitation seemed to stem from the inability to get and maintain the child's cooperation.

Speaking about their support outside the group sessions, parent 2 indicated that grandparents were a source of support, especially when her spouse was out of town and she was home with her child and needed help. Stating that both parents relied on the grandmother for support, parent 2 said, 'If I am to the breaking point, she helps de-escalate the issues.' Another family indicated that they did not really have a support system, but sometimes they would ask the family for advice. 'It is not always the most useful advice . . . the implication is that we should be more stern.'

Of additional interest was the student-teacher relationship. Two families indicated that the week prior to the parent interviews had been difficult and that teachers had talked to them about behavior concerns. Parent 4, who also indicated on the parent survey that the child did not have excessive energy or fidget, shared, 'Today his teacher at [school] was telling me he was running in place and singing.' It should be noted that the researcher also observed this behavior on several occasions during the yoga practice, support sessions, and parent interview. Another family indicated that problems arose when the child got tired because this led him to becoming cranky.

Parent exit survey. At the conclusion of the last parent group meeting, each participant was provided with a Parent Exit Survey to measure the level of agreement regarding stress, routines, and parenting strategies as a result of participating in the

support group. Response choices included strongly agree, agree, unsure, disagree, strongly disagree and does not apply.

In response to, *I have learned some new routines/strategies,* five of six participants chose strongly agree, while one parent chose agree. One of the desired outcomes from the yoga instruction and the parent support groups was the development of a new routine or use of a new strategy to improve the child's focus and self-monitoring, while enhancing the parent-child relationship and reducing parent stress to improve efficacy. When asked to rate their agreement with having implemented a new routine three of six parents indicated they were not using any new routines or strategies. While the strategies had been shared and new techniques taught, half of the parents were unable to follow through.

All of the parents acknowledged feeling better able to help their child. One father strongly agreed with the statement. Five of six parents declared they strongly agreed that, *Talking to other parents facing similar parenting stress has helped me feel less alone,* while one father simply agreed. Ratings for, *I feel less stressed,* varied widely. One father strongly agreed; one was unsure, and one agreed. One mother disagreed, one agreed, and one was unsure.

Limitations

The weekly format for the yoga sessions worked well and having yoga first ensured that parents had ample time for discussion, but one limitation was weekly yoga practice did not provide adequate exposure for students. This researcher recommends that future research be based on an in-school yoga program where students have the opportunity to practice the techniques with an instructor at least two times per week.

Parents expressed enthusiasm for learning new techniques to help them and their child manage symptoms of inattention and hyperactivity and believed that these techniques could work and be transferred to other settings, if practiced daily. The parents were asked to (re)teach their child each of the techniques learned in the weekly session and to practice nightly at home. One limitation to this component of the study was the level of responsibility parents already had for work and family. This researcher recommends that future research make the parents recipients of child-taught practices. This would allow the child the opportunity to more fully experience and internalize the learning and would help to solidify the concepts, as research on learning indicates the child's highest degree of learning takes place when teaching other people the concepts that he or she was to have already learned.

Because all of the parents who agreed to participate worked outside the home, no one was available to meet during the day. This research was mainly concerned with parents and child; therefore, participants in the study met in the evening after work on a mutually agreeable day at a time most convenient for the group, and teachers did not participate. An additional limitation was meeting in the evening after parents had worked all day. One parent had a fluctuating schedule which required her to adjust her weekday work schedule to some degree in order to attend meetings. Future research might try to host parent support groups every two weeks for 16 weeks to minimize the weekly burden on families.

As part of a school-based approached, the researcher would also recommend that classroom teachers be included in the weekly yoga sessions, so that the techniques could

gradually become part of their classroom behavior management techniques, while also providing students with additional opportunities for practice and modeling.

Although smaller groups do promise to promote a stronger connection between members, this group size did not allow for break-out groups, such as for mothers and fathers. Perhaps, had spouses been able to meet separately, mothers and/or fathers would have shared more about the quality of their relationship with their spouse and the levels of stress they felt and believed to be present in the home. The researcher would recommend future research groups have between six and eight couples, and it is further recommended that opportunities, which allow time for sharing between mothers, sharing between fathers, and sharing among different groups of couples, be provided.

