

**“WAIT, WHAT WAS THE QUESTION AGAIN?”: FIRST-PERSON DESCRIPTIONS
OF THE EXPERIENCES OF SCHOOL-AGED FEMALES WITH ATTENTION-
DEFICIT/HYPERACTIVITY DISORDER AND THEIR TEACHERS**

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ABSTRACT

“WAIT, WHAT WAS THE QUESTION AGAIN?”

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Attention-Deficit/Hyperactivity Disorder (ADHD) has been under-researched in females when compared to the amount of research devoted to their male peers. This qualitative study involves individual interviews with middle-school and high-school-aged females with ADHD on their academic and social experiences living with this disorder in order to get their perspectives. Students reported on social and academic implications of ADHD, views on treatment methods, effectiveness of their teachers, and classroom interventions. Focus group interviews also were conducted with elementary-, middle-, and high-school teachers about their experiences in the classroom with females who have been diagnosed with ADHD. Teachers reported on views of ADHD, views of treatment methods, symptoms in males with ADHD versus females with ADHD, classroom interventions, and ways they identify students in need in the classroom.

INTRODUCTION

This is a study of the first-person perspectives of school-aged females with Attention-Deficit/Hyperactivity Disorder (ADHD) and of the first-person perspectives of teachers about their experiences in the classroom with females who have been diagnosed with ADHD. In recent years, there has been an increase of empirical research on females with ADHD, including how they differ from males, how females manifest symptoms, and the outcomes of living with this disorder (Taylor & Keltner, 2002; Silverthorn, Frick, Kuper & Ott, 1996). One might wonder about the cause of this relatively recent outburst of journal articles on this topic.

It has been argued that females have, until recently, been overlooked and nearly ignored in the world of research on Attention-Deficit/Hyperactivity Disorder (Crawford, 2003). Until the newest edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000) hyperactivity was the predominant symptom associated with ADHD and therefore the primary marker that signaled its presence. Research has since shown that females tend to show symptoms of inattention rather than hyperactivity-impulsivity (Mash & Wolfe, 2007). Therefore, until the recent interest in females with ADHD, females were most often overlooked and ignored because they did not show the typical symptoms associated with the disorder.

ADHD symptoms are most often noticed and reported in the classroom, where disruptive children interrupt the flow of teaching and learning and subsequently are cause for concern. However, if a child with ADHD does not disrupt the classroom, he or she often remains unnoticed, despite the presence of the same academic deficits as his or her louder, more problematic peers.

Many theories have been offered as to why there are differences between male and female representations of ADHD, and, since research has increased on this topic, we now understand how ADHD “looks” in young females (Silverthorn, et al., 1996). However, more research needs to be conducted on the perspectives of these young females, including what school and life must be like through their eyes.

This study adds not only to the breadth that already exists in recent research involving females with ADHD, but also provides a different angle of viewing and understanding the disorder. In this study, I go to the source, females with ADHD themselves, and interview them to gain a first-person perspective of the disorder. Most “perspective” qualitative studies involve either adult female participants in retrospection or studies with both young male and female participants, with males being the vastly predominant group (Rucklidge & Kaplan, 2000; Singh, 2003; Travell & Visser, 2006). This study is one of the first to focus solely on first-hand accounts from young females with ADHD and on the first-person perspectives of teachers about their experiences in the classroom with females who have been diagnosed with ADHD.

Because the classroom is the place in which most students with attention-deficits are identified, I went to their teachers. By gaining teachers’ perspectives and the perspectives of their students, I obtained a more complete picture of how females with ADHD behave in the classroom. With the information gathered, I was more able to identify possible classroom interventions for these students who are usually overlooked otherwise. This study is a step in a progression of studies to develop methods of identification and intervention in the classroom for females with attention-deficits.

The quote used in the title of this study, “Wait, what was the question again?” was a question asked to me by HS1, a high-school female who has been diagnosed with ADHD. In our interview I asked her a question and she began to answer, stumbling over her words. After a moment, she caught herself, laughed and asked me to repeat the question. Her response is a clear illustration of what academic and social life must be like for those students who have ADHD: a constant need to restate a question because their minds started up without them. In class, these students miss instructions and need questions and assignments to be repeated. In social situations, they may not be able to focus long enough to carry on a thorough conversation with their friends or be able to respond quickly and effectively in job interviews or college interviews in the future.

LITERATURE REVIEW

When one pictures a child with ADHD, what does one see? A hyperactive little boy who cannot stay in his seat, who frequently speaks out of turn, and taps his pens and pencils on his desk? Or does one see a little girl staring out the window, unable to pay attention and suffering academically, but otherwise seemingly well behaved?

When reviewing the literature on Attention-Deficit/Hyperactivity Disorder, one notices that an overwhelming number of studies involve participants who are predominantly male. As previously mentioned, a relatively recent surge of journal articles has involved females in the research on this childhood disorder (Crawford, 2003). Also prevalent is the emerging conclusion that females exhibit different symptoms than males and therefore are overlooked and remain under-diagnosed (Mash & Wolfe, 2007).

What is Attention-Deficit/Hyperactivity Disorder?

Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most common childhood disorders, defined as a “persistent pattern of inattention and/or hyperactivity-impulsivity” that occurs more often in and to a higher degree than “observed in individuals of a comparable age” (American Psychiatric Association, 2000, p. 85). According to the *Diagnostic and Statistical Manual of Mental Disorder* (Fourth Edition-Text Revision) or DSM-IV-TR (American Psychiatric Association, 2000), ADHD occurs in approximately “3% to 7% of school-age children” (p. 90). Usually symptoms of ADHD must be noticed prior to the age of seven and cause some type of impairment in the child’s life. There are three subtypes of ADHD: predominantly inattentive type, predominantly hyperactive-impulsive type, and combined type, which includes symptoms from both of the previous two categories (American Psychiatric Association, 2000). The

combined subtype is diagnosed in most cases of younger people. Hyperactivity-impulsivity symptoms include fidgeting, excessively running or climbing, talking too much, and a tendency to be intrusive (American Psychiatric Association, 2000).

Inattentive symptoms include failure to pay attention, not finishing tasks that have been started, daily forgetfulness, and frequently misplacing objects (American Psychiatric Association, 2000).

The DSM-IV-TR says little about sex differences, other than that ADHD occurs more often in males than females “with male-to-female ratios ranging from 2:1 to 9:1, depending on the type...and setting” (American Psychiatric Association, 2000, p. 90). This ratio difference is less extreme in the inattentive subtype, showing that it is more common in females than the other two types. This one single statement in the DSM-IV-TR suggests that sex differences, as of the year 2000, had not been researched sufficiently enough to elicit further explanation (American Psychiatric Association, 2000).

The Human Attention System

How Does Attention Work? According to Levine (2002), “when the attention controls operate as they’re supposed to, they help a student learn...on the other hand, dysfunctions of the attention controls often lead to chaos in the learning process and also in the daily life” (p. 52). Levine discusses what are known as attention controls, which include mental energy controls, intake controls, and output controls. In terms of mental energy controls, Levine refers to energy the brain needs to sustain mental control and alertness. Intake controls helps a person to select what incoming stimulus to focus on, how detailed the focus should be, and when he or she should switch to the next topic at hand. Output controls—which includes three types of output: social, behavior, and

academic—involves the child thinking before he or she speaks, review his or her options, and control the pace of the output provided by his or her brain.

When a child has deficits in attention controls, it affects every part of learning and daily life. As Levine (2002) states, when all of these control work properly, he or she has the potential to learn and function normally. Without controls, the mind does indeed turn to chaos, because the child receives information and does not know how to process it, what to do with it, or how to sustain the energy to use the information. Levine (2002) suggests, “well-calibrated attention control influences how a kid feels about himself...it’s really tough to be living with a sense that your mind is a bit out of control...it’s frightening to keep doing things impulsively and having regret done them” (p. 82). It must be difficult for the child who wonders why his or her mind does not work as well as his or her peers’ minds do.

Langer (1997) provides her own take on attention. Paying attention is important for children when they are attending school and trying to learn. Langer (1997) asked a group of high school teachers and students what is meant when they ask/are asked to “pay attention” in class, the two answer choices being “hold the picture still” in memory or to “vary the picture” instead (p. 38). Both the teachers and the students chose the first answer to “hold the picture still” while paying attention, showing that there is no miscommunication in the classroom. Instead, the problem with attention in the classroom seems to be that teachers are expecting their students to accomplish a nearly impossible task. Langer (1997) provides the example of attempting to look at a painting and hold the image completely immobile, without moving the eyes along any aspect of the painting. This task is extremely difficult.

To sustain attention on a certain subject or object for a long time, says Langer (1997), the “image must be varied” (p. 39). This seems to be an option overlooked by both the high school teachers and students when asked how to sustain attention. If teachers are expecting a task that is difficult to the students and students are having issues with these tasks, then that illuminates the faulty expectations of attention in the classroom. For Langer (1997), the answer to solving attention problems in schools is to “enhance novelty” in classroom learning by asking students to think of the stimulus in different ways (p. 40). This is supported by a study she conducted on the topic with a group of undergraduate students who attended to stimulus on a computer screen and then pressed a button when the stimulus disappeared. Students who were asked to manipulate the shape stimuli in their minds performed better than students who were asked to just look at the shape stimuli and students who were told to “trace the outline” of the shape (Langer, 1997, p. 41).

Langer (1997) also addresses the topic of children with Attention-Deficit/Hyperactivity Disorder. To help these students pay better attention during their class time, she suggests a “focus on the roles of context and novelty in paying attention. The attention ability of... children [with ADHD] could be improved with changes in context, including changes in how information is presented and in environmental stimuli” (p. 46). She reports on a study in which boys with ADHD and boys without ADHD were asked to attend to a television with and without toys present in the room. Predictably, when toys were in the room, the boys with ADHD only attended to the television half the time that the boys without ADHD did, but they attended for the same amount of time

when toys were not in the room. For Langer (1997), this supports the theory that environmental stimuli affect attention patterns in boys with ADHD.

Wilding, Munir, and Cornish (2001) conducted a study in Britain where they collected the results of attention tasks from 100 boys: 50 who were considered by their teachers to have good attention skills and low instances of hyperactivity and 50 who were considered by their teachers to have poor attention skills and higher instances of hyperactivity. They tested four domains of attention via computerized attention tasks that were administered to each participant: selective attention, divided attention (or switching attention from one stimulus to another), vigilance, and executive function. Wilding and his colleagues (2001) found only significant difference in executive function and divided attention, however in the instances of tasks measuring attention vigilance, the boys with higher hyperactivity and lower attention skills presented more “false alarms” than their counterparts. By false alarms, the authors are referring to instances where they answered incorrectly because of confusion over shapes or other aspects of stimulus which shows an issue with inhibition and possibly impulsivity; these are two symptoms that are central to the struggle of children with ADHD (Wilding, et al., 2001)

Overall, the study by Wilding et al (2001) supported other empirical claims that ADHD is caused by deficits in frontal lobe areas, which thereby affect executive functions and attention. In terms of classroom implications, Wilding et al. (2001) suggest minimizing distractions, keeping up the consistency of an academic routine as opposed to switching up a schedule, lessening executive process demands, and incorporating “as many features to maintain attention as possible, since such children will have poor ability to ‘force themselves’ to attend” (p. 369).

Sex Differences

Attention-Deficit/Hyperactivity Disorder in Males. One could argue that ADHD and ADD are “males’ diseases” because males present more external, hyperactive symptoms than females and are more likely to be diagnosed. In a study by Singh (2003), fathers of young males with ADHD were interviewed and split into two categories, one called the “reluctant believers” and the other called “tolerant nonbelievers” (p. 312). “Reluctant believers” were defined as the fathers who supported the benefits of placing their sons with ADHD symptoms on stimulant medications, but continued to question whether some of the symptom-elicited behaviors were severe enough for medication. This group also saw medicine as another thing separating their sons from their same-age male peers who did not exhibit attention-deficits. These fathers also questioned how much of their sons’ current concerns might be their fault via heritability of symptoms.

The second group, named “tolerant nonbelievers,” who allowed drug treatment for their sons with ADHD but did not believe that the stimulant medications were doing much to help their sons and their symptoms (Singh, 2003). They also did not think that ADHD was a diagnosis that presented a valid cause for their sons’ behavior patterns. However, in both of these cases they neither opposed the diagnosis nor refused the prescription of stimulant medication. These fathers also held the mindset that ADHD was not necessarily the cause for their sons’ symptoms, instead they asserted that “boys will be boys” claiming that they shared some of the same behaviors that their sons do (p. 314).

One father told Singh (2003) that his son is “more wound up; he has trouble paying attention at school. But my wife comes from a family of all girls, and she doesn’t

have the experience with boys that I do. You know, boys will be boys.... My boys are all boy-- they like sports and running around. My tolerance level for Joseph is a lot stronger than my wife's" (p. 314). Therefore, fathers of ADHD boys who disagree with the use of medication or the diagnosis itself, tend to attribute impulsive and hyperactive tendencies to being a young boy and little else. The mothers of these boys tend to disregard the fathers' claim that their sons are just being "boys" instead of showing symptoms of ADHD (Singh, 2003). According to the American Psychiatric Association (2000), the ratio is greater between males and females when considering hyperactivity/impulsivity subtype and combined subtype, showing that these behaviors do occur more often—or are, at least, reported more often—in young boys than in young girls.

These fathers' beliefs regarding diagnosis and treatment seem to fit the popular view of Attention-Deficit/Hyperactivity Disorder as a male disease (Singh, 2003; American Psychiatric Association, 2000). This is most likely the reason why, when imagining a child with ADHD, one most often imagines a little boy who is fidgeting in his seat, tapping his pen, and blurting out answers in class instead of the little girl who is sitting in class staring out the window unable to sustain attention on her classroom tasks. If hyperactivity/impulsivity is seen as an inherent male trait and is the more salient and common trait associated with ADHD, then it is not surprising that young girls who show inattentive symptoms are easily overlooked and under-diagnosed.

Attention-Deficit/Hyperactivity Disorder in Females. As stated above, the inattentive-subtype of ADHD is more commonly seen in females and females have been traditionally under-diagnosed. Crawford (2003) suggests that, "girls with ADHD aren't

identified and helped earlier...because male ADHD patterns have been over-represented in the literature” (p. 28). The big difference is the tendency for males to externalize their symptoms, while females tend to internalize. However, until recently empirical research involving females—either alone or with male subjects—has been rare. The recent research conducted on females has produced a broader and more comprehensive picture of what ADHD and ADD look like in females, what disorders are commonly comorbid with ADHD and ADD, and what the outcomes for these disorders are (Biederman, et al., 1999; Monuteaux, Faraone, Gross & Biederman, 2007).

Biederman et al. (1999) conducted a study that compared a group of young females with ADHD and group of young females without ADHD (a control group). Of the females with ADHD used in the study, the largest number of girls was classified under the combined subtype, while the second highest number was classified under inattentive subtype. This supports the claims that symptoms of inattention tend to be more common in females than those of hyperactivity/impulsivity. Biederman et al. (1999) looked extensively at the risk of comorbidity with other disorders and reported that young females with ADHD

were significantly more likely than controls to have comorbidity with other disruptive behavior disorders (conduct disorder and oppositional defiant disorder), mood disorders (major depression and bipolar disorder), anxiety disorders, and one or more substance use disorder...girls with ADHD may be at risk for panic disorder, obsessive-compulsive disorder, language disorders, alcohol abuse, drug dependence, and cigarette smoking (p. 970).

In other words, ADHD presented in females has quite a few comorbid risks, the most common being mood disorders, anxiety disorders, and conduct disorders (Biederman, et al., 1999). In this study 45% of the females with ADHD involved showed pathology in one or more of the three aforementioned disorder categories, usually paired into conduct and mood disorders, and mood disorder with an anxiety disorder, while 4% showed all three categories.

Biederman, et al. (1999) also found that school-aged females with ADHD showed slight impairment on tests of cognitive and achievement functioning and also “higher levels of school dysfunction as evidenced by their significantly higher percentage of in-school tutoring, placement in special classes and repeated grades” (p. 971). School-aged females showed a greater proportion of inattentive symptoms over hyperactive/impulsive ones and also showed a large percentage of mood/anxiety disorders over disruptive disorders, like conduct disorder (Biederman, et al., 1999). These findings can be attributed to the female tendency to internalize symptoms and pathologies, while males are more likely to externalize (Biederman, et al., 1999; Mash & Wolfe, 2007).

Among other attributes, Biederman et al. (1999) conclude that “ADHD in girls was characterized by prototypical symptoms of the disorder, comorbid psychopathology, social dysfunction, cognitive impairment, school failure, and adversity in family environment” (p. 371). This shows an image of female ADHD that is both alike its male counterpart and different from it. Both males and females share cognitive impairment, social dysfunction, and family adversity, but they differ on the comorbid disorders they possess, on how they are identified and react in school environments, and on the symptoms they demonstrate. Biederman et al. (1999) report the “prevalence of both

conduct disorder and oppositional defiant disorder found in the sample of girls with ADHD were half of those previously reported in boys with ADHD” (p. 972). As mentioned above, disruptive behavior disorders, like conduct disorder and oppositional defiant disorder, occur more often in males because of the external nature of the disorders and the fact that boys tend to externalize psychological symptoms. The salience of the male representation of ADHD symptoms causes males to be referred more often than their female peers who show less salient symptoms, such as inattention.

Hinshaw, Carte, Sami, Treuting, and Zupan (2002) studied young females with both inattentive and combined subtypes of ADHD in terms of their neurological performances on various assessments and explored the ways that ADHD relates to neurological and cognitive functioning. They found that with the various neuropsychological tests, the females scored in the following hierarchy: “the combined type score worst, the inattentive type somewhat better, and the comparison girls best” (p. 1104). The combination of impulsive/hyperactive and inattentive symptoms puts young females in the combined subtype of ADHD at a disadvantage in these types of tasks, as opposed to females that only show inattentive symptoms.

However, in terms of statistics, Hinshaw et al. (2002) found that there was little to differentiate the two subtypes from each other, showing that the discrepancies were minute. It cannot be denied that no matter the subtype, girls with any type of attention deficit are at a significant disadvantage to females who carry no deficits worthy of a diagnosis. Considering the results of the neuropsychological tests given, Hinshaw et al. (2002) observed the following deficits in the females from both subtypes in comparison to the control group: “planning, response organization, set maintenance requiring both

long- and short-term memory, vigilance, and inhibitory control” (p. 1106). When considering the symptoms of ADHD, one could draw the conclusion that possessing both inattentive and combined subtype symptoms could affect a child’s ability to adequately perform any of the above activities, particularly the areas of planning, memory tasks, vigilance, and inhibitory control. While the study by Hinshaw et al. (2002) does not distinguish the combined subtype and inattentive subtype from each other, it does elaborate upon the neurological differences between females with ADHD and comparison females.

