ABSTRACT

BROCK, LYNNE BEAZLIE. Teachers with ADHD: Perceptions of Support and Strategies. (Under the direction of Dr. Susan S. Osborne and Dr. Alan J. Reiman.)

In this mixed-methods study, I investigated how teachers with ADHD perceived the strategies and supports they used while teaching or preparing to teach. Nine teachers with diagnoses of ADHD participated in the study. Qualitative, quantitative, and archival data including three focus groups, two individual interviews, teacher efficacy and demographic questionnaires, and two teacher observation reports completed by school administrators were examined to investigate common themes and challenges as they related to teaching with the diagnosis of ADHD. The study examined teachers’ descriptions of strategies that they used in the areas of organization, time-management, memory, and workspace. Teachers reported using three categories of support: personal supports (people who provided support to them), and professional and medical supports. Participants conceptualized the tools they used as being primarily linked to the strategies that they used to manage information and time. Participants also reported on related topics such as ADHD disclosure, self-acceptance, and perceived teacher strengths related to their diagnosis of ADHD.

Findings indicated that participants had mixed levels of support and used a variety of strategies and tools to fulfill their teaching responsibilities. Although these teachers were well educated and rated themselves highly on the teacher efficacy scale, they recognized career challenges that many individuals with ADHD encounter, particularly in the areas of organization and time management. Further, these teachers thought that their teaching was
enhanced in areas such as flexibility, student empathy, and strategy use as a result of their experiences with ADHD. Finally, some participants reported challenges in their lives that suggested they possessed resilience that helped them realize their teaching career goals. I conclude with recommendations for practice and further research.
Teachers with ADHD: Perceptions of Support and Strategies

by

Lynne Beazlie Brock

A dissertation submitted to the Graduate Faculty of North Carolina State University in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

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APPROVED BY:

__________________________  ____________________________
Susan S. Osborne          Alan J. Reiman
Co-chair of Advisory Committee  Co-chair of Advisory Committee

__________________________  ____________________________
Bonnie C. Fusarelli        Edward J. Sabornie
BIOGRAPHY

Lynne Beazlie Brock was born in Newport News, Virginia on June 1, 1953. She is the daughter of the late Edwin E. and Rosalyn H. Beazlie, and the second of four children. As a young child, she moved with her family to High Point, North Carolina. After graduating from T. Wingate Andrews High School in 1971, Lynne attended The University of North Carolina at Chapel Hill where she met her husband, Walter E. Brock Jr. After graduating in 1975 with a degree in elementary education, Lynne taught third and fourth grades with the Wake County Public School System. She achieved tenure and gave birth to her first child in March 1980. She then worked as an after-school director and a preschool director before taking time away from teaching to care for her three young children. When her youngest child began kindergarten, Lynne was admitted to the masters program in special education in the Department of Curriculum and Instruction at North Carolina State University. At the same time, she returned to the Wake County Public School System on a part-time basis as a special educator. She received her Master of Arts degree in Special Education from North Carolina State University in 1996. Lynne is pursuing her Doctorate in Curriculum and Instruction, and will graduate with her Ph.D. in the fall of 2008. She is particularly proud of her son, Eddie, her son Robbie and his wife Sarah, her grandson Hudgins, and her daughter Valerie. Lynne and Walter, her husband of 32 years, reside in Raleigh, North Carolina. She is an avid reader and enjoys performing choral music.
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grace. His high academic standards have influenced me just as I believe he wished—he has made me tougher in the best sense of the word.

I thank the participants of my study, as I had the privilege of listening to the stories of these nine teachers with ADHD, and the notion of strong personal support was pervasive throughout the conversations. I am indebted to these brave teachers who were so open in describing their perceptions of the strategies that they used and the support that they received. They did so with strong convictions concerning their teaching, often with humor and compassion.

I am so indebted to my family. Although my parents are deceased, they were my early ‘cheerleaders’, somehow convincing me that I could achieve anything I sought to do. I will never forget their belief in me, their love for me, and the sacrifices that they made on my behalf. My three children have both endured and encouraged me throughout my educational journey. They may have grumbled more than a bit, as I spent so many hours at the computer, but I think they are proud of their mom. Guys, I love you and I am so proud of you. My husband Walter is an amazing man—I love to call him ‘my rock’ as he is steady and strong. Walter is incredibly accomplished and yet unassuming; someone who did the dishes, paid the bills, and ‘covered’ for me as I did my research. I know it was hard on you, my ‘pal’, but my gratitude is forever.
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CHAPTER ONE: INTRODUCTION

Context of the Problem

ADHD has become one of the most prevalent disorders in childhood, with three-to-five percent of school-age children estimated as having this diagnosis (Barkley, 1997). Cuffe, Moore, and McKeown (2005) reported that 6.5% of children between the ages of three and 17 ‘were ever diagnosed’ with ADHD. DuPaul, Stoner, and O’Reilly (2002) reported that there was a substantive increase in students with ADHD between the periods of 1989 and 1999. The ‘other health-impaired’ category, in which ADHD resides, was “the fastest growing special education category, increasing 280%...presumably due to an increased identification of students with AD/HD” (DuPaul, Stoner, & O’Reilly, p. 1116).

While ADHD was once thought to be a disorder of childhood, Weiss and Hechtman (1993) found that two-thirds of children in their study continued to have one or more symptoms that persisted to adulthood. Prevalence rates of adult ADHD range from three to 16 percent of the population (Faraone & Biederman, 2005).

The nature and causes of ADHD has been a matter of considerable debate. The Diagnostic and Statistical Manual of Mental Disorders, fourth edition (American Psychiatric Association, 1994) illustrates the continued discussion of the disorder, as its definition has changed several times. In the DSM-II (1968), ADHD was termed “Hyperkinetic Reaction of Childhood,” the DSM-III (1980) diagnostic criteria changed the name to Attention-Deficit Disorder with or without hyperactivity. The DSM-IV (1994) shows the progress of the extensive research and refinement of the disorder.
Although there are an abundance of books and popular press articles on the possible strengths of adults with ADHD, there is very little research on successful adults with ADHD and how they function in their careers. There is little research on teachers with learning disabilities (Ferri, Connor, Solis, Valle, & Volpitta, 2005; Ferri, Hendrick Keefe, & Gregg, 2001), and no research has been conducted on teachers with ADHD. As ADHD individuals who were diagnosed as children are coming into the workplace, and more adults with ADHD are being diagnosed (Faraone & Biederman, 2005), it is likely that there are many individuals who have ADHD and are teachers.

Statement of the Problem

Studies of young adults in college and of adults with ADHD are increasing, whereas previous research concentrated heavily on children. The majority of research continues to center on characteristics, risks and deficits of those with ADHD. However, there is increasing literature in the popular press that sheds a more positive light on the disorder or that contains coping strategies or valuable supports (e.g., Hallowell & Ratey, 2005; Hartman, 2002; Kolberg & Nadeau, 2002; Murphy & LeVert, 1995). This research will be discussed at length in Chapter 2.

There is no published research, qualitative or quantitative, on teachers with ADHD. These teachers, by the nature of their condition, may need additional resources to maintain organization and focus in their careers, whether these resources come from within or from support systems over a period of time or in the present. Thus, this research explored what strategies, tools, and supports teachers with ADHD employed and how they used such
strategies, tools, and supports to improve the effectiveness of their teaching. The following research questions are the foundation of this study.

Research Questions

1. Do K-12 teachers with ADHD utilize strategies?
2. If so, what strategies do K-12 teachers with ADHD utilize?
3. Do K-12 teachers with ADHD utilize supports?
4. If so, what supports do K-12 teachers with ADHD utilize?
5. Do K-12 teachers with ADHD utilize tools?
6. If so, what tools do K-12 teachers with ADHD utilize?
7. How do teachers describe the utility of these strategies, supports, and tools?

Foundations for research to be addressed in the literature review:

1. What are the attributes of effective teachers?
2. What are the attributes of successful adults with ADHD in the workplace?

Significance of the Study

This researcher found a small body of research of a qualitative nature on teachers with learning disabilities, but none whose focus was on teachers with ADHD. Research is increasing on adults with ADHD and on individuals with ADHD and their potential for career success. The field of teaching would seem to be an important area missing from the literature because anecdotal information suggests that a substantial number of adults with ADHD are drawn to education. As individuals diagnosed as children with ADHD are entering the workplace, some of these individuals will be entering the teaching field,
perhaps because of or despite their unique ADHD experiences in school. In addition, many individuals with ADHD diagnosed as adults are already teachers.

Demonstrating how teachers with ADHD cope with their condition in light of the significant challenges of teaching will serve three purposes. First, an investigation of supports, tools, and strategies that teachers with ADHD utilize will be examined, as more teachers with ADHD come into the workplace. Those concerned with the induction of teachers need to provide optimal training and support for this particular subset of prospective teachers. Secondly, teachers with a high degree of support and effective strategy use may be more likely to remain in the classroom. Finally, the success of supports and coping mechanisms for teachers with ADHD will influence performance of those students under their care.

Because terminology surrounding ADHD may be used differently in medical, psychological, educational and informal social contexts, I provide definitions of terms used in this study.

Definitions

- Attention-Deficit Hyperactivity Disorder, or ADHD, in adults is under current and heated discussion in the medical and psychological fields. However, the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 1994) categories are used here. ADHD has two types: inattentive and hyperactive/impulsive, and three subtypes; ADHD, Primarily Inattentive; ADHD, Primarily Hyperactive/Impulsive; and ADHD, Combined Type. Although the DSM-IV states that onset of symptoms
begin before age seven and clinical trials for ADHD were established using children (McGough, 2004), DSM-IV criteria is used with clinician judgments (Faraone, 2006) as valid diagnosis of ADHD in adults.

- Executive functioning is the ability to self-regulate one’s behavior.
- Medical intervention is defined as medicine prescribed for ADHD symptoms to increase focus and reduce impulsivity.
- Personal teaching efficacy is defined by Woolfolk and Hoy (1990) as the following: “Thus, individuals who believe that teaching is a potentially powerful factor in student’s learning may believe either that they are effective or that they lack the ability to make a difference with their own students” (p. 82).
- Self-efficacy is defined as the extent to which an individual believes that he or she is in control of his or her self-regulation and environment.
- Strategies are defined as carefully planned methods in order to reach a particular goal.
- Support systems, as used in this research, can be both informal and formal support that individuals with ADHD have utilized over his or her lifetime. They may include a nurturing family and friends, church support, school support with or without formal educational interventions, peer support, coaching, and counseling.
- Tools, operationally defined, are concrete objects that an individual uses to help organize and remember tasks and retain focus. Examples of such tools are calendars, personal digital assistants (PDAs), lists, clocks, or computer software.
• Utilize as defined by Webster’s New Collegiate Dictionary is “to make use of” (Gove, 7th ed., 1970, p.978).

Summary

ADHD is a common disorder in children and research has determined that approximately two-thirds of those children have ADHD to some extent as adults. More research has been conducted on adults with ADHD of late, including these individuals’ adaptation and coping abilities in their careers. There are teachers with ADHD; therefore, this initial research sought to investigate how teachers with ADHD manage their teaching responsibilities.

This study was exploratory in nature. This researcher found no research on teachers with ADHD; therefore, using qualitative methodology, two questionnaires, and archival data seemed appropriate to investigate this phenomenon.

The intent of this study was to examine the supports, strategies, and tools that teachers with ADHD used and how the participants described the utility of these aids in fulfilling their job requirements. I hope this study added to the body of research on necessary teacher strategies and supports.

The next chapter provides research pertinent to the proposed study. The three broad sections are the theoretical underpinnings tied to the research questions, the literature on adults with ADHD, and teacher effectiveness research.
CHAPTER TWO: LITERATURE REVIEW

In this chapter, I reviewed relevant literature for this study. The chapter begins with a brief history of ADHD highlighting adults with ADHD, followed by the theoretical foundations of the study. Next addressed are the prevalence, diagnosis criteria, and profiles of adults with ADHD.

The second section reviewed literature on treatment and coping mechanisms for adults with ADHD, followed by career factors of adults with ADHD and learning disabilities. The final section reviewed teacher effectiveness research as it may pertain to teachers with ADHD.

Research included in this review was searched in the broad categories listed above. I primarily searched the databases PsychINFO, ERIC, and Social Sciences Citation Index (SSCI). Although most articles were written between 1990 and 2008, some earlier, seminal articles were discussed due to their importance in the field. The search included peer-reviewed journal articles, relevant books, and book chapters. Additionally, I searched the references of peer-reviewed articles for additional relevant studies. Articles chosen for review pertained to the research questions, theoretical underpinnings of the research, and methodological issues.

The growing knowledge base on attention-deficit/hyperactivity disorder (ADHD) in children and adults continues to center on a deficit model. Many studies concentrate on the learning deficits of students with ADHD (e.g., Barnett, Maruff, Vance, Luk, Costin, & Wood, 2001; Faraone, et al, 1993; Frazier, Youngstrom, Glutting, & Watkins, 2007). Other
researchers investigate the social skills and psychosocial deficits of those with ADHD (e.g., Barkley, Murphy & Kwasnik, 1996; Eyestone & Howell, 1994; Friedman et al., 2003; Landau & Moore, 1991; Rapport, Friedman, Tzelepis, & Van Voorhis, 2002; Shaw-Zirt, Popali-Lehane, Chaplin, & Bergman, 2005).

Further studies examine the memory deficits of those with ADHD (e.g., Brown, Reichel, & Quinlan, 2007; Mannuzza, Klein, Bessler, Mallow, & LaPadula, 1993; Quinlan & Brown, 2003; Riccio et al., 2005; Wolfe, Davis, Romine, George, & Lee, 2005; Roth et al., 2004). The deficit model continues with a plethora of studies concerning the impulsivity of those with ADHD (e.g., Barkley, Murphy & Bush, 2001; Hervey, Epstein, & Curry, 2004; Murphy, 2002; Seidman, Biederman, Weber, Hatch, & Faraone, 1998), and the health and relational risk factors of those with ADHD (Barkley et al.; Murphy & Barkley, 1996; Murphy et al.; Whalen, Jamner, Henker, Delfino, & Lozano, 2002; Wilson & Levin, 2005).

Finally, Barkley (1997) and others (Biederman, et al., 2006; Nigg, et al., 2005; Seidman et al., 2005) consider deficits of executive functioning to be the defining core of those with ADHD.

While these studies have increased the understanding of the disorder and have created a wider acceptance of ADHD as a legitimate disorder, considerably less research has been conducted on possible compensatory or coping mechanisms on individuals having this condition. I reviewed several studies in this category later in the chapter.
Although the vast majority of research remains focused on ADHD deficits, some research, preliminary case studies, and descriptive papers in peer-reviewed journals are beginning to report findings on adults with LD who are moderately to highly successful in the workplace (Gerber, Ginsberg, & Reiff, 1992; Reiff, Ginsberg, & Gerber, 1995; Price, Gerber, & Mulligan, 2003). A few studies address the unique condition of teachers with learning disabilities (Gerber et al.; Ferri, Connor, Solis, Valle, & Volpitta, 2005; Ferri, Hendrick Keefe, & Gregg, 2001), while a descriptive article discusses careers and challenges of adults with ADHD, particularly those with high ability (Nadeau, 2005). Some researchers such as White and Shah (2006) have studied creativity in adults with ADHD.

Despite the lack of research on the possible positive attributes or successful strategies of ADHD in adults, many books, articles, and organizational websites have been published on this topic (e.g., Hallowell & Ratey, 2005; Hartmann, 2002; Nadeau, 1997; Nadeau, 2002; Nadeau & Quinn, 2002; Solden, 1995), and CHADD (Children and adults with Attention Deficit/Hyperactivity Disorder, http://www.chadd.org). While these authors and organizations do not deny the challenges of ADHD, they do emphasize the hope and possibilities for those with the disorder. Other books offer self-help strategies on organization and focus (Hallowell & Ratey, 2005; Kolberg & Nadeau, 2002; Murphy & Levert, 1995; Weiss, 2001).

The deficit literature is necessary to emphasize the existence of ADHD in children and adults. However, research is needed to further investigate the complexities of ADHD
and the characteristics and coping mechanisms associated with successful outcomes in adults with this disorder. There are many individuals who do overcome obstacles, graduate from high school and college, obtain jobs, and keep those jobs. Indeed, these jobs include professions such as teaching that require a varied number of complex skills to be successful. The characteristics that contribute to the success of these individuals are worthy of research; through them we can advance our understanding of the range of adults with ADHD and what strategies successful adults with ADHD employ to overcome the challenges that the disorder defines.

This study examined the strategies and supports that teachers with ADHD utilize and how they described these strategies and supports. Because research of this kind is quite limited, the researcher considered the following supporting questions in this review of the literature:

1. What are the attributes of effective teachers?
2. What are the attributes of successful adults with ADHD in the workplace?

ADHD: An Historical Overview

What we now know as ADHD has evolved for at least 100 years. Still (1902) described boys having a disorder called “hyperactivity” or “hyperkinesia disorder of childhood.” While Still may have used contemporary language, labeling these children as having a “defect in moral control”, some of his description of the behavior deficits such as “defect in inhibitory volition” (p. 1011) is similar to a prominent ADHD factor today. Still also considered this disorder to be of either biological origin or caused by brain damage.
Finally, Still found that three times as many boys as girls suffered from this condition and that the symptoms commonly occurred before the age of eight.

In the 1950s and 1960s the term “minimal brain dysfunction” was used for individuals who showed behavioral impairments without evidence of brain injury. During this period, research was conducted on the neurological constructs of these symptoms (Laufer, Denhoff, & Solomons, 1957), finding that there was a subset of children in medical trials who again showed no obvious head injuries. Identified as “hyperkinetic impulse disorder,” the characteristics under this term seem quite similar to some characteristics attributed to those with ADHD today: short attention span, unpredictable, impulsive behavior, low tolerance for delay in gratification, and low frustration tolerance.

Barkley (1998) labeled the period between 1960 to 1969 as “The Golden Age of Hyperactivity” (p. 8). The term minimal brain dysfunction was losing favor, viewed as vague and without definitive neurological evidence. Chess’ study (as cited in Barkley, 1998) further removed the disorder from the more severe brain-damaged classification. Chess also urged that the criteria for this disorder be objective. In addition, she discounted previous assumptions that blamed children’s behavior on poor parenting.

In the 70s, the trend from hyperactivity to attention deficits was emerging as a more accurate terminology for the disorder (Douglas, 1972). Douglas and others at McGill University were also instrumental in improving and standardizing assessments for diagnosis, particularly in the area of sustained attention. Finally, these researchers were powerful agents for the disorder’s name change to Attention-Deficit Disorder in 1980.
Medication therapies, predominantly for children, were developing rapidly with the main medical treatment being the use of stimulant medication. While still controversial in the public and professional arenas despite proven efficacy, a tremendous amount of research was conducted, and, as reported by Barkley (1998), made “this treatment approach the most well-studied therapy in child psychiatry” (p.14).

Substantial research of this disorder continued and continues today. Such major changes include more research in assessment, the change in classification from ADD to ADHD, developments in therapy, and public awareness (Barkley, 1998). Recent research has shown us, contrary to previous thought, that most individuals with ADHD continue to display characteristics in adulthood, although these characteristics may present in a different manner or to a lesser degree.

ADHD is an extremely well researched disorder, and yet there are gaps in the research. Of particular interest to this study are those adults with mild symptoms, protective factors, and adequate support systems that enable them to have successful careers. This notion of protective factors and support systems has as its theoretical framework the processes of self-efficacy beliefs of Bandura (1977). Bandura discussed the importance of personal and social attributes, particularly personal characteristics and accomplishments, in the building of an individual’s increased self-efficacy. This self-efficacy, including goals and increased feelings of control over one’s actions, has the potential to build on success. Although the deficit model is often necessary, we must consider the possibility that high-functioning adults with ADHD can manage their symptoms, receive help when they need it,
and be successful in their lives. To think otherwise would be to give up on a potentially productive segment of our population and flies in the face of considerable anecdotal evidence.

Theoretical Foundations

This study’s theoretical base comes from Bandura’s processes of self-efficacy beliefs (1977, 1993) and Barkley’s theory of executive functioning (1997, 1998). Bandura’s theory centers on personal, perceived self-efficacy and its contribution to cognitive development and learning. Purposeful goal setting is a major component in high self-efficacy in individual development and success.

Research shows that individuals with ADHD have impairments in self-regulation. As self-regulation is an important component of Bandura’s self-efficacy theory, some may question the soundness of relating this theoretical underpinning to adults with ADHD. However, Bandura (1993) noted that individuals do not reach a degree of self-efficacy in isolation; they are influenced by four interrelated factors. These factors, performance accomplishments, verbal persuasion, emotional arousal, and vicarious experience, combine to form an individual’s level of self-efficacy in a task or career such as teaching.

Teachers with ADHD have successfully crossed many hurdles that differentiate them from many more severely effected individuals with ADHD. They have gotten into and graduated from college and have successfully secured a job in teaching. Indeed, it was the purpose of this study to investigate what supports and strategies have led them to their current positions.
Although ADHD is not specifically labeled a spectrum disorder, there are certainly individuals who have fewer debilitating characteristics and have found ways to accommodate or lessen their ADHD symptoms. These individuals may have had strong support systems growing up and continue to have them in their adult lives. These individuals may have a degree of intelligence that serves as a major protective factor, enabling them to achieve success in school and in their careers.

Barkley’s research (1997, 1998) and his review of the research of others emphasize the importance of self-regulation. Bandura (1977, 1986), too, marks its importance. Bandura, however, adds the crucial self-efficacy component. He summarizes those with high efficacy: “Those who have a high sense of efficacy visualize success scenarios that provide positive guides and supports for performance” (1993, p. 118).

Bandura’s processes of self-efficacy beliefs, therefore, where developmental factors in the context of perceived self-efficacy are premier, are quite appropriate to this study. Indeed, as the ultimate educational goal of our system is to provide a rich educational experience for every student, we should deeply explore factors relating to teacher competence and effectiveness. A detailed section of teacher effectiveness research, including teacher self-efficacy, appears later in this review.

*Bandura’s Processes of Self-Efficacy Beliefs*

Cognitive Processes

Personal skills require the belief that one can perform such skills for them to be used effectively. Bandura (1993) cited several studies (Berry, 1987; Bouffard-Bouchard, 1989;
Collins, 1982; Wood & Bandura, 1989b) in which perceived self-efficacy affected cognitive functioning. He noted, though, “. . . people who perform poorly may do so because they lack the skills or they have the skills but they lack the sense of efficacy to use them well” (p. 119). The most effective individuals in these studies are those who believe that ability is fluid and can be enhanced by cognitive or memory tasks.

Bandura (1977, 1993) stresses the importance of social influences on one’s perception of ability. We naturally compare ourselves to others. However, if we regularly perform poorer than our peers, personal efficacy is weakened, analytic thinking is decreased, and finally, both impair performance. However, if one sees the personal and progressive mastery of his or her skills, this enhances personal efficacy as well as performance. These learning and social feedback methods are applicable to an individual of any age, and may be especially important to those with ADHD and other disorders.

Motivational Processes

Bandura (1993) lists three of the many theories related to cognitive motivators, including causal attributions, outcome expectancies, and cognized goals. He contends that self-efficacy is a component of each theory of motivation. Additionally, personalized goals influence motivation and this interrelationship is a cognitive process. Bandura advocates the use of self-rewarding after goal attainment, leading to fulfilling such goals and increased effort. Bandura discusses his preference of positive actions as a strong factor in motivational theory.
**Affective Processes**

Perceived efficacy plays a strong role on individuals’ affect. Bandura (1977, 1993) postulates that if people believe they have some control over stressors or threats, those threats can be lessened or dealt with in a reasonable manner. Those who lack control or feel inefficacious towards stressors may have emotions that escalate the stress or worry about things that may not happen. This same line of reasoning applies to achievement anxiety. “It [scholastic anxiety] is best reduced not by anxiety palliatives but by building a strong sense of efficacy” (1993, p. 134).

**Selection Processes**

People access their self-efficacy when selecting those things in which they feel strong; this creates a chain that includes a person’s interests, capabilities and social networks. The initial decisions based on perceived efficacy can have life-long effects. Intellectual development is also included. Bandura (1993) discussed the ways that the student, the teacher, and the school all have efficacy belief systems that can strongly affect academic progress.

Caprara, Pastorelli, and Bandura (1992), as cited in Bandura (1993), measured children’s perceived self-efficacy across a broad range of domains including efficacy to resist peer pressure, efficacy to form social relationships, and perceived self-efficacy to meet personal and social expectations. Children who had a high perception of academic and social efficacy were more socially adept and popular and experienced less social rejection.
than those children with low academic efficacy. Therefore, high perceived academic efficacy transferred to the social realm.

Bandura’s theory includes the perceived efficacy of teachers. This will be discussed later in a separate section on teacher effectiveness and efficacy.

Based on Bandura’s model, related theories have similar themes, stressing goal setting, high efficacy, and the connection of an individual and his or her personal strengths, various supports, and environmental factors.

Reiff et al. (1995) base a model of vocational success for adults with learning disabilities on their research that identified employment success factors for this population (Gerber et al., 1992). The authors found that personal control and reasonable goal setting are key factors in career success.

Bandura’s theory is well suited for this study on teachers with ADHD, as it speaks to the power of social networks and perceived self-efficacy and the importance of self-regulation. However, some researchers have discounted Bandura’s theories on self-efficacy, chiefly Kirsch (1982), and more recently, Cahill, Gallo, Lisman, and Weinstein (2006). Their criticism involves the link Bandura made with phobic anxiety and avoidance behaviors, as Bandura stated that these were caused by low efficacy expectations. Bandura retorted (2007) by stating that Kirsch and others oversimplified his theory in this regard. Briefly, Bandura admonished these critics by pointing out “Perceived self-efficacy is conceptualized as perceived operative capability. It is concerned not with what one has but with belief in what one can do with whatever resources one can muster” (2007, p. 646).
Bandura dispelled his critics’ contention that his construct validity of self-efficacy concerning fear-based tasks was flawed. Some of the theoretical underpinnings speak to the possibilities of those teachers with ADHD, and some of them underscore the potential challenges that teachers must address to be successful. Both must be considered in this research.