This qualitative study produced a body of rich data. At times it was difficult to focus on parent discussion without wanting to write reflections about specific observations at the precise moment of each occurrence. Although the researcher felt she was able to summarize these key observations after the meetings, she recommends that the primary researcher work with a partner to better facilitate audio/video recording of yoga and parent support sessions, as well note taking from observations of behavior, interactions in yoga and the support group, and body language during these sessions.

It is also recommended that the research team provide the parents with weekly resources in the form of internet links, articles, and/or picture diagrams or step-by-step instructions for the poses taught at school. A folder or binder in which to keep all resources should be labeled and provided to parents.

Summary

The study consisted of eight weekly sessions. Yoga instruction began the first week of the study, and after the yoga session children went to the supervised child-care area, while the support group met. During the first parent support session, parents introduced themselves and received additional information regarding the study. The researcher provided time for questions and answers. Six of the eight weekly sessions began with 30 minutes of parent-child yoga; one session began with 30 minutes of parent-child martial arts. Following each of the parent-child yoga sessions, children went to the supervised child-care area, and the parent support and discussion session began. Discussion topics were based on a parent survey administered after week one.

All parents reported that their child had difficulty following through with tasks and often needed redirection or reminders. Accomplishing tasks or homework required a great deal of parental involvement in the form of supervision and time management. In addition, creating and following established routines was imperative in maintaining order and equilibrium. Children with ADHD were shown to have emotional dysregulation and parents did indicate that this description fit their child. Lack of routines and stability, along with any uncertainty about expectations or schedules, often frustrated the child and produced dire results, which culminated in tantrums or meltdowns. Tantrums or melt-downs generally lasted longer than several minutes and usually ended in shouting and a child being sent to time out. In some cases, these meltdowns were severe enough to cause the child to become fatigued, at which point sleep ensued. The parent support group and sharing sessions reinforced the importance of expectations and routines and

provided the parents with some new strategies for implementing and managing daily routines.

Overall, parents reported feeling better able to help their child, and expressed that talking to other parents facing similar parenting stress helped them feel less alone. Although parents found the meetings and support helpful and attended with fidelity, they were unable to implement the yoga routines at home with consistency. Parents divulged that their good intentions to practice the yoga poses with their child each evening often dissolved by the time they got home from work, made dinner, shuttled children to nightly activities, and got them back home just in time for bed. The introduction of yoga, meditation routines, and parenting strategies was seen as being favorable for improving parent and child relationships. Parents spoke about using the breathing techniques to help calm emotions and settle children. One parent, participant 6, even reported, 'I used the breathing technique to help me avoid a panic attack.' Participant 2 stated that breath awareness had become part of the daily routine while at work. This participant shared that she programmed an hourly reminder on her cell phone to encourage continued focus on breath control and deep breathing. The participant was also sharing this technique with co-workers. All participants found the program appealing and were glad to have participated, even though they differed in their ability to integrate the insights and practices into their daily lives.

Chapter Five: Discussion and Reflection

The purpose of this study was to examine the benefits of a parent support group to enhance parenting self-efficacy and parent-child relationships between the parents and the inattentive, hyperactive, and/or non-compliant child(ren).

Questions

This study was designed to address the following questions.

RQ1. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children reduce parenting stress?

RQ2. Does participation in a support group for parents of inattentive, hyperactive, and/or non-compliant children improve parenting self-efficacy?

RQ3. Does participation is a support group for parents of inattentive, hyperactive, and/or noncompliant children improve parent-child relationships?

RQ4. Do the parents perceive that the parent-taught yoga or parent-taught martial arts activities for their children with symptoms of inattentive, hyperactive, and/or non-compliant behavior improve the child's ability to use self-monitoring techniques in the classroom to reduce his/her inattentive behavior?

RQ5. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for their children with inattentive, hyperactive and/or non-compliant behavior improve the child's ability to use self-monitoring techniques in the classroom to reduce his/her periods of hyperactive behaviors?