Monuteaux, Faraone, Gross, and Biederman (2007) conducted a longitudinal study on females who had ADHD that was comorbid with conduct disorder (CD), including the outcomes of having these two disorders concurrently. It was hypothesized that ADHD would be a risk factor for CD, that when both occurred together ADHD would exacerbate the CD, and that, aside from concurrent diagnosis of ADHD, CD would present negative outcomes. The females, ranging from childhood to late adolescence, participated in both the initial assessment and a follow-up after a period of five years, and it was found that “ADHD females were 5-8 times more likely to meet lifetime criteria for CD compared to controls” showing a strong relationship between the two disorders (Monuteaux, et al., 2007, p. 1736).

In terms of the severity of CD in females with ADHD, it was found that compared with the controls, there was a significantly lower age of onset of CD symptoms in girls with ADHD compared to girls in the control group, along with more symptoms of CD that occur for a longer period of time (Monuteaux, et al., 2007). In terms of CD, an earlier age of onset signifies a more serious and worse prognosis than a later age of onset

(Monuteaux, et al., 2007). In reference to the third hypothesis, conduct disorder did show many negative outcomes, aside from its comorbidity with ADHD, such as risk of substance abuse, major depression, nicotine addiction, and oppositional defiant disorder. Monuteaux et al. (2007) also found that the more serious problem than having ADHD is when ADHD is co-morbid with CD. The problems of one disorder are merged with the problems of another, specifically “ADHD without CD in girls is associated with academic troubles and moderate psychiatric dysfunction, while girls with ADHD plus CD suffer from the same academic troubles [as females with ADHD alone] as well as pervasive psychiatric co-morbidity and high-risk sexual behaviors” (Monuteaux, et al., 2007, p. 1739).

Because ADHD in girls is highly more likely to be co-morbid with CD, the outcomes for ADHD are amplified by the outcomes of this additional disorder. This comorbidity would cause even more distress and impairment in these young females’ lives than they would have with only one of the disorders alone (Monuteaux et al., 2007). As discussed above, ADHD, CD and a mood disorder can be comorbid in young females. Therefore, diagnosis and intervention with these females are crucial to providing them with a chance to treat these disorders and improve their functioning for the future.

Differences Between the Two Sexes. It has been discussed thus far how ADHD presents itself in males and in females. Males and females show different symptoms, different comorbid disorders, and different diagnostic subtypes. Research suggests the age of onset for ADHD is later in females, which may suggest “either insensitivity to early signs of the disorder in girls or an actual differences in life course of the disorder in

boys and girls” (Lahey, as cited in Arnold, 1996, p. 558). This statement suggests that a later age of onset is indicative of a pattern in female diagnosis.

Silverthorn, Frick, Kuper, and Ott (1996) discuss two different theories for why ADHD seems to occur more often in males than females: (1) the polygenetic multiple threshold model (PMT) and (2) the conditional variability model (CV). The PMT model states “that environmental factors and/or genetic factors combine to form a vulnerability or ‘liability’ to the disorder;” therefore, it can be asserted that “because girls are less likely to have ADHD, they are assumed to have a higher threshold for the disorder and therefore, need a greater liability to develop the disorder” (Silverthorn et al., 1996, p. 53). This means that girls would need a stronger genetic component than boys to even reach diagnostic criteria for the disorder. The CV model takes a different point of view, claiming that males “are subject to more genetic variability; therefore, more boys than girls shows milder forms of the disorder” (Silverthorn et al., 1996, p. 53). These two theories were tested in young males and young females with ADHD but no evidence was found in support of the PMT theory or the CV theory (Silverthorn et al., 1996). One limitation of their study was that their sample size for females (n=13) was small in comparison with their sample of males (n=67).

Biederman, Faraone, Monuteaux, Plunkett, Gifford, and Spencer (2003) also studied additional differences that exist between the sexes, such as growth rates and developmental rates. In this study, the measures included the actual height and weight of the participants along with the measures of what their height and weight “should” be, based on their ages and the heights of their parents. Overall, there were no significant height and weight differences between males and females with ADHD, nor were there

any differences between weight and height of children with ADHD compared with the control group children (Biederman et al., 2003). The researchers did find that females who were medicated for their ADHD weighed more and tended to be taller than females who were unmedicated for the disorder (Biederman et al., 2003). Also, females who had ADHD comorbid with major depression were taller and weighed more than females with ADHD alone. In fact, females with comorbid ADHD and major depression were considered overweight (Biederman et al., 2003).

Yang, Jong, Chung, and Chen (2004) also studied sex differences in regard to ADHD when they examined children from Taiwan, using males and females who met the criteria for the combined subtype of ADHD. The children with ADHD were compared with respect to their cognitive abilities, attention, and behavior using three different measures. There were no major differences between males and females with ADHD aside from the *Wechsler Intelligence Scale for Children* (Third Edition) subtest of Block Design, including no differences in their intelligences scores. Males and females showed “similar patterns of behavior disturbance,” according to their parents and teachers (p. 620). The differences on the scoring of the Block Design subtest are most likely related to an inherent sex difference in cognitive performance, as it is previously known that “women perform better than men on tests of verbal memory...men perform better than women on spatial tasks” like the Block Design subtests (p. 621).

Students with Attention-Deficit/Hyperactivity Disorder in the Schools

Girls Overlooked in the Classroom. Attention deficit behavior is most often seen in classroom settings, where disruptive behavior is the cause of more teacher concern than passive behaviors. Therefore, “boys with ADHD are probably referred

more often than girls, because of their defiance and aggression,” an externalizing tendency (Mash & Wolfe, 2007, p. 124). Females, on the other hand, internalize their symptoms and their problems. As a result, they are overlooked in places like the classroom where their more disruptive male peers with ADHD attract the majority of the attention. Instead of blurting answers out of turn or actively fidgeting and moving about in their seats, “girls with ADHD may be described by their teachers as ‘spacey’ or ‘in a fog.’ Without hyperactivity and disruptive behavior, ADHD in girls may go unrecognized or be ignored” (Mash & Wolfe, 2007, p. 125).

According to Barkley (2003), “DSM criteria were developed and tested mostly with boys with ADHD, and many of the specified symptoms, such as excessive running around, climbing, and blurting out answers in class, are generally more common in boys than in girls” (Barkley, as cited in Mash & Wolfe, 2007, p. 125). Even the diagnostic criteria put females at a risk of being under-diagnosed and subsequently untreated for their impairing attention-deficits. Perhaps as the research database on female symptomatology and presentation of the disorder grows, the newer revisions of the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders* will represent female symptoms equally as male ones.

What seems to be most troubling is the idea that “girls who are referred for treatment may be the most severely affected and may not represent the larger group of girls with ADHD” (Gaub & Carlson; Rucklidge & Tannock; Dalsgaard, Mortensen, Frydenberg, & Thomas as cited in Mash & Wolfe, 2007, p. 125). Therefore, the females studied might be the most serious of ADHD cases and will skew the criteria for diagnosis, creating an environment for overlooking females with milder symptoms.

These females still suffer academically and show higher risk of comorbid conditions, such as depression and anxiety. However, one can hypothesize that the likelihood of recognition and diagnosis decreases exponentially even compared to other school-aged females with the same disorder as themselves, let alone their male peers.

Current School Interventions. A response to the problem of being overlooked in classroom settings and losing the possibility of teacher referrals is to find a better way to identify females with ADHD symptoms, i.e. a school intervention system. If the females with the mildest symptoms could be identified, then the problem of under-diagnosis and under-treatment would be significantly decreased, and researchers could, at last, get an accurate ratio of how many females exhibit attention-deficits in comparison with males. Currently, there are some school intervention options that deal with the treatment and maintenance of proper functioning with ADHD (Edwards & Gfroerer, 2001; Barkley, 2007).

If a school-aged child's primary domain of trouble is the classroom, then the most effective treatments would involve a child's classroom and his or her teachers. Edwards and Gfroerer (2001) claim that these types of interventions are crucial in proper treatment, "while medication therapy may accompany school-based interventions, such programs serve as an integral part of treatment. Because managed care has caused cutbacks on the accessibility of the individual counseling offered to children with ADHD, school-based interventions are imperative" (p. 212). In other words, these types of interventions might be the only type of treatment available to some socioeconomic populations who are unable to access other resources because of financial or insurance complications. Aside from the obvious benefits of incorporating the school into

treatment, “the natural environment existing in schools helps children develop more appropriate behaviors” (Edwards & Gfroerer, 2001, p. 212). No other location proves better to learn how to behave properly in school than school itself.

Edwards and Gfroerer (2001) report on a primarily Adlerian-based school intervention, claiming that Adler “regarded the classroom as a community in which the child’s early beliefs about society are validated” (p. 212). A simple prediction would be to ascertain that if a child can cope with attention deficits inside a classroom, regarded by Adler as a young person’s society, then they should be able to cope in the actual society when they become an adult who may or may not continue to exhibit the same symptoms as in childhood.

Often students with ADHD symptoms show a tendency to become easily discouraged or experience feelings of isolation in the school environment because their hyperactive/impulsive symptoms “are dealt with by teachers and parents through punishment, negative attention, or removal from peers” (Edwards & Gfroerer, 2001, p. 213). These types of responses, however warranted, will most likely set an unfortunate precedent of low self-esteem in these students that will most likely carry into their adulthood. An important aspect of Adlerian-based school interventions is to “build the child’s sense of belonging and social interest [that] will help children excel both socially and academically in school” (Edwards & Gfroerer, 2001, p. 213). These types of interventions can counteract, or even prevent, the negativity expressed by teachers towards students’ ADHD symptoms and keep them from having a deteriorating effect on self-esteem.

Another important aspect of school intervention is to help the child feel as though he or she contributes productively to classroom activity and progression (Edwards & Gfroerer, 2001). Edwards and Gfroerer recommend allowing students to be involved in peer tutoring, if they have mastered a certain subject, or to participate in class meetings, where they are allowed to contribute in resolving conflicts in the classrooms and to both encourage and be encouraged by their classmates. Again, these actions involve an increase in the child's self-esteem and sense of self-worth in the classroom, which, if one follows Adler's theories, will carry over into future functioning.

Barkley (2007) reports on the current status of school intervention programs, but from a perspective associated more with social learning theory than Adler's theories. According to Barkley, school interventions must be prefaced by "functional behavioral assessment" (p. 280). Each student differs in symptoms and the affects that ADHD has on him or her, therefore before any type of intervention must take place, there needs to be some type of assessment on where that student is academically and behaviorally. Barkley comments on the disruptive nature of ADHD in the classroom setting, stating that they are "not confined to overactivity, inattentiveness, or poor inhibition, but were associated with a broader swath of cognitive impairments" (p. 281). Traditionally, students with disruptive ADHD symptoms are seen as those whose behavior disrupts those around them, such as constantly getting out of their seats and talking excessively in class. However, inattentive students with ADHD have cognitive symptoms that disrupt their own learning experiences, which negatively affects their classroom experience, putting those students behind in school work and academic development.

Barkley's (2007) main focus is to inquire into the future of school interventions and how to build on the information that already exists regarding current school interventions. ADHD is considered to be "as much a disorder of self-regulation and executive functioning as it is inattention. What we most need now is a theory of how normal self-regulation develops, where it goes awry in producing ADHD, and what this may mean for constructing better interventions" (Barkley, 2007, p. 281). The more one knows about the disorder itself, the better one can develop strategies to combat the negative impact its symptoms have in a classroom setting. The more involvement of empirically-based theories, the more effective treatments will be. Barkley (2007) goes so far as to say that "psychosocial treatments, especially behavioral ones, as comparable to medication management in this sense, producing solid benefits as long as they are in place" (p. 280). Once one teaches the child to behave in the classroom, this behavior change will serve him or her more efficiently than simply masking the symptoms with medication: the effects will prove to be longer lasting. Barkley (2007) also suggests more research should be conducted to improve school interventions, including exploring "the role of parental ADHD in affecting school intervention...and that of teacher ADHD and the larger realm of teacher-child temperamental 'fit'" (p. 285).

Perspectives of Students and Teachers

Perspectives of Students with Attention-Deficit/Hyperactivity Disorder.

Intuitively, there seems to be no better way to develop theories and models of thinking about ADHD than to talk with the persons who experience daily life with the disorder. Travell and Visser (2006) interviewed students with ADHD and their parents about their experiences with the disorder. In terms of symptoms, students and parents describe

sleeping problems, school problems, aggressive tendencies (more often described by students than parents), poor relationships with teachers, and bad behavior at home. Students also report symptoms of ADHD making them feel out of control and lowering their self-esteem: “you try to behave, but it keeps on going on in your head to stop you behaving, and I always got in trouble for it” claims one student (Travell & Visser, 2006, p. 207).

In terms of initial diagnosis of the disorder and its subsequent treatment, medication is reported as the primary method of treatment, with only a few parents choosing dietary changes and other alternative treatments. One interesting statement from Travell and Visser (2006) is: “the evidence indicated that young people and their parents had mixed experiences of the diagnostic process, and that none had a ‘textbook’ experience” (p. 209). This may suggest that instead of gleaning information about the patient from different sources, like teachers, the physician would most likely either diagnose based solely on parents’ reports or use of a symptoms checklist that could be completed by the parent or the child’s physician. The ideal diagnosis also would involve use of the *Diagnostic and Statistical Manual of Mental Disorders IV-TR* (Travell & Visser, 2006).

Travell and Visser (2006) obtained from participant students and parents suggestions about how to improve interventions, including, “staff acquisition of greater awareness, and acknowledgement of individual young people’s needs...greater staff knowledge of, training in, and understanding of ADHD, improved work with parents” (p. 210). These suggestions should be considered in future research on school interventions for students with ADHD, because each suggestion has important implications for

understanding a child with ADHD. There should be a greater awareness of how ADHD affects a student and what must be done to help him or her learn, and to do this, members of the school staff and faculty should be taught how to understand and handle the disorder in the school.

For most students, carrying a diagnosis of ADHD provides a stigma associated with the disorder. Certain actions in schools, such as taking a child out of class to take medicine or giving a student extra time on class assignments and tests, can cause dissociation from one's peers and a feeling of being different (Taylor & Houghton, 2008). Taylor and Houghton conducted a study concerning perspectives of students on "examination-related" anxiety using semi-structured interviews. Of the 15 students interviewed, only two were female. The students were asked their views on giving students with ADHD extra time on tasks. Only "one third [of the students] fully endorsed an allocation [for extra time]" while the other two thirds simply did not (p. 115).

Students who express mixed feelings in regard to students with ADHD having extra time stated that giving those students diagnosed with ADHD extra time is unfair to the remaining students, and, according to one student, "if you do and nobody else knows that you have ADD then they'll be thinking that's not fair...and then they'll give you a hard time" (Taylor & Houghton, 2008, p. 122). This point of view goes back to the fear of social stigmatization mentioned previously. A student, especially in high school, does not want to draw negative attention to him- or herself and make him- or herself different from his or her peers. In contrast, students who support the notion of extra exam time claim, "kids without AD/HD they do exams easier than kids like me. It's harder for me to concentrate on stuff.... I probably think for about 20 minutes to half an hour. Then I

have to rush towards the end to catch up. Extra time is good. It really helps” (Taylor & Houghton, 2008, p. 122). From this student’s perspective, extra exam time improves the quality of his or her schoolwork, in that he or she does not have to hurry the thought process to meet a relatively arbitrary time limit on a test. As a result, the student has more time to take in the information and provide more thoughtful answers than if he or she were rushed.

The vast majority of research on the female perspectives of the experience with ADHD features adult women, either providing their current experiences with ADHD as an adult or looking retrospectively at their experiences as children. Rucklidge and Kaplan (2000) gained perspectives on childhood experiences from 51 adult women with ADHD. The hypothesis that “these women would demonstrate a more maladaptive attributional style to failure events” was supported and it was also found that these styles are strongly related to the presence of depression and anxiety (Rucklidge & Kaplan, 2000, p. 716). Additionally, women who exhibit elevated symptoms of ADHD and high levels of depression felt as though they have less control over negative events in their lives than women who have lower levels. These women also report feeling unsatisfied with their interpersonal relationships during their childhood years, such as with teachers, peer groups, and parents. This study also affirmed the previous findings that ADHD is co-morbid with depression and anxiety, even carrying on into adulthood.

Taylor and Keltner (2002) studied adult females with ADHD by offering theories on sex differences along with perspectives of adult females. One woman claimed “there’s so much in my head, so many ideas, but they’re a jumbled mess. I can’t seem to turn them into anything productive... and of course, my purse is always such a mess...I

wish I could be one of those neat purse girls” (p. 69). Taylor and Keltner offer three theories on why females with ADHD differ from males with the same disorder: (1) fault within the *Diagnostic and Statistical Manual of Mental Disorders-IV-TR* criteria itself, (2) different representation in females, and (3) biological causes for a later age of onset. According to Taylor and Keltner (2002), the DSM-IV-TR criteria seems to be geared towards symptoms that more frequently occur in males than females, stating “the narrow scope and lack of gender specificity prevents girls and adult women from being diagnosed with ADHD...[and] they feel that symptoms aren’t always present before age 7....inattentive and nondisruptive children, particularly girls might not exhibit symptoms until middle or high school” (p. 71). The DSM-IV-TR overlooks sex differences in its gender and prevalence section of ADHD, and reports females do not typically exhibit symptoms before age 7, which is a requirement in the DSM-IV-TR. In future editions of this manual, there may need to be revisions to the diagnostic criteria to allow diagnoses to be made after the age of 7, especially in the case of females.

In addition, the manifestation of symptoms in males and females differ, as we’ve discussed earlier. Males tend to show outward symptoms and be “disruptive, ‘hyperactive’ boys” whereas “these girls are shy, withdrawn, compliant ‘people pleasers’ whose attempts to fit in can create a barrier to diagnosis” (Taylor & Keltner, 2002, p. 71). Females simply do not draw as much attention to themselves as their male peers and therefore are referred for diagnosis significantly less frequently than males. The age of onset tends to be higher in females than in males. Adult females also are more often diagnosed than younger females. Whereas boys show symptoms at a young age “girls, on the other hand, seem protected until puberty, when an increase in estrogen leads to an

increase in dopamine receptors and...[in] symptoms of ADHD...just as boys' symptoms are beginning to diminish, girls are beginning to appear" (Taylor & Keltner, 2002, p. 70).