_Barkley’s Theory of Executive Functioning_

Executive functioning is the term used to identify those cognitive processes produced by the prefrontal regions of the brain that monitor self-regulation. In Barkley’s theory (1998), which is the model of executive functioning used in this review, the five executive functions of particular difficulty to those with ADHD are: (a) behavioral inhibition, (b) non-verbal working memory, (c) internalization of speech or verbal working memory, (d) affect/motivation/arousal, and (e) reconstitution (p. 229).

_Behavioral Inhibition_

Barkley (1998) describes behavior inhibition as the executive function that is the foundation of the other functions that pertain to ADHD and self-regulation. Barkley states that behavioral inhibition makes it possible for the other executive functions to occur but does not cause them to occur, primarily through the delay of time in the processes described below.

Barkley (1998) states that the three processes of behavioral inhibition are: inhibiting initial prepotent response to an event, stopping an ongoing response permitting delay in decision, and protecting the delay period or “interference control.”
Prepotent response as defined by Barkley (1998) is a response that has received immediate positive or negative reinforcement in the past or is currently available. Because of the immediate nature of the reinforcement, both positive and negative are difficult for individuals with ADHD to control. Self-regulation begins with inhibiting the prepotent response. The delay caused enables the other executive functions to occur and is critical to self-control.

An individual’s ability to stop an ongoing response is also crucial to self-regulation (Barkley, 1998). This requires a flexibility and awareness of one’s surroundings and the appropriate changes that need to occur. This interrupting capability is reliant on behavior response inhibition and working memory.

Interference control is important, particularly during a delay in responding period while other executive functions are at work (Barkley, 1998). External and internal stimuli continuously occur and interference control must serve as a filter in order for self-regulatory processes to discern what stimuli are important at the moment. Interference control is critically connected to working memory. All three of these processes that make up behavioral inhibition are impaired to some degree in individuals with ADHD.

*Non-Verbal Working Memory*

Barkley (1998) defines nonverbal working memory, or “covert sensing to the self” as “the capacity to maintain internally represented information in mind or on line that will be used to control a subsequent response” (p. 235). It features all types of sensory-motor behavior, but two of these are fundamental to human self-regulation: covert visual imagery.
and covert audition. Individuals engaged in current activities use their non-verbal working memory to recall related and prior sensory-motor activities in a covert manner. These memories help the individual retain the events but also change and act on the task at hand as necessary. Sequence is also involved here as nonverbal working memory can aid in forming and improving the temporal order of tasks or events. This process should also guide future behavior and relates to self-awareness.

Recalling sequences in working memory are the foundation of humans’ sense of time (Barkley, 1998). This temporal information and process requires effort; a form of attention. Working memory, then, as it enables individuals to relate past sensory-motor behavior to present and future events can be viewed as an aid for non-verbal rule-governed behavior.

*Internalization of Speech (Verbal Working Memory)*

Internalization of speech can serve many purposes (Barkley, 1998). It can provide a means by which an individual reflects on past behavior before acting on current behavior. This verbal working memory may also involve self-questioning of behavior. Paired with nonverbal working memory, it may add to mental abilities such as reading comprehension and moral reasoning.

*Self-Regulation of Affect/Motivation/Arousal*

Internalization of speech and the self-questioning of behavior are both directly related to an individual’s delay of expressing emotions, and to the quality of the expression of such emotions. The more one can covertly monitor behavior through imagery and private
speech, the more controlled and less emotionally charged one can be. If there is a period of delayed, public responding of negative emotions, an individual can also formulate a more objective response to external stimuli.

Motivational and arousal states are related to emotional states and their affect on goal-directed, purposeful behaviors and goal persistence. Barkley (1998) states that factors such as the ability to self-regulate, control emotional states, and persist in goal-directed behaviors and motivation all influence one another.

Reconstitution

A difficult concept involving analysis and synthesis of behavior, reconstitution consists of analyzing and breaking down complex behaviors, or chaining behaviors into a complex task. These learned “behavioral units” can be used to create novel behaviors or behavior chains “... out of previously learned responses in a process Bronowski called synthesis” (Barkley, 1998, p. 242). Reconstitution, then, contributes to creativity and flexibility.

Summary of Executive Functioning and ADHD

Barkley (1998) connects executive functioning and those with ADHD stating that these individuals have impairments in all of the executive functions, meaning that “ADHD is not just a deficit in behavioral inhibition but also a deficit in executive function and self-regulation as a consequence of that inhibitory impairment” (p.249).
Barkley’s theory does analyze and speak to the deficits of individuals with ADHD. However, he does not explicitly address the range of severity of those with ADHD or the possible protective factors that individuals with ADHD may possess.

Although not part of the theoretical base of this study, Disability Theory is briefly discussed as the participants in this study have the disability of ADHD. The theory gained strength after the 1981 International Year of Disabled Persons (Gabel & Peters, 2004). This activist theory and its proponents have used the social model of disability, asserting that society constructs disability and this model promotes action to fight against the oppression of those with disabilities. These theorists object to the medical model of disability that researches prevalence, diagnoses, treatments, a model that they claim views disability as simply pathology.

I will discuss the literature on protective factors in a later section on treatment and coping mechanisms for adults with ADHD.

Prevalence and Diagnosis of Adults with ADHD

Growing research on adults with ADHD has led to more precise prevalence rates. Wilens and Dodson (2004) report that approximately four percent of college-aged individuals and adults have ADHD. A significant development of the research, the authors report, is due to advances in recognition and diagnosis.

Current researchers are refining the criteria for adult ADHD. Some studies, such as those by Kessler et al. (2005) did not rely on DSM-IV criteria, instead using adult scales such as the Adult ADHD Clinical Diagnostic Scale (ACDS), Version 1.2 (Adler & Spencer,
2004) and the ADHD Rating Scale (ADHD-RS) (DuPaul, Power, Anastopoulos, & Reid, 1998). A diagnosis of ADHD in childhood is important for the diagnosis of adults, as some have reported that as many as 60% of children continued to have ADHD in adulthood (Biederman & Faraone, 2000; Rasmussen & Gillberg, 2000; Weiss & Hechtman, 1986). Therefore, childhood histories of ADHD and the severity of symptoms in childhood may help clinicians determine an accurate diagnosis and devise an effective treatment plan for adults with ADHD.

Currently, the *DSM-IV-TR* is used most commonly to diagnose ADHD by specific criteria into one of three subtypes. Those subtypes are predominately inattentive, hyperactive-impulsive, and the combined type, described by Wilens and Dodson as being the “most common and most debilitating” (2004, p.1302).

Profiles of Adults with ADHD

“It’s as though I have a symphony inside me, but all that comes out is a plunk on a broken-down old piano.” (Solden, 1995, p. 62)

Although there is overlap and inconsistency in the following categories, they are useful in viewing the various explanations and manifestations of adults with ADHD. The aspects of adult functioning addressed here are cognitive factors, social and emotional factors, gender-specific characteristics, and comorbid and health conditions. While noting the extensive research on adults with ADHD, it is recommended that readers be mindful that these adults can vary widely as to the severity of impairment and individual functioning due to this disorder.
Cognitive Factors

Executive Functioning

It is widely known that children with ADHD have attentional and self-regulation deficits as a hallmark of their disorder. Research on adults has indicated that attentional challenges persist. Many adults with ADHD have attentional problems because they lack the ability to filter out extraneous stimuli in their environment. Other adults with ADHD have difficulty holding their attention on stimulus for more than a brief period. These adults may in fact attend to many things at once. In addition, some individuals with ADHD hyperfocus; they attend to one stimulus to the exclusion of other stimuli. These attentional subtypes create different kinds problems for those with ADHD.

One of the most frustrating characteristics for adults with ADHD is their challenge with working memory. Several criteria in the *DSM-IV* are memory-related, such as “often has difficulty organizing tasks or activities,” “often loses things necessary for tasks or activities,” and “is often forgetful in daily activities” (First, Frances, & Pincus, 2004). Originally thought of as synonymous with short-term memory, present thought seems to put working memory between short-term and long-term memory; memory that allows individuals to complete everyday tasks and enable the storage of information into long-term memory.

Organizational challenges are quite common among individuals with ADHD. Cluttered desks and other workspaces, as well as disorganized home areas are concrete examples of the ‘disorganized mind’ of adults with ADHD. Barkley et al. (2001) compared
young adults with ADHD and controls on time perception tasks, finding that young adults with ADHD made greater time reproduction errors than the control group. Not only can this time perception difficulty cause an individual with ADHD to be tardy to an event, it can also affect estimations of task completion. It follows that an individual would have difficulties with organization if insufficient time was allotted for a myriad of tasks.

The adult with organizational and attentional problems needs to be organized and to compensate for his or her working memory deficits—and yet, for most with ADHD, these skills are challenging, but not impossible to maintain. In a section entitled “Fear of Filing,” Kolberg and Nadeau (2002) describe individuals with ADHD who fear that putting something away will cause them to forget its existence. Working or short-term memory deficits may be the underlying culprits of many organizational challenges.

Memory deficits can also negatively influence conversational patterns. A sudden loss of one’s thought patterns during conversation is something that most individuals experience. However, many individuals with ADHD are more impaired than “normal” individuals, and describe this frequent, conversational memory loss as both frustrating and embarrassing (Weiss, 2001).

Roth et al. (2004) studied the verbal learning deficits and memory of adults with ADHD and the contribution that semantic clustering strategies, or the lack of it, affect these individuals. The researchers matched 28 unmedicated adults with ADHD from an outpatient clinic with 34 controls. The groups did not differ with respect to age, estimated IQ, or years of education. However, they differed significantly in the areas of gender, with
more women in the control group, and with more individuals displaying depression and anxiety in the group with ADHD.

Semantic clustering strategies involved the participants organizing and recalling words presented orally in several trials, using the California Verbal Learning Test (Delis, Kramer, Kaplan, & Ober, 1987). Curiously, the researchers found that ineffective use of organizational strategies did not contribute to learning and delayed recall. Indeed, they found that situational anxiety had a greater part in explaining decreased verbal learning and memory.

Roth et al. (2004) questioned whether “executive and verbal memory dysfunctions might be due to at least partly independent mechanisms in ADHD” (p. 81), conflicting with Barkley’s theory of executive functioning (1998). They also questioned whether adults with ADHD had problems generating organizational strategies or difficulties applying such strategies. The authors expressed the need for further research due to their study’s disproportionate number of men in the ADHD group had few women and the overall small sample size.

Quinlan and Brown (2003) sought to determine if a short assessment of verbal memory compared with verbal abilities could determine impairments in adolescents and adults with ADHD. The authors also wished to compare verbal memory and verbal abilities in individuals with ADHD and the general population. Their sample of individuals with ADHD included 193 persons from a private clinic and 83 from a university clinic. The
researchers combined these two groups’ demographics; the mean age was 31.7 years, 68% were male, and the education levels ranged from eighth grade to doctoral degree.

Each potential participant was assessed by a licensed psychologist in two-hour interviews including the integration of the Brown ADD Rating Scale (Brown, 1996) to fulfill the DSM-IV diagnostic criteria. The Wechsler Adult Intelligence Scale-Revised (WAIS-R; Wechsler, 1981) and the Working Memory Scale-Revised (WMS-R; Wechsler, 1987) were administered to all participants. The private clinic group and the university group scores were statistically similar; therefore, the researchers again combined the samples to present results.

The researchers used the Logical Memory subtest of the WMS-R (1987) because of its use of recalled verbal narratives. Most standardized verbal ability tests measure skills such as simple list-learning, and the narrative aspect of Logical Memory resembles more complex processing skills required in everyday memory activities.

Results showed that the sample’s mean scores on the full-scale IQs (113.45) and for general verbal abilities (112.01) were in the high average range. Logical Memory was given twice to all participants, once directly after the narrative probe, and again after a delay of 30 minutes. Interestingly, no significant difference was found between the immediate recall (93.16) and the delayed recall (92.95) scores; the authors concluded that the Logical Test results showed subjects to have problems in encoding and immediate retrieval. The significant differences between Verbal IQ scores and the narrative scores showed the narrative scores to be much more sensitive to verbal memory impairments.
Brown, Reichel, and Quinlan (2007) replicated the Quinlan and Brown (2003) study, instead assessing the verbal memory of children and adolescents with ADHD. They found similar, strong results by reviewing the charts of individuals aged six to 18 years. This replication strengthened the similar study, indicating that those with ADHD, compared to their overall verbal abilities, display more impairment in verbal working memory. These individuals also display this same pattern to a much greater degree than those in the general population.

Researchers in both studies cited the usefulness of assessing verbal memory of those with ADHD using a brief but valid measure. However, they did not discuss pragmatic implications for the everyday lives of those with significant impairments in verbal working memory. At a minimum, teachers, clinicians, and those with ADHD themselves should be aware of these findings, and how strategies and coping mechanisms may help those with impairments in verbal working memory.

**Intelligence**

The majority of studies report no statistical difference between overall intelligence in adults and children with ADHD and adults and children without ADHD (Bridgett & Walker, 2006; Seidman et al., 1998; Schuck & Crinella, 2005; Weyandt, Mitzlaff, & Thomas, 2002). There are, however, common and persistent characteristics that often present challenges to adults with ADHD.

Conflicting research exists concerning the intellectual ability of adults with ADHD. Seidman et al. (2005) found that preteens and teenagers with ADHD had significantly lower
IQs than controls. Seidman et al. (1998) found that self-referred adults with ADHD, however, had milder neuropsychological impairments on an extensive battery of measures as compared to previous pediatric studies. In addition, Seidman et al. did not find significant differences between the adults with ADHD and controls in Freedom-from-Distractibility IQ. The authors surmised that as a self-referred study, these adults were higher functioning than the “overall distribution of ADHD cases seen in childhood” (p. 265).

Zentall, Moon, Hall, and Grskovic (2001) compared boys with ADHD and/or giftedness analyzed in a multiple-case qualitative design. Although the study showed mixed results on the participants with high intelligence and ADHD and the study was on young boys, the participants with high ability and ADHD did display many positive traits, including a marked degree of creativity. Creativity is the next topic.

Creativity

White and Shah (2006) researched one of the few studies on creativity, a “positive” ADHD-related attribute often cited in books and articles geared to the general public. They used several assessments, including two instruments designed to measure divergent and convergent thinking. Ninety college students participated in the study (45 subjects with ADHD, combined type, and 45 subjects without ADHD) and the groups were matched by age, gender, and academic achievement. The students with ADHD were not on medication at the time of the study.
The Unusual Uses task (Torrance, 1974) measures traits cited as linked to divergent thinking. Divergent thinking, as defined by Guilford (1957), “is the ability to generate multiple ideas or solutions to a problem” (p. 1122). Mednick (1962), as cited in White and Shah (2006), defined convergent thinking as “the ability to form associations between disparate concepts” (p. 1122). The Remote Associates Test (RAT; Mednick, 1962) is a common measure of convergent thinking. Research contends that executive inhibition is important to successful completion of such tasks.

Those with ADHD have a range of executive functioning impairments, with difficulties with inhibitory control being a common trait. White and Shah (2006) have shown a relationship between creativity and executive inhibition. Thus, divergent thinkers generally presenting less inhibition may display more creative thought than convergent thinkers.

Results of White and Shah’s (2006) study supported the hypothesis that “adults with ADHD have higher divergent thinking ability, but lower convergent thinking ability, compared to adults without ADHD” (p. 1128). The authors cautioned that as the students with ADHD were high-achieving college students with the ADHD-combined type, results were limited. However, they opened the possibility that tests of divergent thinking may be useful in career decisions for adults with ADHD.

Carson, Higgins, and Peterson (2003) studied decreased latent inhibition in high-functioning college students, hypothesizing that the combination of low-latent inhibition and high intelligence would contribute to increased creative thinking. As with many
individuals with ADHD, this “deficit” in inhibition, or the failure to screen extraneous stimuli, may actually allow creativity and originality to flourish. Whereas those with high inhibition may be able to “attend to task” quite well, this inhibition may risk creative thought.

Results indicated, as hypothesized, that high lifetime achievers in creative fields had significantly lower latent inhibition, as exhibited in the battery of tests and statistical measures performed. Perhaps high-achieving adults with ADHD, who are more likely than normal individuals to have lower latent inhibition, may show the same results in tests of creativity.

These studies in creativity, while small, are refreshing in light of the preponderance of studies concerning the deficits and possible poor life outcomes for adults with ADHD. While not discounting the serious risk factors of individuals with ADHD, the research base and researchers in the field should consider all the possible facets of individuals with disabilities or disorders; including the range of the disorder, the possibility of potential positive attributes, and protective factors.

**Social and Emotional Factors**

Many individuals have difficulty with interpersonal relationships; those adults with ADHD seem to have more problems than does the population as a whole (Biederman, et al., 2006; Friedman, et al., 2003; Kessler, et al., 2005; Parker, Majeski, & Collin, 2004; Shaw-Zirt et al., 2005; Wilens & Dodson, 2004; Young, 2005; Young, Toone, & Tyson, 2003). Some adults with ADHD do not understand the nuances of complex social interaction or are
naive to the intentions of others. As hard as they may try, individuals with ADHD often inadvertently offend others with impulsive comments. Moreover, because some individuals do not ‘read’ social situations well, they may not understand that they have done so. Others with ADHD may be quite sensitive, but that sensitivity is a double-edged sword if they are overly sensitive to how they are perceived as well as sensitive to the feelings of others (Friedman, 2003). For example, sensitivity towards the feelings of others is a positive trait, but this is quite different from the individual who takes undue offense or who misunderstands innocuous remarks or behaviors by others.

Shaw-Zirt et al. (2005) investigated measures of social skills and self-esteem among college students. The researchers matched 21 college students with ADHD and 20 controls on age, gender, and self-reported GPA. The two groups did not differ significantly in terms of IQ scores, GPA, or ethnicity. The mean GPA of both groups was approximately 3.2, indicating that these two groups as a whole were performing well academically. Measures used were a college adjustment questionnaire, a social skills measure, and two self-esteem inventories. Difficulties in college adjustment in those with ADHD were found to be influenced by the individual’s level of self-esteem, and adjustment problems were significantly higher than those of the control group. The social skills of those with ADHD were lower than controls; however, they were not significantly so.

Although there were no overall gender differences in the ADHD and control group, female students with ADHD reported as having significantly more negative social behaviors. The authors surmised that this might be due to the tendency of females with
ADHD to report more negative traits in themselves, rather than the existence of a true
gender difference in social behaviors.

Generalizability was a noted concern in this study as the subjects were commuter
students who lived at home. These students continued to have the supports of their families
and “existing social networks” (p. 117). However, this may not totally be the case if the
students’ social supports included high school friends who left home to attend college in a
variety of locations. These students may have had a different set of adjustment problems as
commuter students, a factor not mentioned in the study.

There is no doubt than many adults with ADHD suffer from social problems. The
extent of these problems showed much variability in the reported research. Some of the
variability appeared to be related to intelligence, age of diagnosis, and family support, as
well as the positive reappraisal coping strategy discussed in Young’s (2005) research.
Positive reappraisal refers to the ability of an individual to reflect and recover from a
stressful event. Despite the numerous poor coping strategies the individuals used including
escape-avoidance and confrontation, participants did not differ from controls in the
reappraisal coping strategy; Young (2005) suggested that individuals with ADHD may have
a learned resiliency, particularly associated with their cognitive ability.

Edward Hallowell, a psychiatrist and writer with ADHD, speaks from experience
about socially troubling behavior. Highly accomplished in many areas, he describes his
continued struggle with social gaffs (2005):
I’m short on what you might call the intermediate reflective step between impulse and action. Like so many people with ADD, I lack tact. Tact is entirely dependent on the ability to consider your words before uttering them. We ADD types become like the Jim Carrey character in *Liar Liar* when he can’t lie….I’ve since learned how to stifle most of these gaffes, but I can still get into trouble for saying the wrong thing at the wrong time. That’s another tough truth about having ADD. It takes a lot of work just to do the trivial tasks—like staying silent, or resisting telling the cop who stopped us that he looks just like Elmer Fudd. (p. 25)

More social and emotional problems as they relate to comorbid and health related factors follow later in this chapter.

*Gender-Specific Characteristics*

The ratio of male to female youth with ADHD ranges from 2:1 to 9:1 across different studies (Biederman, Faraone, Monuteaux, Bober, & Cadogen, 2004). However, reported ratios of males to females in adults with ADHD are lower in many studies, typically between 1:1 to 6:1 (Biederman et al., 1994; Biederman, et al., 2004). Biederman summarizes the research, concluding that the externalizing behaviors in boys with or without ADHD may have led to a number of misdiagnoses in young boys. In addition, female children appear to be under-diagnosed, resulting in referral bias occurring in both genders. As adults, however, more females appear to self-refer, leveling the differences (Arcia & Conners, 1998).
Kessler et al. (2006), however, based their male-to-female ratios at 6:1 on findings from the National Comorbidity Survey Replication conducted by the University of Michigan. The data indicated that girls with ADHD were just as likely as boys with the disorder to have symptoms persist into adulthood, citing possible recognition bias and help-seeking behaviors of adult women with ADHD.

Research has reported higher rates of depression and anxiety disorders in females (Biederman et al., 1994) compared to controls in the early studies of adults with ADHD. A recent study, however, analyzed gender differences of adults with and without ADHD over seven years, predicting that gender would not be a significant factor in the association of adult ADHD and other conditions such as depression and anxiety (Biederman et al., 2004). The study largely supported the authors’ prediction. Results showed that “talks excessively” was the only significance gender difference using the DSM-III-R criteria, occurring more often in the female participants.

Results showed other gender differences, however. More females were classified as DSM-IV inattentive subtype as opposed to males with ADHD. The researchers also found that females were less likely to suffer from conduct disorders. However, adult females with ADHD were as likely as males with ADHD to have oppositional defiant disorder (ODD). As ODD is underrepresented in female children, the authors speculated that this discrepancy may be a result of childhood referral bias.
In contrast, Seidman et al. (2005) found that preteen and teenage individuals with ADHD did not differ by gender on neurological measures. The authors recommended further study with adults concerning possible gender differences.

Current research reports fewer gender differences in children and adults with ADHD than previous studies. It is encouraging that more women with ADHD now self-refer as adults, although it is unfortunate that earlier referral did not occur. Self-referral indicates that an individual is aware of problems and wishes to investigate them. Presumably, some of those individuals are teachers, and certainly seeking help for ADHD is a focus of this study.

The following section is quite sobering, despite the previous glimmers of hope described.

**Comorbidities and Health Factors**

ADHD comorbid conditions and health factors have been widely studied. This area is critically important not only to the individual with ADHD, but to those who interact with them, particularly concerning those with ADHD who display extreme, negative behaviors. Although ADHD is not classified as a spectrum disorder, there are certainly ranges of individuals with ADHD, from those with mild symptoms to those with acute symptoms.

Many studies have reported increased risk of substance abuse among adults and adolescents with ADHD (Wilson & Levin, 2005). Sullivan and Rudnick-Levin (2001) report that as many as half of adults with ADHD may also meet the criteria for substance abuse disorders. In addition, individuals with ADHD progress from onset of drug abuse to
drug dependence at a faster rate than adults without ADHD. Those with ADHD and drug dependence also experience more treatment failure.

Researchers indicate that a substantial number of adolescents and adults with ADHD experience negative outcomes with automobile use (e.g. Barkley, Guevremont, Anastopoulos, DuPaul, & Shelton, 1993; Richards, Deffenbacher, & Rosen, 2002). Richards et al. examined college students with “high” and “low” symptoms of ADHD and driving behaviors, particularly those involving anger and anger expression. Students with ADHD and their parents used diagnostic scales based on DSM-IV criteria to assess ADHD symptomology. Those subjects who were in the “high ADHD symptom” group closely aligned with the attention deficit with hyperactivity type or the attention deficit with hyperactivity/combined type. Subjects with “low ADHD symptoms” exhibited characteristics similar to those with the inattentive ADHD type. Results showed the high ADHD individuals experienced more driving anger. Additionally, this group experienced more accidents and were inappropriate in their display of anger than that of the low ADHD group.

Barkley (2002) discussed several health outcomes concerning children and adults with ADHD. Risks related to children with ADHD showed that they have greater risks for conduct disorders, substance abuse, and criminal behavior than the comparison group. It follows that because of the stated risk factors, children at risk for these factors would be more likely to suffer associated negative outcomes. Those outcomes include health risks
due to substance abuse, and all of the risk factors have the potential for lowering the life expectancy for those individuals above with ADHD.

Adults with ADHD are at risk for several health factors that not only affect their health but in cases such as substance abuse and driving risks, negatively influence others as well. It is probable that the number of adults diagnosed with ADHD will increase, due to greater awareness, acceptance of the disorder, and refinements in diagnosis. In addition, a large percentage of children currently diagnosed with ADHD will continue to have symptoms as adults. It is hoped that insurance companies, physicians, and other health care professionals will carefully consider these risk factors in health care planning. Optimally, these individuals will have jobs, and will have proper supports to enable them to find as much success in their jobs as possible. The next section concentrates on current research on supports used by many adults with ADHD.