RQ6. Do the parents perceive that the parent-taught yoga or parent-taught martial arts program for children with inattentive, hyperactive and/or non-complaint behavior improve the child's ability to self-monitor and reduce behaviors across settings?

Discussion

Research question one was concerned with the ability of parent support groups and yoga to help parents of inattentive children reduce parenting stress. Previous research suggested that parents of inattentive children must be more involved in managing and overseeing daily routines. As busy professionals, this aspect of parenting could increase stress levels, which ultimately impact the parent-child relationship and the spousal relationship, thereby having an impact on the entire family. Two of the families had two or more children, and at least one child in each family was diagnosed with ADHD or exhibited impulsivity and oppositional behaviors. These children attended school and were in preschool through third grade. Except for one child, all participated in activities outside of school. Getting children up, dressed, and ready to leave to attend summer camps, sports practices, and school required a great deal of parental involvement and organization, as parents tried to coordinate transportation to and from summer camps, sports, and school, in addition to overseeing chores and homework during the school year. Managing their own professional schedules added another component with which parents must deal. As one parent noted, 'In the grand scheme of things it is very regimented.' Parenting is challenging; there is no standard set of practices that works for every child in every situation. Parents who do not work outside the home experience a greater level of stress when parenting a child with ADHD than those whose child does not have behaviors typical of ADHD. For parents who work outside the home, their professional responsibilities added yet another layer of complexity in trying to manage the day-to-day routines of their child. These challenges could produce significant anxiety and stress for parents, which in turn could lead to reactionary parenting and a strained

parent-child relationship, which in turn causes the child to exhibit more externalizing behaviors.

In this study, all parents were married, living with their spouse, and dual-income families. While the majority of the parents had a consistent work schedule, one parent had flexible hours from week to week. This flexible schedule was difficult, not only for the parents, but also for the child, because it lacked predictability. In addition to the lack of predictable schedule, this child also lacked routines, which could have helped him manage this uncertainty and the emotions that accompanied it, possibly minimizing tantrums and meltdowns. During group meetings, there was rarely agreement between the parents regarding routines or strategies used, and most often, both parents revealed different styles and strategies. The father seemed to 'give in' more often than the mother. Because his mother's schedule was so flexible, often the child was in the care of only his father, which further increased stress for the caregiver, because of the unpredictable reactions the child would have when he was given a task or told 'no.' The same was also true on days when his mother was not working. She found herself facing increasing levels of stress and frustration as she struggled trying to figure out how to entertain her child and avoid a serious meltdown. The researcher saw this first hand on several occasions when mother and her son were wandering through school or lingering on the campus long after dismissal. Three months after the study group, these parents still had not tried any of the techniques they had learned from Miss Bridget, or those they had learned from other parents, and it was apparent that their frustrations were growing as their child became more impulsive and reactive. Because of the lack of well-defined expectations and boundaries the parents were providing for this child, it was difficult to

distinguish whether all of the behaviors were impulsivity or oppositional or whether these were partially the result of granting the child's every wish without regard for the impact of the behavior or the parenting decision.

Five of the six parents had extensive professional obligations, which often caused them to work longer days. These working parents relied on the school's after-care program and regularly picked children up after 5:30 p.m. Lack of time was most commonly cited as a reason parents did not initiate new routines for their child, despite knowing that those routines might be beneficial in helping them or the child manage symptoms of inattention or emotional breakdowns. One family who had experienced their child's extreme emotional dysregulation learned very early the importance of structure in the home and at school, set routines and consequences, and elevated expectations for behavior. While they often described themselves as 'strict,' their combined style was more managerial and organized than strict. Their child had many opportunities for social activities and sports, and both parents enjoyed spending time with their child. The parents revealed that following routines helped their child feel less frustrated, ultimately reducing emotional outbursts. This couple also acknowledged that occasionally routines needed adjustment. When this was the case, talking to their child about the changes before making them was a crucial step to successful implementation.