Perspectives of Teachers of Students with Attention-Deficit/Hyperactivity Disorder. One of the main consequences of under-diagnosis is that young females are over-looked in the classroom, and therefore are less likely to be referred for diagnosis by their teachers (Mash & Wolfe, 2007). Under these circumstances, the first-person perspectives of teachers who work closely in the classroom with female students with ADHD are almost as important as the perspectives of the students themselves. The suggestions and strategies used by these teachers can help shape and improve school interventions for students with ADHD.

Lee (2008) interviewed 10 elementary school teachers in the United States about their experiences with teaching students with ADHD. All the teachers voiced concern about the problematic behavior that result from the symptoms of ADHD. More specifically, one teacher thought that problematic behavior "interrupts the learning of the child who distracts" while another "thought that such behavior prevents other children from learning" (Lee, 2008, p. 421). This presents teachers with a conundrum; in one teacher's words, "it was hard for me to know: do I stay with him? Or do I circulate with my other kids?" (Lee, 2008, p. 421). Teachers are concerned about what will benefit both the classroom as a whole and their individual students.

In reference to sex differences, two teachers "pointed out that less visible and yet inattentive behavior is also problematic...the quiet children demonstrating inattentive behavior disrupt 'their own personal learning'": likewise, these children, who are described as "listless" are not noticed in the classroom because they are not outwardly

disruptive and more quiet (Lee, 2008, p. 421). Because females tend to be the more “listless children” in the classroom and teachers admit that these quiet and inattentive children are most often overlooked, it is not hard to imagine that their teachers have a harder time identifying them in the classroom than their male peers with more salient symptoms.

In Lee’s study, only one of the 10 teachers talked of dichotomous symptoms, split into hyperactivity and inattention: “there’s the child who is very loud and active and busy and noisy and off task and moving around...then there’s maybe the quiet child, who’s just daydreaming, and not able to finish anything and tends to just get bogged down with the slightest task” (Lee, 2008, p. 422). The other teachers either saw solely hyperactive or solely inattentive types of ADHD or a combination of the two. These statements show that some teachers do notice inattentive symptoms in their students and what they do notice is the tendency to daydream and the failure to keep up with classroom assignments (Lee, 2008). As a pattern, preschool and kindergarten teachers tend to report a “focus on inattentive behavior” while elementary school teachers “discussed hyperactive-impulsive behavior” (Lee, 2008, p. 423). When discussing hyperactivity and ADHD in males, one teacher asserts: “the more acting out, the more disruptive are the boys.” Another comments: “it’s that Y chromosome” (Lee, 2008, p. 424). This may indicate a predisposition towards looking for these disruptive behaviors and thus looking primarily for males and not females.

In Lee’s study (2008), one teacher comments: “I...think that girls fit into the school culture better than boys do...in our society....It’s still very expected that girls will be quiet and prim and proper and boys will be boys—you know, that boys are going to be

rough and...we expect little girls to come in and sit down and be quiet.... Is *that* [why] we don't see as much ADHD in girls?" (p. 424). This statement from a third-grade teacher illustrates the crux of the under-diagnosis problem with young females from a socialization perspective. If young females with ADHD inattentive-subtype are unfocused and suffering academically but quiet and well-behaved, how does one identify females with ADHD? This statement provides another argument for developing a school intervention that better identifies and supplements treatment for females with ADHD. If it is possible to instruct teachers on what to look for, then they will be better able to distinguish these girls from others in the class and refer them for a diagnosis.

In terms of how to effectively accommodate students with ADHD, when asked if students should be given extra exam time, over 50% of 18 teachers included in a study conducted by Taylor and Houghton (2008) agreed that extra exam time was beneficial and very few (two) disagreed. One of the 10 teachers who agreed that extra exam time was beneficial believed that

AD/HD [is]...a 'mental disability,' which, under formal exam conditions, impedes the ability of students...to process complex information in a timely manner" and also that extra time "need to be afforded to students with...AD/HD...as is currently extended to students with more tangible physical (e.g. broken arm) or learning (e.g. Dyslexia) disabilities (Taylor & Houghton, 2008, p. 117).

These 10 teachers argue that because these students have a "handicap" that does not afflict other students, steps have to be taken to accommodate to their needs so that they can maximize the student's academic potential. In one teacher's words, extra exam time

“doesn’t give ADD kids any extra advantage, it just puts them in the same frame as everyone else” (Taylor & Houghton, 2008, p. 118).

Einarsdottir (2008) observes that “the developments of a younger school entrance age, longer school days, larger classes and earlier emphasis on academics in the Icelandic school system may have strong negative effects on many children with ADHD-associated behavior” (p. 381). These academic concerns are quite similar to concerns teachers have with elementary-school students in the United States. Overall, the teachers in Einarsdottir’s (2008) study agree that most of the children with ADHD symptoms they saw in the classroom were male and one teacher commented on a student: “he was overactive and into everything, you could not take your eyes off him, or he would hurt himself” (Einarsdottir, 2008, p. 385). Again, the consensus from the teachers that male students with ADHD were the ones they saw most often is a statement to the salience of ADHD symptoms in males.

In terms of accommodating students with ADHD, the teachers in this study claimed “they always took the time to get to know the child” and they also “found it important to work with these children in the classroom, as part of the group, because the children needed support in social relations...and should try to focus on the child and adapt what they are doing, so the child would benefit from it” (Einarsdottir, 2008, p. 385-386). These are useful suggestions for a fresh approach to school interventions: that children should have individual attention from their teachers, but children also require social support from group work. However, in the typical overcrowded classroom with a single teacher, these types of individualized attention patterns are not always possible.

Some teachers, however, are skeptical about diagnosis procedures. In Einarsdottir's study (2008), one teacher stated. "I don't know where we are heading. Are we heading in the direction of defining everyone and everything into its smallest details?" (p. 387). This teacher seems to be referring to the concern about over-diagnosis and the resulting social stigma attached to a diagnosis.

Teachers in Einarsdottir's (2008) study offer suggestions for how to handle a student with ADHD in the classroom, such as seating the child in a place where he or she is less likely to be disturbed or distracted. Also, many teachers use a strategy of removing the child from the classroom for a "break" where he/she can have one-on-one attention from an adult, which is beneficial because "other children in the classroom often needed a break from those children with behavioral problems" (Einarsdottir, 2008, p. 389). These teachers also found that assigning children with attention deficits creative assignments that could be emphasized more heavily than traditional academic assignments could be beneficial (Einarsdottir, 2008). In terms of medication, most of the teachers saw "medication as a last resort" that should only be used if "absolutely necessary: and "should be constantly monitored" (Einarsdottir, 2008, p. 391). These teachers have more exposure and experience with children with ADHD than the average adult and therefore they often are a more reliable source of information about children's classroom behaviors and strategies that have proven effective and ineffective than parents or physicians. Because of these experiences and the potential advice they could give, their perspectives are extremely important.

The Purpose of the Study

Recent research indicates: (1) males are diagnosed with ADHD more often than females (Mash & Wolfe, 2007; Silverthorn, et al., 1996); (2) males and females manifest ADHD in different symptoms, some of which cause females to be overlooked (Taylor & Keltner, 2002; Mash & Wolfe, 2007); (3) ADHD provides problematic academic outcomes and sometimes disruptive classroom behavior along with the risk of comorbid disorders (Biederman et al., 1999); and (4) school interventions are beneficial but need to continue to improve in the future (Barkley, 2007; Edwards & Gfroerer, 2001). Few studies have been devoted to obtaining first-person perspectives of school-aged females with ADHD.

The purpose of this study is to obtain first-person perspectives of preadolescent and adolescent female students with ADHD about what school is like and how ADHD affects their daily lives, both in and out school. The purpose also is to obtain first-person perspectives from teachers of females with ADHD as to how they identify females with ADHD in the classroom, the factors they associate with teaching females with this disorder, and strategies they use in the classroom.

Research goals are: (1) Describe the academic and social experiences of preadolescent and adolescent females with ADHD from their first-person perspectives, (2) Describe the experiences of teachers who interact with female students with ADHD on a daily basis from their first-person perspectives, and (3) With this information, I hope to provide additional information for the development of a classroom intervention strategy to more accurately identify females exhibiting ADHD symptoms in the classroom and reduce the problem of under-diagnosis.

METHODS

Participants

Participants were 10 female students who had been diagnosed with Attention-Deficit/Hyperactivity Disorder and 12 teachers who came into daily contact with females with ADHD. Five of these females and four teachers were from a middle school (ages 12-14) in the Southeastern United States and the other five females and four teachers were from a high school (ages 15-17) in the Southeastern United States. There also were four teachers from an elementary school in the Southeastern United States. Female students from these two age groups were used because it is assumed that they would be more articulate in describing their experiences than younger females and are at grade levels where more academic and social pressure is placed on them than in elementary grades. However, it was important to gain perspectives from teachers who teach elementary aged females with ADHD, in addition to the other teacher participants.

Information was gathered from the female students through a self-report demographic form, including age, race, grade in school, approximate GPA, what “track” of schooling they are in (honors courses, regular courses, resource courses), age of first diagnosis, type of treatment (including medication), severity of symptoms, and whether or not their biological parents (or anyone else in their biological family) have received a diagnosis of ADHD. Demographic data also were gathered from their teachers, including age, sex, race, how many years they been teaching, area of expertise, grades they have taught, grades they were currently teaching, and approximately how much experience they have had with teaching children with ADHD.

Teachers were referred to by their assigned number or “name” in this report. The letter of the name represented the level of education that the teachers were currently working in (H represented high-school grades, M represented middle-school grades, and E represented elementary-school grades). The number of the name was arbitrary and was determined based on the order in which the participant turned in his or her consent form. For example, the participant M3 was a middle-school teacher who turned in his or her consent form 3rd of that group of 4. Of the 12 teachers interviewed, eleven were female and one was male. Ages ranged from 31-60 (mean = 49.67) and years of teaching experienced ranged from 2-42 years of teaching (mean = 18.375). Eleven of the teachers identified themselves as “Caucasian” or “White” and one teacher identified herself as “White/Hispanic.”

The amount of experience each teacher had with female ADHD/ADD students varied. Some teachers reported a concrete number of years, such as 10 years (H1) or 6 years (H4). Others reported adjectives such as “much [experience]” (E1), “some” (M3 and E4), “many years” (E2), or “quite a bit I suppose” (E3). M1, M4, H3, and H2 all reported seeing one or more female students with ADHD/ADD per year/semester class. M2 reported seeing “not as many girls as boys – girl ADD tends to be quieter, so not as noticeable.”

Students also were referred to by their assigned names. The first letter represented the grade level (H for high school, M for middle school), the second letter was “S” for student to distinguish them from the teacher participants and the number, as with the teachers, was arbitrary—the number in which they turned in their consent form. Therefore participant HS2 was the high-school student who was the second to turn in her

consent form. The five high-school students were all chosen from the same high school, which also was the same high school as the four high school teachers interviewed. Of the five female high-school students, two were Caucasian and three were African-American. Two of the females were 15 years old and the other three were 17 years old. The two 15-year-olds were in the 10th grade and the three 17-year-olds were in the 11th grade. All five females had a diagnosis of ADHD or ADD and followed an Individualized Education Plan (IEP) in their high school, which allows them special privileges regarding academic work, such as extra time in test-taking, shortened tasks, or preferential seating in the front of the classroom to be less distracted. Their reported age of first ADHD diagnosis ranged from age 7 to age 10 (with one not reporting). Three of the females rated their ADHD symptoms as moderate, one rated her symptoms as moderate to severe, and one rated her symptoms as mild. Four of the five females reported that medication was a component of their treatment. Four also reported the use of a therapist in treatment. Three of the five females reported a member of their immediate family as having an ADHD diagnosis. None of the females reported approximate GPA and “track” of schooling.

The school psychologist with whom I collaborated in finding participants did not have a record that specified the subtype of ADHD. *The Diagnostic and Statistical Manual of Mental Disorders* (Fourth Edition – Text Revision) (2000) has eliminated the diagnosis of ADD and replaced it with ADHD-predominately inattentive subtype. The diagnosis of ADHD also includes two other subtypes: predominately hyperactive/impulsive subtype and combined subtype, which includes symptoms from both the hyperactive/impulsive subtype and the inattentive subtype (APA, 2000). Three

of the high-school females were reported to have ADD, which can translate into ADHD-predominately inattentive subtype. The other two high-school students were reported to have ADHD and it is unclear whether this means predominately hyperactive/impulsive subtype diagnoses or combined subtype diagnoses. One high-school female student had co-morbid diagnoses of Post-Traumatic Stress Disorder and Autism. There were no other reported co-morbid diagnoses.

The five middle-school students were chosen from the same middle school as one another and as the four middle school teachers who were interviewed. All five students identified themselves as Caucasian. One student was in the 8th grade, while the remaining four were in the 7th grade. Three of the females were 12 years old and two were 14 years old. Only two female students reported their age of first ADHD diagnosis; one age 6 and one age 8. Four students were currently taking medication for their ADHD symptoms and one female reported seeing a counselor. One student reported her symptoms as “mild,” two as “moderate,” and one as “severe,” with one student not reporting. Three of the five students reported someone in their immediate family having an ADHD diagnosis. None of the females reported approximate GPA and “track” of schooling. Two of the females have IEP plans, described in the section on high school females and the remaining three had 504 plans. A 504 plan is part of a legal federal act that requires school systems to accommodate students with disabilities, such as ADHD, while in the classroom.

Similar to what was reported with the high school students, there were no subtypes reported with the diagnoses of ADHD. All five students have a reported diagnosis of ADHD, the subtypes of which are unknown. One student had a comorbid

diagnosis of Oppositional Defiant Disorder and there were no other reported comorbid diagnoses.

Materials

The materials used for this study included an Olympus WS-400 S digital audio recorder for use in audio recording the interviews with students and teachers, paper and pencil for noting participants' behavioral observations during the interviews, and a laptop computer to transcribe and analyze the data after the interview process was completed.

Procedures

The participants (both female students and teachers) were recruited from a local school district and purposive sampling was used. A purposive sample is a sample obtained based on its relevance to the study. For example, I used females ages 12-14 and 15-17 who have been diagnosed with ADHD and attend school because that is the group of interest in this study. Informed consent forms were sent to the participating teachers and to the parents/guardians of the student participants via the school psychologist associated with the school district. In addition, assent forms were presented and explained to the student at the time of the interview, at which it was also signed.

One semi-structured interview took place with each of the student participants individually and with each group of teachers (elementary school, middle school, high school) during the fall semester of 2009 and the spring semester of 2010. Teacher interviews were conducted during the months of October and November of 2009 and student interviews were conducted during the months of February and March of 2010. I conducted the interviews with three groups of teachers through focus groups instead of individually so that a discussion among teachers could be initiated. Semi-structured

interviews have pre-established open-ended questions that will be asked that follow a particular theme, “yet at the same time there is an openness to changes of sequence and forms of questions in order to follow up the answers given” (Kvale, 1996, p. 124).

The interviews took place in small conference rooms at the schools where each group of teachers was employed. The interviews for student participants also took place in small conference rooms in the school where the students attended. I audio recorded each interview and also took behavioral observation notes. Interviews with students included the following questions:

1. Tell me about a time when you were especially aware of how ADHD/ADD affected you in school.
2. Describe what having ADHD means to you.
3. Are you on medication for ADHD/ADD? If so, describe the differences between times when you are on and off your medication.
4. Are there other ways that people have tried to help you, such as seeing a therapist, using behavioral techniques, or use of dietary restrictions?
5. Tell me about a time when you felt as though having ADHD/ADD made you different or unique.
6. Describe a time where having ADHD/ADD affected your relationship with your classmates.
7. What kinds of special opportunities do you receive in school because of your ADHD? (Extra exam time, individual attention, etc). If so, how do other students react towards these special opportunities?

8. Tell me about a time when you had a teacher who was understanding about your ADHD/ADD and made classroom life easier for you.
9. Tell me about a time when you had a teacher who did not know how to help you handle your ADHD/ADD in the classroom.
10. What are some specific things your teachers could do to help you in the classroom?

Probes were used following the initial responses to each question addressed to students and teachers, as needed.

Interviews with the teacher participants included the following questions:

1. How much experience have you had with students who had ADHD/ADD?
2. Describe your understanding of ADHD.
3. Tell me your thoughts on the various treatments of ADHD/ADD and which you feel are most and least effective in the classroom.
4. What types of behaviors in the classroom are typical of male students with ADHD/ADD?
5. What methods have you used to identify males with symptoms of ADHD who are in your classroom?
6. Who do you turn to for support when you encounter a student with ADHD/ADD who you are not sure how to handle or what to do with in the classroom?
7. What types of behaviors in the classroom are typical of female students with ADHD/ADD?

8. What methods have you used to identify females with symptoms of ADHD who are in your classroom?
9. What types of techniques (preferred seating, extra exam time, individual attention) do you use to support your female students who have attention deficits?

All of the questions were in an open-ended format that “focuses more on the subjective experience of the participant” (Seidman, 2006, p. 85). Seidman also claims, “everything said in an interview is a story” (p. 87). Of chief interest is uncovering the stories from these female students and their teachers. Questions were chosen based upon models used in qualitative studies in the literature review and the information they provided. Questions were also chosen to elicit the richest response from the participants and gain information on the participants’ first-person perspectives that were outlined in the research goals. After the interviews were conducted, I transcribed each of them. Student participants and teachers were given the opportunity to be debriefed. The transcripts and recordings were assigned a numeric code instead of names with identifying information. In the subsequent report, I referred to the participants by pseudonyms and only limited demographic information was reported. After the report was written the transcripts and the audio recordings were destroyed.

Analysis

After the interviews were transcribed, I analyzed the transcripts for patterns and themes in the responses of students and teachers. Patterns and themes are the portions of the interview that are most important and relevant to the study and also the portions that are of most interest to me. Seidman (2006) recommends one should first “read [the text]

and mark with brackets the passages that are interesting” (p. 117). I approached the data with the intention of searching for descriptions of what it is like in the classroom for a student with ADHD; what it is like to teach a child with ADHD; and what can be done to aid teachers with female students who have ADHD in regards to interventions. Themes regarding student perspectives were determined by comparing all five of the middle-school transcripts to one another, all five of the high-school transcripts to one another, and then considering data from the ten transcripts as a whole.

I used a slightly altered technique for the analysis of the teacher focus group interviews. Morgan (1988) provides a process of analyzing transcripts of focus group interviews. He advises “to begin with one or two groups, developing hypotheses and coding schemes that can then be applied to the remainder of the groups” (Morgan, 1988, p. 64). Doing this helps the researcher conceptualize the patterns of answering without becoming lost in all of the dialogue. As with individual analysis, quotations chosen for the report were done so based on the categories that were found when reviewing all three of the teacher transcripts as a whole. Morgan (1988) also recommends organizing information by conducting analysis by topic because it “facilitates the comparison of the groups” (p. 66).