Treatment and Coping Mechanisms for Adults with ADHD

As ADHD gains increased acceptance and understanding with more and better research, authors such as Kolberg and Nadeau (2002), Hallowell and Ratey (2005), Nadeau and Quinn (2002) and others may have a stronger empirical base for the positive and practical therapies and strategies that these authors recommend for adults with ADHD. There is a great need for research on such therapies and strategies to determine their empirical efficacy. Some research does exist and will be examined in this section.
Therapy

Most researchers and clinicians who investigate and treat adults with ADHD agree that some form of therapy (e.g. Hallowell & Ratey, 2005; Murphy, 1995; Rostain & Ramsay, 2006; Safren, et al., 2005; Weiss & Hechtman, 1986; Wilens & Dodson, 2004) is beneficial and recommended. However, the results of therapy and the type of therapy most efficacious warrants further analysis. The following research addresses different therapy approaches.

Pharmacotherapy

Pharmacotherapy is the primary treatment for all individuals with ADHD. Although most of the extensive research on different medications and the efficacy of such medications have been on children, a substantial amount of pharmacological research has now been conducted on adults (e.g., Weiss & Murray, 2003; Wilens, Spencer, & Biederman, 2000). While also the first treatment considered for adults with ADHD, Wilens et al. reported that adults who responded positively to medication interventions showed a reduction of 50% or less of the core symptoms of ADHD. As a result, clinicians and others began to consider behavioral treatments and therapy recommendations to supplement pharmacotherapy for those with ADHD.

Cognitive-behavioral Therapy

Cognitive-behavioral therapy (CBT) was originally developed to treat individuals with depression, with its central theory immersed in the belief that clinical symptoms are caused by dysfunctional thinking. Although ADHD is not the result of distorted thoughts,
the cumulative experience of living with the disorder, especially without a diagnosis or treatment, can lead to low self-esteem and poor self-efficacy. As CBT is a functional approach, it is well suited to the treatment of both comorbid conditions and problems specific to ADHD such as poor time management.

Safren et al. (2005) investigated two groups of adults with ADHD to compare a cognitive-behavioral therapy group plus continued psychopharmacology with a group on continued psychopharmacology alone. Thirty-one individuals were randomly assigned after meeting inclusion criteria to one of the groups. Before treatment, the two groups did not differ by age, sex, race, or any of the outcome variables, such as ADHD severity, depression, or anxiety.

The therapists were licensed psychologists who developed specific interventions tailored to each participant in the CBT group. Those therapists met with the lead author for supervision. The therapy consisted of three core modules, with three optional modules. The first, four-session module consisted of practical training on organization and planning. The second, three-session module dealt with distractibility reduction strategies. The third module involved “cognitive restructuring” where participants learned skills to maximize adaptive, positive thinking. The authors did not state the number of sessions in this module.

The optional modules dealt with three areas if a participant showed difficulties with the following: procrastination, anger and frustration management, and communication skills. All therapy for these modules pertained to positive skills in each area.
Results on outcome variables showed that the CBT group participants, after 15 weeks, had significantly lower scores on the ADHD rating scale (particular scale not specified) and lower Clinical Global Impression-severity scores (Clinical Global Impression Scale, NIMH, 1985) than those in the continued psychopharmacology alone group. In addition, those in the CBT group had lower overall self-reported ADHD scores at post-treatment than did the comparison group. Finally, the participants who received CBT had lower depression and anxiety scores on both the independent evaluator ratings and the self-ratings.

The authors concluded that for adults with ADHD, medication can help with core neurobiological impairments, but medication cannot cause compensatory strategies to occur in those with ADHD. The authors stressed the teaching of coping strategies, in this case in the form of CBT.

In contrast, Stevenson, Stevenson and Whitmont (2003) investigated the efficacy of a less intense and intrusive treatment for adults with ADHD. The researchers recruited adults with ADHD from support groups containing such individuals and from psychiatrists who specialize in treating adults with ADHD. Thirty-five participants met inclusion criteria and were randomly placed into a treatment group or a waiting list control group. The groups did not differ significantly in age, sex, medication, or severity of ADHD symptoms.

The treatment program consisted of three group therapist-led sessions, a self-help regimen including a workbook with required activities, and monitoring from trained support people. The support individuals were undergraduate and graduate psychology students.
whose duties primarily consisted of calling their assigned participants and reminding them
to complete their assignments and activities.

The outcomes of the treatment were quite strong, with significant improvements
noted within groups and comparing groups in all of the outcome measures (ADHD
symptom reduction, increase in organizational skills, self-esteem, and decrease in state
anger and trait anger). After two months, gains were maintained for ADHD symptoms,
organizational skills and trait anger decreases.

Physical Activity

Doctors all over the world urge their patients to exercise regularly. Most individuals
know about the benefits of exercise on cardiovascular health and other physiological
benefits, but research has increased concerning the cognitive benefits of physical exercise.

Although the following studies do not target those with ADHD, Hallowell and
Ratey (2005) emphasize the importance of physical exercise for adults with ADHD. The
authors state that as physical exercise promotes mental focus, sustained attention, and
reduced depression and anxiety, common comorbid conditions of ADHD, exercise is an
especially important treatment consideration.

Colcombe and Kramer (2003) conducted a stringent meta-analysis on the effects of
cognitive functioning on older adults. The included studies were on adults with a mean age
of more than 55 who engaged in supervised aerobic fitness with or without fitness training.
Study methodology required randomly assigned participants. Depending on the task used to
measure cognitive functioning, the four coded categories were a) speed, b) visuospatial, c)
controlled processes, and d) executive, where complex mental tasks were required as a cognitive measure.

Exercise had the greatest effect on executive processes with an effect size \( (g = 0.68) \), significantly larger than any other cognitive measures. Although the meta-analysis was performed on older adults, the improvement of executive functioning by physical training is important to consider for all adults, as the next study examines.

Hillman, et al. (2006) examined the possible positive relationship of physical activity and improved cognition on 241 individuals aged 15-71. Researchers recruited participants from a larger study on twins in the Netherlands and their non-twin siblings. Researchers divided the participants into two groups; an older group (mean age 49.6 years) and a younger group (mean age 25.5 years). Participants completed two hours of cognitive testing including the Wechsler Adult Intelligence Scale—Third Edition (WAIS-III; Wechsler, 1997) and 2.5 hours of electroencephalography testing. The Eriksen Flanker Task (Eriksen, 1979) was given to all persons, measuring response accuracy, decision time, movement time, total response time, and the number of incorrect and slow responses. Participants also completed a survey on lifestyle and physical health components.

The authors reported that higher levels of physical activity was associated significantly with increased response time with both groups but response accuracy was associated with physical activity in the older group only. Findings also showed that physical activity was more closely related to flank test conditions requiring greater interference control. This indicated that there is an association with physical activity and executive
functioning. The study added to the body of research supporting the benefits of exercise to cognition at different life stages.

Finally, many recommend multimodal treatment for adults with ADHD (e.g. Hallowell & Ratey, 2005; Ramsay & Rostain, 2005). Appropriate treatment depends on efficacy of psychopharmacology, degree of impact on everyday functioning, and comorbid conditions. Certainly, a thorough assessment for each individual with ADHD should be performed to be followed by tailored treatment.

Protective Factors

Protective factors are those personal attributes or components in individuals’ lives that enable them to better perform in their personal or professional lives. I include these protective factors because these are accessed by many successful individuals, including those with ADHD, and therefore may be beneficial to teachers with ADHD. Because of the challenges of ADHD, even for teachers with milder forms of the disorder, those with ADHD may need these protective factors more than normal individuals. These protective factors link to my research as I hypothesize that further investigation will provide evidence that more teachers with ADHD employ these factors.

Individuals in the focus group pilot that I conducted cited protective factors such as intelligence, personal supports, and professional supports as helping them better fulfill their teaching responsibilities. Although pilot participants did not mention this factor, it follows that those with financial security will be able to afford other helpful therapies such as pharmacotherapy and cognitive-behavioral therapy.
Career Factors in Adults with ADHD and Learning Disabilities

There is a growing body of research on adults with ADHD and careers. However, it is necessary to look to similar disabilities and ascertain the impact on career success for more empirical findings. Adults with learning disabilities share some similar characteristics with those having ADHD. In addition, there is a small body of research on teachers with learning disabilities. This section begins with a description of The Americans with Disabilities Act (1990) as it pertains to careers and individuals with ADHD.

ADA and ADHD: Challenges of the Rationale for Accommodations

The Americans with Disabilities Act (ADA) of 1990 mandated needed changes to improve the lives of many individuals with disabilities in ease of access regarding such public accesses as transportation and building design. Educational environments and the workplace environments are also major areas that have been impacted by this law.

ADA was designed to reduce discrimination for those with physical and mental handicaps; this focus is on its use in the workplace for those with ADHD. The language of ADA is vague, perhaps intentionally so, in that it states “The term ‘qualified individual with a disability’ means an individual with a disability who, with or without reasonable accommodation, can perform the essential functions of the employment position that such individual holds or desires” (Retrieved October 19, 2008, from http://www.ada.gov/pubs/ada.htm#Anchor-Sec-49575). Some employers have concluded that those with ADHD do not qualify for reasonable accommodations, such as some legal groups (Retrieved October 18, 2008, from
www.ulmer.com/SiteCollectionDocuments/EmploymentLawUpdates/ADHDNotHeldADisability.pdf), and lawsuits have resulted in this assumption. However, federal legislators have recently amended the law with more inclusive language that appears to help those who feel they need accommodations to successfully manage their jobs.

As there are no firm numbers regarding adults with ADHD in the workplace, there is also the problem of ADA’s use for those with ADHD, as the law requires a formal diagnosis, documentation that the condition significantly and negatively affects an individual’s life, and disclosure of the condition.

Although employers are prohibited to discriminate against those with disabilities and indeed cannot ask if an individual has a disability, most potential employees are cautious concerning disclosure while seeking employment. This caution is wise, as many employers do not understand or do not acknowledge ADHD as a disability under ADA and may consider accommodations of any kind to be intrusive. Employers may also see employees, if hired, in a negative view, or they may be particularly watchful of their behavior for “irregularities.” For this reason, many individuals, if they decide to request accommodations, do so after they have established that their employer is open-minded concerning disabilities.

Those who request accommodations are required by law to provide documentation of not only their disorder from a physician, but details as to how ADHD in this case impacts their careers. They must build a case for the need for reasonable accommodations.
ADA, as best intended, should help otherwise capable individuals with ADHD improve their work environment with reasonable accommodations for their individual needs.

To use accommodations under ADA is a more complex decision by those with disabilities than just announcing the need for accommodations and expecting them. This is particularly so for “invisible disabilities” such as ADHD that have not yet reached universal public acceptance. Each individual must weigh the pros and cons of the intricacies of ADA and ADHD before requesting accommodations in the workplace, even as such individuals should have protection under this federal law.

Price, Gerber, and Mulligan (2003) investigated the impact of The Americans with Disabilities Act on adults with learning disabilities in the workplace. Price et al. found that employers were ill informed about what accommodations were appropriate for employees with learning disabilities. Similar to many functional and educational aspects concerning the entire range of disabilities, employers understood that their concern should be to make physical accommodations for those with physical disabilities.

Price et al. (2003) found that the burden of disclosure and advocacy was on the individuals with learning disabilities, and that these individuals had mixed feelings about both. Using a collective case study design, subjects were found using purposeful sampling. A group of 17 men and 8 women with learning disabilities had ages that ranged from 19 to 32 years.
These individuals had received special education services in schools and held a variety of jobs, such as a business sales clerk, a flight attendant, a civil engineer, and a shipping department manager. Two individuals were special education teachers.

None of the participants used ADA accommodations that were available for procuring their job, even though some of the forms and pre-employment tests were challenging. Only five of the 25 individuals mentioned their learning disability, and none of them mentioned using ADA. I find it surprising that 13 of the individuals “did not see themselves as having a disability in the first place” (p. 353).

This lack of advocacy and disclosure stemmed from several perspectives. Many of the respondents felt that they had overcome their learning disability or that it was not the responsibility of their employer to make accommodations. Others seemed fearful that they would be fired and were embarrassed about their disability. Some respondents felt that they did not have enough information to self-advocate. On a somewhat more positive note, one individual stressed “You need to self-promote, not self-disclose!” (p. 355).

The authors were surprised that none of the respondents in the study used ADA in any way. They noted the need for additional research to determine various perceptions about learning disabilities in adulthood and if transition programs are properly equipping adolescents with learning disabilities to be effective self-advocates. Finally, the authors suggested that more research was needed to lessen this disconnect between the spirit of ADA and its use for those with high incidence disorders.
Self-Awareness and Career Strategies

Positive outcomes resulted from the following study on careers and learning disabilities. Reiff et al. (1995) investigated 71 successfully employed adults with learning disabilities to determine common characteristics in an effort to make recommendations to those who teach students with learning disabilities. They systematically chose these individuals using various methods and criteria and interviewed them with the collective interviews lasting more than four hours. The authors compiled the data and found eight major factors that these participants considered essential to their individual success.

All of the participants indicated that they had achieved a sense of control over their lives and that this control was the major factor that correlated with all others. Success factors fell into two broad categories: internal decisions and external manifestations.

Internal decisions included desire. Several of the adults were angry at the school system, and the authors emphasized that although anger could be an effective catalyst, it often had negative side effects. Other participants gained results more positively by making incremental success or finding support from family members or others.

A realistic goal orientation was highly valued, including an accurate assessment of what goals were attainable. Mentioned also was the willingness to take risks and not to be afraid of temporary failure. Participants thought it was important to learn from these life experiences and to continue to try to overcome challenges.
Reframing for these successful persons meant that they realized the learning disability existed, and that realization allowed the development of strategies and coping with his or her learning disabilities in a proactive way.

Persistence is an external manifestation that these individuals displayed in two ways. These successful individuals viewed working hard as a way of life. In addition, they showed a strong sense of resilience; they would not give up and would continue to try, despite occasional failures.

These adults found careers that suited them; in other words, they found goodness of fit. These careers were highly individualized and matched the strengths that each person possessed. An appropriate work environment that could match and adapt such strengths and needs was also an important factor leading to career success. One individual, a teacher, said, “I have a particular talent in the classroom. I realize that I don’t have to be right. I don’t have to be perfect, and students identify with that” (p. 32).

Successful adults in the study utilized learned creativity. They used their “differentness” to devise other ways to solve problems. Some individuals explained that they had failed to do tasks in a “normal way,” but instead of giving up, they persevered and found different solutions. This creativity often led to specific strategies, habits, or technologies to compensate for individual challenges.

Almost all of the subjects stressed the importance of having positive social ecologies, or supportive individuals, usually family members, in their childhood. However, as they became adults, they resisted becoming overly dependent on the supports that
worked for them. Finally, however, they were not advocates of total independence and accepted the fact that it was all right to accept some help. These successful adults extended this belief of support to their careers and often sought out helpful people in creative ways.

The authors stated clearly that this group of successful adults was never meant to be a representative sample of adults with learning disabilities. However, the themes that came from the study can be used to consider teaching methods not only for students with learning disabilities but also for students with other disabilities or for students with no known disabilities. The authors ended on a powerful quote: “Most importantly, we will have to replace our tendency to focus on failure with a commitment to discover the possibilities of achieving success” (p. 35).

Gerber (2001) used the results of the study above to apply the principles to adults with ADHD. Both articles make the case that both ADHD and learning disabilities are quite heterogeneous in nature; individuals may have either strong coping factors or milder manifestations of either disorder. Therefore, many individuals can be successful with ADHD or learning disabilities. It follows then that with effective support and the success factors listed in both articles, adults with ADHD may also have the chance to improve and succeed.

Weiss, Hechtman, and Weiss (1999) summarized a case study concerning an electronics professor under the category of “ADHD-Friendly Occupations.” This individual reported loving his work at a technical institute. He sought assessment, however, as he had switched schools often “to cover his inability to cope with people and to avoid
accumulating administrative responsibilities” (p. 220). Although this particular teacher had social and organizational challenges, he sought counseling to come up with coping strategies to continue in the job he enjoyed.

Carroll and Ponterotto (1998) reviewed the specific challenges of counseling adults with ADHD. While Carroll and Ponterotto extensively cited success factors detailed in the Reiff article, the authors linked this research to the social cognitive career theory by Lent and Brown (1996). The social cognitive career theory is based on Bandura’s (1977) theory of processes of self-efficacy beliefs and takes a practical career counseling approach using theory to assess and form treatment based on factors such as clients’ perceived self-efficacy, outcome expectations, and goal attainment.

While using the Reiff, Ginsberg and Gerber model, Nadeau (2005) examined in much detail the importance of individuals with ADHD needing more than a career counselor because of unique challenges. Nadeau claimed a full assessment including psychological, social, and emotional functioning may be necessary in addition to traditional career assessments for those suspected as having ADHD. Beyond assessment, however, Nadeau recommended that adults with ADHD and career concerns seek therapy from professionals that are well versed in the challenges that effect high-functioning adults with ADHD.

Ferri, Keefe, and Gregg (2001) studied three individuals with learning disabilities who had received special education services as students in public school and had subsequently become teachers. They focused on two research questions: (a) how do
individuals who received special education services during school perceive those services, and (b) how did those services and experiences influence them as teachers?

The three teachers viewed their own education differently, but they all agreed that they did not want their peers to know that they received special services. They had varying degrees of help while in the resource room and they were concerned about the activities missed in their general education classes. Dominant was the theme that they believed most of their teachers, either general or special educators, did not expect nearly enough of them as students. They did not like these lowered expectations and recognized them as such. As teachers, these individuals all stressed that they had high expectations for their students. Although they did not discuss specific teaching techniques or strategies that they used, they responded that they worked hard to motivate and empower their students.

These teachers all described their learning disabilities as important factors in connecting with their students. They understood their struggles. Furthermore, they no longer hid their own learning disabilities; they saw that disclosing them helped their students persevere and understand that these teachers really did understand on a personal level the challenges of having learning disabilities. Finally, the teachers attempted to demonstrate that having learning disabilities need not prevent individuals from working hard and achieving their goals.

Gerber (1998) described the successes, struggles, and support of a male teacher with learning disabilities. This case study of a young man teaching students with learning disabilities stressed career themes that are applicable to individuals with ADHD.
One of the themes concerned the notion of how hard this teacher worked to accomplish his high teaching goals. He had a light load by most standards, but some tasks took him many hours to complete. He expressed his frustration with this part of his job, as his interests centered on finding ways to teach his students effectively and to help them feel successful. He spent a great deal of time on his teaching tasks as well, individualizing instruction for each student.

T. J., as named in the article (Gerber, 1998) viewed one of his strengths as connecting well with his students with learning disabilities, another reoccurring theme in this and other studies on teachers with disabilities. He tried several ways to reach his students, using that “learned creativity” noted in Ginsberg et al. (1995). His room did not hide the existence of learning disabilities; quite the opposite. Motivational posters concerning learning disabilities and posters about individuals who had adapted and succeeded with learning disabilities adorned T. J.’s walls in his classroom. He clearly identified with his students and knew their struggles.

In the study that researched the attributes of highly successful adults with learning disabilities, Gerber et al. (1992) found that all of the 72 subjects possessed “…an internal reframing of the learning disabilities ordeal into a more positive or productive experience” (p.479). In addition to internal reframing, these successful individuals developed what the authors called “learned creativity.” As traditional pathways toward success were often difficult for them, they came up with creative alternatives and used their strengths. “Thus, they did not just cope, they creatively excelled” (p. 483). This study, by investigating these
success-building factors, gives adults with learning disabilities and also adults with ADHD hope towards having successful, fulfilling, and varied careers. In the following section, I discuss teacher effectiveness research as it pertains to empirically-driven teacher practice and implications for teachers with ADHD.

Teacher Effectiveness Research: Is There a Place for the Teacher with ADHD?

There is much research on teacher effectiveness and teacher efficacy. Researchers and educational leaders struggle with how best to interpret and utilize these concepts (e.g., Ellis & Worthington, 1994; Englert, 1984; Good, 1983; Greenwood, Arreaga-Mayer, & Carta, 1994; Rosenshine, 1983; Tschannen-Moran & Hoy, 2001; Walsh & Tracy, 1994). Ellis and Worthington (1994) convey commonly held beliefs in the following: “Do we really know what effective teaching is? Certainly, many would agree that its determination has in large part, remained elusive to us” (p. 3). However, most would agree that the three subtopics below—classroom management, instructional planning and organization, and lesson presentation, are key components of any teacher’s routine and student outcomes.

These three categories do not encompass all of the teacher effectiveness research, and a comprehensive analysis of such is beyond the scope of this study. However, I review these elements here as a foundation of proposed research questions. Furthermore, these teaching components are interrelated; for example, one must use previous planning to guide lesson presentation that should include classroom management techniques particular to each lesson.
The research on these subtopics is followed by related research on adults with ADHD. Finally, I raise questions relevant to this study concerning teachers with ADHD. As stated previously in this review, teachers with ADHD have successfully crossed many hurdles that differentiate them from many more severely effected individuals with ADHD. Therefore, in this discussion of teacher effectiveness and those with ADHD, I address in this study the needs of a higher-achieving subset of all adults with ADHD.

*Instructional Planning and Organization*

Administrators usually give teachers a planning book with very little space for detail at the beginning of the year. Given the complexity of the effective presentation of lesson content (Good, 1983), good teachers must have other planning methods or use different tools than those supplied. As most teacher effectiveness and teacher efficacy research addresses the importance of careful planning for effective student learning, I addressed key planning elements in this section.

There is a great deal of overlap between planning, classroom management, and lesson presentation and organization. For purposes of this review, however, each section is discussed separately as much as possible. I concentrated on the following factors in this section: (a) phases of planning, (b) planning for engaged learning and success, and (c) planning challenges.

*Phases of Planning*

Schumm and Vaughn (1992) and Vaughn and Schumm (1994) used a planning framework entitled the Flow of Planning Process Model with three components:
preplanning, interactive planning, and postplanning. As in other topics, these components are highly related.

In general, preplanning relates to teachers’ planning activities or lessons, usually in the short term. This component includes preparing materials and considering practical matters such as student grouping for instruction. Vaughn and Schumm (1994) state that unfortunately, experienced teachers rarely write specific learning objectives, and that teachers use desired outcomes and evaluation plans less often than is optimal. I will address this problem in the planning challenges section below.

Teachers engage in interactive planning during instruction; this involves teacher flexibility. A teacher makes planning adaptations that he or she perceive as necessary to meet student needs while observing students’ progress throughout the lesson.

Postplanning concerns teacher reflection on the outcomes of a lesson, including the activities, planning, and assessments that accompanied the lesson. Postplanning relates to what McCutcheon (1980) called “mental planning.” “One important activity of planning, then, is mental planning, reflecting on the past and envisioning what might occur in current and subsequent lessons” (p. 11). If teachers know their students’ needs, empirically proven instructional methods, and curriculum requirements, it is my contention that they can find a way to plan for effective lessons. Bartelheim and Evans (1993), Panasuk and Todd (2005) and others have provided research to suggest that this is possible.
Planning for Engaged Learning and Success

Effective teachers plan not only the content of lessons but also the time that each lesson needs. This time planning should maximize engaged student learning with all students in the class achieve high rates of success. Denham and Lieberman (1980), in their study on beginning teachers, found that engaged time, maximized allotted time, and high success rates are related to positive student outcomes. In addition, research indicates that effective teachers spend 50% more time on interactive activities with students than on management tasks as compared to less effective teachers (Ellis & Worthington, 1994).

Teachers who enable their students to learn at a high rate of success utilize research that shows this is strongly correlated with achievement. These rates vary, but Rosenshine (1983) recommends that students be able to complete teacher-supported, initial learning at a 70% to 90% success rate. Additionally, students should achieve a success rate of 90% to 100% when engaged in independent activities such as seatwork and homework. Effective teachers know that seatwork and homework should be extensions of classroom lessons and are meant to firm up already learned skills. As such, these teachers know what kind of work to assign—and that it may not be the same for all students (Englert, 1984).

Planning Challenges

While all teachers engage in some form of planning, research has shown a disconnect between teachers engaging in detailed, research-based planning taught in pre-service courses and the more typical planning involving teachers relying on lists or outlines in their plan book (Fuchs, Fuchs, & Stecker, 1989; McCutcheon, 1980; Spooner,
Baker, Harris, Ahlgrim-Delzell, & Browder, 2007; Vaughn & Schumm, 1992). It is beyond the scope of this study to detail this difficulty; but I address it briefly here due to its importance on student achievement.

Teachers may be limited in the ability to plan because of time constraints. Meeting the needs of diverse students, administrative demands, and outside of the classroom responsibilities all create time challenges for teachers (Ellis & Worthington, 1994). Further, teachers may not have the training to plan effectively for all students. Even if they have had such training, many teachers have the opinion that at-risk students or students with exceptionalities should get limited accommodations or changes to their instruction (Vaughn & Schumm, 1994).

There is no question that teachers have many responsibilities and that finding sufficient time to plan for effective lessons is often challenging. It is hoped that effective teachers find a way to plan carefully for all of their students, as this component is essential to effective instruction and high student achievement.

Assessment of Planning

Assessment of student learning is an essential component of teacher planning. Although all teachers certainly have curriculum guides and standards to which they must adhere, how do teachers know what to teach if they do not know where their students are performing academically? Effective teachers assess their students continuously in order to change instruction if any of their students are not making adequate progress. Formative assessment is this type; it guides the teacher’s instruction towards improving student
achievement (e.g. Deno, 1985, & Fuchs, Fuchs, & Stecker, 1989). It requires the flexibility of an effective teacher to change methods for some students, such as providing extra review, guided practice, or reteaching. This teacher’s plans, in whatever style, will reflect that not all students learn at the same rate, and that accommodations for such should be a regular part of the planning process.

*Links to Research on Adults with ADHD*

I contend that perhaps the teacher with ADHD’s greatest strength in planning is his or her feelings of personal efficacy in teaching those students with special needs. These teachers can certainly relate to these students and may be especially motivated to enhance their learning while considering different approaches that may work for the student that also may have worked for them.