Although parent feedback for the yoga sessions and the support group was positive at this time, the researcher did not feel that there was enough evidence from this study to fully support the claim that participation in a parent support group and yoga would reduce parenting stress. However, based on the Parent Survey and Weekly Meeting Survey, along with parents' regular attendance, the researcher did feel that they

gained something from the yoga sessions and the support group. Knowing that they were not the only parents struggling to meet the needs of a child with ADHD while also caring for their spouse and other children helped parents feel less alone in these challenges.

The saying, 'It takes a village to raise a child' really was not too far from the truth. Most families relied to some degree on their extended family for brief periods of childcare, but for these parents whose child was inattentive or hyperactive, they felt somewhat reluctant to leave their child with anyone for extended periods. The inability to control the child could lead to concern regarding what the child might do when not supervised by the parents. The need for support raising a child with inattentive behaviors was revealed through the parent interview. Parents were asked about support outside of the home, and all of the parents noted that support helped them and their child. Participant 2 noted, 'If I am to the breaking point, she [participant's mother] helps de-escalate the issues.' Although other family members may not have dealt with similar parenting issues, that does not stop parents of inattentive children from seeking guidance or advice. 'It is not always the most useful advice . . . the implication is that we should be stern.' Given that this could be typical for families dealing with an inattentive child, it would be logical that the advice and comradery of a support group would enhance parenting efficacy through related and relatable experiences. Parents who had first-hand knowledge of living with a child with inattentive behavior provided insight into structured routines and logical consequences. Parent 5 said, being with someone 'who has some of the same rules . . . is really, really helpful.' This was true for both the parent and the child. Parent 6 noted that it helped their child understand rules and consequences when a friend had to follow rules.

Through the support group, parents who had already established routines, set expectations, and followed through with consequences to help their child manage inattentive behavior were able to affirm their parenting-efficacy by hearing from peers that their ideas, strategies, and routines were good, but also from hearing the struggles parents faced when there were no/low expectations and no consequences. The researcher also contends that for the parents who did not have structure in the home or established routines, the support group helped them understand the impact lack of routines had on their child, themselves, and their spouse. The researcher believes that the parent support group demonstrated to them the significantly positive impact establishing routines and setting consequences could have in better managing their child's behaviors. As a result of participating, over time their participation in the support group will lead to enhanced parenting efficacy.

Struggles such as these to manage parental responsibilities of work and family, along with parenting a child who is inattentive, hyperactive, and highly emotional can lead to reactive parenting, which often exacerbates the child's externalizing behaviors. Through the yoga sessions, both parents and children learned ways to de-stress and to regain control of rampant emotions. Postures requiring balance also required a great deal of focus. This technique can help to relieve stress, especially when combined with mindful breathing. By taking focused breaths, holding, then exhaling, parents and students were able to relax and shift their focus to their bodies in the present moment, a key for dealing with stress. Although the parents and children did not practice the techniques outside of the group as often as the researcher would have hoped, there was a

togetherness and supportive rapport between the majority of the parents and their children.

One family attended each weekly session with their school age child and two younger children between the ages of three and four-and-a-half. These children readily participated and were able to model poses taught during the yoga session. The researcher mentions this only because one child, age five, did not participate in these activities and during one interview the parents of this five-year-old said, 'He is just too young to utilize the yoga.' The researcher did not believe that he was too young to practice these techniques, but because there was a lack of encouragement and involvement of the parents, the child was resistant to trying the poses. Given the absence of redirection when the child chose to run in circles during the yoga sessions, the researcher would have to say this, more so than his age, was likely the reason the family did not try the strategies at home. Observation of the family dynamics of all attendees, including younger children, led the researcher to believe that the practice of yoga was less about age and more about parent-child relationship. Four of the six parents and their children talked to each other, offered encouragement, and even challenged each other during group sessions. Outside of the sessions, several of these children did ask a parent to practice the poses together. Based on the researcher's observation and the personal accounts of the parents, the researcher felt that the yoga sessions did enhance the parent-child relationship to some degree.