Each group has its own themes and patterns, but the three groups also can be compared for overarching themes that exist in all the groups. I read each of the transcripts and noted themes that were common to each of the interviews. For example, in coding my teacher research I noticed that many of their responses fell under the category of “Classroom Interventions” or “ADHD Symptoms in Males vs. Females.” Therefore, I coded the data for each teacher interview appropriately. I used the same

method of coding for the student interviews; the methods included reading all the transcripts, searching for themes, and creating a coding scheme.

When analyzing qualitative data, particularly interview transcripts, reliability and confirmability are important. Confirmability is a concept in which the results of a qualitative study should be corroborated—or confirmed, as the name suggests—by persons other than the investigator. According to Orcher (2005), “when possible, it is desirable to have two or more researchers code the data....They consult with each other to determine the extent to which their codes and interpretations are in agreement” (p. 72). For this study, we used analyst triangulation, which Patton (1999) described as using “multiple analysts to review findings” (p. 1193). Two other analysts aided in the analysis of critical portions of the transcripts by reviewing the passages that I had already selected and confirmed their importance and relevance to the research.

The two analysts were fellow graduate students: one was in the clinical psychology program with little experience in qualitative research and the other was in the school psychology program with previous experience in qualitative research. Analysts were given transcripts that were coded with themes and asked to read the coded portions only and indicate whether they agreed with how the passage was coded. This process reduced investigator bias and increased the confirmability of the results found. The two other analysts looked over the coded transcripts, judged the investigator’s coding, and decided if it was coded legitimately or if the investigator was biased in some way in the interpretation of data. The disagreements that were expressed by the two additional analysts were mainly that some coded portions fell into more than one coding category, such as “Views on ADHD” excerpts overlapped with “ADHD Symptoms in Males versus

Females.” The same passage could have been coded for both categories and that fact was illuminated for the researcher.

The purpose of analyst triangulation is not to achieve total agreement, but instead to discover fresh, alternative views of the data collected (Patton, 1999). The views expressed by the additional analysts involved different ways of looking at the data, such as reminding the researcher that one particular passage contains information pertinent to more than one coding category. Analyst triangulation is a method used to determine confirmability of the analysis. By examining the data and comparing their conclusions to the conclusions drawn by the researcher, an outside analyst “attests that [the conclusions are] supported by data and is internally coherent, so that the ‘bottom line’ may be accepted” (Lincoln & Guba, 1985, p. 318). These comparisons, similar to the ones described by Orcher (2005), strengthen the confirmability of analysis and interpretation.

After identifying relevant and important data, the next step, according to Seidman (2006), was to “reduce and then shape the material into a form in which it can be shared or displayed” (p. 119). In doing this, I narrowed the selection of passages of interest and separated them into categories, such as “Classroom Interventions,” “Teacher Effectiveness,” or “Academic Implications of ADHD” to present in the report. I also included an appendix with entire transcripts of the interview with one group of teacher participants and an appendix with the entire transcript of the interview with one student participant and an appendix with copies of each of the three informed consent forms.

RESULTS

This Results section includes a report of the results from the teacher participants who were interviewed first and then a report of the results from the student participants who were interviewed. This is the order that was used in the procedures. Each of these reports includes excerpts and quotations from the interviews as well as common themes that were observed in each of the interviews. Both the teacher perspectives and the student perspectives are reported along five themes that were common between each of the participants in that category.

Teachers' Perspectives

The views of the elementary-, middle-, and high-school teachers are presented individually by the three grade levels in the five following categories: views of Attention-Deficit/Hyperactivity Disorder, comparing Attention-Deficit/Hyperactivity Disorder symptoms in males versus females, identifying students in need in the classroom, views on treatment methods, and classroom interventions. These five categories encompass the overarching themes seen in the interview questions presented to the focus groups of teachers. As mentioned in the Methods section, the teachers were interviewed in three focus groups of four teachers: first elementary-school teachers, then middle-school teachers, then high-school teachers. The five themes were chosen because each is clearly demonstrated in all of the transcripts as an overarching, universal theme.

Teachers are referred to by a code that indicates which grade level they are (E for elementary, M for middle, H for high) and a number which indicates the order in which each teacher turned in his or her consent form. For example, E2 is the elementary-school teacher who was the second to turn in her consent form. A complete transcript of the

interview with the elementary-school teachers is provided at the end of the report in Appendix D. Provided below are brief descriptions of each of the twelve teachers:

- E1: A 52-year-old Caucasian female with 2 years of teaching experience. She is a special education teacher who specializes in 3rd through 5th grades.
- E2: A 41-year-old Caucasian female with 19 years of teaching experience. She teaches the 3rd grade.
- E3: A 54-year-old Caucasian female with 18 years of teaching experience. She teaches the 5th grade.
- E4: A 51-year-old Caucasian female with 30 years of teaching experience. She teaches 1st grade.
- M1: A 51-year-old Caucasian female with 27 years of teaching experience. She teaches math and science in the 6th grade.
- M2: A 53-year-old Caucasian female with 20 years of teaching experience. She teaches math and science in the 6th grade.
- M3: A 58-year-old Caucasian female with 18 years of teaching experience. She teaches 6th grade and has some reported experience in counseling.
- M4: A 60-year-old Caucasian female with 42 years of teaching experience. She teaches language arts and social studies in the 6th grade.
- H1: A 58-year-old Caucasian female with 14 years of teaching experience. She has experience teaching all grade levels. She reports expertise in learning disabilities and behavioral handicaps.
- H2: A 33-year-old Caucasian male with 9 and a half years of teaching experience. He is a 10th and 11th grade English teacher.

- H3: A 54-year-old Caucasian female with approximately 15 years of teaching experience. She teaches science to grades 10 through 12.
- H4: A 31-year-old Caucasian/Hispanic female with 6 years of experience. She teaches 9th through 12th grades. She reports expertise in special education, autism spectrum disorders, and other behavior disorders.

Elementary-School Teachers.

Views of Attention-Deficit/Hyperactivity Disorder. Each of the four elementary-school teachers expresses the presence of one or more children in their classroom with Attention-Deficit/Hyperactivity Disorder each year. E1, a special education teacher, claims that “half my students have attention issues.” E3, a 5th grade teacher who has 18 years of teaching experience, comments, “I think we see more children now who actually carry a label or are diagnosed than we did previously, but the symptoms and the behaviors are very typical and have been seen all along.”

When asked to describe how they, personally, understood ADHD as a disorder, the four teachers express the theme that the symptoms are involuntary and chaotic for a student with this disorder. E2, a 3rd grade teacher, specifically states, “I always look at it as a child whose body and brain can’t keep up with one another. I was trying to talk with a parent the other day, I felt like their child was constantly in a wrestling match. It’s just this back and forth.” E3 shares her opinion: “it’s like they’re just being bombarded by stimuli that they can’t filter.” The consensus among these teachers is that school is a daily and difficult struggle for these students.

Comparing Attention-Deficit/Hyperactivity Disorder Symptoms in Males versus Females. When asked what types of behaviors in the classroom were typical for males

with ADHD, the teachers express mostly symptoms found in the predominantly hyperactive/impulsive subtype of ADHD, as described in the *Diagnostic and Statistical Manual of Mental Disorders* (Fourth Edition-Text Revision) (APA, 2000). They report the following attributes: “very impulsive,” “loud,” “can’t sit still,” “constantly in motion, into everybody else’s business,” “lack of personal space,” “lack of respect for others’ personal space” and “too busy being active to think about their learning.” E3 comments that one child she has taught is “kind of like a human pinball and just boings off of everybody as they move around the room.” E1 adds that male students with ADHD “find amazing ways to entertain themselves with something much more interesting than the challenge that you have for them.”

When asked about behaviors typical of female students with ADHD, E3 admits that she has seen females exhibit the same hyperactive-impulsive symptoms as male students, but that it is not the norm. However, the rest of the teachers describe a variety of passive symptoms that are associated with the predominately inattentive subtype of ADHD, such as “withdrawn,” “teacher pleasers,” “real daydreamers,” “real chatty,” and “can be missed a lot.” E3 comments that a female student she knows with ADHD seems as though she is “playing a different movie than what’s happening in front of her.” To the same effect, E1 comments that one student she knows “sees life through another lens.” E4, a 1st grade teacher with 30 years of experience, states that these girls are “the quiet ones. They don’t cause trouble, they’re not disruptive, they’re just not getting it” to which E1 adds “and they’re not getting it done.” The perspective is that some female students they have encountered in the past have exhibited hyperactive-impulsive

symptoms, but the majority of their experience with females has been those who show symptoms that fall in the predominately inattentive subtype.

Identifying Students in Need in the Classroom. The four elementary-school teachers interviewed reach the consensus that the best way to identify a child in the classroom, male or female, who seems to be struggling with sustaining attention would be to compare his or her work and his or her attentiveness to that of his or her same-age peers. Teachers in the school system, as they express in the interview, are not allowed to diagnose. To this effect, E3 elaborates: “we can’t identify and say that this child is ADHD, but I can say this child’s ability to focus is not that of his peers who are working on grade level.” Likewise, observing noticeable symptoms of ADHD in males, such as being out of their seat or needing to be constantly redirected to their current task is another indicator of attention issues that is discussed during the interview. For both sexes, organizational issues are also an issue for students with attention problems, one specific example from E4 is that “their desk is a mess, they can’t find things, they don’t know where their homework is or else it’s crumpled up in the bottom of their bookbag and they don’t know it.”

The teachers discuss the theme of easily overlooking female students with attention problems in the classroom. E2 comments that “many times, I think girls want to keep issues to themselves. You have the children that blurt out and tell you, ‘I can’t do this!’ or ‘I’m having trouble,’ but girls don’t want anyone to know.” Because of the less salient nature of their academic struggles, these girls are less likely to be identified by the teacher, as opposed to the males mentioned previously who are out of their seat and needing constant redirection. Specifically, E1 recalls:

It's more typical when I look back on kids who could have placed in special ed [sic] and didn't that it seems like it's more often a girl who we look at her as capable. They just need a little more time, a little more this or that.

The elementary teachers, as voiced by E3, believe that the reason for this reluctance to announce their personal struggles that:

girls have an innate social ability.... They seem more concerned about fitting in and, therefore, you know, 'if I don't know how to do this either I'll ask somebody for help or I'll just look to get their help.' And so I think that's more typical of girls than I do boys. Because they do want to fit. They don't want to stand out.

Once teachers have identified a male or female student who seems to be presenting attention difficulties, the elementary-teachers describe a variety of strategies they use to gather more information, such as talking to previous teachers and talking with parents about behaviors exhibited in the home environment. E2 describes a specific procedure she had adopted to showing parents their children's issues in the classroom:

I send home weekly progress reports and on it, a part of it, not only is it the academic but it's the behavior, is their class work done on time, what does their time on task look like, what's their conduct look like. If I have week after week of a child having difficulty, that's a great tool for me to sit down with the parent and say, This is happening over and over again... It's not just that it's a bad week, because it's been a bad week for six weeks now. Parents really have to be able to see something.

Views on Treatment Methods. When asked about various treatment methods of ADHD, all four elementary school teachers express frustration with the difficulties in

being consistent with treating the disorder. Stimulant medication is the first treatment option discussed, with E1 beginning the discussion:

A child who is truly ADHD unmedicated is very noticeable. And when they are medicated and they take their medicine and it is appropriate medication, it makes a world of difference. So, I like all the other things because you need all the other things anyway, but to me that's make it or break it.

Some of the teachers, especially E1, agree that medicine is a good and effective option, but even the elementary-school teachers who do not see medicine as the most effective option, like E3, admit that it seems to be an inevitable outcome because of our society's views:

Often times, they just want a pill to fix it and don't want to take responsibility for structuring things for their child that would help. That consistent structure is so important and I think as teachers that's what we try to do in the classroom is keep the structure there and be very consistent and those things help a child with that situation that often times the only place that happens is in the classroom. It doesn't happen outside and that makes it harder.

All four teachers express frustration that parents don't consider other treatment options first, such as daily consistency at home and school, dietary options, or making sure their children get enough sleep at night. E3 also discusses that consistency is difficult to maintain in the classroom because of unexpected changes and interruptions in the daily school schedule which are unavoidable in a public school system. Lastly, E1, E2 and E4 share their frustrations that some parents take their children on and off their stimulant medication which is also detrimental to the student in terms of developing coping skills.

Classroom Interventions. The consensus of the four elementary-school teachers is that tailoring classroom interventions to the child's specific needs is best practice. E2 and E4 discuss their tendency to place students with attention deficits in pairs or groups to complete their assignments so that other students are present to keep the student on task. Interventions range from E1's policy of providing snacks for the children in the classroom, especially with those students on medication, to E4's practice of allowing a student to stand while taking a test or doing class work to more innovative interventions, such as that utilized by E1, the special education teacher:

I have tents in my room and I have headphones that don't work, so for both girls and boys, I will give them headphones so they can not tune out and I will allow them to do their work in the tents, under desks, in corners, places where they can just go. And I don't know that the regular classroom has this much opportunity for that as I do, but that's what a lot of what I do with my kids who can't get it focused in the group. Especially when they're all of like kind in the room.

Other interventions described included E2's tendency to give students an object to manipulate during lessons and E3's suggestion to allow the child to use a larger work space than a traditional desk and moving away from distracting noises.

Middle-School Teachers.

Views of Attention-Deficit/Hyperactivity Disorder. Each of the middle-school teachers describes having much experience with students who have been diagnosed with ADHD in the classroom; however, each admits that he or she tends to see more males in the past than females. M2, a 6th grade teacher with 20 years of experience, specifically adds:

The boys tended to have more issues with ADD or ADHD. However, the girls that I've worked with, I find that it's not usually ADHD, it's just ADD and it's very passive and it's easy to look over it. So you think that they're just quiet and they're paying attention, when in fact, they're not.

These differences between males and females are addressed further in the following section on ADHD symptomology.

Like the elementary-school teachers, the middle-school teachers express a belief that having ADHD is not a voluntary condition. M1 comments:

It's not something the child chooses to do, which parents usually think it is. The true ones that are diagnosed and really are ADD or ADHD can't help it. Now we have to teach them strategies to learn to deal with it and to be successful in the things, all the different characteristics that come with an ADD person. And I don't think they choose to be that way, and it's just one of these things. And that's a big fallacy of the public because that's what they think. When we were growing up, we just got a spanking and it was over. It's not that way and I do think it is a brain thing.

This teacher is not the only one of the group to discuss involvement of brain function, which is not mentioned in the elementary-school teacher interview; M3, a 58-year-old 6th grade teacher, also addresses it. Teachers describe symptoms of ADHD as involving distractibility, inattention, poor social outcomes, disorganization, forgetfulness, and being overwhelmed with school tasks that other children would find feasible. The middle-school teachers also empathize with their students who show ADHD symptoms. M1, a 51-year-old math and science teacher, expresses the following:

I tell you they do not have a lot success in school. School is very difficult for a child with ADD or ADHD because it just doesn't fit the norm. And they struggle and struggle and many times, by the time we get them, their self-confidence is completely gone. I can vouch for that.

Comparing Attention-Deficit/Hyperactivity Disorder Symptoms in Males versus Females. In a similar pattern to that of elementary-school teachers, the middle-school teachers describe females as being easily overlooked in the classroom and less willing to share their diagnosis with classmates, M4 elaborates: "For some reason, the girls when they have a problem with the ADD, usually they are less obvious than the boys are, the boys act out, they're more physically involved in whatever it is than the girls are." M2 adds: "I've found that boys don't tend to try to hide it like girls." M4, a 60-year-old social studies and language arts teacher, insinuates that girls are less open about their disorder with peers because they are "more self-conscious about it." Also, M2 suggests that societal pressures might contribute to this mindset:

I think a lot of that, too, is society's view that 'boys will be boys.' It's okay for boys to be a little wild and crazy, but girls need to control their behavior more. I think that's pushed from very young to very old.

Teachers report that males they have observed display the following symptoms: "tapping," "impulsivity," "walking around the classroom," "blurting out whatever comes to mind," "aggressive," "argumentative," and other movement symptoms, like "riding the chair." As noted in the elementary-school interview, these symptoms are associated with the predominately hyperactive/impulsive subtype of ADHD. However, M1 and M4

describe males exhibiting symptoms of the predominately inattentive subtype, such as “passive” and “zoned out.”

The middle-school teachers report that females display the following symptoms: “they tend to preen a lot,” “play in their trapper keepers,” “organize stuff,” “arranging stuff,” “fiddle around with stuff,” “talkers,” “tend not to blurt out,” “tend to fiddle more,” “tapping pens,” “more passive,” “daydreaming,” and “living in a fantasy land.” The most interesting difference between responses from elementary-school teachers and middle-school teachers is the introduction of the students’ tendency to groom and preen themselves, which distracts them from classwork. Preening behaviors mentioned include brushing their hair and putting on lipstick. Also, according to the middle-school teachers more behaviors are common to both males and females than are reported at the elementary-school level.

Identifying Students in Need in the Classroom. Unlike the elementary-school teachers, the middle-school teachers discuss use of observations and scales for help identifying students in the classroom who might be showing attention problems. Middle-school teachers also ask parents, former teachers, and the students themselves about their behaviors and whether the behaviors have recently developed or if they have been present in the past. Parents and former teachers also are used as resources for support when handling a child who has ADHD. According to M3:

We also have a good relationship with the fifth grade teachers at both of our feeder schools and that might be another call we could make to see what kind of behaviors they saw last year and what they were able to do to help and try some of those strategies.

One interesting fact mentioned by two of the teachers is that students at this grade level usually already have been diagnosed, and M2 reports that “a lot of them have already learned to control their behavior” and M1 adds that “their strategies have worked for them.” This is a pattern in the results from the interview with high-school teachers, also, because they also report that most students at the high-school level have already been identified and diagnosed.

Views on Treatment Methods. Teachers at the middle-school level also express frustration with how difficult it is to be consistent with treatment methods, particularly behavior modification. M2 comments:

I think behavior modification is excellent but the problem with behavior modification is that it’s very, very, very difficult to do because it can’t just be done at school. It’s gotta be done on the schoolbus, it’s gotta be done at home, it has to be everywhere. It’s gotta be at Sunday School and Brownie scouts and it’s hard to get a whole society of people to buy into that.

Effective behavior modification reportedly used in the classroom by M4 involves the use of checklists:

...because they can do short increments of expectations. You give them large increments of time frame or expectations and they just can’t reach it so they have to be short goal oriented in order to have any kind of success. Even at home, I think they’re parents need to shorten, shorten their expectations to make them feel successful.

Teachers agree that medicine is effective as a treatment, but this effectiveness is contingent, according to M2, “on the degree of severity.” The severity comes into play

when the teachers observe some children for whom medicine makes an extreme difference, whereas for some children the effects of medication are less noticeable.