A mixed advantage that many individuals with ADHD have is the comorbid condition of anxiety (Biederman et al., 2004). If there is such a thing as positive anxiety, it is the type that drives teachers to have explicit, detailed planning, at least in the preplanning stage, so that the teacher with ADHD and anxiety is *ready* for the lesson. If the teacher is ready for the lesson to his or her satisfaction, this anxiety will alleviate during lesson presentation. Teachers who have planned well and completely are more effective; however, the teacher with ADHD has to be protective of his or her personal time or anxiety and burn out will certainly increase.
Questions for Research on Teachers with ADHD

Do teachers with ADHD plan effectively for their lessons? My hypothesis is that planning procedures for all teachers vary significantly, and there well may be a disconnect between what recommended practice is as taught in teacher preparation classes and what teachers actually do in their classrooms. Therefore, it may be difficult to measure effective planning, except to rely on student outcomes as a final measure.

Classroom Management

Carefully honed classroom management techniques are akin to preventative medicine; if rules and classroom procedures are put into place to enable an optimal learning environment for all students, less time off-task and less misbehavior will occur. The use of effective classroom management techniques does not ensure that high achievement for all students will take place, but it will create a classroom climate conducive to learning. Brophy (2001) described effective classroom managers:

The teachers who are most admired as classroom managers are those whose classes run smoothly without a great deal of cueing or direction giving, whose students are actively engaged in academic activities, and who can leave the room or turn the class over to a substitute without fear of disruption or inappropriate behavior. (p. 235)

Good (1983), Englert (1984) and others recommend classroom management techniques that will be mentioned below. The topics are not exhaustive, but are meant to
describe the important factors teachers must consider in planning for an academic, productive class.

*Teaching Rules and Procedures*

Teachers should tailor rules and procedures in any class to the age level and the particular needs of the students in their classrooms. Teachers who explicitly teach, enforce, and maintain appropriate rules and procedures beginning on the first day and throughout the year create an atmosphere of purposeful learning (Englert, 1984). For example, teachers would be wise to teach even the ‘unexpected’ occurrences, such as procedures if a parent enters the room, the lights go out unexpectedly, or a student has a severe temper tantrum. Teachers cannot explicitly teach for everything; but they can teach a specific procedure for “the unusual in general.” In addition, teachers who are consistent in their rule implementation actually lessen the need for reminders or student consequences as the rules become ingrained in classroom routine.

Teachers with effective classroom management plans consider the physical placement of classroom furniture and materials, again to meet the needs of their students. Students who know what to expect in their classroom, with fair rules that they understand and have internalized, are more apt to generalize these rules and routines without their teacher’s reminders.

*Withitness*

Withitness is cited in the effective teacher research as knowing what is going on in the classroom (Brophy, 1996; Englert & Thomas, 1982; Kounin, 1970; Stanovich & Jordan,
If a teacher is aware of both positive and negative behaviors occurring in his or her class, appropriate interventions can take place. Withitness corresponds to the humorous myth that teachers “have eyes in the back of their heads.” Many individuals with ADHD have difficulty filtering extraneous stimuli; in other words, these individuals can see everything that is going on around them. In a busy classroom, this trait can be invaluable. 

**Overlappingness**

“Multi-tasking” is synonymous with this older phrase used in teacher effectiveness research (e.g.; Brophy, 1979; Kounin, 1970). In overlappingness, a trait related to withitness, teachers attend to two events at the same time so as not to hinder the flow of instruction. For example, teachers with this trait are able to conduct a lesson while either giving earned positive feedback or correcting inappropriate behaviors with subtle cues. Teachers may also attend to minor incidental events such as a student from another class coming to the classroom door to retrieve materials with little interruption in the flow of his or her lesson.

**Structure**

There is much debate as to the amount of structure needed in our classrooms. As in the case of rules and procedures, there is no doubt that all classes need *some* structure to maintain an appropriate atmosphere for learning. Structure is a key component of effective classroom management.

I contend that successful adults who have ADHD have likely wrestled with the overriding challenge of structure and have developed their personalized set of strategies and
procedures to cope with this challenge. As teachers learn effective classroom management techniques in their teacher preparation courses, teachers with ADHD know the need for structure both on an academic level and on a deep, personal level. As they have had to do this often and in a more explicit way than other people have, they may make structure a greater priority in their classrooms.

Assessment of Classroom Management

Principals, assistant principals or occasionally peers assess teachers one or more times a year depending on teachers’ level of experience and prior assessment ratings. Many different rating instruments exist; some with broad strokes such as the Instructional Performance Appraisal Instrument, (Florida School District, St. John’s County Professional Assessment, p. 1-2), and others using more observable measures such as the Teacher Performance Appraisal System—Revised (North Carolina Public Schools, Personnel Evaluation, p. 1-4). All of these instruments have a classroom management component. Analysis and comparisons of these instruments are beyond the scope of this study. Classroom management assessment should, however, be continuously conducted by teachers; not simply to achieve control or order, but to maintain an academic classroom climate (e.g. Brophy, 2001; Ellis & Worthington, 1994).

Links to Research on Adults with ADHD

Barkley (1998) describes ADHD as a deficit of performance, not of knowledge. Teachers with ADHD may know recommended practice in creating and maintaining classroom management techniques. The challenge for these teachers may not be in the
initial implementation; rather, it may more likely be in the maintenance and consistency over time of such techniques.

Although self-monitoring of attention and performance could be appropriate across all aspects of teacher responsibilities, the following research relates to those with ADHD concerning classroom management. Harris, Friedlander, Saddler, Frizzelle, and Graham (2005) studied self-monitoring of attention and academic performance of six elementary students with ADHD. Findings showed that both types of self-monitoring improved the performance of the academic task (spelling) and on-task behaviors. If such behaviors worked with students, it is reasonable to assume that teachers could self-monitor their own behavior to optimize their classroom management skills.

Most experts recommend some kind of psychotherapy for adults with ADHD as discussed in the treatment subsection earlier in this chapter. Cognitive-behavioral therapy, involving practical goal-setting, strategies and coping mechanisms, is recommended in the research. Related to this approach was a study by Robinson, Smith, Miller and Brownell (1999) on cognitive behavior modification with children in school settings. The authors found that training of behavior modification procedures produced a better outcome for students when such training took place in the classroom setting. In addition, the authors noted that classroom teachers should employ behavioral change strategies that fit easily into classroom routine for those students in need of such treatment.

If such interventions work for both children in the classroom and for adults with ADHD, it follows that teachers with ADHD can indeed practice such strategies for
themselves as a part of their particular needs and can also model (and understand deeply) such strategies for students with similar needs under their care.

*Questions for Research on Teachers with ADHD*

There are several questions not yet clear concerning classroom management and teachers with ADHD. As many think of classroom management as a form of *control*, however positive, can an individual with ADHD effectively maintain a positive and productive classroom climate? I suspect that this is possible, but the teacher with ADHD may need to work harder with strategies, classroom or organizational tools, and personal or professional support.

Withitness is an important component in effective classroom management. Teachers with ADHD may be skilled at observing most behaviors in the classroom. However, there is a question important to the teaching efficacy of those with ADHD. Can teachers with ADHD, if taking in many stimuli, make quick transitions while doing so? This may be problematic, as short-term or working memory can be impaired in those with ADHD. However, if teachers with ADHD promote a classroom climate that encourages the notion that students—and teachers—make mistakes and that these mistakes can aid learning if they are addressed in a non-judgmental manner, then a mistake by the teacher is accepted. Indeed, this may enable students to accept their errors and become more willing to ask for help.
Lesson Presentation

Effective teachers present their lessons to maximize the success of all of their students. Englert (1984) grouped her review of effective lesson structures into three sections that will be used here: (a) Reviewing previous learning and communicating lesson goals and expectations, (b) Active demonstration and practice, and (c) Independent practice and systematic feedback.

Reviewing Previous Learning and Communicating Lesson Goal Expectations

Effective teachers begin a lesson by reviewing relevant, previously taught material. This helps firm up learned material or indicates areas in which students may need additional instruction. Teachers check and correct homework, and, importantly, review prior knowledge for the current lesson. This is generally a quick process, presented at an engaging pace.

When presenting new material, effective teachers set the stage of learning by stating the goals of the lesson in an enthusiastic manner, linking the goals to prior learning, and explicitly demonstrating the importance of the goals. Enthusiasm by the teacher throughout the lesson has two components to effective teaching (Good & Brophy, 2001). “Effective teachers are very interested in both the subject matter itself and the dynamics involved in presenting the subject matter” (p. 345).

After review and goal setting, teachers begin presenting new information by focusing on one point at a time, continuously questioning students for understanding, and
interactively planning to ensure that students understand lesson material. Effective teachers engage the students often in the next phase, providing guided practice.

Teachers supervise guided practice carefully for student understanding, and they provide elaboration and positive or corrective feedback as needed. Students are engaged in applying the rule, skill or concept and answering teacher questions. This procedure is intended to scaffold instruction, with the intent of making the students confident in the material and able to perform learned skills independently. Ellis and Worthington (1994) emphasize: “The effective teacher does not proceed until students have mastered the presented material” (p. 79).

When teachers assess students on the lesson in a formal or informal manner to the mastery level, they are ready for independent practice. Not all students will be at the mastery level simultaneously; therefore, the effective teacher should plan for fluid grouping so that students who need additional practice can have it with the teacher’s assistance and those students who reached mastery level can proceed with independent practice.

Effective teachers know that independent practice is evident when students can achieve mastery of a skill or concept at 90%-100%. As students are working independently at their desks, they should feel confident, thereby adding to their academic self-efficacy. If students need more than 30 seconds of their teacher’s time, mastery was not achieved (Rosenshine, 1980).

Lesson closure is an important step that effective teachers utilize. Asking students, “Did we reach our goals today?” helps them remember the importance of the lesson as a
summary, firms up the important points, and helps them generalize the lesson in preparation for the next lesson in the learning sequence.

Effective teachers employ scheduled skill review as regular practice. This practice should be distributed over time so that important skills are automatic, applied in different settings and/or to different tasks, and are set in students’ long-term memory. Although these procedures may appear somewhat rigid, they are important to the success of student learning. These procedures are worthy for this reason alone.

Assessment and Skill Review

Assessment of a lesson can be informal, as when the effective teacher uses proven questioning techniques or checks homework quickly so that students are given prompt feedback and can correct their errors as soon as possible. As noted earlier, effective teachers assess skills on a periodic basis to ensure maintenance of skills.

Although teacher-made tests do not always achieve high psychometric standards, curriculum-based measurement (CBM), a formative assessment tool initiated by Deno (1985), is an objective, accurate method to monitor student progress in basic skills (Fuchs et al., 1989). CBM originated in the field of special education, but technological advances have made such measurement feasible for regular classroom use at least on elementary levels. Such computer-based programs such as Monitoring Basic Skills Progress (Fuchs, Hamlett, & Fuchs, 1997) have proven effective and feasible for whole-class use.
Links to Research on Adults with ADHD

As discussed in the profiles and treatment sections, individuals with ADHD respond to external structure and the learning of strategies to help them cope with the challenges they face (Reid, Trout, & Schartz, 2005; Rostain & Ramsay, 2006; Stevenson, Whitmont, Bornholt, Livesey, & Stevenson, 2002). I contend that the lesson plan format mentioned above is not only effective teaching practice, but also a method by which teachers with ADHD can structure exemplary lessons and also increase their teaching efficacy. The more these teachers use empirically proven practice in their lessons, the more confident they will become. As confidence builds, teachers may internalize these instructional components, only needing, for example, an outline on a poster or the board either to fill in with each lesson or to use as a visual cue to ensure that all elements are in place. Teachers with ADHD may very well have short-term memory impairments; but with sufficient aids, both visual and auditory, they can succeed in an effective manner.

Questions for Research on Teachers with ADHD

A possible challenge in lesson implementation on at least two levels pertains to the management of time. As we know that time management is often problematic for those with ADHD, can these teachers keep to their planned lesson time frame? In addition, can teachers with ADHD grade and evaluate student work in a timely manner, as we know that prompt feedback improves student learning? As in other areas, I suspect that they can, but that they may need time aids and a sufficient knowledge base motivating them to use effective practice.
Summary of Teacher Effectiveness

As in many fields, effective teachers may make the process of teaching look “easy.” However, teaching is not an easy task in any category or grade level. Effective practice is not easy for any teacher; it is hard work and more improvements can always be made. However, there are aids that can help the subset of teachers with ADHD. Much more research has to be done as many questions remain concerning internal and external levels of support needed for teachers not only to survive, but also to excel. I propose that using results from the teacher effectiveness literature can actually make this challenging job more manageable.

Conclusion

Considerable research has addressed the characteristics, and primarily the deficits, of adults with ADHD. These findings are critical in the diagnosis and treatment of all individuals with ADHD. Difficulties with working memory, attention, organization, and work completion are significant. Problems with social and emotional impairments and impulsivity persist in many adults with ADHD. There are substantial health risk factors associated with ADHD. Research in all populations of those with ADHD will continue. More research on comorbid conditions aligned with ADHD is needed, particularly with those individual who present milder symptoms of the disorder.

Along with further investigation of the limitations and deficits of those with ADHD, it is hoped that researchers will begin to explore possible positive outcomes of having
ADHD. In addition, additional research is needed concerning protective factors, coping strategies, and practical interventions for enhancing the lives of individuals with ADHD.

Finally, this researcher looks forward to a more extensive analysis of the current research on adults with ADHD and careers that suit such individuals’ strengths. I explored a possible connection between teachers with ADHD and the protective factors that may enhance their teaching—and therefore the students’—experience. Teachers with ADHD exist and quite possibly may have a unique set of qualities where they find a ‘goodness of fit’ in the teaching profession. In the chapter that follows, I describe methodology to address the research questions of this study.
CHAPTER THREE: METHODOLOGY

Introduction

In this chapter, I describe the four methods employed to investigate the research questions: three focus groups (including the initial pilot group), two individual interviews, a teacher efficacy questionnaire, The Teachers’ Sense of Efficacy Scale (short form) by Tschannen-Moran and Hoy (2001), and two recent teacher observation results, completed by school supervisors and provided by two different participants.

The research questions are: (a) Do K-12 teachers with ADHD utilize strategies?, (b) If so, what strategies do K-12 teachers with ADHD utilize?, (c) Do K-12 teachers with ADHD utilize supports?, (d) If so, what supports and do K-12 teachers with ADHD utilize?, (e) Do K-12 teachers utilize tools?, (f) If so, what tools do K-12 teachers utilize, and (e) How do teachers describe the utility of these strategies, supports, and tools?

Overview and Rationale of Research Design

As stated in the introduction, I employed four methods to investigate the research questions. I chose to use three focus groups to obtain individual and group responses relating to the research questions. I compared the evolved themes from the focus groups to give strength to the combined validity of the results. After the pilot focus group in January 2007 but prior to the focus group meeting in March of 2008, I interviewed an individual from the March focus group, and this interview added depth and a richness of response that is not always possible in a group setting. I then conducted the March focus group approximately two weeks after the initial interview with four participants. In May of 2008, I
conducted the third focus group with three participants. The second interview with a May participant was held two weeks after the May focus group. All participants in the March and May focus groups were administered the questionnaire to provide quantitative information on perceptions of their teacher efficacy. As the pilot focus group participants displayed strong self-efficacy characteristics, I decided to administer the TSES (Tschannen-Moran & Hoy, 2001) to the subsequent focus groups.

At the end of the March and May focus group sessions, I invited participants to share teacher observations results that their school administrators had completed. Two participants out of the seven provided me with a recent summary of their observation.

The combination of these four methods produced data to investigate the research questions in more depth, and from a broader perspective than would be the case with any one method. In addition, the mixed methods approach was especially appropriate with this exploratory study. In a review of mixed-methods research techniques and rationales, Bryman (2006) noted the lack of reflection on design choice in many research articles. Self-administered questionnaires and semi-structured interviews were quite commonly used; focus groups were much less so. This study used the rationales from Bryman (2006) of completeness, credibility, and enhancement. I will discuss the rationale for each method in more detail below.

I employed a mixed-methods design in order to provide insight concerning the perceptions of support and strategies used by teachers with ADHD, and how these
influenced the management of their teaching responsibilities. This approach provided multiple perspectives on this topic, thus attempting research rigor and trustworthiness.

Focus groups can be useful, especially in initial probes into a research area, as participant responses often cause other participants to think of additional experiences that they may not have considered if interviewed alone. Focus groups often encourage individual members to reflect on their personal opinions during the group dynamic, permitting them to change, question, or defend their own opinions as they influence others. The focus groups and participants added depth and further defined the themes that evolved from the pilot.

To add further insight to the study, this researcher conducted individual interviews with two teachers with ADHD who participated in one of the focus groups—one prior to the March focus group and one after the May focus group. Detailed, richer interview data added strength to the study. In addition, Barbour and Kitzinger (1999) explained that some participants prefer to express feelings and opinions in the interview setting rather than in a group. I included as many “voices” as possible while making participants feel at ease. I provided more details of interview procedures in a separate section to follow.

This researcher transcribed the full proceedings of the interviews, coded and analyzed themes from the interviews, as well as from the focus groups. One interview session fully captured the views of each interviewee as ascertained by interviewer and interviewee. Interviewees with strong insight concerning the research questions and those who had unfinished opinions were approached by this researcher concerning further
discussion in individual interviews. After emailing or speaking to potential March focus group members on the phone, I chose an individual I wished to interview based on her open nature and her astute comments concerning her personal issues as a teacher with ADHD. I chose the interviewee that would follow the May focus group because she had the least to say during the group, but who made thoughtful comments when she spoke. I wanted to hear more of her story.

I administered the Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) to all participants in the March and May focus groups. This questionnaire provided additional insight as to how these teachers perceived supports and strategies in the context of their views on personal teacher effectiveness. These perceptions of teacher self-efficacy directly connect to Bandura’s processes of self-efficacy beliefs (1977). The scaled question responses did not correspond with Barkley’s theory of executive functioning (Barkley, 1998) of individuals with ADHD, as discussed in detail in Chapter 2. I discussed these results in Chapter 5. All four methods (focus groups, interviews, teacher observations and questionnaire) provided authentic data in response to the research questions and related to Bandura’s processes of self-efficacy beliefs on learning and personal growth, as described in Chapter 2.

The researcher chose this methodology based on past research, foundational theories, the research questions, and because this research is looked upon as interpretative in nature. There is no published peer-reviewed research on teachers with ADHD. This researcher described supports and strategies that teachers with ADHD use, but reached
deeper to conceptualize themes concerning these adults with ADHD and their teaching experience. For this formulative work, qualitative research strengthened by a quantitative survey and archival reports was appropriate.

Focus Group Research

The researcher used focus group research regarding the use of supports and strategies used by teachers with ADHD. Krueger and Casey (2000) described the basic characteristic of a focus group as being comprised of individuals who have similarities to one another who discuss pertinent information with a client or researcher in a focused discussion. Bogden and Biklen (2003) discuss the particular utility of focus groups:

They [focus groups] are particularly useful when the topic to explore is general, and the purpose is either to stimulate talk from multiple perspectives from the group participants so that the researchers can learn what the range of views are, or to promote talk on a topic that informants might not be able to talk so thoughtfully about in individual interviews. (p. 101)

I considered several factors in determining the number of focus groups and participants to be included. Three or more groups are recommended by the literature (Barbour & Kitzinger, 1999; Krueger & Casey, 2000; Morgan, 1997) as analysis requires groups to be compared to create dependable results. I moderated four focus groups; however, data from one group had to be discarded as described below. Because of the potentially sensitive nature of the discussion, the researcher chose to have a small number of participants in each focus group to hear each voice and to provide a sense of comfort and confidentiality.
(Barbour & Kitzinger, 1999). Finally, a small group was considered ideal because of the unique characteristics of persons with ADHD that often impact conversational patterns, such as interrupting and occasional short-term memory difficulties that may cause lapses in complete thoughts. In light of these considerations, the smaller groups produced a clearer, more open discussion of participants’ views about their perceptions of teaching strategies and supports.

The moderator was cognizant of the potential bias created by group dynamics. For example, a possible threat to authentic data is the dominant participant. Greenbaum (1988), Krueger (1994), Barbour and Kitzinger (1999) and others suggested methods the moderator may employ to diminish the dominance of any one participant. Such methods include stating clear expectations concerning the value of all members, or responding to other participants while ignoring speaking requests of the dominant member for a period, hoping that the individual understands the subtle cue.

Because there is no known research specifically on teachers with ADHD, this researcher conducted the first group as a pilot study to explore the soundness of the research questions and to test the methodology. This pilot was similar to the following two focus groups and was analyzed as the third focus group.

In addition to conducting the focus groups in the present study, the researcher interviewed two participants to enrich the data on perceptions of support and strategy use of K-12 teachers with ADHD. The interview section study is an interpretative case study using two subjects. As Merriam (1998) explains, “Interpretative case studies, too, contain rich,
thick description. These descriptive data, however, are used to develop conceptual categories or to illustrate, support, or challenge theoretical assumptions held prior to the data gathering” (p. 38).

A focus group, as noted above, allows a group of individuals with a particular purpose or shared characteristics to discuss questions posed to them by a moderator in a specified period. While this interaction has its own unique advantages, the individual interview does as well. Bogdan and Bilken (2003) explain, “Good interviews produce rich data filled with words that reveal the respondents’ perspectives” (p. 96). The individuals interviewed had the complete attention of the interviewer and thus gave detailed views of their beliefs about supports and strategies that they used. The researcher interviewed using a semi-structured approach, and asked open-ended questions as in the focus group, but sought more complete and in-depth perspectives from the interviewees. I have provided more methodological detail in the Interview Protocol subsection.

Interview Research

Interview methodology has been well researched. Although there is common knowledge about the components of an interview, Wengraf (2001) emphasized the complex nature of conducting semi-structured research interviews. He asserted that this form of interviewing, compared with fully structured interviews, requires as much preparation before the interview, and “more discipline and more creativity in the session…” (p. 5).

Planning for an informative interview requires careful thought; not only prior to the interview but also during and after it. Bogo, Globerman and Sussman (2004) carefully
developed an interview guide for their study concerning group supervision of prospective social workers. The researchers pilot-tested the interview guide and reworded questions deemed unclear. Wengraf (2001) stressed the importance of planning using semi-structured interviews in a different manner:

As regards *semi-structured interviews* [emphasis added], they are ones where research and planning produce a session in which most of the informant’s responses can’t be predicted in advance and where you as interviewer therefore have to *improvise* probably half—and maybe 80% or more—of your responses to what they say in response to your *initial prepared* question or questions. (p. 5)

Cooper and Burnett (2006) highlighted the interactive and changing nature that is common in interviews. Their research included two interviews each with seven young mothers. After reviewing the first interview, the researchers found that “…reviewing how we had interpreted talk and involving participants in this process would enable greater reflection on the interview material” (p. 112).

Bias reflections and disclosure by the researcher was a continuous part of the interview process. Scior (2003) reflected, for example, on her position and prior knowledge of gender and learning disabilities throughout her writing about discourse analysis and women with learning disabilities. She used such reflections in an attempt to be sensitive to her position as expert in the interview sessions as well as considering her role and knowledge during the analysis of her research.
Wengraf (2001) cautioned researchers to be aware of the many facets of human nature in both the interviewer and interviewee to consider possible bias:

You do not leave behind your anxieties, your hopes, your blindspots, your prejudices, your class, race or gender, our location in global social structure, your age and historical positions, your emotions, your past and your sense of possible futures when you set up an interview, and nor does your interviewee. (p. 4-5)

Seidman (2006), Kvale (1994, 1996), Wengraf (2001) and others have defended validity as it relates to qualitative research interviews. Kvale (1994) employed practical meanings to the word validity to strengthen its qualitative meaning. Rather than using the quantitative definition, Kvale reasons that a method is valid if it investigates what it intends to, validating data with “continual checks of the credibility, plausibility, and trustworthiness of the findings” (p. 168). Seidman discusses the manner of voice of an interviewee as an indicator of valid statements for a particular interview at the time of the interview. He asserts that the struggling of an individual to respond carefully, and the syntax and pauses in speaking, for example, provides a sense of truthfulness or validity to interview statements.

Researchers conducting interviews must deal with many considerations to ensure that the methods, results, and analysis are “true.” Kvale (1996) summarizes this process in his discussion of qualitative validity. “Validation comes to depend on the quality of craftsmanship during investigation, continually checking, questioning, and theoretically interpreting the findings” (p.241).
Questionnaire Research

Questionnaires or surveys have been a common tool in marketing and academia for many years. A substantial number of questionnaires, however, are constructed without careful concern regarding validity and sound administration techniques.

There is much research concerning questionnaire validity on such issues as self-reporting and possible bias (e.g. Morsbach & Prinz, 2006, Richman, Kiesler, Weisband, & Drasgow, 1999), question wording and question order (Myers, MacPherson, McCarthy, & Brown, 2003; Schwarz, 2007; Smith, Schwarz, Roberts, & Ubel, 2006), and construction of short forms (Myers et al.). Other methodological concerns relate to confidentiality and anonymity (Richman, Kiesler, Weisband, & Drasgow, 1999), face-to-face versus computer-administered or mailed questionnaires (Richman et al.), and the quality of participant thought given to responses (Schwarz, 2007). Schwartz reviews the cognitive and communicative processes of surveys by respondents.

Sierles (2003) summarized the administration of research questionnaires. He recommended that questionnaires be completed in five or ten minutes to respect the time of the participants. Sierles stressed the importance of guaranteeing anonymity or confidentiality and gave practical methods for doing so.

Although the following questionnaire did not explicitly address many of the above methodological concerns, the researcher considered them in the administration of the questionnaire.
Participants in the March and May focus groups completed a questionnaire: the Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). The researcher used the questionnaire to add to the understanding of the perceptions of teachers with ADHD concerning supports and strategies that they used to manage their teaching responsibilities. The scale quantitatively portrayed each participant’s sense of self-efficacy in the classroom. Appendix G contains a copy of the short form of the scale used in this study.