Regarding research questions four through six, which were directed at the child's use of yoga and breathing techniques to monitor inattention and hyperactivity in the classroom or across settings, the researcher did not feel that the practice of the yoga

techniques was performed outside of the group sessions often enough for there to be a consistent improvement in the child's ability to self-monitor

Additionally, the researcher investigated the effects of yoga to help children reduce problem behaviors in the classrooms and across settings. Parents and children participated in eight weekly sessions, which began with a series of yoga poses and meditation. All parents attended regularly with their children and generally, parents were on time for the start of the yoga sessions. During yoga, all but two parents and one child participated in the sessions. Weekly practice outside of the group setting was very limited, due to both professional and family commitments; however, parents did express interest in additional resources for yoga that would help them utilize the strategy more fully at home; but, they were realistic about how much they could accomplish at night and stated that trying to add something to their routines would be difficult. Parents recognized one of the difficulties would stem from the change to their established nightly routines and parents remembering the newly enhanced routines. The majority of parents felt that their schedules were already very tight and anything new required a large degree of time and additional focus.

Observation of the parents and children together indicated that the parent-child relationship was enhanced by the participation in the weekly sessions together. Parents and children offered each other encouragement and shared a sense of enthusiasm for practicing and learning poses. For the practice to be successfully utilized across settings, it is likely that additional practice of the techniques at home would have been needed. This would be best accomplished by daily incorporation into a morning or nighttime

routine, but these families were not disciplined enough to devote between 10 and 20 minutes daily, or a few times per week, for successful integration across settings

Personal Reflections

Each week, the researcher had the opportunity to watch the arrival and interaction of family members. This was a period of great activity and noise. Parents were very accepting of their child's rambunctious behaviors during arrival, but most parents were very effective in gaining their child's attention for the start of the yoga sessions. These interactions demonstrated that children were aware there could be consequences if they did not respond appropriately to their parents.

The yoga instructor, Miss Bridget, was very knowledgeable about the issues parents of inattentive children faced and was very often willing to speak both personally and professionally to parents. This interaction seemed to build the bond between the yoga instructor and parents, making it possible for parents to ask direct questions regarding their child's behavior. Miss Bridget was kind and enthusiastic when working with the group each week and the researcher believes that this helped to further put parents at ease. Although participant 4 did not participate in the yoga sessions, on several occasions she engaged Miss Bridget in discussion afterward. Although Miss Bridget's time with the group had ended, she never rushed out on this parent and graciously stayed to answer questions and provide suggestions for working with the child at home.

Based on research findings, the researcher expected that the dropout rate for this group, with its already small size, to be so significant that the research would have to be placed on hold and another parent support group formed. That was not the case. Parents attended all sessions and completed weekly meeting surveys. Because parents attended

the sessions with fidelity, the researcher also believed that the parents would practice the weekly yoga poses regularly. This was not the case; however, direct observation of the children and their parents revealed that there was a sense of fun and togetherness at each of the sessions. The parents who seemed to have the best relationships with their children were also the ones who revealed they maintained a structured routine which was utilized daily.

No significant difference was found between parents. All parents were working outside the home, all parents were married, and all parents had post-secondary education. These similarities were discovered when the Parent Demographic surveys were examined. With such similarity between parents revealed by the demographic survey, the researcher expected that parenting styles would have been similar. This was not the case, however; and through direct observations and discussions it was discovered that one family lacked routines and expectations for their child's behavior. There was no guidance or discipline at the weekly sessions. The parents allowed the child to do anything or nothing. Over the course of the eight weeks, the child had not participated in any of the yoga activities despite being invited to the group circle by Miss Bridget and the researcher on several occasions. On a few occasions, the parents asked the child if he wanted to join the group. The result was not surprisingly always the same. The child would respond, 'no,' and begin running through the yoga space or would begin running in circles. No verbal prompts were given by the parents, and there were no consequences for disrupting the group. These parents rarely engaged in the activities and were often found standing off to the side. Even when invited to the group by the researcher or Miss Bridget, they continued to stand just outside the group. Although at first the researcher

believed this behavior might be a form of shyness, these parents were enthusiastic participants in the group discussions and often shared their experiences raising a 'very active' child.