Classroom Interventions. The middle-school teachers mention many common classroom interventions, like modified assignments, preferential seating, behavioral checklists, working with partners, and extra time on tests and assignments. The teachers also describe interventions that seem more unique than previously mentioned, including giving the child verbal encouragement, organizing classes into a consistent routine, and caring about the child so that he or she will form a bond with the teacher. M2 describes the purpose of forming a close bond with female students with ADHD:

It's important for the girls to develop a close bond with the teacher. They need that bond...because they're pleasers. They want to make you happy and they'll try to focus a little bit better and so, that's usually the first thing I try to do with mine is make them love me.

M2 and M3 also describe an effective intervention involving both parents and teachers, thereby increasing the level of consistency between home and school environments as discussed in the Views on Treatment Methods section. The intervention is effective, in M2's opinion, because it involves a log kept by the teacher of the student's daily progress and "the parents signing the log, making sure that the information gets back and forth" between the two settings.

High-School Teachers

Views of Attention-Deficit/Hyperactivity Disorder. Similar to the elementary- and middle-school teachers, the high-school teachers report the presence of more than one child with ADHD in each classroom annually and that, as a whole, they have noticed

more male students than female students with the disorder. In terms of how the high-school teachers define ADHD, descriptions of students with ADHD include: “difficulty attending and maintaining focus and concentration,” “very distracted,” “organizational issues,” “very loud,” “not aware of social cues,” and “lots of tapping.” However, the teachers reach a consensus that by high school, most of the ADHD symptoms appear to have, in H2’s words, “toned down.”

Comparing Attention-Deficit/Hyperactivity Disorder Symptoms in Males versus Females. When asked specifically how males with ADHD behave in the classroom, the high-school teachers include the following descriptions: “out of seat, needing to stand, move around,” “a real need for kinesthetic learning, hands on,” “impulsivity,” “anger,” “very argumentative,” and “spacing out and staring away.” As with the middle-school teachers, the high-school teachers describe symptoms from both the predominately hyperactive/impulsive subtype of ADHD, as well as the inattentive subtype, which could suggest they have seen male students from both these subtypes, as well as, the combined subtype.

When asked about common symptoms of female students with ADHD, the high school teachers describe the following: “going through their book bag,” “fiddling with their personal stuff,” “housekeeping and grooming,” “go off on tangents,” “immature outbursts,” “spaciness,” and “being very quiet.” Again, symptoms from both the hyperactive/impulsive subtype and the inattentive subtype are described by the teachers. Also, when described in more detail, the housekeeping and grooming is along the same premise as the preening described by the middle-school teachers, fiddling with make-up and hair. Similar to what the elementary-school teachers described in their interview, H3,

a science teacher with 15 years of experience, comments that females with ADHD are “always highly tuned into any social subtleties in the classroom.”

Identifying Students in Need in the Classroom. All the high-school teachers affirm that by the high-school level, most students with ADHD have been identified and diagnosed. However, the teachers provide some suggestions about red flags they have noticed in the classroom, such as “grade performance,” “inability to sit and get focused,” “not being ready to work when it’s time to start the lesson,” and “not getting materials out promptly or doesn’t seem to have a system for organizing their notes.” For females specifically, excessive socialization also is suggested as a potential red flag.

The high-school teachers, as a whole, provide many different outlets for support such as the school counselor, the parents of the students, other teachers, and the students themselves when encountering a difficult situation involving a child with ADHD. Students with ADHD are perceived by H4, a teacher who has expertise in special education, as “a wealth of knowledge of knowing ‘what works for you?’ or ‘what if we try this?’” In H2’s mind, sometimes even extracurricular advisors and coaches can provide “different ways to motivate” a child with ADHD.

Views on Treatment Methods. Two of the main themes present in the teachers’ response patterns regarding views on various methods of treatment for ADHD are consistency in treatment and tailoring the treatment to the individual child’s needs. As expressed by H4:

Whatever works for one student may not be what works for another...I think it’s important that we do use the IEPs. They are there for a reason and they are individualized for a purpose, so not just putting them in a box, but ensuring that

each of their significant needs are met. Some kids do respond greatly to medication whereas some, it just doesn't matter; they could find things in the environment that helps them to cope and they don't need medication.

H3 addresses the importance of being in communication with counseling services:

If I'm aware of whatever therapeutic help they're getting, then I can sense if their medication is wearing off at the end of the day or if they have any help aids that have been put in place, like agendas and you tools. If I'm aware of the tools that there are already using, then I can help reinforce it.

As with the elementary- and middle-school teachers, the high-school teachers also express frustration about how hard it is to consistently implement an effective behavior modification plan. One of the main reasons is that these teachers have a whole classroom of students to worry about and not just those with attention deficits. In this instance, H2, a 33-year-old English teacher, recommends treatment options, like self-tallies and personal recuing, that place the responsibility for redirecting a student to a task on the student instead of the teacher. H1, the teacher with specialty in learning disabilities, discusses the need of parents to monitor their child's height and weight so that proper dosage of medicine can be altered and administered to a child in instances of stimulant medication as treatment.

Classroom Interventions. The high-school teachers provide unconventional intervention ideas for helping their female students who have been diagnosed with ADHD. H3 recalls that she helped a "fidgety" student "by having colored pens and she could use those colored pens... she would manipulate her notes and that would satisfy the twitching." Other teachers use items to make organization tangible: H4 uses "classroom

tasks sheets to identify what materials are needed for this task and when it's finished, check it off." H1 utilizes "a daily planner or a home report sheet that she needs to, you know, get checked daily, just a management system to help her keep track of what has to be done period by period."

H3 gives her female students with ADHD "chores, tasks, handout things, pass things up...so that when it's time to make a transition, she can be part of the transition and that gives more of a purpose to her focus." Other teachers discuss more obvious interventions, such as seating a female student away from people who provoke her or windows that may distract her, or, in H1's case, even seating a female student away from fluorescent lighting which "really aggravates some kids...too bright." H1 also discuss the importance of letting a female student with ADHD have a spacious workspace where she has plenty of desk surface to spread out her belongings and assignments.

Student Perspectives

The views of the 10 student participants are presented by grade level, similarly to the data from the teacher participants. Results from the individual interviews conducted are presented along five categories: academic implications of ADHD, social implications of ADHD, response to and opinions of treatment methods, teacher effectiveness, and classroom interventions. As with the teachers, these five categories encompass the overarching themes observed when comparing the content of the coded transcripts of the individual interviews with the students.

Students are referred to by a codename: the first letter represents their grade level (H for high school and M for middle school) and the second letter is "S" for student to distinguish the student participants from the teacher participants. The number, similar to

the teacher participants, is the number in which the student turned in her consent form. For example, participant HS4 is the high-school student who was the fourth to turn in her consent form. A complete transcript of the interview with HS4 is provided at the end of this report in Appendix E. Provided below are brief descriptions of each of the ten female students:

- MS1: A 12-year-old Caucasian female in the 7th grade. She reports moderate ADHD symptoms and has a 504 plan.
- MS2: A 12-year-old Caucasian female in the 7th grade. She reports severe ADHD symptoms and has a 504 plan.
- MS3: A 14-year-old Caucasian female in the 7th grade. She did not report on severity of her ADHD symptoms and has an IEP.
- MS4: A 12-year-old Caucasian female in the 7th grade. She reports moderate ADHD symptoms and has an IEP.
- MS5: A 14-year-old Caucasian female in the 8th grade. She reports mild ADHD symptoms and has a 504 plan.
- HS1: A 15-year-old Caucasian female in the 10th grade. She reports moderate ADHD symptoms and has an IEP.
- HS2: A 17-year-old Caucasian female in the 11th grade. She reported moderate to severe ADHD symptoms and has an IEP.
- HS3: A 15-year-old African-American female in the 10th grade. She reports mild symptoms and has an IEP.
- HS4: A 17-year-old African-American female in the 11th grade. She reports fluctuating ADHD symptoms and has an IEP.

- HS5: A 17-year-old African-American female in the 11th grade. She reports moderate ADHD symptoms and has an IEP.

Middle School Students.

Academic Implications of ADHD. The two predominant themes reported by the middle-school students with ADHD are that their disorder manifests itself in the forms of hyperactivity and inability to focus. The students also commonly report that getting up out of their seats, talking to peers, and laughing in class frequently causes them trouble in the classroom. MS4 describes that she “couldn’t get anything so, that’s basically it. I heard what they were saying, but I didn’t get it.” And when asked what having ADHD meant to her, she simply responded “No focus.” Other students, such as MS5, describe their effects as more on the hyperactive/impulsive end of the spectrum: “I get really really hyper and I can’t focus and I usually get in trouble because I’m supposed to be doing my work, and I will just be sitting there talking and won’t be listening.”

These findings are unexpected based on the findings of research presented in the literature review (Biederman et al., 1999), but not entirely shocking considering the teachers’ responses that male and female students they had observed showed both inattentive and hyperactive/impulsive symptoms. Middle-school students also indicate that these academic effects of having ADHD cause them stress and inhibit their ability to comprehend lessons from their teachers.

Social Implications of ADHD. Four of the five middle-school students interviewed report some negative social ramifications for either their ADHD diagnosis or the symptoms they exhibit at school; however, the degrees of severity varied. Upon the age of first diagnosis, MS2 expresses fear of social stigmatization: “When I first figured

out that I had it, I felt really different because I was the only kid in my class that had it and I really never told anybody because I figured they'd laugh at me because I had ADHD." These fears of being judged according to her behavior and diagnosis continue to bother MS2: "Usually when I go to parties I tell the person who is having the party to tell everybody that I have ADHD and not to be all freaked out when I get all hyper at night."

Each of the five middle-school students expresses, in some degree, a self-perception that ADHD means, in the words of MS3 "you're different from other people." MS4 experiences this as a feeling that other students have an academic advantage over her: "I did notice that they make higher grades than I do and they can work easier." MS5 recalls that people singling out students with ADHD because of their behavior and diagnosis: "People at school just don't like me and it's hard to concentrate with all my schoolwork because everybody's sitting there judging me when I've done nothing to them. And it's hard." This singling out includes students reacting to special accommodations and services a student with ADHD, like MS1, receives because of her diagnosis: "They call me a 'special' kid in a bad way. They're like, 'oh you're so special.' And they say, 'Why should *you* get so much attention from the teachers and you're not popular?'"

Response to and Opinions of Treatment Methods. As previously mentioned, three of the five female middle-school students interviewed are currently taking stimulant medication as their primary form of treatment, meaning that medication is their only treatment method they are currently utilizing. MS5 decided, in collaboration with her parents, to stop taking her ADHD medication last school year. She reports that she

currently sees a therapist for issues unrelated to her ADHD diagnosis. MS1, who also takes medication, also sees a therapist and describes the therapist's involvement in making goals for her academic future, such as attending college. The four girls currently taking medication report a positive effect of the medication on both their thought patterns and behavior in the classroom. MS1 elaborates:

If I don't take it, then I'm hyper all day and then I'll be blurting out in class and I won't be doing my work. But, whenever I do, I'm doing all my work and I'm getting good grades whenever I have it. But if I don't, then I'm not paying attention and I'm talking during class.

M4 describes that on days when she takes her medicine her mind "feels like it's just a filing cabinet. I can file what I want when I want." When she forgets or chooses not to take her medicine: "It's a disaster. I cannot find anything. It's just like, 'I don't know this.'" M3 expresses feelings of losing control over her behavior when she did not take her medicine. M2 also describes side effects she experiences when she takes her medicine:

When I take my medication it ruins my appetite, I don't eat anything except breakfast, so breakfast is biggest meal of the day. And when I don't take it, I usually eat everything in the house...Usually when I take my pill I'm all boring and then my brother gets there and begs me to go out and play with him and I tell him no.

M5 does not express the same positive experience when she recounts her experiences with stimulant medication:

I kind of took myself off of it for a couple of days because it was during EOGs [end-of-grade tests] and I wanted to see if I could do it without it and I made good scores on my EOGs and my parents said if I did good over the summer without it, then I could be taken off it and I was taken off it and I could concentrate.... I really didn't see any difference besides my grades were better. That's all I saw.

Teacher Effectiveness. MS1, MS2, and MS5 share experiences with both effective teachers and ineffective teachers. MS3 states she never has had a teacher who seemed particularly ineffective. Conversely, MS4 is not able to think of a single instance where a teacher had been sensitive to her struggles with ADHD. Teachers who are described as helpful, understanding and effective in the classroom follow a similar pattern: patient, encouraging, motivating, "nice," and providing effective interventions in the classroom. Teachers who are described as ineffective follow a pattern of being strict in their classroom rules, inattentive to the students' needs, and harsh in their interaction with the students. For example, MS4 describes a teacher who "yelled at me because I couldn't get it."

The middle-school students also provide some specific examples of times when teachers are effective or ineffective in the classroom. MS1 describes a teacher that she deems lacking in his understanding of how to handle her ADHD symptoms in the classroom:

He gets mad because I draw whenever I get bored and I draw because it helps me pay attention in class. He will be sending notes home with me to tell my Mom that I've been doodling all over my papers and he gets mad. I have ADHD and

you're telling me I cannot draw on a paper? It helps me focus so why wouldn't I do it if it helps me focus?

The aspect of patience is especially memorable to MS2 who shares the following positive experience with a teacher:

It's when I don't understand a lot of stuff. I'll tell them and then they'll explain it and then they'll ask me if I get it now and I'll say 'no, not really.' Then they'll keep explaining it until I exactly get it, or get it to where I can do it.

Classroom Interventions. MS3, MS2, and MS5 express a desire for more one-on-one time with their teachers, especially if they could be removed from the room and work alone. MS3 thinks this would help, "because it's silent and no one is around talking and that stuff." This is also a thematic request of the middle-school students, who want further instruction beyond the standard amount given during a normal classroom lesson. This is expressed by MS2 who wishes her teachers would "keep me after school sometimes and just try to teach it to me so I can understand it better." In addition to the introduction of rewards for good work, MS5 also expresses this desire: "If I don't understand something, I could come after school and they could explain it to me, but normally I'm afraid to ask." Within this same category, MS4 describes the helpfulness that her recent increase in math tutoring has been for her classroom performance.

MS1, MS5, and MS2 report that they regularly get extended time on tests. MS5 also is taken out of the normal classroom for testing during the end-of-grade tests (EOGs). Another recommendation, from MS1, is that classrooms should be more active, with less sitting down and more activities. MS1 also makes a recommendation for her teachers: "I really wish that they could just calm down and not yell so much. Because I

hate it when they yell because it makes me feel like I'm a bad student because they'll be yelling at the whole class and sometimes they'll single some kids out."

High-School Students.

Academic Implications of ADHD. The high-school students interviewed provide many descriptions for their ADHD symptoms and how they affect their classroom experience: "can't sit still," "can't concentrate," "not paying attention," "off task," "goofing off," "crack jokes," "talking to people," "getting up and walking around," "hyper," "fidgety," "blurt out answers," and "not listening as much as I would be supposed to." When asked what someone having ADHD means to them, the students answer similarly, but with adding "hyperactive" to the list of attributes. Most of students describe inattentive-subtype symptoms, with two reporting more of hyperactive/impulsive subtype or combined subtype symptoms. HS1, a female who describes inattentive-subtype symptoms, reports on a situation in which classroom identification might be difficult: "The teachers look at me. I want them to think I can do my work. Sometimes I don't want to, so I'll pretend like I'm doing it and I'll just write something or draw something. They won't notice sometimes; sometimes they will."

HS5 describes a similar experience that involves more passive symptoms of ADHD that may or may not be noticed by a teacher in a classroom full of students:

In the fifth grade we were writing an essay.... The whole room was quiet and somebody was flicking a pen and it was tapping the desk and I had completely stopped writing my essay to find out what it was because it was really annoying me. I found out what it was. I just stopped and kept watching it and watching it and watching it until my teacher finally had to tell me, "start writing your essay

again.” Then I was writing my essay a little bit more. Then they continued to flick the pen and I just kept watching it. So I get sidetracked really easily.

Other students, like HS3, also express a frequent need to be redirected to their current task: “I’d do something for five minutes and then after that I’d be ready to do something else. I couldn’t really stay on one thing.” Though variety in symptomology is present in the accounts of the high-school females, it is not as wide a variety as described by the middle-school students.

Social Implications of ADHD. Like their middle-school aged peers, the high-school students also report negative social reactions to both their diagnoses and the presence of their ADHD symptoms in the classroom. In addition, they report negative reactions from their peers who did not carry an ADHD diagnosis towards receiving special accommodations in the classroom. Regarding her peers, HS1 reports: “I sometimes get them off task by talking too much and stuff and then sometimes they tell me to be quiet so they can work.” In some instances, the high-school students even claim that their peers who did not carry an ADHD diagnosis try to side-track or sabotage them academically because of jealousy or anger over their special opportunities in the classroom. HS3 explains:

They try so hard to get me to skip class and stuff like that just because they’re miserable in their class. They don’t mind bringing me down with them. And they act a little different because they see that I’m getting my work done. They don’t get extended time, so they get a little mad about that.

HS3 then acknowledges that her friends target her because she is easier to sidetrack than other students. In contrast, HS5, reports she has not experienced negative attention or

conflict because of her diagnosis and the resulting accommodations: “Some kids ask ‘How come you get to go in a different room?’ and I tell them, ‘I have ADD and I can’t stay in a room with a bunch of people because I’ll get sidetracked easily.’ And they’ll go, ‘Oh, okay, that’s cool.’”

Similar to what was reported by the middle-school students, HS1 and HS2 also perceive that while they are different from their peers because of the ADHD diagnosis, sometimes different is not necessarily negative. HS2 elaborates:

It’s just hard because I really want to be normal, like other people, but I also like it because I get more attention and I get more help than other people. I get special things, like special help and they shorten things for me.

Some of these perceived differences from their peers and classmates are also a result of receiving accommodations and/or modification, such as longer test time or shortened assignment. HS1 provides examples: “Not getting the same projects as some kids sometimes or longer time limit, which made me feel a little more different from the other kids because they didn’t really get that either.”

HS4 and HS5 describe how they have destigmatized ADHD as a disorder in their own lives, including messages that they would like to impart to other females with ADHD. HS4 wants females with ADHD to know: “I think that people shouldn’t be ashamed to have ADHD because it’s just something you have to live with and just know how to control it. And it makes me me. It makes my life so much funner [sic]; it really does.” HS5 also discusses how she reclaims control over her ADHD symptoms:

Well ADD, it’s really not like a mental disease unless somebody sits there and tells you, “Oh yeah, you’re doing this because you have ADD.” It’s not like a

mental disease some people can control it. It's just other people think that they can't. A few of my friends have ADD and I tell them, "Don't sit here and let other people tell you about your disease. You control it." Because when I was younger, I used to be way worse. I couldn't sit still, I couldn't pay attention. As I got older, I realized I used my "disease" as a crutch, and now it's time to face reality. So, I just grew up, and now I don't use it as a crutch anymore.