Developed in 2001, the Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) was originally called The Ohio State Teacher Efficacy Scale (OTES). There is a short form of the scale with twelve items and a long form with 24 items. Each form has nine possible response choices ranging under the heading of “How much can you do?” from “Nothing” to “A Great Deal.” A factor analysis of both forms revealed three correlated factors: Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management.

The intent of the authors of the OTES was to assess teacher self-efficacy and to move “beyond previous measures to capture a wider range of teaching tasks” (Tschannen-Moran, 2001, p. 801). They conducted several studies and tests of the instrument, including teacher feedback, comparison to other scales (construct validity), and multiple factor analyses to confirm subscales derived from teacher responses and to determine the correlation of the factors. The original scale contained 52 items, was refined by further analysis to 32, and was further reduced to 18 items.
The authors found that the classroom management factor of the 18-item scale was weak, suspected due to its brevity; therefore, items were added, as this component of teaching was deemed too important to omit. After a third study with 410 participants, the scale was increased to 24 items. Cronbach’s alpha subscales were 0.91 for instruction, 0.90 for management, and 0.87 for engagement, indicating evidence that these subscales have high reliability.

The reported construct validity was tested using other measures of teacher efficacy and was found to be valid, particularly with scales that access personal teaching efficacy. Examples of other teacher efficacy measures used in this comparison by Tschannen-Moran and Hoy (2001) were Gibson and Dembo’s Teacher Efficacy Scale (TES) (Gibson & Dembo, 1984), Bandura’s Teacher Self-Efficacy Scale (Bandura, undated), and The Webb Scale (Ashton, Olejnik, Croker, & McAuliffe, 1982).

Although Tschannen-Moran and Hoy (2001) noted the scale’s limitations and areas for further study, they emphasized its superiority to previous measures concerning factor structure and content.

It is superior to previous measures of teacher efficacy in that it has a unified and stable factor structure and assesses a broad range of capabilities that teachers consider important to good teaching, without being so specific as to render it useless for comparisons of teachers across contexts, levels, and subjects. (p. 801-802)
Teacher Evaluations

I asked participants during the March and May focus groups to provide evidence of their teaching competence if they felt comfortable doing so. One participant from the March group sent a recent teacher observation and one participant from the May group did so. One teacher had a “career status” observation form completed by one of the principals at her school (Careered Teacher TPAI-R Full Review). One of the principals observed the other teacher, using the ‘Teacher Performance Appraisal System—Probationary Teachers’ form. Both forms were part of the state’s teacher evaluation system. Results from the evaluations are in Chapter 4.

Description of the Study

_Institutional Review Board Approval_

The university’s Institutional Review Board (IRB) approved all proposed study procedures. The first focus group served as a pilot for the rest of the study and had a separate International Review Board (IRB) submission. Submissions, both approved, were very similar. The second review approval included the efficacy scale and the procedures for inviting two individuals to participate in the planned interviews.

The four components of the mixed-methods study were three focus groups, including the first one that served as a pilot, individual interviews with two individuals, a questionnaire on teacher efficacy, and two recent teaching observation results, completed by school supervisors, provided by two different participants.
Participants and Recruitment

The participants for the focus groups were, or had been, K-12 teachers with documented ADHD. Recruitment occurred by placing informational flyers in psychiatrists’ offices, a pediatrician’s office, and the educational building at a large university (Appendix A). This purposeful sampling method was similar to the procedure conducted in the pilot focus group.

Nine teachers participated in one of three focus groups. In addition, two focus group members also participated in individual interviews. One participated in an interview with the researcher one month prior to engaging in a focus group meeting and the other participated in an interview 13 days following her focus group meeting.

Three individuals were in the January 2007 focus group. However, one participant was a teacher candidate; he did not meet study criteria and no data from his presence was used in the study. Four participants were in the March focus group and three were in the May focus group. I provided detailed demographic information in Chapter 4.

A fourth focus group was held in June 2008, but data from that group was determined to be invalid. Of the three participants, one did not attend, giving no prior notification, one disclosed that she did not have a formal diagnosis in the session, despite reports to the contrary during the recruitment phase, and the third participant was a teacher’s aide and had not yet earned her teaching degree.

Participants were willing to attend and participate in a two-hour focus group. A heterogeneous group based on age, gender, race, teaching experience, and grade level for
each focus group would have been ideal. However, achieving a diverse group of participants was difficult, as I could not recruit from specific demographic categories. Recruitment was difficult for all focus groups.

I reflected on the reasons that participants volunteered to participate in the focus groups and examined the literature on this issue. Researchers have discerned various reasons that individuals volunteer to participate in focus groups or interviews. (Barbour & Kitzinger, 1999; Smithson, 2000; Woodring, Foley, Rado, et al., 2006). I was correct in my prediction that the responders would be persons who felt they had something to say in a setting with similar peers, who wanted to hear the experience of others, and, in some cases, felt that they had something to “prove” considering the often negative view of adults with ADHD in the literature. My method of selecting interviewees is discussed in the Interview Protocol subsection.

Communication Prior to Focus Groups and Interviews

When potential participants contacted me, I used a scripted format (Appendix B) to explain the study and the general procedures of the focus group (Appendix E). I assured complete confidentiality should the individuals be eligible and decide to participate. Participants were given the choice of using a pseudonym or their first names in the focus group setting. All chose to use their first names. The researcher also asked for contact information, in order to send a letter of consent (Appendix C), a demographic questionnaire (Appendix D), and a map of directions to the location of the focus group meeting to the potential participants by their choice of regular mail or email. In addition, individuals
identified preferred times and days for meeting. Dates and times of the meetings were
determined based upon participants’ preferences.

The researcher sent a reminder letter or email to each participant approximately a
week prior to the designated time for each focus group or interview. The demographic
questionnaire included information about participants’ ADHD diagnosis and teaching
experience. Individuals returned consent forms and demographic data when the focus group
convened. These procedures worked well (100% return rate), and all participants returned
promised materials either during the focus group sessions or during the interviews of those
two participants.

Interviews were not discussed initially at the time of the focus group recruitment.
After the initial recruitment conversation with each participant and prior to the March focus
group meeting, I selected one individual, contacted that person by telephone, and extended
an invitation (as per IRB approval).

The choice of interviewees was based on several factors. I invited an individual who
seemed to have much to discuss about her particular experience as a teacher with ADHD
prior to the March focus group meeting. After the May focus group, I chose an individual
who was more reticent than the other participants, but who appeared to have more insight to
offer. Finally, I strived not to rely “. . .too much on articulate, insightful, attractive, and
intellectually responsive informants; such people often turn out to be in the local elite”
(Miles & Huberman, p. 264).
Focus Group Procedures

Role of the Moderator

A moderator’s key job is to make participants feel at ease and feel encouraged to voice his or her opinions, and to agree or disagree with other individuals in the focus group. The moderator, then, should not present as a forbidding expert, but as an interested facilitator.

The moderator should be mindful that this is a job where one asks open-ended questions, and probes for more specific information when needed. Above all, the moderator must listen to each participant and not allow any one individual to dominate the conversation. Three individuals, one in each focus group, were clearly more dominant than the other participants were. However, their comments were generally pertinent to the questions raised and they allowed me to give others ample opportunity to speak. Other focus group members did not seem to mind these individual’s comments; therefore, I felt the sessions were not compromised.

I served as the moderator of all groups and interviews. I welcomed participants to each focus group and sat them around a table with place cards denoting their seating location. Before beginning the questions and discussion, I discussed the ground rules to make the experience as fruitful as possible. In addition, I told all participants that I also had a diagnosis of ADHD, as I felt they would feel more comfortable and forthcoming knowing this.
Because of my diagnosis of ADHD, I was particularly cognizant of any potential bias and I reflected on methodology and analysis in a bias journal throughout all components of the research process.

Using procedures that proved to be effective in the pilot focus group (Brock, 2007, unpublished manuscript), I encouraged discussion and facilitated focus on the pertinent topic by asking questions and displaying them one at a time in printed format using large cards on a table easel. The initial question following the introductory opening was, “What are some of the reasons you became a teacher?” The complete protocol appears in Appendix E.

I led the discussion without adding my own thoughts or ideas. I was mindful of the dynamics of the group and urged those more reticent members to add their views to the discussion.

After each two-hour session, I thanked the participants and assured them that they would receive a written summary of the session. They were invited to respond as to their perceived accuracy of the summary of the focus group proceedings. Five participants responded, and they had a few positive comments and suggestions. I assumed that the other participants agreed that my summary of the proceedings was an accurate portrayal of our discussions but their non-response made this assumption a certainty.

Role of Assistant

A trained assistant with an Ed.D. in school psychology and with qualitative research course experience was present to take field notes during the March and May focus groups
and to assist in serving refreshments, gathering forms, and completing other administrative duties. This allowed the researcher (moderator) to concentrate on the content of the focus groups. In addition, the assistant looked carefully at my behavior to check that I was not using undue influence during each session (Miles & Huberman, 1994). Finally, the assistant validated all field notes, as described in more detail below. The assistant received a cash stipend for her contribution based on the number of hours worked.

Training consisted of a meeting with the investigator where we reviewed focus group procedures, field note taking and rationales, and general expectations. We simultaneously viewed a short group vignette from a movie that illustrated group dynamics. During the vignette, we both took field notes that were compared for content and detail. Miles and Huberman (1994) recommend using vignettes in training, engaging study participants, and in member checking. The researcher provided further instruction to the assistant for assurance of methological integrity.

Immediately after each focus group and during the transcription process the researcher wrote field notes. The researcher and the assistant, soon after each group, reviewed all field notes and came to a consensus as to the accuracy of their portrayal of events during each focus group. I discuss this process in detail in the data collection and analysis section.

*Focus Group Protocol*

The chosen site was “neutral” in the sense that all focus groups took place in an office building not associated with either the university or public or private school facilities.
A comfortable conference room was used for all focus groups in the office building, and the office had adequate parking. The meeting location further helped protect participants’ privacy and anonymity.

The researcher greeted the participants as they entered the conference room. The assistant served refreshments and gathered the participants’ completed forms in the March and May focus groups. I then seated the participants and requested that they complete the self-efficacy questionnaire, offering a private setting in which to do so. None of the participants in any of the groups requested a private setting in which to complete the questionnaire.

All focus groups lasted approximately, but did not exceed, two hours. The sessions were digitally tape recorded for purposes of transcription and analysis. The assistant took field notes during the sessions with the exception of the first focus group, in which I did not have an assistant. I determined after the January focus group that an assistant would be helpful with logistics, field notes and methodological integrity.

The focus groups had a semi-structured format, where the moderator asked planned questions, and each group was asked the same core questions. I displayed the questions on an easel, one question at a time, to help participants focus on the issue under discussion. I asked probing or clarifying questions as needed. The moderator did not interject personal comments during the January 2007 focus group. Similarly, the moderator and the assistant did not participate in the discussions in the March 2008 and the May 2008 focus groups.
Data Collection and Analysis

The researcher transcribed the tapes of each focus group. When transcription was complete, the researcher began the coding process. In addition, the researcher added additional field notes as appropriate while coding. For member checking purposes, the assistant reviewed all field notes for validation in the March and May focus groups.

I coded and analyzed the data using ATLAS.ti software. ATLAS.ti (Muhr, 2004) is a qualitative coding and analysis aid that visually formats, organizes, and references material in text. The program does not perform final analysis for the researcher, but helps with the organization of large amounts of qualitative information. Both Lewis (2004) and Barry (1998) considered ATLAS.ti one of the two top qualitative data analysis computer software programs on the market. Barry (1998) preferred ATLAS.ti for its visual format and its capability to code video, sound, and picture files.

I correctly anticipated that the codes would relate to the theoretical themes and executive functioning. Support issues and codes were generally aligned with Bandura’s processes of self-efficacy beliefs. Strategies and tools that these teachers with ADHD used linked well with the executive functioning issues of an individual with ADHD. I correctly hypothesized that the data derived from the study would show interrelationships with both theories.

After I completed the analysis, I wrote a summary of each focus group and provided it to all of the participants. I also included a personal thank you letter to each participant. The researcher asked the participants to respond in an email concerning their view of the
accuracy of the focus group’s proceedings. If any of the participants questioned the validity of the summary, the researcher contacted the participant and resolved possible differences in interpretation. Final analysis, however, was my responsibility.

*Interview Procedures*

*Interview Protocol*

The participants chosen for the interviews completed a demographic information form, a consent form, and the questionnaire (Appendix G) prior to each focus group. I provided a separate consent form for the first focus group and interviewees as the protocol differed from that in the May and March focus groups. See Appendix H for the consent forms for the initial and two subsequent focus groups with interviews. I recruited by phone two members of the focus groups to participate in individual interviews, one before the second focus group and one following the third focus group.

The second interviewee’s perceptions may have been affected by the focus group discussion, which was appropriate as I intended the interview to follow up on the May focus group discussion.

The face-to-face interviews were held at a convenient location for the interviewee and neither exceeded 1 ½ hours. I presented questions or probes in a friendly, non-judgmental fashion. A pleasant rapport existed with both individuals interviewed, as stated by the individuals during or after the interviewing process.

Most researchers (Bogden & Biklen, 2003; Frechtling, 1997; Seidman, 2006) recommend interviews of one to one and a half hours in length. If not all topics are
discussed to the satisfaction of the researcher and the participant, another interview may be conducted, if the interviewee is willing. While I asked the first interviewee questions based on the research questions, I gave her much freedom to express her ideas, thoughts, and feelings concerning teaching duties, strategies, and supports. The second interview contained follow up questions based on the individual’s participation in the focus group and the research questions, and the participant was able to freely express and expand personal thoughts. I had questions tailored to each interviewee but allowed some deviation depending on the experiences of these participants. An example of an interview template appears in Appendix F. I compensated each participant with a set monetary amount of ten dollars per half hour.

Each interview began with a few minutes of “small talk” as recommended by Bogdan and Biklen (2003) and Siedman (2006), among others. I then began the open-ended, semi-structured, taped interview with each single participant.

Data Collection and Analysis

The researcher transcribed the tapes of each interview. After transcription, the researcher began the coding process. In addition, the researcher added additional field notes written after each interview as appropriate while coding. I coded and analyzed the data using ATLAS.ti software. Details regarding use of this software are contained in the data analysis section of focus group procedures.

After analysis was complete, the researcher wrote a separate summary for each interview, and provided the summary and a personal thank you letter to each interviewee.
The researcher asked the interviewees to respond in an email concerning their view of the accuracy of the interview summary. Member checking is especially important with individual interviews, as the interviewing process is more of a story of the interviewee’s experiences rather than responses to strictly formatted questions. Therefore, interviews are more difficult to summarize than are discussions from focus groups. The participants did not question the validity of the summary. Final analysis as with the focus group data was the responsibility of the researcher.

*Questionnaire Procedures*

*Questionnaire Timing and Rationale*

I administered the short form of the Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) in the second and third focus groups, as its reliability and validity are quite similar to the long form. In addition, I chose the time immediately before each focus group for the administration of the questionnaire, as I did not want the participants to dwell on the 12 questions for a week or more prior to participating in the focus group. I believed that careful thought in a limited amount of time would produce responses that were candid. I obtained a return rate of 100%.

I assured the participants that questionnaires were confidential but not anonymous as I compared their focus group comments to their responses on the questionnaire. Participants did not choose to complete the questionnaire in a private setting.

I administered the questionnaire before the focus group discussion began in order to avoid the possibility that responses to the questionnaire were affected by the focus group
discussion experience. Even though the discussion was about these teachers’ supports and strategies that they employed as individuals with ADHD, there was a connection to self-efficacy in general. One might question whether the focus group experiences influenced the participants’ reported sense of efficacy, at least in the short term; however, that question was left for future study. The researcher analyzed the data from the questionnaire as described below.

Data Collection and Analysis

There were nine eligible participants; therefore, sophisticated statistical analysis could not be employed on the questionnaire results. However, as the questionnaire is in the form of a likert scale, descriptive statistics (means and standard deviations) by individual items and questionnaire categories were reported. I also looked for patterns of participant demographics such as teaching experience and the age of students taught.

I looked for similarities between the questionnaire responses and the interview and focus group themes. In addition to its link with Bandura’s theory, the questionnaire highlighted research on executive functioning and individuals with ADHD, as discussed in chapter 2. An analysis comparing the responses of teachers without ADHD and to those of teachers with ADHD using the questionnaire would be of interest, but was beyond the scope of this study.

Summary

I employed four methods to investigate the research questions: three focus groups with two eligible participants in the first group, three in the third group, and four
participants in the March group. I conducted two individual interviews, and administered a teacher efficacy questionnaire, the Teachers’ Sense of Efficacy Scale (short form) by Tschannen-Moran and Hoy (2001), completed by participants in the March and May focus groups. Finally, I received and analyzed copies of two teacher observations completed by two teachers’ school administrators. The combination of these four methods produced data that addressed the research questions in more depth and from a broader perspective, than would be the case with any one method.

All four methods related to the study’s theoretical foundations, primarily Bandura’s processes of self-efficacy beliefs (1977), in a slightly different way. The focus groups utilized a social setting to explore the perceived supports and strategies of K-12 teachers with ADHD. The interviews allowed two individuals to respond to the research questions and related discussion in detail and richness on a personal level, including issues of self-efficacy. Finally, the questionnaire related to teachers’ self-efficacy, a major component of Bandura’s theory. I intended for each method to have an additive effect, enabling the data to reach saturation. I believe I did so. Together, these methods allowed the researcher to gather rich information on supports and strategies of K-12 teachers with ADHD as depicted in Figure 3.1. Results of the analysis are presented in the following chapter.
Theory and Literature

Bandura's Processes of Self-Efficacy Beliefs
Barkley’s Theory of Executive Functioning

Literature Review
a. ADHD Background
b. Profiles of Adults with ADHD and Learning Disabilities
c. Career Factors in Adults with ADHD and Learning Disabilities
d. Teacher Effectiveness and Teacher Self-Efficacy

Research Questions
1. Do K-12 teachers with ADHD utilize strategies?
2. If so, what strategies do K-12 teachers with ADHD utilize?
3. Do K-12 teachers with ADHD utilize supports?
4. If so, what supports do K-12 teachers with ADHD utilize?
5. Do K-12 teachers with ADHD utilize tools?
6. If so, what tools do K-12 teachers with ADHD utilize?
7. How do teachers describe the utility of these strategies, supports, and tools?

Research Design
Mixed Methods
1. Three Focus Groups w/9 participants, purposeful sampling
2. Two individual Interviews from focus group participants
3. Teacher Sense of Efficacy Scale; all participants (Tschannen-Moran & Woolfolk Hoy)
4. Two teacher observation results completed by school supervisors; two participants

Data Analysis
Modified Analytic Induction

Findings, Conclusions, Limitations, Further Research

Figure 3-1. Graphical Representation of the Research Design
CHAPTER FOUR: RESULTS

In this section, I present results of the participants’ responses to the demographic data questionnaire and the Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) followed by results of analyses of the data collected from three focus groups and two interviews with individuals from the focus groups conducted in February 2008 and May 2008, as described in chapter 3. Results from focus groups and interviews are organized by research questions followed by other major findings that emerged during the focus groups and interviews.

Participants

Nine eligible participants participated in three focus groups. Two valid participants were in the January 2007 pilot focus group, four were in the March 2008 focus group, and three were in the May 2008 focus group. In addition, two focus group members also participated in individual interviews. I interviewed a member of the March focus group in February, one month prior to engaging in the focus meeting and a member of the May focus group participated in an interview 13 days following her focus group meeting.

Contributions of participants in the study are identified here by pseudonyms assigned by the researcher in order to personalize and clarify remarks made by particular individuals without risking confidentiality. Wengraf (2001) states,

Anonymity and anonymization is a matter of degree of skill in changing details sufficiently so that the reader cannot identify the individual concerned but in such a way as not to destroy the social-science research value of the final report. (p.187)
Table 4.1 provides demographic information for all participants.

### Table 4.1 Participant Demographics

<table>
<thead>
<tr>
<th>Participants</th>
<th>Jan. 2007 FG (n = 2)</th>
<th>March FG (n = 4)</th>
<th>May FG (n = 3)</th>
<th>Total (n = 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Age</td>
<td>56.5</td>
<td>6.4</td>
<td>45.3</td>
<td>17.6</td>
</tr>
<tr>
<td>Age of Diagnosis</td>
<td>51.0</td>
<td>5.7</td>
<td>35</td>
<td>17.6</td>
</tr>
<tr>
<td>Years Taught</td>
<td>20.0</td>
<td>1.4</td>
<td>16</td>
<td>11.3</td>
</tr>
<tr>
<td>Educational Level*</td>
<td>3.0</td>
<td>1.4</td>
<td>3.0</td>
<td>0.96</td>
</tr>
</tbody>
</table>

*Educational Level rated as follows: PhD = 4, Masters = 3, BA = 2

As is apparent from Table 4.1, participants were experienced teachers. In addition, these teachers were highly educated. Two participants had earned PhDs and had college teaching experience and three others had earned their master’s degrees in education, resulting in 56% of the participants holding advanced degrees. One participant was working on her master’s degree at the time of the study and another was in the process of applying to graduate school.
Only one participant (a May group participant) was diagnosed with ADHD as a child, at age eight. Two of the participants had the comorbid condition of learning disabilities, and one had received services throughout school for learning disabilities, and one received services for both learning disabilities and ADHD. One participant had a comorbid condition of post-traumatic stress disorder, diagnosed as an adult. One participant with learning disabilities was not diagnosed with ADHD until the age of 35.

The groups’ greatest demographic differences were in experience and age. The March group had the highest variability in age with participants’ ages ranging from 26 to 63 years. This group also had the greatest variability in years taught.

Mean years taught for the January group was 20 years of teaching experience. In addition, this January group was the oldest, both in age and in mean age at diagnosis.

All of the participants were Caucasian, with eight women and one man with an age range from 26 to 63 years. While teaching at the K-12 level, seven participants taught in elementary schools. One teacher taught at the middle school level. One of the participants with an earned Ph.D. had taught at the elementary, middle, and high school levels in addition to having college teaching experience. Although the second participant with a Ph.D. now teaches at the college level, she taught special education at the elementary school level prior to earning her Ph.D.

The use of medication was diverse over all of the groups. All of the participants had tried medication for a period, but 44% of the individuals were not on medication for ADHD at the time of the study.
Disclosure of their ADHD among the three groups varied to a marked degree. The March group disclosed to a higher degree than both the January and May groups, although there was variance within participants in each group. The demographic questionnaire (see Appendix D) asked four questions relating to disclosure, distinguished by those to whom disclosure was made. The categories were disclosure to (a) teachers or co-workers, (b) principals or supervisory personnel, (c) students, and (d) students’ parents.

All participants disclosed with teachers or coworkers, although the questions did not specify the extent of disclosure. All of the March participants disclosed to principals or supervisory personnel, 50% in the January group disclosed to this group, but only 33% in the May group did so. Disclosure to students was much more conservative—in the January and March groups, 50% disclosed to students, but not to all students. In the May group, 33% disclosed to students. All participants in the March group disclosed to the parents of their students, and 67% of the May group disclosed to this group. January group disclosure to parents was 50%; again, these participants did not disclose to all parents. Discussion of teacher disclosure is in chapter 5.

Teacher Sense of Self-Efficacy

All participants at the beginning of the March and May focus groups completed the Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001); however, the January group did not complete this instrument. Although there was some variation across individuals, participants described themselves as very effective teachers. Ratings across subscale items and participants ranged from 6 to 9, on a scale of 1 – 9, with nine being the
highest ranking. Table 4.2 provides the means and standard deviations of the focus groups’ results.

Table 4.2  TSES Subscale Score Results

<table>
<thead>
<tr>
<th>Subscale</th>
<th>March FG (n = 4)</th>
<th>May FG (n = 3)</th>
<th>Total (n = 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Efficacy in Student Engagement</td>
<td>8.4</td>
<td>.59</td>
<td>8.2</td>
</tr>
<tr>
<td>Efficacy in Instructional Strategies</td>
<td>8.3</td>
<td>.61</td>
<td>8.2</td>
</tr>
<tr>
<td>Efficacy in Classroom Management</td>
<td>8.3</td>
<td>.70</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Participants rated their self-efficacy as quite high in all areas, with the March group reporting slightly higher self-efficacy scores in each domain, corresponding with their higher mean teaching experience.

School district supervisors in two cases corroborated teachers’ self-ratings. Two participants shared their recent teacher evaluations, which identified them as exemplary teachers. One of those participants had been recently named Teacher of the Year at her school. It is clear that these teachers with ADHD felt quite strongly that they had much to offer their students in all three subscale areas.
As stated above, the two teachers who volunteered their teacher evaluations received impressive scores and positive comments. The teacher who had been named Teacher of the Year at her school received “above standard” scores for all of the categories in her evaluation, made all the more impressive as she was in her early years of teaching. The second teacher who shared her teacher evaluation had achieved career status. She also received above standard scores for all of the categories in her evaluation. Her evaluation also disclosed that she was the grade level chair for the year of the evaluation.

The following sections address each research question with results from the focus group and interview data.

Research Question 1: Do K-12 Teachers with ADHD Utilize Strategies?

The data from the focus groups and interviews confirmed that all of these teachers did utilize strategies to help them fulfill their teaching responsibilities. The strategies identified and used by these teachers are not unique to individuals with ADHD, but almost all of the study participants articulated the strongly perceived need for these strategies.

Research Question 2: What Strategies do K-12 Teachers with ADHD Utilize?

Based on focus group data, interviews and subsequent coding with ATLAS.ti, I identified the four themes that emerged. Participants used strategies grouped into these themes: (a) organizational strategies, (b) time-management strategies, (c) memory strategies, and (d) strategies involving workspace. There was considerable overlap in these themes. Interestingly, many of these were strategies not used by the participants while
working with students in the classroom, but were used to plan and complete other necessary
teacher tasks.