In direct contrast to this were participant 5 and participant 6. This dyad had strong routines and lofty expectations for their child. Barring physical limitations, both participated in the weekly yoga sessions and encouraged their child to participate. The expectation to listen and follow directions was evident week after week, and the child demonstrated a willingness to listen and to try something new each week. Their experience raising a child diagnosed with ADHD and their proactive parenting became assets for the group, as there was almost no situation other parents had experienced that these parents had not already been through. Parents 5 and 6 provided insight into communicating with teachers and caregivers about a child's struggles with ADHD and their expectation for the child's behavior. Understanding the motivators and consequences that worked best for their child allowed them to share not only with the group, but also with the child's teachers and other caregivers and coaches. By communicating this with others who worked with their child, they helped to maximize their child's success. Children with ADHD needed consistency and often needed an 'advanced notice.' When everyone understands this, and can take the time to establish routines and provide the child with a heads-up, externalizing behaviors resulting from frustration can be decreased.

The participants were not the only ones who benefitted from this study. By observing these parents and children together, the researcher developed a greater sense of each parent's parenting style. Although during the discussion group and in the research

parents expressed reactive parenting practices at times, the researcher did not see this on any occasion, including when parents dropped their child off for school. As an educator who believes in the academic growth and success of each child, the researcher was overwhelmed by the commitment four of six parents demonstrated regarding homework and was pleased that two families had structured routines, quiet places, and supply boxes for their child to help facilitate homework without hassles.

Not unlike typical families, two of the participating families in this research were also learning to navigate the availability and addictive nature of mobile devices. The researcher was not surprised when all of the parents talked about their child's obsession with an iPad, Kindle, computer, or parent cell phone. Two families had learned to minimize screen time and set parameters for usage. Because mobile devices were very important to children in this study, two families had imposed loss of screen time as a consequence for inappropriate behavior. They also allowed their child to earn screen time for consistently good behavior, completing chores, tasks, or homework in a timely manner, and for engaging in other activities. This was great news to the researcher, as in the last 10 years the researcher had seen so many parents provide mobile technology and unlimited usage for their children without full realization of the negative impact on the child's social development and health.

The researcher enjoyed working with this group to gain an understanding of what daily challenges they faced and how they managed these. The researcher also believes that by working with parents in this capacity and building a rapport with them, it has enhanced our relationship. It is important to the researcher that parents see her as more than the principal of the school and see her as an advocate for their child and a leader

who would continuously look for ways to reach all learners so students experience the greatest degree of success they can. The researcher thinks our time together in the support sessions helped parents see her dedication to them and to their child and her willingness to provide support, encouragement, and resources to aid them in their roles as parents.

Recommendations for Future Research

The weekly format for the yoga sessions worked well and having yoga first ensured that parents had ample time for discussion, but one limitation was weekly yoga practice did not provide adequate exposure for students. The researcher recommends that future research be based on an in-school yoga program where students have the opportunity to practice the techniques with an instructor at least two times per week.

Parents expressed enthusiasm for learning new techniques to help them and their child manage symptoms of inattention and hyperactivity and believed that these techniques could work and be transferred to other settings, if practiced daily. The parents were asked to (re)teach their child each of the techniques learned in the weekly session and to practice nightly at home. One limitation to this component of the study was the level of responsibility parents already had for work and family. The researcher recommends that future research make the parents recipients of child-taught practices. This would allow the child the opportunity to more fully experience and internalize the learning and would help to solidify the concepts, as research on learning indicated the child's highest degree of learning takes place when teaching other people, peers or parents, the concepts that he or she was to have already learned.

Because all of the parents who agreed to participate worked outside the home, no one was available to meet during the day. This research was mainly concerned with

parents and child; therefore, participants in the study met in the evening after work on a mutually agreeable day at a time most convenient for the group, and teachers did not participate. An additional limitation was meeting in the evening after parents had worked all day. One parent had a fluctuating schedule, which required her to adjust her weekday work schedule to some degree in order to attend meetings. Future research might try to host parent support groups every two weeks for 16 weeks to minimize the weekly burden on families.