Response to and Opinions of Treatment Methods. HS1, HS2, HS3, and HS5 report that they currently are taking stimulant medication as a method of treatment for ADHD. HS4 reports that she no longer uses stimulant medication. Each of the five students reports seeing a counselor or therapist at some point in her diagnostic history, but only HS1 reports discussing issues relevant to her ADHD diagnosis with her counselor or therapist. HS2, HS3, HS4, and HS5 currently see a therapist or counselor, predominantly for diagnoses or issues unrelated to having ADHD.

Each of the four female students currently using stimulant medication reports a positive difference between times she takes medications and times when she does not. However, only three of four report the difference is substantial. HS1 describes her experience: "When I take my medicine, I don't really see a *huge* difference. I might see a little bit of a difference in me goofing off a little bit more." For the remaining students, the medicine is reportedly crucial for academic success. According to HS3: "When I'm off my medicine, I don't really complete anything and when I'm on I'm more organized... I'm more disruptive when I don't take it. When I do take it, I'm more 'Let's get down to business.'" HS5 reports similar effects:

When I take my medication, I'm focused. I know what I need to do and if there's anything else on my mind, it kind of helps me move all that stuff away and get concentrated on the things I need to be concentrating on, but when I don't take it everything else just takes over and I'm not really in the mood to be concentrating on what I should be.

The major issue that HS4 has with medication—and the underlying reason why she stopped taking her medication—is the unpleasant side effects that she experienced:

It made me not hungry but you have to eat on medicine because it makes you sick. So, I would just get sick all the time, and I would just be very quiet and just sit in my seat and it just was not me. It just made me feel like a different person, and it was kind of weird. But with me not on the medication, I'm just a very cheerful person. I'm always on the move, and just having fun in class even though I shouldn't be; I should be focusing on my work.

For this student, the academic risks of not taking her medicine, such as being easily distracted in class, do not outweigh the negative side effects she experienced, such as loss of appetite and loss of personality characteristics. HS5 also reports a change in appetite based on whether or not she takes her medicine: “When I'm on my medication, I really don't eat breakfast or lunch, I kind of eat a small/medium dinner. When I'm off my medication, I eat like ten times a day.” However, she willingly continues to take the stimulant medication because of her resulting academic improvement.

Teacher Effectiveness. Unlike the five middle-school students, each of the five high-school students provides feedback about teachers whom they deem effective and teachers whom they deem ineffective. Effective teachers are described as those who

think and teach in unconventional ways, show kindness and understanding, and provide effective interventions for the students. Ineffective teachers are described as those who do not provide effective interventions, misunderstand ADHD as a disorder and its symptoms, and do not treat students with ADHD with respect and kindness in the classroom.

The results suggest that teachers who are more flexible in their lessons and techniques than other teachers are more effective with females who have ADHD, and presumably all students with ADHD. HS5 reports:

It's like a certain amount of teachers that I have or had show more interest in kids who have ADD, but some of the teachers really didn't. It's like they wanted to show interest, but they didn't want to teach the whole class in a different way because two or three of their students have ADD.

In addition, doing small things to harness the student's attention is significant for HS3: "When she saw I was getting distracted she'd do something like get my attention by throwing a ball or doing something. So after that energy I would go back to doing my work. That kind of made it easier." Hands-on learning, recommended by HS5, and more classroom group activities, recommended by HS4, also is mentioned as ways to make the classroom a more effective learning environment for the female students with ADHD.

Ineffective teachers, on the other hand, are reported as those who have abrasive personality types that clash with the personalities of the students, and those who either are unaware or do not understand how to effectively help a student with a disorder learn in the classroom. For some students, like HS1, the request for help from a teacher is an awkward situation that she tends to avoid: "There's this teacher or whatever who didn't

understand I needed help....She wouldn't really help very much like I needed it... I didn't really know how to let her know and to tell her that I need extra help." In addition, according to HS3, if teachers do not take into consideration the symptoms of ADHD, then life in the classroom becomes harder than necessary for a student with ADHD: "She [a teacher] was still making stuff harder than it already was. She would put more pressure on me to work harder. She made me re-do stuff over and over and over and over if it was a little jumbled."

Classroom Interventions. The five high-school students report a variety of classroom interventions that they find effective. These include working with partners, obtaining extended time on tests and assignments, receiving shortened assignments, using daily checklists for behavior and academic work, getting preferential seating in the front of the classroom, being removed from the room during testing, having questions read aloud on tests and assignments, and even being exempt from doing homework. HS4 describes behavioral interventions that are specified in her Individualized Education Plan (IEP):

The teachers I have now know I have ADHD and they know I have all these problems. So, what I do is get up and walk out of class for five minute. It's called a "Take Five." I'll take five minutes and just walk around and then I come back and do my work for a minute. Then I get back up and walk around the room.... I'll just have shorter class work, and when I have tests I get to go to another room because I will get easily sidetracked if I'm in a room with a bunch of people. So, I'd be just paying attention to them and not paying attention to what I'm doing.

Additionally, when asked what classroom interventions they would prefer or wish that their teachers would implement, HS5 reports a desire for more field trips and more hands-on activities and visual demonstrations. HS1 requests to be pulled from the classroom for further instruction, HS3 would enjoy having frequent breaks, while HS2 would like to be excused from traditional tests. For these students, the reported benefits of having these potential interventions are more attentiveness, less classroom stress, and grade improvement. In HS5's opinion, the request to go on field trips is beneficial in her Spanish class "because when I hear him [the teacher] talk, I just hear 'blah blah blah.'"

Most of the requests are trivial, such as the request to be able to eat in class, which is a rule enforced by many of the students' teachers:

Some teachers don't let you drink or eat in their class and I carry snacks in my purse. People call me the "Grocery Store Lady" because I always have snacks in my purse. When I get really hyper sometimes I sit down and just eat and just eat so that way I calm down.... That's just how I am. They'll be like "put that food up!" and I'll be like "If I put it up, I won't be able to calm myself down."

Other requests are more problematical, such as one from HS5 requesting the staggering of the assignment of tests, papers, and other tasks so she can have more time to complete one assignment before starting the next: "I know it's high school, but don't give me so much at one time. Space it out for me so that way I can get one thing done, turn it in, and get another thing done, because if I get stuff piled up it doesn't really work out that well." The students argue that interventions like these that demonstrate a genuine understanding of ADHD and its effects in the classroom would increase their classroom productiveness and make their lives at school easier.

DISCUSSION

This is an exploratory qualitative study with three research goals: (1) Describe the academic and social experiences of preadolescent and adolescent females with ADHD from their first-person perspectives, (2) Describe the experiences of teachers who interact with female students with ADHD on a daily basis from their first-person perspectives, and (3) With this information, I hope to provide additional information for the development of a classroom intervention strategy to more accurately identify females exhibiting ADHD symptoms in the classroom and reduce the problem of under-diagnosis. Results indicate this study has been successful in illuminating these research goals through interviewing 10 female student participants who have been diagnosed with ADHD and through interviewing 12 teachers who have experience with both male and female students with ADHD.

Participant Considerations

Both the teacher participants and the student participants provided candid and genuine responses to the interview questions. The three focus groups of teachers (elementary-school teachers, middle-school teachers, and high-school teachers) were equally articulate. However, as a whole, the high-school students provided richer and more descriptive data than the middle-school students. The reason for this could be because of age and maturation between the two grade levels or the difference could have been caused by the individual participants in each grade level. Females at the high-school level could have been more articulate about their disorder because they have lived longer with the disorder and have gone further in their education than the middle-school females. However, an alternative explanation could be that the individual students

chosen in the high-school level were by chance more articulate than the middle-school students chosen.

When discussing symptomatology in females who have ADHD, teachers in this study reported grooming and preening practices in middle-school and high-school aged females with ADHD. Preening and grooming are common practices for most, if not all, middle-school and high-school females. However, one should consider that when teachers report this as a symptom or behavioral indicator of a female with ADHD, they are reporting that it is something used to distract the student from her work, not just a social practice among females.

Furthermore, when HS4 mentions that she wishes her teachers would allow her to eat in the classroom, one might conclude that this is a common request among many high school students, male or female, with ADHD or without. When considered further, HS4 explains that eating or snacking in the classroom helps her focus and calm down. Therefore the request has a different meaning than the request of the average middle-school and high-school student, and this pattern is observed at other times in the self-reports of the student participants. Examples include MS1's anecdote of the teacher who would not allow her to draw, even though it helped her focus, and HS3's recollects a teacher who she believed put more pressure on her than was necessary regarding her schoolwork. Though these may be complaints of the average middle-school or high-school student, when considering the symptoms and needs of students with ADHD, one can clearly see that these suggestions and complaints are applicable for them, especially.

Analysis Considerations

The two different types of interview protocol—focus groups for teachers and individual interviews for students—allowed for two distinct categories of answers: one generated by a group discussion on a given question and another resulting from the more conversational individual interview between participant and researcher. Teachers were able to address the questions individually and then respond to others' answers for the question. The discussion-based environment allowed for straightforward analysis and gleaning of themes. For example, because all four elementary-school teachers responded to the same question in the same transcript, it was less complicated to recognize universality and commonalities in the teachers' answers. On the other hand, student participants responded to the interview questions individually, with no knowledge of their peers' answers. When considering views of middle-school students, for example, I compared each of the five middle-school transcripts individually—five separate transcript documents—in order to uncover agreements or differing opinions on the same topic.

Views and Perspective of Participants

The female student participants who have been diagnosed with ADHD report that ADHD affects them negatively in both academic and social settings. However, some female students—such as HS4 and HS5—describe pride in their diagnosis and inform other female students about how they could take control over their disorder and over the way they live their lives. Each of the ten students, with the exception of MS4 and MS3, describe instances when she had both teachers who were effective in handling her symptoms in the classroom and instances in which teachers were ineffective. These students share their views on the treatments they have been given, both positive and negative, particularly with stimulant medication. Lastly, the students share current

interventions they have experienced, as well as interventions they wish teachers would implement in the classroom. With this, students like HS1 and MS1 report receiving negative attention because of special accommodations, much like the students with ADHD in Taylor and Houghton's (2008) study, who received negative attention from classmates because they received extra exam time because of having ADHD.

Teacher participants express views on ADHD as a disorder itself, providing both their own personal understandings of what ADHD is and what causes it and the symptoms they observe in both male and female students. Teachers also report the differences they have observed between the sexes, with males usually showing symptoms from the predominately hyperactive/impulsive subtype and females usually showing symptoms from the predominately inattentive subtype of ADHD. Not surprisingly, exceptions to these sex-typed patterns also are addressed. Teachers describe "red flags" that help them identify students in the classroom who might be in need of help with attention problems. In addition, teachers express their views on the various treatment methods of ADHD, such as stimulant medication and behavioral modification. Finally, teachers shared interventions that they implement for different female students they have encountered in the past who have been diagnosed with ADHD.

Interestingly, quite a few of the teachers expressed similar attributes towards female students with ADHD as teachers interviewed by other researchers. The sex-typed biases of teachers regarding ADHD were displayed by teachers Lee's study (2008). Both the teachers in Lee's (2008) study and in this study attest to the fact that females are expected by society to be more quiet and calm, whereas males are expected to be more rambunctious (read: hyperactive/impulsive). The idea that females students with ADHD

tend to be “people pleasers” was voiced by the teachers in this study, as well as by Taylor and Keltner (2002) in their study.

The Purpose of this Study

The purpose of this study is to gain insight into how female students with ADHD exhibit symptoms in the classroom, how to identify them, and how to implement classroom interventions and techniques to help them succeed academically. The teacher participants were asked questions about what they observe in the classroom and how they implement interventions when faced with a classroom that has one or more children diagnosed with ADHD. Who else to regard as an expert on how ADHD presents itself in the classroom than the teachers themselves? Moreover, in order to gain insight into what life is like in the classroom for a female student with ADHD, researchers must go into the classroom and ask the students what works for them and how they need to be helped.

The findings of this study suggest that one of the main attributes of an effective teacher is a comprehensive understanding of the symptoms of ADHD. Along these lines Barkley (2007), recommended that research needs to be conducted on a teacher’s involvement in school interventions and how well the personality of the student fits that of the teacher. This is precisely what I set out to do by interviewing teachers and students on teacher effectiveness and classroom interventions. Student participants repeatedly state that ineffective teachers are impatient with them or to give them work that is beyond their capacity to complete. Teacher participants report that interventions should range from giving a student permission to stand to complete his or her work, giving a female student with ADHD colored pens to manipulate her notes and help her focus, or giving a student with ADHD things to pass out to class when a classroom transition occurs. These

effective teachers demonstrate an understanding of a student with ADHD and how his or her symptoms affect him or her. These teachers use this understanding of ADHD as a disorder to help mold their classroom techniques to the student's needs.

Ineffective teachers also are described as being stricter in their classroom rules than teachers who are considered effective by the students. With regards to classroom flexibility, if a teacher is more flexible and can better accommodate a child with ADHD by modifying work environments, then the student will consider that teacher more understanding and more effective. Conversely, if the teacher does not exhibit such flexibility and refuses to modify any or all classroom policies, then a student could perceive him or her as rigid and could find him or her ineffective. Referring to Barkley's (2007) observation about how personalities fit between teachers and students, students did report that ineffective teachers tended to have abrasive personalities that clashed with those of the students interviewed, which is what Barkley warned about: when considering school interventions, one must keep in mind "the teacher/child temperamental fit" (p. 285). Teachers must be aware of how they react to students and how students react to them.

With that being said, school districts have rules and regulations that must be followed and in some instances, such as MS5's suggestion for teachers to allow her to eat in the classroom, classroom rules cannot be broken or bent. However, a teacher in that case could allow the student to take a break and leave the classroom and have a quick snack, if the school administration allows. Therefore, teachers are not always the obstacle to modifying classroom policy; in fact, much of the obstacle could fall with the school administration and thus be out of the teacher's hands.

When considering teacher effectiveness, one should recall a premise of the Regular Education Initiative (REI) that students with disabilities “may be accommodated within the regular classroom using ‘good teaching’ methods which are relevant to the learning of all students” (Mostert, 1991, p.92). Therefore, what is good for a student with ADHD, in terms of teaching strategies, should be good for the entire classroom of students. Therefore, what student participants report to be effective or ineffective in terms of teaching strategies is intuitively linked to what makes up a “good” teacher. These characteristics of effective teachers (e.g., sensitivity to students’ needs, kindness and patience) are characteristics of all “good” teachers. Moreover, what student participants report to be characteristics of ineffective teachers generally are characteristics of teachers who rate poorly with all students (e.g., rigidity, inflexibility in teaching methods, and lack of sensitivity to students’ needs). Therefore, the schools should be in search for more effective teachers, not only for female students with ADHD but for all students.

In terms of classroom interventions, both teacher participants and student participants suggest that the classroom interventions should be tailored to the students themselves, which was expressed to Travell and Visser (2006) by parents and students when they mentioned being aware of individual students’ needs. Teachers describe a variety of interventions they have used based on the child’s needs, such as seating a child away from a window to avoid being distracted or allowing a child to wear headphones over his or her ears to block out extraneous noise. Students describe slightly altered interventions that they would desire, ranging from being removed from the classroom to going on more field trips to having more activity in the classroom and less sitting down.

Therefore, when a teacher is considering the question: “What will work for this student in the classroom?”, he or she should first consider how ADHD—or any condition that affects cognition and behavior—affects the student’s attention and what triggers distraction for the student.

As H4 stated, Individualized Education Plans (IEPs) should be used and followed accordingly. An IEP meeting is specifically the place where interventions can be discussed and individualized to fit the student’s needs. After interventions are placed in the IEP, they can begin to be implemented in the classroom on a daily basis and during various testing situations, such as during the EOGs. For students who do not have IEPs and 504 plans, teachers should remain cognizant of the student’s personal struggles and how ADHD affects him or her as an individual. Once the teacher is aware of this, he/she can implement interventions that would aid that student in learning and being successful in the classroom.

In addition, making the teachers and school administration more aware of how females with ADHD manifest their symptoms is extremely important. Barkley (2003) made clear that the criteria for diagnosis of ADHD “were developed and tested mostly with boys, and many of the specified symptoms...are generally more common in boys than in girls” (Barkley, as cited in Mash & Wolfe, 2007, p. 125). Therefore, teachers need to have instruction on how to identify and refer for treatment female students with ADHD. This point is addressed again in the implications for future research. As stated by Edwards and Gfroerer (2001), involvement from the school, such as behavioral plans that involve action and participation from teachers, is crucial to help treat ADHD, along

with medication and other treatment options. This implies that the more the school becomes involved, the more the student will have the opportunity to succeed.

Implications for Future Research

Implications for future research include ways to incorporate classroom interventions that are both feasible for teachers and helpful to students with ADHD. Travell and Visser (2006) received feedback from parent and student participants on how to improve school interventions and one suggestion was “greater staff knowledge of, training in, and understanding of ADHD” (p. 2010). In regards to this, there could one day be mandatory workshops for teachers before the school year begins that gives them psychoeducational training regarding many common behavioral disorders seen in the classroom: ADHD and its subtypes, Oppositional Defiant Disorder, Learning Disabilities, Conduct Disorder, Mental Retardation, and others. “Psychoeducational” refers to the fact that the teachers should be taught the fundamentals about these disorders; in essence, the education of psychological ideas and disorders.

The psychoeducational training should include symptoms observed in each disorder, procedural protocols for alerting the parents and school counseling staff to a child’s needs, evidence-based classroom interventions, procedures for identify a child for testing, and training about the physical and emotional effects of stimulant medication. In addition, this training for teachers should include examples of interventions commonly found to be effective for female students with ADHD, such as H3’s intervention in which she gives one of her students colored pens to help her organize her notes and satisfy the need to fidget.

Areas for future research should include further interviews with female students who have ADHD and their teachers. Female students of elementary-school age were not used in this study; therefore, it would be interesting to determine if they would be able to clearly articulate their experiences of living with the disorder in a future study. Also, a future study that involves interviewing should specifically ask females about their coping strategies, aside from traditional treatment options, like stimulant medication. Two middle-school teachers, M1 and M2, address students' developing strategies as they age with the disorder.

Limitations of This Study

There are limitations to this study. The first being that all participants were selected from a single public school district in the southeastern United States that lacks cultural and geographical diversity. Because the middle-school and high-school teacher participants and student participants are from a single public school district, there is much overlap of data, such as teacher effectiveness and classroom interventions used. It is likely that in other larger and more diverse school districts, there would be more variety in interventions, at least minimally.