**Organizational Strategies**

The need for organizational strategies is both a frustration and a reality for those
with ADHD. However, many participants used their organizational challenges and the
resulting strategies to help their students. Cathy, for example, summed up the importance of
organization for herself and her students: “Being organized was a big deal that I felt was
most essential. Because if you’ve got all your things, then you’re gonna be more likely to
be successful.”

Participants’ comments generated organizational themes related to (a) using
notebooks or folders to manage information, (b) using schedules or priority grids to manage
time, (c) color-coding materials to organize information, and (d) using technology to
manage time, information, and communication with parents and school staff and
administrators.

**Notebooks for Organization**

Participants used organizational notebooks in different ways. Sarah preferred to use
several notebooks containing different information in each to help her organize her teaching
materials or essential student information.

So I may carry five to six notebooks from school and keep them in the trunk of
my car every day. But the kids see me and I tell them what I’m doing; they use
notebooks; we have that strategy for classes.
Participant responses often mentioned, as above, that the strategies they used also helped their students’ strategy development, a notion that will be reported later in this chapter under “self-identified teaching strengths”.

Other teachers needed notebooks to organize school-related information such as lesson plans, school meetings, and student information, but found several of them too overwhelming. Lisa’s comment emphasizes the difference.

I have what I call “it’s everything notebook” and in there I have a section for reading, for math, a section that just has my lesson plans at a glance for a week, and then a section for notes that we get from our meetings from school, a section for parent conferences, so that I can take that notebook, if I’m in a hurry to leave school, that notebook goes with me wherever I go.

Although Dan did not use large notebooks, he did rely quite heavily on file folders as an organizational aide, both in school and in his everyday life.

Every minute of every day would get a folder. First lesson, first period. And if it was groups, it would be a big folder with everything with the group work. A whole day had to be ready before I could teach. At home, for finances, records . . . or I would never find it.

*Schedules or Priority Grids for Organization*

All of the participants used some sort of scheduling strategies, and all used a calendar of one form or another to keep track of their teaching and personal responsibilities. Jane stressed her necessity for her calendar. “My calendar is the bible, and I learned quickly
that one calendar for everything is what I need.” Fran used the traditional lesson plan book, but stressed that it was used for planning and teaching reminders. “I mean my lesson plan book has far more in it than what I plan. Cause I would have to write little notes to myself and see if it’s not written down, it’s gone.”

Sarah also spoke of the importance of her calendar. “The second most essential tool I use is my calendar.”

Teachers spoke about calendars and organizational schedules as though they were a “given.” They did not spend much time discussing them although they all used them.

Dan had a different method that he maintained was essential to the prioritizing of tasks. He also used this method in his teaching.

I live off—I have to live off—Covey’s quadrant. You have like 1, 2, 3, 4 and then “urgent” and “not urgent.” So you have important, urgent, very important—not urgent, less important but still urgent; that’s the fourth in there, and so, I learned to sort of sort things in blocks.

**Color-coding Materials**

Many of the teachers preferred to use some sort of color-coding system for the organization either of materials or of schedules. Jane reported using color-coding heavily, both in her classroom materials, while planning, and in staff presentations. “My teammates make fun of me. I am the highlighter, color-coding queen. Everything has a color; I have to have things in color.”
Sarah gives this example of color-coding that she shared with her students.

So I have kinds of meetings in yellow, others in orange, others in blue, so it’s all highlighted; but I can see in each day what I need. And I share that with the kids.

Use highlighters for your own strategies.

*Technology Use*

Many of the teachers used technology strategies to help them with their ADHD challenges. Mary used a Palm Pilot even though it was not her favorite organizational method.

I do put like parents’ numbers, addresses, emails, on the Palm Pilot. And that’s…my mother got me [that] and I didn’t think I’d ever use it, I usually like writing stuff down better, I actually do like it. I just kind of scroll through, and be able to connect to someone fast; but I’m not that “tech-savvy” really.

Sarah really liked using a device that is a simple, portable keyboard, and emphasized that her students used it for written organization and ease as well.

I would be nowhere without my AlphaSmart. It was developed by a middle school teacher; it runs on 3 AA batteries for a hundred hours, which is at least a semester, it types up to a hundred typewritten pages. You only see about five lines of text, so the kids (or me) can’t do a lot of messing around, it has ASCII so that you can plug it in to a PC or a Mac and it automatically prints it out. The kids love that part when they see it going really fast with their writing, then you do all the spell check or whatever
program you want. It is a lifesaver; I use it to take notes at conferences, I use it to take notes at parent meetings.

Jane professed to love certain web sites for memory and organization; so much so that she paid for the use of one teacher organizational site, even though her school system provided a free organizational and communication web-based program.

I have a couple different web sites that I use for things. All of my grades are online, and keep parent communication through this website, so that it automatically documents everything that I’ve sent to them which is great; ‘cause if I had to go back, there it is, and I didn’t have to write it down. The website with my grade book on it is probably the best online tool that I’ve found. Parents can go and check their [children’s] grades, anytime they want to check their kid’s grades, it’s there, and it has the ability to email back and forth, keeps track of those things, and so that’s nice for everybody’s lifestyle. It’s “TeacherEase.com.” I love it... and it’s got nice graphic organizers in there. I can run sheets that have my kid’s names, and however many boxes I need, when I’m checking something, like objectives, or there’s form letters in there, and there’s actually emails in there that I don’t even have to type; it just says ‘Your child needs lunch money for tomorrow’ and I can send it right out.

I found it interesting that these teachers did not use technology tools to a greater degree. Most of them preferred “non-technological” organizational strategies, such as writing important information on paper. One teacher even jotted notes on her hand to aid her memory while teaching.
The following section discusses strategies to deal with another common and frustrating ADHD characteristic: challenges with time management.

*Time Management Strategies*

Most individuals have ways to deal with their personal or professional time management issues. However, these teachers with ADHD found that to successfully manage their teaching responsibilities, these strategies were essential. Time strategies varied by (a) amount of time needed, (b) different time schedules, and (c) time prioritization.

*Amount of Time Needed*

Most of the participants needed extended time blocks to successfully concentrate on teaching duties such as planning and student and administrative paperwork. Anna described her need for larger blocks of time for planning and other responsibilities requiring sustained concentration. Most of these teachers had trouble using the shorter time periods that occurred during the school day to complete planning activities.

Yeah, I’m one of those people; I do well with working long periods of time. I tend to hyperfocus a lot of times and I can work probably better for longer periods of time than a bunch of short periods of time; it takes me a while to get into something.

Fran acknowledged needing more time to get her teaching tasks done due to focusing issues. She perceived that she needed more time than her peers.

I was always there later at school, and whether it was because…at the time I didn’t think it was because I wasn’t focusing. Everybody was obviously in my room
asking questions of myself and everybody else, but that may have been a way for me not to focus. I don’t know. The interruptions when you are trying to do any kind of lesson plans at school, you know. . .I never could.

Different Time Schedules

The following quote is an example of a teacher who knew her time challenges and planned around them. Beth explained,

I realize that I need to plan, and I definitely see that, so I need time in my room to do the planning and I always do best when I have a couple hours. I do it before school. I used to go in really really early but it’s gotten a little later; but having that time to be in the room and pull things together, because during the day you just can’t do it all because you’re teaching anyways.

Jane also provided insight into needing extended time periods for many tasks and how she needed to use the planning time in her school day for other activities.

I don’t want to get involved in something and then have to stop, like it’s a matter of saying that it drives me crazy ‘cause I need that solid amount of time to do that kind of stuff, so…planning periods are great but I don’t use them for planning.

She further explained that she used that short period for tasks not requiring intense concentration or for “decompressing” while having a break from her busy elementary students.

Dan expressed frustration concerning the loss of time at school, wanting to use the copy machine but found he was distracted while trying to do so.
I mean if I can try to sort that these things, I’m copying, I’m putting them in folders, somebody wants to go “Hey, ya-talk to me.” I’ve got things to do; I go “This is not the time.” I mean, I’ll be glad to talk, but I can’t do this and do that.

To make necessary copies without distractions, Dan would go to school early, emphasizing: “I do not have the patience to wait in line, to make my copies, I don’t care. . .everything has to be ready for class before I start or I’m just wasted.”

*Time Prioritization*

Although not mentioned frequently, some teachers considered prioritizing time important to their teaching success. Anna said, “I prioritize things by when they have to be done by and then also the level of importance.”

Beth described her growth with teaching experience related to prioritizing time commitments. “I feel like in the past year, I feel like I’ve learned how to un-commit myself a little bit, from too many things. So I think that helps because, and I’ve learned how to plan ahead more.”

The following strategies are closely related to time strategies, in that lapses in memory may cause individuals to miss deadlines or to allow insufficient time to complete all responsibilities.

*Memory Strategies*

A common characteristic of individuals with ADHD is difficulty with working memory and word retrieval. All participants in this study expressed the need to use memory strategies. As was common with organizational and time strategies, participants reported
different ways to remember information before, during, or after they taught in order to fulfill their teaching responsibilities. When participants had difficulty with word retrieval, most had coping mechanisms or used this difficulty as a “teachable moment.”

For example, Jane explained her reasons to reject a common school support and strategically not use it, as she could not remember to use the offered support when it would be helpful. “We had hired somebody at the school to do our copying for us, and that was the worst thing for me, because I had to remember to get the copies in a couple days in advance.”

Dan expressed his memory difficulties as a frustration, but also as a way for students to realize that teachers make mistakes; and that this mindset could lead to an enhanced classroom climate where students felt that mistakes were a natural occurrence and a learning tool. Dan would forget a point in a lesson and explain it to his students.

I used to tell kids that I just had a brain cramp, and they got where they used the term. “It’s a brain cramp, it’s okay—it happens.” I mean I’ve gotten where [I tell students that] “You’re not gonna laugh just cause of a brain cramp. It could happen to you.”

Mary expressed her memory strategy as a need that she has accepted for herself, despite the fact that this strategy was quite labor-intensive.

I have to write everything down, every morning, I write down what I’ve gotta do. It’s a daily thing for me; it’s not weekly, it’s daily. And I’m just used to it; it’s just a routine for me, and I don’t ever procrastinate because that could be trouble for me,
and it’s not a big deal anymore, I just make myself do it, and it’s fine, and things go smoothly, and if I don’t, that’s when I have trouble.

Anna explained her “fear of filing” memory dilemma (Nadeau, 1997) that other participants also expressed: “I figure if I put it in a drawer I’m gonna forget about it.” Because of this fear, she preferred to store important, immediate information on her desk or in a file in her computer. She did not explain why she felt more comfortable with computer files versus paper files.

Several teachers strategically used post-it notes to help them remember important tasks or events. Anna used them and cited their use as a major memory strategy. “I would have post its all up and down my door to remind me before walking out the door.”

Two teachers in the May focus group disagreed on the use of post-it notes. Mary found them very useful while teaching.

I’ll put them like next to certain stations, like in the classroom, like learning stations, and I can just go right to it. And it’s great because it’s like, “Oh yeah! That’s right-I need to do that.” But I have them on me all the time [laughs], so I love post-it notes.

Beth explained that using them was not a good memory strategy for her. “I get really unorganized with post-it notes. Because I could stick them everywhere and if I come across it I don’t know why I wrote it down.”
The following section denotes the importance most of the participants cited concerning where they could best focus for planning or completing other tasks outside of the actual time spent with their students.

*Strategies Involving Work Space*

Teachers had different opinions concerning the best places that they could work. As stated previously, time and organization challenges overlap with individuals with ADHD, and focus challenges are in all facets of coping as individuals with ADHD. Jane preferred the school setting and admitted that working at school helped her with her memory challenges as well.

I would just rather go to school two hours early and do it there, ‘cause that’s where it belongs, and I won’t lose it, whereas if I take it home, who knows where it’s going to end up [laughter] you know, it could very well be gone.

Most individuals preferred to work at school, but when necessary, they had a plan for a place in which they could focus at home. Mary described her need to have a formal, designated place for schoolwork, even if it was not the quietest place in her home. “But there’s a big table that I can work on if I’m not working at school. And it’s that designated place where I work. It’s almost like I need to be in a formal setting.”

Interestingly, several teachers explained that they could focus in noisy settings such as a coffee shop or at home. In these cases, the causes of their focusing problems were not the noises, but the temptations of doing other things at home rather than their schoolwork.
Cathy explained,

I don’t work at home. I find that I get distracted when I walk to the room to do something that I would be doing something in the house, washing clothes, so I would go to school. I’m around people, but it doesn’t distract me as much as being alone in the house.

The following section deals with supports, past or present, that teachers described as significant. Supports or the lack of supports were discussed to a great degree in all research settings.

Research Question 3: Do K-12 Teachers with ADHD Utilize Supports?

Supports are heavily used by teachers with ADHD, but in different degrees and in different ways. Different focus groups and interviewees focused on varied supports, some not predicted by this researcher. Specific supports are reported below.

Research Question 4: What supports to K-12 Teachers with ADHD Utilize?

These supports are categorized into three themes based on data coded from the focus groups and interviews: (a) personal support, (b) school-based supports, and (c) medical and professional supports. Important to all groups and interviewees was the additional theme of lack of support. Even though these personal supports were often not linked directly to the participants’ teaching responsibilities, they attributed their ability to cope and persevere to become teachers as a result of these supports.
**Personal Supports**

Personal supports derived from the codings of (a) family, (b) self-support, (c) friends, (d) faith (with one participant), and (e) exercise (with two participants). Family supports and self-support were mentioned with much more frequency than support from friends. Some of these supports were specific to certain groups; they may have been present in other groups but were not discussed.

Participants viewed family supports as coming predominantly from parents or siblings. Two husbands and a son were mentioned briefly as supports, but to a significantly lesser degree than parents or siblings. Family support varied among participants. Anna credited her parents as being her greatest form of support, both as a child and to a lesser degree as an adult. Her parents gave her support in the form of advocacy and academic support through school, but they also gave her the support of believing in her.

So it was more just them being there to give me the confidence that you know you can do it; yes, it’s going to be hard, but you can do it, and if that’s what you want to do. They also were good about respecting what I wanted to do.

Anna also had the support of her husband. His support seemed to define him as more of a stress-reducer.

The way I deal with stress or lack thereof [laughs] dealing with stress is probably a lot with my ADHD. It all runs fast and fast and fast in my head and then you know you just get so stressed out. It’s all going through your head and it never stops going through your head. He’s good about holding me and saying “Calm down, let’s go
through this step by step,” so he’s really laid back and a calm person so that’s very helpful.

Participants mentioned self-support predominantly in the focus groups. It appeared that the context of the focus group encouraged individuals to talk about how they had learned to develop coping strategies that worked especially for them. Anna described her personality in terms of being tenacious. “That’s the way I am. I’m a very headstrong independent, ‘I’d rather do it myself’ type of person. I’m not one that’s going to ask for help unless I’m just bleeding and I really, really need it.”

Mary described her self-support in terms of what she did not expect from others. She had support from her parents growing up and mixed levels of support from her two sisters, who did not have ADHD, but as an adult, her support changed.

The world I live in is not going to do anything for me. And I, you know, I don’t have dyslexia; I don’t struggle with numbers or anything; I think people with speech impediments have to figure out what to do, so this is, I have an impediment in this way. And I have to deal with it. And that’s how I look at it, too. And I have friends and everything but I’ve just, at my age I think you have to be your support system. You have to do it.

Lisa added that she considered having ADHD forced some individuals to have strong self-support.

I would be willing to bet that many of us are like that. I had support growing up but I am very very driven and have had to kind of advocate for myself. And I would
think that many of us who have been successful actually have learned to do that, not
even knowing that we were; I didn’t realize that in high school.

Cathy felt that life, not ADHD, forced her to be her own support system. She did not
have family support growing up; in fact, her parents divorced when she was very young and
she described herself as having been raised in poverty. She created self-support in spite of
her impoverished beginnings and little external support.

If we wanted to share battle stories I have some that people would just, they
would drop. “I can’t believe that and you’re a teacher.” So to me, having had a
background that wasn’t what I wanted my children to have, I think was really
beneficial, and I learned to be self-sufficient at a very early age.

Finally, Cathy seemed to sum up what most of the participants believed; that self-
support was a positive quality.

I find support; if there’s something that I need, and I know that I’m going to need it
to do the next thing, then I find a way to get around it. It may be the back door
considering everything I’ve done, but I know that I can get into it, and once I get in I
can prove that I can handle it and I will be successful.

The participants cited friends as supports in a general sense, but not to the degree as
family or self-support. When participants talked about friends, they spoke of them most
often in the collective sense, as in “I have a lot of friends.” Lisa described a positive
support: “I have a great roommate who totally understands me.”

Participants discussed the need for school-based supports in the next section.
School-Based Supports

School-based supports varied, with most participants citing peer supports as more positive than administrative supports. Beth, however, spoke generally about her supportive school environment.

I’ve been very blessed in that I pretty much everywhere have found supportive environments. So I mean I’m thankful for that and I realize that, I feel like I’ve been so blessed because I’ve gotten to be a more organized teacher, and I still have a long way to go, but I’m so thankful.

Jane had another positive view of her school’s overall support and both administrators and peers accepted her.

But my grade level they understand me and they can give me reminders, or “I’m just having an off day or I forgot my meds today, please forgive me if I’m like all over the place.” And they’re good about it. You know, they will pick up the slack, or do whatever. I don’t think my school is normal [laughter]; like I think my school is just so wonderful and great that it can’t be normal.

Lisa spoke of the support of a group of teachers and how the group helped her cope with her ADHD challenges.

Collaboration is so important, too. Just within your team, ‘cause you can learn things that they are doing, or that they thought of that you hadn’t thought of or vice-versa; that helps me. And it’s helped with organization, that maybe I couldn’t get it
together in my brain, long-term planning, but maybe I have the short-term ideas, so collaboratively working together, we had a plan.

Other participants felt great support from individuals at their school. Sarah spoke fondly of a mentor who supported her a great deal.

I think that, just from the time I had that mentor; although she wasn’t ADHD; but she was so brilliant, and she had such an investigative mind, that she was curious about everything, and she was a consummate educator, so she wanted to try all ways of learning.

Jane successfully completed her National Board exam and was considering applying to graduate school in part because of the great support she received from a peer. She acknowledged that she needed her friend’s help.

But I mean that worked out well, and actually she might just start talking about applying to grad school together because we did work so well together, that going into something else, kind of like holding someone else’s hand. I’ll jump up and do it, but I sort of need that help and assistance.

Jane also told of a peer who supported her by helping her remember important events. “I have a coworker that I work with that I will always email her and say, ‘Is there anything going on on such and such a date that I don’t have on my calendar before I commit to this?’”
In one instance, Dan described a compliment he received from a peer as being affirming: “‘You are one of the most energetic persons I have ever met in my life.’ He says ‘I admire your energy and your vitality.’”

On the other hand, Anna felt no administrative support in one of the schools in which she was a special educator. “There was not a lot of administrative support in the school. We could go on for hours talking about the lack of administrative support.” Anna resolved this problem by transferring to another school.

Beth reported an administrator who was not supportive as ‘not safe’—not someone that she could trust.

But I think one of our principals is one of those ‘not safe’ people; I mean there are unsafe people. And like if she’s having a good day, then she might be your friend. If she’s not, then she will make you cry.

The following section reports participant supports of a professional or medical nature.

Professional and Medical Supports

Professional supports refer to professionals who served or referred participants for the treatment of their ADHD symptoms. These professionals were chiefly psychologists or psychiatrists, although one person used an ADHD coach and another cited her yoga instructor as a wonderful support. Not all participants used professional supports, although some of them considered doing so in the future.
Professional Supports

Participants did not talk about professional supports at length. One participant spoke of a psychologist: “Well, there’s only one; if you’re asking me who my support is, my first support is the psychologist, my counselor.”

Another participant sought help from a coach as a young adult in undergraduate school.

[I had an] ADHD coach; she had all these different titles. That was when, I found out just meeting with her once a week, just to talk through strategies, or something specific in a class, that just really helped me be successful, and that’s when I think I’ve learned to search out; to have certain people in my life that could support me, or help me stay organized.

Finally, another counselor helped a participant consider strategies for the classroom: “She definitely helps me think of strategies.”

Medical Supports

Medical support refers to the use of medication specifically for ADHD. As cited in the demographics description in chapter 3, 44% of the participants took medication during the data gathering, although all of the participants had tried medication at some point in their adult lives. Those who were on medication were generally satisfied with the help they thought it provided.

Cathy described the change in the way she felt after going on medication for ADHD.
I can focus more on one particular thing, where before I was all over the place. I could get things done. I was great at initiating; but following through and completing something was a problem—the main problem. So now, I initiate, I get really excited and I actually follow through.

Fran described her medication as essential in a stark way. “Oh, yeah; without medication I’d be in la-la land. I don’t think of it as a tool, I think of it as a necessity.” Dan agreed; and when I asked if he considered medication a tool, he replied, “Let’s see: meds, diet, exercise. Those things aren’t tools, those things are mandates.”

Jane described her thoughts about medication as increasing the control she had over her behavior.

I felt like once I got on the medication I found a way, doses and things, I felt so much more in control. Where you know even the little voice in my head is now telling me “No, that’s not a good choice. You know, finish it up, put it away.” You know, the little rule in my head is telling me that’s not a good choice.

Some participants, while being on medication, were not as enthusiastic as were the two teachers quoted above. These teachers took medication as they felt they needed it; and they cited those times as being when they were under considerable academic or cognitive pressure. Lisa summed up in the following quote.

‘Course when I started grad school it was a totally different story; that’s what made me think when you said that--I had to get back on it; because I couldn’t
have six hours of class after teaching all day. So now, the nice thing is that I can
take it when I know I need it, instead of every day.

Those teachers who were not on medication expressed that the medication did not
work or that it had side effects that they did not like. In addition, Sarah did not like taking
any medication at all, even though she stated that her ADHD medication worked quite well
for her, and her initial reaction was quite strong.

I can’t believe it; 23 years ago after my son was diagnosed I was diagnosed, and I
started Ritalin. For me, within 12 hours there was a total difference. I was so angry;
I went back to my doctor and said, “Excuse me. Is this how normal people have
lived their whole lives—that they haven’t had this underlying anxiety and they don’t
have multiple things all floating through their minds at every moment so that it’s
really hard to focus on one thing?”

Instead of medication, Sarah preferred to use relaxation techniques such as yoga and
soft lighting among other things to help her maintain focus and calm. However, she stated
that she would have to return to medicine if she pursued further graduate work.

The following section deals with participants’ perceived lack of support, whether
that lack of support came early in their lives or occurred or continued into their present
lives.
Lack of Supports

The lack of support for some teachers came quite early in their lives and carried over into their professional careers and personal lives. Due to the potential sensitive nature of this section, I did not use some pseudonyms.

Some participants recalled that they did not have the understanding and support of their families, particularly their parents. Some reasons discussed by individuals were a lack of understanding, personal rigidity, and the suspicion that at least one of their parents had undiagnosed ADHD themselves. One participant described lack of family support.

My dad by the end of the first year of first grade, his hands were all thrown up. You know, “Why can’t you be. . . .spankings at school, I give you spankings at home, but it doesn’t do any good—you go back the next day and you do it.” I mean my dad made it very clear to everybody that I was really different. And very little [support from]—basically it was a passive thing with my mother.

One of Beth’s parents was a perfectionist and made her feel as though she did not measure up. She described this parent as having many skills, but her parent could not accept the fact that this teacher, successful on several measures, had ADHD, even though Beth believed strongly that this parent had ADHD. She seemed to accept this parent but she did not feel that true empathy was possible.

Mary had at least one parent with undiagnosed ADHD, but described mixed support from two siblings. Mary was the only child in her family with ADHD.
Anna described her frustration with not being fully understood by well-meaning teachers before she had the diagnosis of ADHD and was served as a student with learning disabilities.

I mean I had some incredible teachers and if it wasn’t for them I wouldn’t be here today. BUT I still never felt that they understood what I was going through and that they never completely understood that a learning disability does not just affect your academics; it affects your whole world.

I provide discussion concerning the consequences of lack of family support or understanding and the lack of school supports in chapter 5.

Research Question 5: Do K-12 Teachers Utilize Tools?

Teachers in this study did use tools to help manage their ADHD characteristics and to fulfill their teaching responsibilities. These tools were not unique to ADHD, but some teachers thought their utilization and degree of need was quite related to their ADHD diagnosis.

Research Question 6: What Tools do K-12 Teachers with ADHD Utilize?

Teachers predominantly used tools for organization and time management, and these tools were personalized to the individual and overlapped extensively with the strategies they employed. Few tools were particularly sophisticated, but they were viewed as quite important to these teachers’ personal and professional lives. Jane, as noted in the organizational section, considered her favorite web sites to be invaluable.
Several participants used common tools such as calendars or other time-management and organizational tools such as post-it notes. Lisa preferred to have all of her essential information in one place with her ‘everything notebook’ as described in the organizational strategies section.

Jane described her need for organizational tools as being important to her teaching duties. In her case, calendars and highlighters were essential. Her coworkers initially teased her for her color-coding methods, but she knew how important this tool was for her, and she was not offended by the teasing.

Fran decided to use a tool, for example, to save precious time.

I got to the point where I had my own copy machine in my classroom ‘cause I wasn’t gonna be held hostage to be able to get it when I was there; when I want it, I want it now, and I can’t wait for the copy machine.

Fran did not imply that she interrupted her lesson to make copies. Rather, because the copier was in her room, she did not have to wait in a line to make copies nor waste time going to the copy room.

Research Question 7: How do Teachers Describe the Utility of These Strategies, Supports and Tools?

In general, participants used a variety of strategies, tools, and supports to help fulfill their teaching responsibilities. These were quite individualized; but the common theme throughout their discussions was the emphasis on need and hard work. All teachers need
strategies, tools, and supports, but almost all of the participants felt that having their particular strategies, tools, or supports were essential to their teaching success.