Although the results of this study were largely favorable, the researcher recommends additional research on the effectiveness of yoga on improving student attention and behavior. It is recommended that future research be conducted as part of the school day, either as an after-school program or as direct instruction in the classroom or physical education classes, and that the study be conducted for a longer period of time ranging from one semester to a full year. Since early intervention is paramount, the inclusion of young learners and preschoolers though kindergarten students, should be a large portion of the population, if the study is not conducted in connection with the school's physical education program.

The formation of the parent support network might also expand to include secondary care-givers, such as grandparents or adolescent and adult siblings. It is also recommended that an experienced counselor trained in a positive parenting program work with all members of the family who are the primary and secondary caregivers.

As part of a school-based approached, the researcher would also recommend that classroom teachers be included in the weekly yoga sessions, so that the techniques could

gradually become part of their classroom behavior management techniques, while also providing students with additional opportunities for practice and modeling.

Although smaller groups do promise to promote a stronger connection between parents, this group size did not allow for breakout groups, such as mothers and fathers. Perhaps had spouses been able to meet separately, mothers with mothers and fathers with fathers, spouses would have shared more about the quality of their marital relationship and the levels of stress they felt and believed to be present in the home. The researcher would recommend future research groups having between six and eight couples, and it is further recommended that opportunities which allow time for sharing between mothers, sharing between fathers, and sharing among different groups of couples be provided.

This qualitative study produced a body of rich data. At times it was difficult to focus on parent discussion without wanting to write reflections about specific observations at the precise moment of each occurrence. Although the researcher felt she was able to summarize these key observations after the meetings, she recommends that the primary researcher work with a partner to better facilitate audio/video recording of yoga and parent support sessions, as well note taking from observations of behavior, interactions in yoga and the support group, and body language during these sessions.

It is also recommended that the research team provide the parents with weekly resources in the form of internet links, articles, and/or picture diagrams or step-by-step instructions for the poses taught at school. A folder or binder in which to keep all resources should be labeled and provided to parents.

Conclusion

This research served to enhance the body of knowledge regarding ADHD and furthered the understanding of the impact of a parent-support group on minimizing parenting stress. Parents as the primary advocates for their children faced increased stress, which stemmed from the level of involvement needed to help their child maintain focus, complete tasks, and control hyperactivity. Without support in their roles as parents, family and spousal relationships became strained. The parent-child relationship also suffered when parent stress or other factors caused reactionary parent behaviors. This in turn caused the child to exhibit additional externalizing behaviors. Through working with a support group, parents felt better able to deal with the child's behaviors and felt less alone in their parenting struggle. Participation in yoga was shown to have positive effects for parenting stress and did enhance the parent-child relationship, which was demonstrated through comradery at the weekly sessions and when children actively sought parents at home for practice.

Little was known about the combined effectiveness of a parent-support group and yoga for improving the quality of the parent-child relationship and the level of parenting stress. In addition, little research existed on the effectiveness of yoga or martial arts to improve self-monitoring and attention in children with ADHD. Further study on these techniques is recommended by incorporating the practice of yoga into the regular school day. It is further recommended that the yoga sessions occur at least twice per week and the number of parent support sessions be extended to a minimum of 16 weeks where parents meet every two weeks.

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Vitae

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Colleges and Universities

1985-1988: Bachelor of Arts in Education, emphasis in Elementary Education from Webster University; 2009-2011 Master of Arts in Educational Administration from Lindenwood University; 2016-present: pursuing Doctorate of Education in Instructional Leadership (expected graduation date in May 2018) from Lindenwood University

Teaching and School Leadership History

2013 – present: School Principal; Preschool - Eighth Grade

2007 - 2013: Educator for students in grades 4-7, at Sacred Heart School, Valley Park Mo

Awards

2016 Inducted into Alpha Chi National College Honor Society

2014 Nominated from among principals in the region for the St. Rose Philippine Duchesne Award