Another limitation is that the student participants in this study were females who already had been identified and diagnosed. Therefore, these females were not representative of the population of females who have yet to be identified, which is the population of interest. These students also had mixed ADHD diagnoses: some predominately inattentive subtype and others either predominately hyperactive/impulsive subtype or combined subtype, without clarification or specification. Those with either combined subtype or predominately hyperactive/impulsive subtype could be expected to

show some of the more salient, stereotypically “male” symptoms of ADHD and would be easier to identify in the classroom and, consequentially, would not be included in the population of interest.

Another limitation of this study is that the student participants currently have either a 504 plan or an IEP, which means they are entitled to special accommodations that other females with ADHD are not. Because the presence of Learning Disorders was not indicated by the school psychologist when addressing diagnoses, there is no way to know if these female students have Learning Disorders that would cause them to have the IEPs and 504 plans, in addition to a diagnosis of ADHD. Diagnoses for each of the ten student participants were not purely ADHD diagnoses; some students had co-morbid diagnoses, such as Autism and Oppositional Defiant Disorder. Additionally, the student participants in this study were selected by a school psychologist to participate in this study because of their ADHD diagnosis, treatment plan, and their potential to be articulate on their experiences with ADHD, therefore they are not representative of the larger population of female students who have ADHD.

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APPENDIX A – Transcript with Elementary-School Teachers

October 26, 2008. Four elementary school teachers at [REDACTED]

Researcher: Alright, so the first question we are going to talk about is um, kind of more specifically than it said on your demographic sheet, how much experience have you had with students in general who have ADHD. And anyone can start.

E1: Well, I'm a special ed teacher and I would say half my students have attention issues.

R: Okay

E2: During the course of my 19 years, um, there is not a year teaching that I haven't had at least one child in my room, whether it is diagnosed or not diagnosed.

R: Okay.

E3: And I think that's probably um pretty fair to say for every year. This is my 30th year but I and I think we see more children now who have been, who actually carry a label or are diagnosed than we did previously but the symptoms and the behaviors are very typical and have been seen all along.

E4: I would say the same thing: always one or two in the classroom. Generally, you can diagnose them, if they aren't diagnosed you don't really diagnose them, but you can tell their behaviors

E2: and you use some of their same interventions whether they have a particular label or not.

R: Okay, very good. Um, the next thing we'll talk about is: just describe (in laymen's terms) your individual understanding of what ADHD is.

E2: I always look at it as a child whose body and brain can't keep up with one another. I mean, it's that struggle and depending on whether its ADD or ADHD. I mean, it's almost...I was trying to talk with a parent the other day, I felt like their child was constantly in a wrestling match. You know, it's just this back and forth, exhausting

E4: They want to attend and focus, generally, but their body is fighting that and...

E3: Well and I know that just in the last couple of years I have had some children that have had really severe problems with it, and it's like they can't block out any stimuli. Everything is coming at them and they can't say "well, this is more important so I can tune this out." You know, when you can change a piece of paper one place in the classroom and that child sees it when they walk in the door. It's like they're just being bombarded by stimuli that they can't filter.

E4: Right.

E1: And I see that same things that (name) talking about where they are just absorbing everything and maybe wrestling with themselves to do that one thing that's right in front of them. And with me too, they wrestle with both of us.

Laughter.

R: Very good, very good. Um and stop me if I'm going too fast and you have more to say about a question and I just kind of skip over it. Um, tell me your thoughts on the various treatments of ADHD (Behavioral interventions vs. stimulant medication vs. dietary restrictions) and which you feel are the most and the least effective in the classroom.

E1: Well, I'll start with the medication. If a child is diagnosed, and I would not have said this in my youth when I was an idealistic parent and person, but a child who is truly ADHD unmedicated is very noticeable. And when they are medicated and they take their medicine and it is appropriate medication, it makes a world of difference. So I like all the other things because you need all the other things anyway, um, but to me that's make it or break it.

E2: And I think sometimes, parents who are resistant to trying medication that huge, if it is given a chance and the child notices a difference to me that the big, you know... I would love to see parents look at dietary and daily life first. Unfortunately as our population continues to change, we find parents that want the fix and they don't have time to look at: is my child getting enough sleep? Is my child following a schedule? Is my child eating too much crud? Um,

E3: Often times, they just want a pill to fix it and don't want to take responsibility for structuring things for their child that would help, that consistent structure is so important and I think as teachers that's what we try to do in the classroom is keep the structure there and be very consistent and those things help a child with that situation that often times the only place that happens is in the classroom. It doesn't happen outside and that makes it harder.

E4: And part of my frustration in the classroom, too, is parents that um decide they want to do the structure and yes, we're gonna try the dietary and we're gonna try the sleep, we're gonna just try to get it structured at home and they try it for a week and they don't and then they're inconsistent with that and then the child, you know, obviously is not doing well in the classroom because the consistency is not there. So they know that they need to do that, but they are not consistently practicing it at home. So, that's frustrating.

E3: And it's hard sometimes to practice it in the classroom when you have interruptions to schedule, um because those are the children who don't handle differences or change or transition time very well and when you don't have a chance to prepare them for those transitions because "well today we're gonna see..." you know and it's happening right

now or it's supposed to happen at 10 and you prepare them for that and then at 8:15, it happens, that's really hard for those children. Um, and, you know, sometimes rolling with the punches is not as easy for those kids, um, they need to be prepared...

E2: And then you have those parents who choose to medicate but then that's not done consistently either. And so now the child is still, they're on a rollercoaster and they're still battling. That's hard.

E4: And it's probably even worse for them now, because they had some coping skills before perhaps and now they're on medicine and oh, this is so much easier for me and I can now concentrate and then they're not and it's "now, what do I do?" They lose those coping skills because they haven't had to use them. I mean, it's gotta be hard for the child.

E1: It is hard for me. That's what got me having a difficult day today because I know if this child, were to take the medicine that was prescribed last year, I would be dealing, we would be in another place of his learning by now. But he's chosen not to take it... so.

R: Okay, what types of behaviors in the classroom are typical of male students with ADHD, from your own experience?

E1: Very impulsive.

E2: Loud.

E4: Can't sit still.

E1: Constantly in motion. Into everybody else's business.

E2: yes, personal space is a big issue.

E3: ..Lack of personal space, probably lack of respect of others' person space and actually knowing their personal space. They've a child who is kind of like a human pinball and just boings off of everybody as they move around the room.

E4: And they have a hard time recognizing that they need to make adjustments for their learning and you know, if they're truly ADHD and they're not medicated, then it doesn't matter to them that they're not getting it and they're not... they're too busy being active to think about their learning.

E2: What do I need to do to make this better for me?

E3: Exactly.

E1: They find amazing ways to entertain themselves with something much more interesting than the challenge that you have for them.

R: Very good, very good. Okay, what methods have you used to identify male students with ADHD symptoms in the classroom?

E1: Well, we're not allowed, uh ... identify them for our own purposes?

R: Yeah, your own purposes. Are you not allowed to do referrals? Or anything? No? Okay.

E1: Well, we can refer and

E3: To care team

E1: And in that process, we can discover through other professionals that this child has something...

E2: We can talk about a child having trouble focusing

E1: But they can only, only if it comes from a doctor... that diagnosis...do we truly see them because we don't diagnose.

R: Okay.

E1: Does that make sense? So then if you are asking us, how do we...

E3: Well I think, what we do to say to parents and to other professionals in our building to help this child get additional resource help or additional help is, "This is what I see in comparison to children of the same age, you know,

E2: On grade level.

E3: ... on grade level." This is what behavior should like. This is where it differs from that and I think that's probably... we can't identify and say "This child is ADHD," but I can say this child's ability to focus is not that of his peers who are working on grade level.

E4: Comparatively

E3: You know, in the period of fifteen minutes, this child is out of their seat 31 times, um, you know, in comparison to their peers who are able to sit for that amount of time and work on a subject or this child needs to be constantly redirected. And, I think keeping anecdotal records of that proves very valuable then if a parent pursues talking to their pediatrician, then I have that information that I can give them and say, you know because I am the one that works with that age group child all day, I see them. Parents don't often see their child in relationship to a whole classroom of children of the same

age to see that, for them, that's normal for their child, but to see that it's outside the realm of normal for that age group child.

E4: Organization is also a key issue for ADHD children. Um, their desk is a mess, they can't find things, they don't know where their homework is, a lot of that is, um...

E1: They did it but they didn't bring it in.

E4: Uh huh, yeah or else it's crumpled in the bottom of their bookbag and they don't know it, I mean, that's another key

E2: That's a big ah-ha to parents, I think and I saw this transitioning from teaching second grade to moving to third grade, once letter grades become part of their child's life, some parents are more willing to look at it and consider "Oh, maybe this is an issue. Why is my child making Ds?" Well, they can't follow through with a task, um, they are not, the organization is so bad, look at all the holes I have in my gradebook, they're not turning their papers in and so sometimes I didn't have that concrete evidence to show parents as a second grade teacher as much as I do as a third grade teacher.

E3: Well and you're also asking them to do things much more independently whereas in K1 and K2, we tend to do lots of verbal reminders and, you know, ensure that everybody gets their work finished and they're not having to do it as independently and I think once it becomes more of "you have to complete this independently," then those children really stand out even moreso and I think for parents, they see it better.

R: Okay, so just for your own personal recordkeeping, do you use the same types of things to kind of get in your mind "This kid may have an attention problem," "This kid may have something going on." Do you use the same things or do you use different things also?

E2: Um, well I send home weekly progress reports and on it, a part of it, not only is it the academic but it's the behavior, is their, um, class work done on time, what does their time on task look like, what's their conduct look like, and if I have week after week of a child having difficulty, that's a great tool for me to sit down with the parent and say, "This is happening over and over again... it's not just that it's a bad week." Because it's been a bad week for six weeks now, um, and so, parents really have to be able to see something. Nobody likes to hear that their child is broken, you know, and that's how parents tend to, to look at it, and you know "That's not happening to my child." Um, and so, it's, it's, it's delicate.

E3: Mmmhmm. Very much so.

R: Okay. Who do you turn to for support when you encounter a student who is, or is showing symptoms of, ADHD and you're not sure how to handle the situation or what to do with the situation?

E2: I go to former teachers usually first to say, "Did you see this? Is this a new behavior?"

E3: What worked for you?

E2: Yes, "what did you do?" To see what kinds of conversations happened with the parents in previous years and have the parents been approached about this being an issue? Um...

E4: And that's what I do, too. I contact the parents if it continued to be a big problem so that they could help me at home with organization and those kinds of things, but um...and if it's a real behavior problem, I'll speak to the principal also and she's got great ideas on how to handle situations like that.

E3: Well, and if you start to see it recurring and recurring and recurring, uh we have a procedure here to send a child to Care Team and, you know, I've forgotten what it's called...

E1: Student Success Team

E3: It's Student Success Team now as of this year but to have other folks in our school take a look at this child and see, um, you know, work with the guidance counselor, um the nurse,

E4: yes, what other interventions could we be putting

E3: In place

E1: The ones that come to me, they usually are.. they're

E2: Diagnosed!

E1: They're there.

R (to 1): Do you have a lot of people coming to you, specifically, for advice on what to do?

E1: No, they really have each other. I mean, by the time they're going through Care Team, they're just happy I'm taking them for an hour or two hours or whatever time they're gonna give direct instruction.

R: Can you give me kind of an overview of what Care Team and Student Success Teams are?

E1: Well, Care Team is the old form, old language for the same team. And, uh, the new model is that general ed do a lot of interventions with they see a child is not performing at

grade level, either, um, in their, everything has to affect their academics at this point for them to go into a Care Team. And if they've done what they can do and they need greater help, then they refer them to the Student Success Team where they get more feedback, other possibilities for what they can do, and it's over a period of time, um, if these interventions aren't working, then they refer them to special ed, where we then test them and see if they qualify in any category of learning disability, of um, under the umbrella of special ed. So they have to, they could come in as "other health impaired" because they have a diagnosis of ADD or ADHD, if those symptoms, that condition is affecting their learning.

R: Okay.

E2: But before it can advance in steps, first we have to identify a problem and then go through, make sure their vision is okay, make sure their hearing is okay. If all that checks out, then you move forward. If either one of those are a problem, then we have to backtrack, take care of that before we can move on. Attendance is also an issue that we have to look at before it can move forward. So...

E1: Did they get the instruction that they needed? Is another way...

R: Okay. Well thank you for clearing that up for me.

Laughter.

E1: Ask us next month, it may be different.

More laughter.

R: That's the beauty of working in a school system.

E3: Yes.

R: Okay, what types of behaviors in the classroom are typical for females with ADHD?

E2: It's usually, uh, so many times, so much more of the withdrawn.

E1: Either that, or they're talking so much somewhere else, so it's, it seems like they're sly-, they're quicker, more clever about going around the issue to me.

E4: Well I think they're, they're teacher pleasers. They don't want to be found as ADHD, so the ones that are withdrawn are real daydreamers, but they still want to please and do what they're supposed to do.

E3: Much more verbal than they are.. than they're able to get down in writing.

E2: Get down on paper, yeah.

E4: I have one friend living in my head.

E1: I have one, two....

Laughter

E4: I have two opposite cases in my classroom now, I have one real chatty person... she even asks "Can I move? This is not a good situation" so we try here, we try here, we try here. Oh give me help! what are you suggesting? Uh, but she at least recognized that. But the point is, she's the one that's the trouble. And then, I have one in the class that is the opposite, she is the daydreamer and, um, just big old eyes staring at you all the time, but what's going in her head, we don't really know. You know...

E3: She's playing a different movie than what's happening in front of her.

E4: She really is, she really is.

R: Any other things?

E1: About girls?

R: Mmhmm.

E1: I don't know, they can be missed a lot. You know, if you're not real tuned in and holding them accountable, then you can...they can slide.

E2: I see that as the daydreamer type much more so.

E1: The ADD

E4: Me too. Because they're the quiet ones. They don't cause trouble in the classroom, they're not disruptive, they're just not getting it.

E1: And they're not getting it done.

E4: Right.

E1: But they're so sweet.

R: A little easier to handle than the boys, I'm sure.

E3: Well, but now, I have had some ADHD girls who were, who presented the same way as the boys, they were all over the place, they couldn't...

E1: We can all think of one.

E2: I just don't think it's the norm.

E3: No, I, I think it, it probably is not as problem-

E1: There's other issues going on.

E2: I had one last year that you could definitely walk in the room and tell, she's—

E1: She's still mine. And she sees life through another lens.

E4: Actually, I had three last year, but thanks.

Laughter.

E1: One of them is still mine.

R: Okay. And, kind of like the boys' question: what methods do you use to, kind of, personally identify females who you might think have an attention problem when you're in the classroom?

E2: I think it all starts with academics. I mean those red flags go up when our kids aren't doing what they need to be doing. I don't mind an active child that's functioning. I don't mind an active child that can, you know, complete tasks. You can stand at your desk and work, that, that's fine. But it's one that, when academics are being affected, that's when the flag goes up.

E3: And not only that child's academics, but the children around them have trouble getting their work done because this one person is constantly in their space. Um, and I think both of those things kind of send that flag up. And, you say "Okay," and like, your child that you move to every different table and still can't find a place where they can function without disturbing their learning and the learning of everyone around them. Um, that usually is a pretty good indicator of, okay...

E4: you know, it's the inability to work in groups. I mean lots of times they are so, um, outside themselves they can't work with a team of other children and it's frustrating to a child, as well as, to the team of children trying to work with them. So, um, that can be frustrating.

E2: And I think girls, not all. Many times, I think girls are more, um, want to keep issues to themselves, you know, you have the children that blurt out and and tell you, "I can't do this!" or "I'm having trouble," but girls don't want anyone to know.

E4: that's true.

E3: Mmhmm.

E2: Not all. But I think as a whole, especially as they get older, that becomes even more the case.

E4: Always the exception

E1: I think some, it's more typical when I look back on kids who could have placed in special ed and didn't that it seems like it's more often a girl. Who we look at her, them as capable. You know, they just need a little more time, a little more this or that. So I don't think we as always, not the exceptional girl, you know see them as someone with real needs, their needs are probably just as great. So...

E2: I think they develop other coping skills.

E1: They've managed to get it done somehow.

E4: Girls develop more quickly than boys too. Part of the boy problem could be maturity level that they're not... when you add immaturity to ADHD you get this baby that really needs (unintelligible) You know where as girls...

Laughter.

E2: There's the social aspects of girls as well, which goes along with the maturity.

E3: I think you're right.

R: Do you want to elaborate some on the social aspect?

E3: Well, you know, yeah, but the first thing that comes to my head is, is looking at children who've been placed on the Autistic spectrum, which I know is not what we're talking about today, but girls have an innate social ability. Um, that doesn't have to be fostered as much; it automatically you know has this group thing.

E4: I think it's almost a mothering tendency, too. You know, girls are good at, you know, caring for...taking care of whereas guys aren't that way, so I don't know if that's part of what you're trying to say. But I think you know, that tends to.

E1: And when they're gonna get the help, they're gonna do something to get, I mean even if its not coming directly from you. They're more likely to create it for themselves.

E3: I think they copy other children's behaviors more.

E1: Or work.

Laughter.

E3: Or work um...Because they seem to want. They seem more concerned about fitting in and, therefore, you know, if I don't know how to do this either I'll ask somebody for help or I'll just look to get their help. Um, and so I think that's more, more typical of girls than I do boys. Um, because they do want to fit, they don't want to stand out. They don't want to be the one

E4: They're the pleasers.

E3: They are. They're much more in tune with pleasing than the boys... meh, who cares? They want to please, but they don't seem to be as concerned about it oft times.

E1: For example, I can think of a girl that we went half way through the year two years ago before we realized that she's just copying someone else's work. She couldn't do the task, it wasn't until she had someone beside her that you didn't want to copy that person's work

Laughter.

E1: that we realized that this child is not...here, getting what they need.

R: Okay. What types of techniques, like preferred seating or extra test time or individual attention, do you use to support female students you've had with attention problems?

E1: Can I say what I do different from, and I don't know what they do in their classrooms

R: Sure, yeah.

E1: Girls and boys, I have tents in my room and I have headphones that don't work, so for both girls and boys, I will give them headphones so they can not tune out and I will allow them to do their work in the tents, under desks, in corners, places where they can just go. And I don't know that the regular classroom has this much opportunity for that as I do, but that's what a lot of what I do with my kids who can't get it focused in the group. Especially when they're all of like kind in the room.