These teachers also perceived that they had to work harder than did their non-ADHD counterparts. As a participant explained, “If I think I’ve forgotten it [my organizational notebook] I go into a panic mode; like my heartbeat races. Oh, no, okay. ‘Cause other teachers could easily just get by; I could not. I need to have it.”

Other Findings

These additional topics were not directly related to the research questions but were discussed to a significant degree by the participants, and thus findings are reported here.

**ADHD Diagnosis and Disclosure**

The teachers in the study voiced feelings about their ADHD diagnosis ranging from anger to relief and validation to a more matter-of-fact acceptance. The mean age of diagnosis for all groups was 34.4 years of age; this possible impact on understanding ADHD and possible supports the participants did or did not receive will be discussed in chapter 5.

The teacher who expressed anger was distressed that she did not know what normal people could do until she was 40 years of age. Many participants said that they were surprised at their increase of focus and reduction of anxiety when they tried medication; none of the other participants described themselves as angry regarding the diagnosis itself.
An ADHD diagnosis usually leads to a trial of medication; therefore, the two cannot be neatly separated. As previously stated, four teachers remained on medication and five did not. Cathy, who remained on medication, describes a more typical response.

I thought, “What is going on here?” So I went to the doctor and I explained all of my symptoms to the psychiatrist and he said I think what we’re dealing with is ADHD, so let’s try medication. At that point I started Ritalin, and I took the first dose on Saturday morning, and it was the difference in night and day.

Disclosure of having ADHD was a more sensitive topic for most of the participants. The participants disclosed to different individuals and for different reasons. The participants in all groups explained their decision to disclose was based on relevancy and their perception of how the disclosure would be taken by the recipient. Only one participant, Jane, disclosed to all groups--her students, her supervisors and peers, and the parents of her students. Her feelings about disclosure are reflected in the following remarks.

And I am very upfront and I put it in my newsletters. I may not come right out and say it, but I’ll just say that, you know, everybody’s learning style is different and my learning style is…and I’ll word it in that way. And I’ll be very upfront with parents in conferences, and I’m up front with my kids, you know, um, that I have some problems too, and sometimes it’s not easy for me, and if I’m talking with a kid who’s struggling with things, or if they [a student] were just diagnosed and they’re a little upset about it, you know, I talk to them too. My whole staff knows.
Several participants reported that they would disclose if they thought that the disclosure would help their students, but there was considerable ambivalence about disclosure, as described by Mary.

I’ve become more open, but I have to say in the beginning I was really, I overcompensated and I did not tell anybody ‘cause I thought I shouldn’t, and I’ve talked to other teachers about it, but I don’t always tell it to the principal or I don’t always tell parents. Now I’ve gotten better at that, because, what am I embarrassed about?

**Self-Acceptance**

Participants had varied levels of self-acceptance, and most of them had settings where they felt their ADHD characteristics were accepted, and other settings where their ADHD was not accepted which appeared to affect levels of self-acceptance and reduced self-esteem. Some of these mixed feelings were manifested in the participants’ beliefs in their teaching abilities. For example, the participant, who had not only received a stellar evaluation from her principal but had been Teacher of the Year at her school the year of this research, described her mixed feelings and the resulting stress:

If I don’t feel confident and I don’t feel like I’m able to offer something, and the other person is all like watching everything I’m doing wrong, that is very stressful for me. And I did something like that recently and that was a very big thing to accept.
Lisa, who was finishing graduate school, explained,

When I start comparing myself, as I mentioned before, to those teachers who have everything in place at all times, that’s when I go back to being hard. I haven’t forgiven myself in that ‘these are my strengths, these are my weaknesses and it’s going to be ok’.

Sarah, with considerable teaching experience, expressed much self-doubt about her abilities. This lack of self-acceptance was to the point that she felt that she was going to be exposed as a “teaching fraud.”

I must be really hard on myself. I have never felt that I’ve really attained or achieved success or that I am ‘good enough for me’. I accept it in my children; I encourage it in them. But for myself, I always feel that I’m a failure. And that even in school, that, after all these years, they’re gonna unveil me and say “whoa, you are really not a good teacher, you’re terrible, you know, you’re not this that and that.” And I’m always thinking that day will come.

Dan explained conflicting feelings regarding living with ADHD.

A feeling of…it makes you feel inadequate. Or stupid at times. I know I know this…or I know I can do this quickly, and why is it taking so long, but all of a sudden you get frustrated, and that’s how you get stress. It’s all over. Might as well hang it up, because I know that it’s not going to work. And at that time I really get angry. “I know I can do this.”
Fran described this frustration further.

It’s a panic feeling when you can’t find something that you don’t want to live through especially when you’re in a group of students because of panic when you can’t find something. And you’re second guessing yourself and you’re cracking up; “Can I really not do this?” “Why can’t I find it because this is the millionth time I can’t find something.”

Some participants described more self-acceptance. Jane openly admitted her ADHD and appeared to have come to terms with herself as a person and a teacher.

I feel a lot of positives. I think I have way of looking at situations that other people don’t necessarily have. Where they might give up, I can see, you know, multiple opportunities; just kind of the ability to look outside of the box and assess.

**Self-Identified Teaching Strengths**

Both focus groups and individuals interviewed reported on teaching strengths that they specifically attributed to having ADHD; some teachers felt quite strongly about their “ADHD abilities.” The most common ability discussed was a feeling of connectedness to their students with particular challenges. Sarah expressed this link to her students.

I think for me the empathy I have [as one with ADHD]; both because of my experience, and I really feel it and I can feel their pain when you know they are agonizing and I can identify and then help them come out of it. So I think that’s been so important, that rapport, that person [that I have become].
A part of the feeling of connectedness was expressed as more than empathy. Several participants cited academic strategies that they could give their students because of having ADHD. Anna explained,

I think another definite strength is because of my struggles, and because of my profession, I’ve become very insightful in terms of “why does this way of teaching work vs. this way of teaching,” and just being very reflective and I know that this is why it helped me, and this is why teaching it this way would be helpful.

Jane described her “lack of maturity” as an ADHD teaching strength as she felt she could gage her student’s attention span while learning.

And I think because um my attention span is not as mature as most adults [I understand my students’ shorter attention spans]. . . .I think a lot of people they’re seated, and there’s work, and they’re doing…but I think I have my own little clock saying, “Okay it’s time for something else to happen here.” [emphasis added to reflect participant’s verbal emphasis].

Some participants described a sense of resilience because of or in spite of having ADHD. Fran explained her view.

The fact that ADHD teachers are very committed, but they still struggle with the frustrations, that frustration with bureaucracy. The mundane, the trivial, being overwhelmed and feeling guilty and frustrated when you know that loss of words; when you know you’re smart, and yet you keep going.
Many of the participants also felt they had unique supports to provide for the parents of their students. These participants wanted to educate parents as to how their children really felt, and how they could help and advocate for them. Anna describes this in the following quote.

Working with my parents was one of my favorite points of my teaching, because I did a lot of educating the parents on, ok, this learning disability and ADHD is not going to just affect their reading, writing, and math, it’s going to affect them here, you’ll have to do this at home with them, you know. I was trying to educate them on this is not something that can be cured. You have to realize and teach your child; you have to learn that this is something you live with. You have to learn coping strategies. Remediate and learn to cope but we can’t cure it.

Also particularly emphasized in the May focus group was “reciprocal support” that students and teachers gave to one another because of individuals admitting that they had ADHD or, in a more vague way, a need for help with time and organization. The participants viewed this shared support as a definite strength; because they admitted some of their challenges, they welcomed the help of their students. This had two advantages for the students: they felt good about contributing to the total support of the class, and it allowed students to realize that mistakes or weaknesses can be lessened with effective coping mechanisms. Supporting these teachers’ methods, Ellis and Lenz (1992) as cited in Ellis and Worthington (1994) discussed the importance of teachers as effective role models by verbalizing self-coping statements. Jane expressed her views in the following.
Well I own up to my weaknesses. I will straight up tell them that this is not something that I’m good at, remembering to leave early on early release day, this is not easy for me to do. So I need some help here. Or, pictures, we have to go at such and such a time, and I’ll write it on the board but it will be behind me on the board and if I don’t see it, “out of sight, out of mind.” So the kids will remind me and they know; they know that that’s not something that I’m good at. But it helps.

Participants cited flexibility in teaching and dealing with students as another ability they thought they possessed in part because of their ADHD. Cathy spoke of the importance of flexibility over time with different groups of children.

I hated lesson plan books, because I never, I usually knew the objective, the goal that I was teaching; and I made sure I was covering all that and the children were learning it. But, year to year, my lesson plans were different. There was never the same thing. I might use the same concept, different book, or a new way of presenting something, but I tried to find a different way to reach all children. And you know in teaching that every year is different.

Jane expressed the need for flexibility within the school day.

Why would a child want to come in every day when somebody’s so stick-formal; I wouldn’t, you know, and their shoulders are like [denoting rigidity] and everything is you know, there’s no relax time; today was our end-of-grade and “We can party like rock stars now. This is the time; this is what we worked so hard all year, now
it’s time to have a good time.” And they know. Now it’s going to be less rigor and more fun.

Dan expressed being able to be flexible and successful with a student who other teachers had not been able to reach.

And teachers had put he’s lazy, he can’t be still, can’t focus. [I] got him a foosball; the kid was successful, and went on to middle school, and high school. Nobody understood; he just needed more space and freedom, within parameters.

Conclusion

The research questions upon which this study was based were verified by the responses given by the participants. Teachers with ADHD in this study used an array of strategies to optimize the effectiveness of their teaching. Teachers used a variety of supports to cope with the challenges of their jobs. To a lesser degree, teachers identified specific tools to assist them with organization and time management skills while teaching and planning.

A set of themes clearly emerged from participants responses. The participants emphasized certain factors in teaching or concerning ADHD that were important to them. They spoke at length about their feelings concerning their ADHD diagnosis and how and when they chose to disclose. To different degrees, the teachers did or did not accept themselves as successful individuals with ADHD. Although the participants varied in their feelings about having ADHD, they all strongly believed that they had definite teaching strengths because of living their lives and teaching with this disorder.
The following chapter will address the interpretation and implications of the results in this chapter. Finally, I will discuss limitations of the study and recommend directions for practice and future research.
CHAPTER FIVE: DISCUSSION

Summary and Discussion of Findings

This study sought to investigate the perception of supports, strategies, and tools utilized by teachers with ADHD. Nine participants contributed rich data from their personal lives and teaching experiences to comprise findings on these topics. However, prior to discussion of the data, I will address limitations, as they were important to my interpretation of the findings. Discussion of limitations is followed by key findings and interpretation.

Limitations

This study has several limitations, some of which are due in part to its exploratory nature. The teacher perceptions, educational level, and years of teaching experience of these nine individuals may not be representative of teachers with ADHD. Eight of the teachers had taught elementary school and only one taught full time at the middle school level. Therefore, findings may not be representative of teachers in secondary settings.

I conducted purposeful sampling, specifically to recruit participants who were teachers with ADHD. The sensitive nature of this population likely limited the number of participants. I advertised widely at a university and at doctors’ offices where many adult patients were treated for ADHD. Sampling was also restricted by location, as focus groups and interviews had to be held at a central location for the participants and the researcher. Finally, the sample was self-selected, as participation was voluntary.

There may have been teachers who, by the nature of their ADHD, did not participate due to difficulties managing their time. Two individuals who said they were attending a
focus group, with no prior notice, failed to attend. The final nine participants in the study may have been elite partially because some individuals were in graduate school, they took the initiative to respond to flyers inviting participation, and they followed through to attend. These participants may have been individuals with ADHD who were particularly adept at managing their time. Therefore, the characteristics of these participants could have biased results in favor of individuals who were particularly interested and well organized.

Although steps were taken to create safe discussions encouraging honest responses in both the focus groups and the interviews, some participants may have answered questions so as to be viewed favorably. However, this “observer effect” is common in almost all research (Bogdan & Bilken, 2003).

Finally, there is missing data on self-efficacy as reported in chapter 3 from participants in the first focus group. The decision to administer and use data from The Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) was based in part on results from this group.

Strategy Use

Participants described strategies that were varied but dealt with their greatest challenges: tasks that required organization, time, and memory.

Participant responses emphasized what they considered to be an important teaching strength: that many of the strategies they needed and used benefited the children whom they taught and these strategies supported a positive classroom climate and the understanding and accepting of differences in others. For example, Dan modeled what individuals can do
when they forget a thought—he spoke of his lapse in memory, calling it a “brain freeze,” adding that the thought would return. In addition, Dan did not allow students to be teased by other students should they experience a brain freeze. He allowed that making mistakes was acceptable, he made them, and he promoted a class climate in which tolerance for differences in others was encouraged. In addition, teachers embedded these strategies in their instruction. Teachers reported explicitly teaching these strategies and pointing out their utility to their students.

Strategies that participants employed to help them with their teaching were used out of the necessity of being an individual with ADHD. Additionally, these teachers varied in their perceptions of the effectiveness of the strategies that they used.

For example, most participants admitted that they thought they did not plan in a traditional manner or with efficiency. Some participants either accepted their less than optimal planning styles or vowed to do a better job in the future. In addition, some participants felt they did plan well but stated that it took extra effort to do so. It was evident that participants wanted to provide good instruction for their students and thus desired to plan well, but that this was a difficult task for most of them. Perhaps this difficulty related to the ADHD challenges of sustained attention or difficulty with time management.

I found it surprising that while teachers talked about distractions and the need for extended time to complete their work, no participants mentioned noise as a distraction. Distractions for these nine participants, then, were internal.
Finally, at least three participants stated the need to separate work and school and they dealt with this by working longer at school and not taking work home, guarding and prioritizing their time by choosing to limit extra school commitments such as serving on several school committees, or simply setting a time limit on their school work and declaring “enough.” While this is common for most individuals in teaching and, indeed, in other occupations, the reported need for this separation accentuates the possible stress or human cost that may result if these individuals with ADHD did not guard their private lives.

Supports

*Personal Supports*

Supports varied widely across the ten participants. They discussed personal supports the most—family support, self-support, and support from friends, although friends were mentioned least frequently.

Although some participants reported strong personal supports, others reported lack of personal supports or were silent on the subject. Only two of the nine participants mentioned having a “significant other” and only one participant identified this person as a strong support. I do not know if the others did not have these special supports, or if the participants did not think this information was appropriate to the conversation.

Participants were more forthcoming in discussing their parents. Five of the nine participants viewed their parents as strong or fairly strong supports. Some participants spoke of parent supports as occurring in the past, and others remarked that they continued to view their parents as supports.
Not all parents were supportive. The participants’ discussion of this lack of support was stated in a sad tone, a resigned tone, or even a matter-of-fact tone, as if “that’s just the way it was.” Dan, for example, sounded full of suppressed anger and sadness when describing his father who seemed to have given up on him in the first grade because of Dan’s hyperactivity and behavioral issues.

Several interpretations can be made from this disparity in participants’ family supports. One can surmise that gender differences and age negatively affected the support that Dan reported from his parents. Though studies differ widely on effects of gender and ADHD, many boys display externalizing behaviors that cause friction between parents and sons (Biederman, et al., 2002; Weiss & Hechtman, 1986). As Dan was diagnosed too late in his life to have been considered for K-12 services for ADHD, it is likely that his behavior was not understood, just as ADHD was a largely unknown entity when he was in public school. There could have been other factors as well. Weiss and Hechtman (1986) reported on the reciprocal nature of parenting “difficult” children with ADHD; that the defiant or challenging behaviors of these children created considerable frustration in parents, and that in turn resulted in parents being more punitive towards them. In contrast, if the same parents had other children who were compliant, this cycle did not occur.

Other factors influencing family support could include low socio-economic status, resulting in a multitude of family difficulties such as struggling to feed, house, and clothe the family. These basic pressures may have interfered with the parents’ abilities to provide emotional support and advocacy. Parents who were poorly educated may not have felt
comfortable advocating for their children nor known how to do so. Sibling rivalry, unchecked, could have affected the mixed support Mary received. Another likely component affecting family support for many of the participants was their strong suspicion that at least one of their parents had undiagnosed ADHD, and they expressed this in both positive and negative comments.

Families are complicated; and one must be cautious in interpreting the effects of family dynamics based on one meeting with three or four teachers. However, I felt that participants who described receiving strong family support or very little support showed their strong feelings not only with words, but also with their body language and tone of voice. Sarah was one exception; while talking about self-advocacy after another teacher brought up the subject, she stated “I didn’t really have support systems” and quickly moved on. It was clear that she did not want to talk about family support. I did find this significant as the three other teachers in the group talked freely about their families. For example, Cathy reported she had very little support from her family yet she talked quite freely about her family with a matter of fact tone, and this set her apart from others who discussed the lack of family support.

On a positive note, two participants talked with obvious affection regarding the support they received from their parents. Anna and Lisa felt fortunate to have parents who were personally affirming, but who also were strong advocates while Anna and Lisa were in school. Both sets of parents were also able to provide strong financial support.
Why go to such depth concerning family support? There are two reasons for this: most participants talked at length about their families. In addition, I interpreted family support and self-support to be linked to self-esteem issues, discussed later in this chapter. Two participants directly stated that they learned to advocate for themselves from their parents, but others such as Mary stated that they learned to self-advocate because they had little support and they learned advocacy on their own.

All participants reported self-support as being important to their teaching and to their lives in general. They were, overall, pleased with the initiative they had taken to construct strategies for themselves to cope with their ADHD symptoms. They were proud of their self-advocacy, as they acknowledged the challenges they surpassed while realizing that there were many ADHD challenges that persisted in their lives. They acknowledged that those challenges would require their strategies and personal vigilance for the rest of their lives. Some participants described their self-advocacy in terms of personality traits: they were motivated, tenacious, stubborn, driven, and persistent.

**School-Based Supports**

Most participants reported mixed-to-strong support from their peers at school and less support from their school administrators. School support was related to the issue of disclosure of teachers’ ADHD. The relevancy of disclosure in this case relates to two factors: trust and power. Teachers reported that they all disclosed to teachers or other co-workers, but most did not say to what extent. Only 67% of the participants disclosed to school administrators. Because this information came from the demographic questionnaire
which asked only if they did or did not disclose to administrators, I cannot say to what degree these individuals discussed their ADHD unless they directed divulged this information in the focus groups or interviews.

All participants reported having friends and confidants among their colleagues at school. Two participants used the word “safe” when describing supportive peers; in other words, these peers could be trusted. The closest peers seemed to be the ones who unconditionally accepted these teachers with ADHD.

Most participants accepted and appreciated help from their peers, and this help occurred informally. Peers offered help to enhance participants’ memory, time management, and organization. Bandura (1997) explains that by modeling and using verbal persuasion (or encouragement) to individuals such as teachers with ADHD, peers may not only help their colleagues but may also lead them to acquire more strategies to deal with challenges in time management and organization. Bandura goes on to explain that in order for this to occur, individuals must have some strategic ability from which to build.

Most participants did not speak of their school administrators as being directly unsupportive; rather, they complained about school procedures or policies that they found unreasonable. I believe that time management challenges made these teachers especially resentful of what they perceived as wasted time—staff meetings that were too long, time-consuming paperwork that they considered unnecessary, or inefficient procedures such as having to wait in line for the copy machine. This frustration is understandable considering that Barkley (1998) considers time to be the great disability for those with ADHD.
Negative remarks made directly about school administrators dealt with those individuals being unnecessarily judgmental, untrustworthy, or unsupportive. Based on my personal observations in a number of public schools, I do not believe that this lack of administrative support distinguishes teachers with and without ADHD. I maintain that teachers without ADHD regularly make these or similar remarks.

A few participants viewed their school’s administration as being especially supportive. Jane was the only participant who provided specific examples of positive supports. She praised an assistant principal for encouraging her leadership abilities, and she gave the principal credit for her school’s positive climate. However, participants’ statements concerning school administrators were markedly general, whether they were positive or negative, implying that these teachers relied heavily on other teachers or staff for school support.

Medical and Professional Supports

I was surprised that only 44% of participants were on medication at the time of the focus groups, as research clearly shows medication to be the most effective treatment for reducing or managing the symptoms of ADHD. Considering the relatively high academic achievement and career attainment of these individuals, and conversely, their mixed reports of self-esteem and lingering difficulties with time management, organizational management, and memory, the rate of those participants not on medication is substantial. One teacher preferred alternative treatments to medication to help her focusing issues. Additionally, Mary and Beth both reported that they would consider medication if either
were married and had families, as both anticipated that the resulting responsibilities might be overwhelming. Lisa and Cathy said that they needed their medication especially for graduate school. While these teachers had mixed feelings about medication, they felt that life events or academic challenges would necessitate its use. Wilens, Spencer, and Biederman (2000) reported that adults who responded positively to medication interventions showed a reduction of 50% or less of the core symptoms of ADHD. While medication is usually the first treatment of choice for these symptoms, many participants chose therapy to cope with their ADHD or for other reasons.

Fifty-six percent of the participants reported using the services of a counselor either at the time of the focus groups or prior to them. Some participants reported using counseling services for other conditions as well as seeing a physician for the monitoring of medication to treat ADHD. Three participants directly stated that they had a positive view of the help they received from counselors. Results regarding the use of pharmacological support and counseling support suggested that participants carefully considered the use of such supports and some saw this use, as do many in the general public, as an indication of personal weakness, rather than a positive intervention for ADHD.

Lack of Support

Participants also talked about the lack of support as having important impacts on their lives. This lack of support was much greater for some participants than others, but all of them mentioned at least one instance where support was wished for and not received. These instances of lack of support occurred at different stages of life for different
participants. For example, Cathy regretted that she had little support from her parents as she was growing up, but she later found support in her husband who encouraged her to attend college.

The lack of social support appeared to be the most painful for the participants. Although Anna had much family support, she hid her disabilities from her friends throughout school for fear of being rejected by them. Dan only recalled two K-12 teachers that he felt supported him. Beth felt belittled by one of her parents and continues to feel that parental disappointment today.

Some participants seemed to have diminished self-esteem, perhaps due to this lack of support. Vieno, Santinello, Pastore, and Perkins (2007) emphasize the importance of family and friends in the development of self-efficacy and adolescents’ sense of community in school. Their study suggests that some participants’ lack of support could have negatively affected their self-esteem and self-efficacy, but it does not explain the other participants quietly defiant, “I’ll show you” attitude towards past disappointments. I will discuss both of these attitudes further in the sections on self-esteem issues and resilience.

All participants discussed different kinds of personal supports such as that by families, teachers, or friends a great deal. They knew they needed them and generally sought out support both in their personal lives and as teachers with ADHD. I considered the results of the participants’ perceptions of supports to be linked strongly to Bandura’s theory of self-efficacy beliefs (1997) and to the factors of resilience. Bandura discusses the importance of social feedback and positive verbal persuasion of highly regarded individuals
to a person’s self-efficacy, and that increased self-efficacy encouraged these persons to
work harder at their goals, whether those goals related to their career or related to academic
achievement. If this study’s teachers felt supported, they were motivated to achieve.
Participants without adequate supports who achieved their goals in their teaching careers
appeared to be resilient as they “buckled up” and depended on self-support or found support
elsewhere.

Tools

Teachers in this study did not talk at length about specific tools that helped them
perform their teaching duties. They discussed tools predominantly in relation to specific
teaching strategies. Participants described tools as part of a strategic process to deal with
their challenges that they attributed to ADHD.

I encountered some resistance or confusion when I asked about the use of tools in
isolation from strategy use. For example, Fran emphatically stated that medication was not
a tool, but a need. The participants were not particularly interested in discussing tools or
they did not think their use of tools was worth mentioning as an important part of their
teaching. Again, they talked about a variety of tools that they used, but they generally
considered these tools as part of their strategies—and they enthusiastically discussed
strategies at length.
Other Findings

Teacher Sense of Efficacy

Teacher responses to the Teacher Sense of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001) indicated that the seven individuals from the March and May focus groups saw themselves as efficacious, with an overall mean score of 8.23 on a scale of 1 to 9. Interestingly, participants of the two focus groups whose members completed the TSES rated themselves more highly on each of the three dimensions than did the standardization sample; whose overall mean score was 7.07.

The following section addresses the apparent disconnect between some of the participants’ high teaching efficacy scores and their overall self-esteem as noted in their comments in the focus groups and interviews.

Self-Esteem Issues

While the teachers in this study rated themselves high in teacher efficacy, their comments in focus groups and interviews indicated that their overall self-esteem was quite mixed. There are several possible interpretations.

The participants were primarily older teachers and generally were older when diagnosed with only two being identified and receiving services in elementary school. While identification and services alone may not have bolstered their self-esteem, Beth and Anna grew up with ADHD and learning disabilities, received services, and had strong family support. Increased public awareness of ADHD in the late 1980s and increased understanding of the disorder may have contributed to Beth and Anna’s family support.
The other seven participants’ mean age of diagnosis was at approximately 39 years of age, and the youngest of those was 20 when diagnosed—too old to have received services in school at the K-12 level. Furthermore, most of the other participants were much older when diagnosed—meaning, perhaps, that they had a lifetime of being misunderstood or even viewed as “bad” or “quirky” for much of their lives. Being viewed as difficult while struggling to manage misunderstood behaviors would likely have had a negative and cumulative effect on many individuals. This appeared to be the case for Sarah, who had a mean score on the TSES of 8.0, and was told by others who knew of her teaching methods that she had helped many children. Yet, despite her graduate degree and her extensive experience—the most of all the participants—she spoke of being too hard on herself and sometimes feeling like a fraud in her teaching career. It is not clear that her long-undiagnosed ADHD lowered her self-esteem, but Barkley, Murphy, and Fischer (2008) and others have shown that more adults with ADHD suffered from lowered self-esteem than those without ADHD.