E2: And I find, I think it's beneficial to ADD and ADHD children and um, but I do it for all my kids, we have a lot of pair time where you're working with a partner and I think, in third grade, they're such a huge move to independent work and that is where a lot of children get left behind. And so, lots of times before independent work they'll talk it over with a friend, or um, quickly share ideas to get their ideas thinking and so that way if they're having trouble focusing in on something, they can at least hear somebody else's idea that helps them focus and I wouldn't say that's something that I do specifically for these children but I think it's helpful for those children.

E4: I believe that more and more also with the strategies that we're learning in the classroom for reading and math and those kinds of things, open discussion and paired work does help those children. Um, I also allow kids if they're taking a test or something

and they want to go up to the front table and work up there, wherever they want to move to be more comfortable, that's fine because I know that they're making their own accommodations and that's fine. Um, if if they wanted, and I think (name) said this before, um that if they want to stand and take a test or stand and do something, that's fine too and if a child needs to move around a little bit, then that's fine, too.

E3: Well and sometimes for those children who just need more space because they can't, they have trouble designating what's theirs, you know, rather than, putting the preferential seating may not be right at the teacher's knees, it may be at the back of the group so that they're not constantly disrupting the other children who are trying to focus and it keeps that child from being the center of the focus, um, because they do need to move or they need to be able to have room to be up on their knees or standing up, sitting down, so, you know sometimes you want them where you can touch and redirect, you know, pull them back in without having to say their name or but sometimes they need to be where they have more space and I think a lot of it just depends on the child. Um, you know and, and giving them more work spaces in the classrooms and it's hard when you have a room full to come up with enough quiet spots but, but being aware that some children need to move away from the table to, to get, to be able to focus on what they need to do. Um, and making it okay for anybody who needs to do that, I think is really important so that that child doesn't stand out so much as, you know, this is if you need to move, you need to move. And it doesn't matter.

E2: Sometimes I give my kids things to hold onto, to manipulate and sometimes that works. And sometimes it adds fuel to the fire. Um, but for some kids that is helpful.

E1: And I keep snacks. I have kids that have attention challenges often have, if they have meds or if they don't have meds, they often need food. So, I try to make sure that there's some food around and that they can eat it.

R: Okay, well that's my last question. Um, the kind of overarching purpose of me doing this study, this kind of qualitative interview type study, is to add to kind of the outburst that research that has been devoted to females with ADHD has become, it's kind of become a new hot topic. Um, because girls are most often overlooked in the classroom because their symptoms, in general, aren't as "out there" as boys' symptoms. I'm trying to, kind of, bring that awareness out there about the problem of girls with ADHD and how to help teachers identify girls in the classroom, help teachers cope with girls in the classroom who suffer from these types of attention problems. So do you have anything else that you'd like me to know, to include in a report? It's okay if you don't because you've given me a lot of great information.. just is there anything.

E2: Well I know I had a child last year that was struggling with lots of issues and I think there were some attention issues along with everything else. And I think that's where a lot of, uh, our children are compounded anyway when it's not one thing their dealing with, you know, it's multiple things. But one thing I did with her was some journaling and that helped her when she was frustrated, you know, to try and pinpoint and sometimes she'd share it with me and we'd go back and forth and sometimes it was just

private and she'd just needed to write and sometimes, many times it ended up pulled out of the journal and balled up, and thrown away. But it gave her an outlet, um, so sometimes I think the children are unaware that they are having this struggle until medication becomes a part of it and then when the medication isn't there and then they have this awareness because they see how they can be different. But, um, but sometimes there is a frustration with, you know, why can't I do what others are doing?

E3: Or why am I always being the one spoken to? And that frustration with, "Well, I was only..."

laughter

E1: I just think private time, time to calm down, a place to calm down, a place to find one's self is real key with these kids. And that's hard.

Laughter.

E1: It's hard in this world. But it is how we've helped a lot of them.

R: Anything else?

E1: That's it.

R: Okay, well thank you ladies so much.

APPENDIX B – Transcript from HS4

Interview with HS4 at [REDACTED]: March 12, 2010

R: Alright, tell me about a time when you were very much aware of how having ADHD or ADD affected you in school?

HS4: Um, well, when I was in... elementary.. I um, I always used to just get out of my seat and just walk around... teacher would be like “Go ahead and sit down for a minute” and then I’d get right back up. So...

R: Okay, can you think of a time recently when you could tell how it affected you in school?

HS4: Well the teachers I have now just let me get up whenever I want, so, like... I don’t know, I just.. I just have to move, I can’t sit still.

R: Okay. What about in terms of concentration or focus in class?

HS4: I can’t concentrate.

(Both laugh.)

HS4: I’ll be on other, like my mind just goes on other things like what my friends are doing or what other class or whatever, sometimes it gets on my nerves because I can’t stay focused.

R: Yeah, that makes sense. Describe what having ADHD means to you.

HS4: Um, I don’t really know, like, I guess just that I just have a problem just sitting still and focusing, I guess. That’s what it means to me.

R: So, when someone says, “Hey that kid over there has ADHD,” what’s the first thing you think about?

HS4: Can’t stay still.

R: Okay, and for you is the need to move, you know, is it like a fidgety thing or is it actually “I need to get up and walk around.”

HS4: It’s an actually “I need to get up and walk around.” Because if not, I will just... I don’t know...lose my mind or go to sleep.

(Both laugh.)

R: Okay. Um, if you can remember back to when you were on medication, think about the times when you were on the medicine versus times when you weren't... just days that you maybe forgot to take it or days when you just didn't take it to have a little break. What was the difference like between those days?

HS4: Well, actually the medicine that I was on, the reason why I didn't... I used to sneak and hide it because my momma would make me take it and like what it did to me, it made me not hungry but you know you have to eat on medicine because it makes you sick and so I would just get sick all the time and I would just be very quiet and just sit in my seat and it just was not me, it just made me feel like.. I don't know... like a different person and it was kind of weird, but like with me not on the medication, I'm just a very cheerful person and I'm always on the move and just having fun in class even though I shouldn't be, I should be focusing on my work. (Laughs).

R: Okay, okay. Did you notice a difference in your need to move or your concentration at all when you were on the medication?

HS4: Yeah.

R: You did? It just wasn't as noticeable as the hunger thing...

HS4: Right.

R: Okay, alright. Was it a big difference between the attention or was it just a small difference?

HS4: Big.

R: Big? Okay. Tell me about your IEP.

HS4: Well, my IEP is like... because I have a lot of like... okay I have ADHD and anger management problems and like, with me, like, what like my... the program that I'm in now, it's like separated from the rest of... I mean it's in ■ but it's different. And the teachers that I have now, they know I have ADHD and they know I have all these problems, so like what I do is get up and walk out of class for like five minutes and it's called a "Take Five" and I'll take five minutes and just walk around and then I come back and do my work for a minute and then get back up and walk around the room and whatever, so... It's just... that's just basically how my IEP is and like I'll just have shorter classwork and like when I have tests and stuff I get to go to another room because I will get easily sidetracked if I'm in a room with a bunch of people and so I'd be like just paying attention to them and not paying attention to what I'm doing, so... I go into another room and just do stuff.

R: Okay. Tell me about your therapist.

HS4: Well, like, the therapist, he basically focuses on my goals that I have in the future and my anger management and stuff like that... and how do I handle a situation and stuff like that and that's basically all he is.

R: Does he talk to you at all about your ADHD?

HS4: No, he doesn't talk to me about my ADHD, but he knows I have ADHD but he just doesn't talk to me about that.

R: The anger is more of an issue for him to deal with...

HS4: Right.

R: Okay. Alright, are there any other things that you've tried in like a coping way for you for your ADHD? I know you did try medicine for a while and then this therapist and this IEP, is there anything else you've done?

HS4: Not really.

R: Okay, okay. Tell me about a time when you felt as though having ADHD made you different or unique.

HS4: Well, it makes me different because like... we have one period where we... out of each semester where we have regular class with the regular students in ■ and whatever and like, when I'm in my third period class, I'll just be sitting... I'll sit there for like a minute and then I'll just get up and do what I do. I either laugh or just walk around the room and stuff. People will just look at me and be like "you're really hyper, you're crazy." And I think I'm just weird to other people I guess you should say.

R: Okay.

HS4: But I really don't care because I like being different. I'm different, I like to be different than other people.

R: Well, that's good. Tell me about another time where it made you feel different or unique.

HS4: Um... I don't know. That's basically it, I mean there's a lot of people in this school who have ADHD so I mean... I don't know.

R: Okay. Tell me or describe a time when having ADHD affected your relationship with your classmates.

HS4: Um... well like sometimes they get mad because I just blurt out the answers instead of just raising my hand, I'll just blurt it out and that kind of makes them mad. Like, "You should raise your hand." And it just causes a big conflict in the classroom. So...

R: Okay. Any other times where it affects your relationship with them?

HS4: I can say, like, it makes me very competitive because when I'm in gym and stuff, like, I don't know, like, I just get extra excited and stuff and just happy and it just takes over. So... and they get kind of, they get kind of like "Let us back up because she..." It makes them not walk to be around me, I should say because I get so crazy, I guess. I don't know.

R: Okay. You told me about a few of them, but what kinds of special opportunities do you receive because you have ADHD in school? I mean you mentioned leaving the room to do testing, what else?

HS4: Shorter work, no homework, um, I do projects. I do a lot of hands on work, like that's what I do, um. Like, when I get written up for stuff like getting up without asking or stuff like that, they, usually the principal just like throws it away or say "Just try to not just get up without saying anything or walking out of the classroom without saying anything." So, I don't get in trouble.

R: Okay. Do you get extra time on tests?

HS4: Mmhhh. Yeah, extended time on tests. Or any other work, like classwork or any other thing.

R: Alright. Do you feel like you get a lot of individual attention from your teachers, specifically because you have ADHD?

HS4: Uh huh.

R: You do? Describe some of that for me.

HS4: Like, the teacher sometimes just hand, like she'll hand out the work to like the other kids or whatever and then she'll hand me my work and she'll explain it and be like "You know, if you don't want to do it in here, you can go somewhere else or you know, anytime you need help just tell me to come over here and I'll help you" or whatever.

R: Okay, very good. How do other students react towards you receiving these special opportunities?

HS4: They don't really say nothing or do anything. They just do their work.

R: It doesn't make them jealous or anything?

HS4: No.

R: Okay good! That's good. Alright, tell me about a time when you had a teacher who was understanding about your ADHD and made classroom life easier for you.

HS4: Um, I would have to say everyday!

R: That's good.

HS4: Like everyday my teachers just like makes the work... they break it down to where I understand it and they help me out and when I can't stay still they like "Do you need to take five?" You know what I'm saying?

R: So they're very responsive.

HS4: Right. It's just an everyday thing.

R: Okay. What other things do they do?

HS4: Um, they make learning more fun than regular classes because in regular classes you know they just "You're gonna do this and you're gonna do that." I can't do that. Like I just won't do the work. I would just "uh uh, I'm not doing that." But the teachers I have now, they just like "We are going to have a group activity so you can learn this and this and this and this" so it's like they do more activities. So it's more fun.

R: Okay. Very good. Tell me about a time when you had a teacher who did not know how to help you handle your ADHD in the classroom.

HS4: Let's just say I've got a lot of referrals. A lot. And, like, I kept trying to explain to her and the other teachers kept trying to explain to her that you know I have ADHD and I have anger problems and, you know, I need more time or I need more space or something like that. But she just never like really got it in her head, so like we bumped heads all the time and we always got in arguments or I never did her work. And she would kick me out because I never did her work or stuff like that. It's just...

R: So do you think it was her not being understanding or was it something else that made her different from your teachers who are really effective.

HS4: I guess, I'm pretty sure she understood it, it was probably just how she taught different than my teachers.

R: Alright. Any other times when you've had a teacher who wasn't helpful? It sounds like you've had a really positive experience.

HS4: Yeah.

R: That's really good. Um, what are some specific things your teachers could do to help you in the classroom?

HS4: You want specific things?

R: And it can be realistic or unrealistic, just things you wish they would do for you.

HS4: Let me sleep.

(Both laugh.)

R: Okay, what else?

HS4: Um and like when I get like... I mean some teachers don't let you drink or eat in their class and see me? I carry snacks in my purse, like people call me the Grocery Store Lady because I always have snacks in my purse. And like when I get really hyper sometimes I sit down and just eat and just eat so that way I calm down. You know? I don't know, that may sound weird. But that's just how I am and I don't know. They'll be like "put that food up!" and that's just when I'll be like "If I put it up, I won't be able to calm myself down" because it's just, I don't know.

R: Okay. Anything else you wish they would do? (Pause) Okay, well those are all of my questions. Is there anything else you'd like to share with me about having ADHD and your experience with it or something maybe I didn't cover enough that you wish I had?

HS4: Um, like, I think that people shouldn't be ashamed to have ADHD because, I mean, it's just something you have to live with and just know how to control it, you know, and to me it makes my life... it makes me me. It makes my life so much funner, it really does.

APPENDIX C – Parent Informed Consent Form

Informed Consent Form
Western Carolina University

Dear Parent/Guardian:

As a clinical psychology graduate student, I am conducting research on perspectives of school-aged females with attention deficits on their current and past academic and social experiences and also the perspectives of teachers who interact with female students with ADHD on a daily basis. By signing this form, you are allowing your child to participate in this study that will consist of one semi-structured interview in which she will be asked to answer a collection of questions on personal experiences relating to her academic and social life with attention deficits. Answers from this study will be audio recorded and will be used in a written report of the study with a pseudonym, or code name, used instead of your child's real name. By signing this form, you are agreeing to release your child's answers for this use. Once the study has been completed, the audio recordings and transcripts will be destroyed.

This consent form will be the only document with your child's name. For the report and data collection, a pseudonym will be used that will in no way resemble your child's actual name or any identifying information about your child. However, for descriptive purposes, her age and race might be used in reporting.

During this study, your child will be asked to share with the interviewer personal experiences and feelings about her academic experiences with attention-deficits. You should be aware that some participants might feel embarrassment or discomfort from sharing these thoughts and experiences with someone else who will later use their words in a report. However, the benefits of this study include providing data to set the groundwork for future research in the field of females with ADHD, a field that has not been thoroughly researched in the past. Your child may withdraw from this study at any time, at no cost, and her information will not be included in the report.

If you have any questions or concerns about the study, feel free to ask questions. You may contact me, Blair Burke, at beburke1@catamount.wcu.edu or by phone at (843-632-0024). You may also contact my faculty advisor (Dr. John Habel) with questions and concerns regarding your participation in this study by email (habel@email.wcu.edu) or by phone (828-227-3367). If you would like the results of this study or a copy of the report, please include your email address. Thank you for your and your child's time and cooperation.

Additionally, if you have any concerns about how you were treated during the experiment, you may contact the office of the Institutional Review Board (IRB) at Western Carolina University, a committee that oversees the ethical dimensions of the research process. The IRB office can be contacted at 828-227-3177. This research project has been approved by the IRB.

Child's Name: _____ Date: _____
 Parent/Guardian's Name (please print) _____
 Parent/Guardian Signature: _____

APPENDIX D – Teacher Participant Informed Consent Form

Informed Consent Form
Western Carolina University

Dear Teacher Participant:

As a clinical psychology graduate student, I am conducting research on perspectives of school-aged females with attention deficits on their current and past academic and social experiences and also the perspectives of teachers who interact with female students with ADHD on a daily basis. By signing this form, you are agreeing to participate in this study that will consist of one semi-structured interview in which you will be asked to answer a collection of questions on personal experiences in the classroom with female students who have ADHD/ADD. Answers from this study will be audio recorded and will be used in a written report of the study with a pseudonym, or code name, used instead of your real name. By signing this form, you are agreeing to release your answers for this use. Once the study has been completed, the audio recordings and transcripts will be destroyed.

This consent form will be the only document with your name. For the report and data collection, a pseudonym will be used that will in no way resemble your actual name or any identifying information about you. However, for descriptive purposes, your age and race might be used in reporting.

During this study, you will be asked to share with the interviewer personal experiences and feelings about your experiences teaching and interacting with students who have ADHD/ADD. You should be aware that some participants might feel embarrassment or discomfort from sharing these thoughts and experiences with someone else who will later use their words in a report. However, the benefits of this study include providing data to set the groundwork for future research in the field of females with ADHD, a field that has not been thoroughly researched in the past. You may withdraw from this study at any time, at no cost, and your information will not be used in the report.

If you have any questions or concerns about the study, feel free to ask questions. You may contact me, Blair Burke, at beburke1@catamount.wcu.edu or by phone at (843-632-0024). You may also contact my faculty advisor (Dr. John Habel) with questions and concerns regarding your participation in this study by email (habel@email.wcu.edu) or by phone (828-227-3367). If you would like the results of this study or a copy of the report, please include your email address. Thank you for your time and cooperation.

Additionally, if you have any concerns about how you were treated during the experiment, you may contact the office of the Institutional Review Board (IRB) at Western Carolina University, a committee that oversees the ethical dimensions of the research process. The IRB office can be contacted at 828-227-3177. This research project has been approved by the IRB.

Name: _____ Date: _____
Signature: _____

Email address (if you'd like results): _____

APPENDIX E – Student Assent Form

Student Assent Form
Western Carolina University

Dear Student:

As a psychology graduate student, I am conducting research on views of school-aged females with attention deficits on your experiences with school and social life and also the views of your teachers on their classroom experiences. By signing this form, you are agreeing to participate in this study that will consist of an interview in which you will be asked to answer some questions on your personal experiences in the classroom with having ADHD/ADD. Your parent/guardian already has signed a consent form stating that you are allowed to participate in this study. This form states you agree to participate in this study. Answers from this study will be audio recorded and will be used in a written report of the study with a code name used instead of your real name. By signing this form, you are agreeing to participate. Once the study has been completed, the audio recordings and transcripts will be destroyed.

This assent form will be the only document with your name. For the report and data collection, a code name will be used that will in no way resemble your actual name or any identifying information about you. However, your age and race might be used in reporting.

During this study, you will be asked to share with me some personal experiences and feelings about your experiences academically and socially living with ADHD. You may withdraw from this study at any time, without any consequences, and your information will not be included in the report.

If you have any questions or concerns about the study, feel free to ask questions. You may contact me, Blair Burke, at beburke1@catamount.wcu.edu or by phone at (843-632-0024). You may also contact my faculty advisor (Dr. John Habel) with questions and concerns regarding your participation in this study by email (habel@email.wcu.edu) or by phone (828-227-3367). If you would like the results of this study or a copy of the report, please include your email address. Thank you for your time and cooperation.

Additionally, if you have any concerns about how you were treated during the experiment, you may contact the office of the Institutional Review Board (IRB) at Western Carolina University, a committee that oversees the ethical dimensions of the research process. The IRB office can be contacted at 828-227-3177. This research project has been approved by the IRB.

Name: _____ Date: _____

Signature: _____