The participants in the March and May focus groups may have made a distinct separation between their abilities as teachers and their overall self-esteem. Anna was a good example of this. She had a mean score of 8.7 on the TSES, the second-highest score, and a very high score by all measures. However, she reported mixed feelings concerning her self-esteem. During one part of the focus group, she said that she was tenacious and perseverant; at other times during the session, she stated that she was too hard on herself, particularly
when discussing her ADHD challenges. ADHD may have contributed to life and career frustrations that affected her self-esteem.

I cannot say for certain what determinants caused the lowered self-esteem of many of the participants in the study. There are indicators, however, that the participants with high teaching efficacy scores and mixed or low self-esteem statements may have had frustrations and mixed signals due to their ADHD.

Perceived Teacher Strengths

All participants in this study stressed that they had teaching strengths because of having ADHD. These teachers all reported that they had special connections and empathy towards their students, particularly those students with special needs. These individuals concluded that other teachers could be empathetic, but they thought that this empathy came more naturally to them. Because they could connect with their students, they thought that they could—and would—find ways to help students with special needs learn. Ferri, Keefe, and Gregg (2001) reported this same drive and connection to their students in teachers with learning disabilities.

Many teachers thought that they could help their students with or without special needs by modeling strategies that they had to use themselves. Again, because they regularly used a particular strategy, the participants thought with confidence and conviction that they could model and teach such a strategy successfully.

Several participants thought that because they had a mild disability, they were good advocates for their students with special needs and their students’ parents. Many disclosed
their disability in meetings with parents to show that they really did understand issues that
the family or the student was dealing with, and that authenticity made them more trusted
and credible to these parents. In addition, they felt that parents were often reassured by
meeting a successful professional with the same or a related disability.

All participants stressed the importance of teaching flexibility and felt that they
were flexible in ways that helped their students. They considered their flexibility to be akin
to the learned creativity that Gerber, Ginsberg and Reiff (1992) conceptualized in their
study and subsequent book (Reiff, Gerber and Ginsberg, 1997) on successful adults with
learning disabilities. This view of flexibility asserts that there are many ways to teach and
engage children in a positive manner. Flexibility also means that good teachers are willing
to change techniques or schedules according to student needs. Finally, flexibility means that
no group of students are the same and that good teachers should plan differently not only
for each group of students, but should also plan differently for individual students within a
group or to differentiate instruction during the year to meet student needs if necessary.

Implication of Results

Theoretical Implication of Findings

Bandura’s Processes of Self-Efficacy Beliefs

The study’s participants had multiple supports that mesh with Bandura’s theory.
Bandura speaks of individuals with high self-efficacy as being able to see themselves as
successful with supports and positive guides. Bandura (1993) frames perceived self-
efficacy into four processes and implications will follow his model.
Cognitive processes.

Personal skills require the belief that one can perform such skills for them to be used effectively. The most effective individuals are those who believe that ability is fluid and can be enhanced by cognitive or memory tasks.

Bandura (1986, 1993) stresses the importance of social influences on one’s perception of ability. Participants had mixed social supports as a whole. The mixed supports on average of the participants in this study support Bandura’s theory as it applies to social influences, but in a negative way. In other words, I contend that social influences are important to one’s perception of ability, but many participants lacked early, positive social influences. However, Bandura places much greater emphasis on each individual’s progressive mastery of desired skills. These teachers with ADHD align with Bandura’s theory concerning personal skill mastery, as they were highly educated and acquired and maintained their teaching careers.

Motivational processes.

Bandura (1993) lists three of the many theories related to cognitive motivators, including casual attributions, outcome expectancies, and cognized goals. He contends that self-efficacy is a component of each theory of motivation. Participants’ long-term goal setting strengthens Bandura’s theory. However, the inconsistency that challenged these teachers in their reports of strategy use does not support Bandura’s theory in the short term. This variance relates to Barkley’s (1998) description of individuals with ADHD as having deficiencies of performance, not skill. In other words, these teachers as a whole did not set
consistent teaching and planning goals even though they had the ability to do so, despite their attempts and their frustrations with their lack of consistency.

Affective processes.

Perceived efficacy plays a strong role on individuals’ affect. Bandura (1977, 1993) states that if people believe they have some control over stressors or threats, they can lessen such threats. Those who lack control or feel inefficacious towards stressors may have emotions that escalate this stress. Most participants in this study, while scoring themselves highly on the Teacher’s Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) and reporting themselves as effective teachers in the focus groups and interviews, appeared to have less personal coping skills. This result does not support Bandura’s factor of affective processes. Although participants were quite strong in many respects, most admitted that they were often plagued by self-doubt and sometimes felt like “posers,” suggesting that their affect was either fragile or inconsistent.

Selection processes.

Participants strongly affirmed this factor of Bandura’s theory. These teachers, clearly bright and well educated despite their challenges with ADHD, were self-efficacious by chaining on their strengths to increase their academic and career achievement. Perhaps this factor describes the best of these individuals and relates to the persistence and apparent resiliency of many of the participants.

Related to Bandura, Reiff, Ginsberg, and Gerber (1992) researched successful adults with learning disabilities. The authors stated that successful individuals with learning
disabilities employed a certain amount of *reframing*—the notion that some individuals have to work harder, or longer, or have more structure and use more or different strategies in order to be successful, and that this reframing is a form of acceptance of their challenges. The same may be said of the participants in this study with ADHD. For example, as Jane realized she needed extended periods of time in which to plan, she needed to be close to her work materials, and she needed to complete much planning in close proximity to her classroom, she chose to arrive at school quite early to accomplish her teaching goals.

*Barkley’s Theory of Executive Functioning*

Results of this study can also be interpreted in the context of executive functioning. All participants in the study realized that they possessed weaknesses related to ADHD, particularly in the areas of executive functioning. Of the components of Barkley’s theory—(a) behavioral inhibition, (b) non-verbal working memory, (c) internalization of speech or verbal working memory, (d) affect/motivation/arousal, and (e) reconstitution, three of the components, (non-verbal working memory, affect/motional/arousal, and reconstitution) are most closely connected to the participants’ reports of their ADHD challenges.

Non-verbal working memory involves the sequence of events, sense of time, and self-awareness to guide future behaviors. While these overtly successful teachers with ADHD had strategies and tools to bolster their challenges in time and organizational management, results showed that such strategies needed to be maintained over the participants’ teaching careers. Affective remarks in regards to the importance of their strategies such as *need, have to have it,* or *panic* conveyed the necessity of participants’
strategies and tools. As Barkley (1998, p. 250) maintains, “. . . time is the ultimate yet nearly invisible disability afflicting those with ADHD,” the importance and maintenance of developed strategies for time management and memory cannot be overstated.

The self-regulation of motivation and arousal states was in one way evident in the educational and career attainment of this group of teachers with ADHD. Barkley (1998) has stated that these factors are related to goal-directed, purposeful behaviors. Five of nine teachers had earned advanced degrees. Eight of the participants were teaching at the time of the data collection, and the ninth was volunteering in an elementary school while a full-time graduate student. Further, all had taught for five years or more. As teaching is a challenging profession with a high rate of attrition, the goal persistence the participants displayed was impressive. Most participants spoke with conviction of their tenacity and persistence despite their challenges. They wanted to teach and they reached and maintained their goal. These individuals demonstrated reconstitution.

Reconstitution, in part, is a . . . generator of behavioral diversity and novelty. . . . the reconstitutive function contributes to goal-directed behavioral flexibility and creativity: the power to assemble multiple potential responses for the resolution of a problem or the attainment of a future goal. (Barkley, 1998, p. 243)

Barkley’s concept of reconstitution can be looked at from positive and negative perspectives in the context of these particular teachers with ADHD. In the positive sense, participants described their substantial teaching flexibility; their ability to gauge the needs of their students and to change instruction related to those needs. They spoke of teaching
creatively as naturally occurring from their having ADHD; they believed that their different or divergent characteristics naturally developed into seeing situations from many and different perspectives. These individuals spoke of these characteristics in positive terms when teaching the diverse groups of students present in any classroom.

However, reconstitution had some negative ramifications for the participants as well. Verbal fluency, analysis, and synthesis are components of reconstitution. Participants described frustrations with memory lapses while speaking where thoughts were lost mid-sentence; thus, verbal fluency was interrupted. In addition, synthesis has a temporal component, which could help explain the fact that participants reported the need for extended periods of time in which to complete complex or sustained teaching tasks such as planning. Some participants reported that they preferred to plan in temporal and spatial proximity to their teaching environments. I cannot say whether this need was related to problems of memory or sustained attention, but I suspect both were involved.

As Barkley (1998) described ADHD as ‘a disorder of performance, not skill’ (p. 249), that those with ADHD know what to do but cannot do it, is quite discouraging for individuals such as the teachers in this study. This explanation of ADHD regarding participants with the intelligence and tenacity who have reached the goal of becoming teachers must have partially explained why they were very hard on themselves. More than one participant spoke about this disconnect of “I know I can do this—why can’t I do it?” giving the impression that they figuratively beat themselves up to the detriment of their self-esteem during their childhood or adolescence. Barkley is correct that ADHD is largely
a deficit of performance; but as many participants displayed lowered self-esteem in their own stories, what are they supposed to do with such a dire pronouncement? Bandura’s theory of self-efficacy may not apply to all high-achieving adults with ADHD such as the teachers in this study, but it surely gives more avenues for hope. However, Bandura corroborated Barkley’s contention, even though Bandura was not discussing individuals with ADHD. He said, “There is a marked difference between possessing knowledge and skills and being able to use them well under taxing conditions” (Bandura, 1993, p. 119). Bandura provides more hope for individuals with ADHD, as he gives many methods and avenues one can pursue to become self-efficacious.

The participants who were diagnosed as adults fit into Barkley’s “self-referred adults” category (Barkley, Murphy & Fischer, 2008). Although still exhibiting significant challenges, these individuals recognized that they had problems and sought treatment. In addition, it is likely that their problems were less severe as children and adolescents, even though two of the participants reported behavioral challenges in school and two received services to remediate their learning disabilities and ADHD.

Barkley’s research and his theory of executive functioning for those with ADHD concentrates on the serious challenges and possible outcomes of those that have the disorder. However, Barkley reported that there is a subset of individuals with milder ADHD symptoms (2008).

The following section contains possible programmatic considerations based on the results of this study.
Implications for Practice

Teacher Preparation Programs

Several participants reported being overwhelmed as college students, feeling that while undergraduate school could be fun, they felt they were abruptly cut off from needed home supports and structure. Of course, many college students report this, but the participants mentioned that they felt this lack of support to a marked degree. Some of the participants reported poor grades, predominantly at the beginning of college, and they had to work quite hard to recover to make grades that they considered commensurate with their ability.

Because of this difficult transition for these participants and suspected other teacher candidates with ADHD, teacher education programs should consider different training and induction schedules or structures for students with ADHD. Universities have a substantial and growing number of students with ADHD (Parker, 1998) with many of them in education. S. S. Osborne (personal communication, 2008) reported that 8% to 15% of students in a graduate program have ADHD or related disorders based on self-disclosure. However, not all of those students make use of accommodations.

While not sacrificing program quality, creative thought to this notion may improve confidence and success for these individuals (Osborne & Brock, 2008). Practical examples of this are required study or support sessions, pairing cooperating teachers with student teachers carefully, or providing structured classes with clear class goals and expectations with a variety of assessment methods.
A practical and reciprocal training approach could be to have skilled teachers with ADHD participate in teacher preparation either through presentations in pertinent education courses, co-teaching special education courses, or as informal mentors. Graduate students or inservice teachers fulfilling these roles could also earn course credit for their contributions. This would both legitimize the notion that teachers with ADHD can handle their professional responsibilities and give students enrolled in teacher preparation programs a practical view of a successful teacher with ADHD and that person’s challenges, solutions and educational history. I believe the reciprocity would provide affirmation to the teacher or graduate student while giving the teacher candidates an ‘inside view’ of life with ADHD. In addition, any prospective teachers with ADHD in the program may be emboldened to increase their self-advocacy and disclose their disorder.

Prospective teachers with ADHD have responsibilities as well. The Americans with Disabilities Act of 1990 (ADA) requires that individuals at the college level must show personal advocacy by admitting that they need help and providing documentation confirming their ADHD diagnosis. With the advocacy and courage of more individuals with ADHD, ADA use of accommodations under the law could become more widespread. However, many students, professors, and indeed the public are not aware of how ADA serves those with ADHD and other invisible disabilities.

Those participants that had attended or completed graduate school were much more confident about their graduate experience, perhaps because of maturity, as most of them went to graduate school after teaching for some years. However, a few participants did
express the need for mediation because of the high level of expectations of achievement and the increased difficulty of the curricula. Additionally, most of these students used particular strategies concerning organization and time management to complete their courses successfully. It is of note that one participant reported that it was not until she took her education courses did she feel successful at college, as she thought that she had found success and great conviction that being a teacher was her ‘gift’. She thought that she had done well in her education courses because she realized that she wanted to be a teacher and she was especially motivated to do well as a result.

In summary, the participants in this study confirmed indirectly that additional supports in teacher preparation programs might have helped them be more successful in their college experiences.

*Teacher Induction*

Teaching for the first time is both an exciting and frightening experience for most educators. Do schools and school services provide enough support for new teachers? This study, corroborated by research on recommended treatments for adults with ADHD (Stevenson, Stevenson & Whitmont, 2003; Young, 2005), indicates that while some individuals have a number of strategies and supports that help them to perform their teaching duties successfully, additional support should be considered in teacher induction programs. I believe the following recommendations based on these findings may help teachers with ADHD and perhaps other new or practicing teachers as well.
Transition workshops.

Transition plans are usually considered for high school students perhaps going to college but more often to jobs after high school. However, as many participants reported considerable difficulties when adjusting to college and adjusting as new teachers, we may want to consider additional or different supports for individuals with ADHD entering the teaching field.

Seven of the participants in this study were diagnosed as adults older than 25 or attended school before accommodations or services were offered. However, practical training on the transition from being preservice teachers to becoming new teachers with ADHD may be especially helpful given the challenges that even this group of teachers with ADHD described. In addition, I recommend services be offered for those teachers already in the field who feel they could benefit from additional training to meet their needs. Such training could take place at the central office of a school district, but privacy issues are a concern. Special care would have to be made so as not to advertise such workshops as ‘ADHD Teacher Support’ or something similar. It would be best to give a more generic descriptor such as ‘Helping Teachers Manage Their Time’, for example.

School systems generally provide new teacher workshops before a newly hired teacher enters the classroom. There may be functional components to this training, such as how to perform everyday duties—taking roll, writing report cards, and communicating with parents. However, much of the information is administrative in nature; filling out tax forms, or receiving information about health insurance.
Some participants reported “learning on the job” and relying on other teachers and mentors to learn school procedures and paperwork requirements. They did not mention receiving specific help from the school system concerning planning, time management, or the organization of classroom materials or schedules. Given these teachers’ challenges, transition workshops that deal with these functional, specific needs are recommended for teachers with ADHD or other teachers that feel they could benefit. As participants in this project reported wanting help from experienced teachers who have “walked in their shoes” and who really understand them, I recommend that a successful teacher with ADHD be an integral part of these transition services.

**ADA and teacher accommodations.**

As evidenced by this study and research on ADA and adults with learning disabilities (Price et al., 2003), The Americans with Disabilities Act (1990) is underutilized by adults with mild cognitive disorders. As surmised in chapter 2, such adults may be unaware of the law’s usefulness or may not feel that they need accommodations in the workplace. However, many individuals in this study expressed the fear of using ADA at all, believing that disclosure may have either prevented the acquisition of their jobs or that employees would view them as “ADHD teachers” rather than “teachers who happen to have ADHD.” Further, although ADA prohibits discrimination, many individuals with mild disorders do not disclose because they believe their employers will keep track of their job errors in an effort to dismiss them.
As this study has investigated a group of teachers with ADHD who were successful on several levels but who felt that they would benefit from more support, school systems should consider accommodations for similar teachers. School systems, however, would have to begin with the training of principals and administrators on reasonable accommodations for otherwise qualified teachers. Successful and self-efficacious teachers with ADHD would be well suited to aid in such training. This appears particularly reasonable in schools, as educators should understand that diversity does not mean inability and that all individuals should be treated with respect.

Support groups.

Participants, by their comments, open discussions, and willingness to stay over the allotted two hours for focus group sessions indicated that they enjoyed discussing their challenges and overall supports as teachers with ADHD. Every participant, in one way or another, told me that he or she enjoyed the discussions; many said that they would enjoy participating in another focus group or a more informal meeting with other teachers with ADHD.

Because of the positive feedback I received from the participants, I believe that other teachers may be eager to meet periodically to provide support for one another. It may be quite helpful to have a leader in the support groups who is a teacher with ADHD, but who has also studied adults with ADHD or who has other experience working with adults with ADHD. There are support groups for all kinds of issues, including adults with ADHD,
but I believe that teachers would find it particularly helpful and affirming to discuss issues that are closely related to their professional interests and challenges.

*Mentors from colleges of education.*

Faculty from Colleges of Education, particularly special education, may make excellent mentors to teachers with ADHD. They may possess specific knowledge not only in the field of education but some may also have research credentials and experience concerning adults with ADHD. It would be a generous personal commitment to give a few hours of time to the teachers who may need extra support, but it could serve another purpose: that of strengthening the bonds between local school systems and university schools of education.

Mentors could either lead these sessions face to face on a predetermined schedule, or they could similarly conduct sessions by phone or hold support groups as ‘chats’ on the internet. The results of this study indicated that teachers with ADHD want mentors who understand them—and realize that these teachers can be empathetic, knowledgeable, and effective educators.

*Recommendations for Research*

The results from this study raised a number of questions related to teachers with ADHD. I discuss four important research recommendations.

*Resilience*

Findings of this study indicated that some individuals appeared to be particularly resilient despite the challenges of ADHD. Research on protective factors and risk in
children (Grotberg, 1995; Van Vliet, 2008) suggests that resilience in the face of risk depends in part on protective factors such as adequate income, and parental or family nurturance. Yet in this small sample, 33% of participants experienced poverty and/or grew up in families that provided little support. Nonetheless, these individuals appeared to thrive despite their ADHD and the other risk factors they experienced. An important question is what factors contributed to the resilience of these individuals.

Results suggested that, despite mixed or low supports, most participants’ ratings on the TSES indicated that they possessed a strong sense of teacher efficacy. The data suggest that two teachers in particular possessed resiliency factors that helped them prevail despite low support. Most research on resilience such as Bonanno, Galea, Bucciarelli and Vlahov (2007) list social support as promoting resilience.

Further research should investigate resilience in adults with ADHD and the perceptions of teachers with ADHD who consider themselves to be resilient, including the components in their lives that may have contributed to this personal trait. Investigations using case study methodology and performance studies could add to the literature regarding external factors that might promote the development of resilience. As this study relied on the perceptions of strategies and support for teachers with ADHD, it is a logical next step to include direct teacher observations to investigate these teachers’ efficacy.

*Universal Design*

A future study should investigate supports and accommodations for teachers with ADHD within the framework of universal design. Universal design was developed to
include the design of learning environments and educational planning for those individuals with cognitive challenges. As the term implies, the careful construction of curricula and supports is meant to benefit all learners and this could be extended to teachers. Not only would this study investigate the needs of teachers with ADHD and teacher candidates at the university level with ADHD and possible programs to meet those needs, but by definition, the support needs of all teachers and teacher candidates would be assessed. The results of such research may be more palatable to teacher induction programs and school systems as it would involve the needs of all teachers and teacher candidates and should make recommendations that could increase the number of prepared teacher candidates, decrease teacher attrition, and positively impact students’ learning. School systems already possess data on teacher satisfaction ratings. Hopefully this information could be accessed and evaluated as a first step.

The Ideal Study

Upon reflection, I recommend methodological changes for further research on teachers with ADHD. I found that some pertinent questions were not answered due to the design of the demographic questionnaire. The “ideal study” would include more diagnostic information on participants, such as how teachers were specifically diagnosed and the specific subtype of ADHD for each participant. Documentation would be helpful to validate the diagnosis if participants and the IRB would allow the researcher to obtain such information.
In addition, the demographic questionnaire would be more specific concerning disclosure. For example, teachers would specify why they did or did not disclose to certain individuals at their schools.

An improved study would include more middle and high school teachers to investigate any possible differences in supports or strategy use at these levels. I recommend more creative and far-reaching recruiting methods, as the perceptions of more diverse participants would add to this research.

Finally, I recommend direct observations of several teachers with ADHD throughout their school day over a period of time so that these teacher’s perceptions can be compared to their daily teaching practices. These teachers may also participate in more interviews with the researcher to explore teaching methods and to deeply access the efficacy of the strategies that these teachers use and the school supports upon which they rely, if present.

*Larger Study with Broader Demographics*

Finally, I recommend both quantitative and qualitative research concerning teachers with ADHD. Studies with more subjects would add to the needed academic discourse regarding the representation of individuals with ADHD who teach across all K-12 grade levels by gender, age, race, region, and culture. Well-constructed research on a larger scale of teachers with ADHD could broaden our understanding more effectively than this small sample allowed.
Conclusion

This study’s participants voiced a need for different or additional supports they desired as teachers with ADHD. Results suggest that these teachers perceived that they were effective despite their diagnosis of ADHD. Additionally, they thought they had specific strengths because of having ADHD. These teachers also discussed their challenges in their teaching careers as high-achieving individuals with this disorder.

I addressed the perceptions of nine teachers and the self-reported strategies, supports, and tools that they identified as needing to teach every day. I have discussed their contributions and made suggestions for more research and practical directions that colleges and school systems should consider for this subset of teachers. These teachers with ADHD, though small in number, had not only a passion for teaching but an openness and enthusiasm when telling their stories. They wanted to listen to others, to be heard, and they expressed their delight in the focus group experience. I do not want their story to end here; there is much more to be done.
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Appendices
Appendix A: Recruitment Flyer Example

Would you like to talk to others LIKE YOU?
Seeking individuals to participate in a

**FOCUS GROUP**

*Who is eligible?*
K-12 TEACHERS with *Diagnosed* ADHD

One session for approximately 2 hours; afternoon or evening, February 2008

*Meeting time and date set according to participants’ convenience*

*What’s In It For Me?*

- 40.00 For Each Participant
  - Refreshments
  - Pleasant, Convenient Setting to Discuss Issues as Related to Teachers with ADD/ADHD

COMPLETE Confidentiality assured

*Want to know more? CALL or EMAIL:*

Lynne Brock, Doctoral Student, North Carolina State University

Cell, 815-5839; Email, lbbrock@ncsu.edu

Appendix B: Potential Focus Group Participant Checklist
CHECKLIST WHEN POTENTIAL PARTICIPANTS CALL OR EMAIL

Friendly greeting

Intent of Focus Group: ‘To generate themes and discussion of teachers with ADHD’s perception of support, past and present, and strategies used by these teachers to fulfill their teaching responsibilities’

Name______________________________________ (to be kept secured and confidential)

Phone number, email and address________________________________________________________

Totally confidential; will use pseudonym or first name in the group

4-8 people along with me (doctoral student) and another graduate student to take field notes

Will send consent letter in mail or email attachment; your preference

Tell me 3 or more possible times you are available for the group; I am totally flexible; 2 hours; location XXX; map will be included with letter

Possible participant meeting times:________________________________________________________

________________________________________________________

TIMES approved at location:________________________________________

Give them my contact information again

Thank them!

Appendix C: Focus Group Letter of Consent
INFORMED CONSENT FORM for RESEARCH

Title of Study: K-12 Teachers with ADHD: Perceptions of Support and Strategies on the Management of Teaching Responsibilities

Principal Investigator: Lynne B. Brock
Faculty Sponsor (if applicable): Susan Osborne, PhD.

What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate in. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

The purpose of the focus group is to generate themes of the perceptions of support, strategies and tools that teachers with diagnosed ADHD utilize to fulfill their teaching responsibilities. As ADHD research has advanced, more individuals have been diagnosed with this condition. It is suspected that more of these individuals are now in the teaching field. Thus, the research is important as it proposes to investigate the management tools, strategies, and the degree of support that these teachers use to manage their teaching responsibilities. This information will be used in the principal investigator’s dissertation.

What will happen if you take part in the study?

If you agree to participate in this study, you will be asked to complete a confidential demographic form and participate in a focus group with other teachers that have ADHD. The focus group session will last up to, but not longer than, two hours. You will also be asked to complete a teacher efficacy scale. The research will take place in an office building with a sign in the lobby containing the heading ‘FOCUS GROUP’ followed by directions to the specific room.

Risks

The potential risks of the research may be psychological or social for the teachers involved. To minimize these risks, the following will occur:

- The primary researcher will fully inform all participants, explaining that all participants have ADHD and have volunteered to participate.
- The primary researcher will explain in writing and in person that no individual responses will be disclosed to identify any participant.
Participants may choose to fill out the teacher efficacy questionnaire in a private setting if they desire.

The primary researcher will ask all participants not to discuss identifying information out of the focus group of any participant.

The location for the focus group is neutral and no identifying information will be placed at the site.

As the sessions will be recorded using digital voice recorders, the primary researcher will ask participants to use pseudonyms of their choosing or their first names and to state them before they speak for clarity in analysis.

Audio data will be stored on the researcher’s personal computer, and then erased permanently from the audio recorders. This computer is in a secured location at the researcher’s home. Computer recordings and written transcriptions will be destroyed when the dissertation is complete.

Benefits

Each individual will potentially gain insight as a teacher with ADHD. It is hoped that all participants will view the process as supportive, and they will obtain more insight on their own views of teaching and ADHD.

Confidentiality

The information in the study records will be kept strictly confidential. Data will be stored securely in the home office computer of the primary investigator’s home. No reference will be made in oral or written reports which could link you to the study.

Compensation

For participating in this study you will receive $40.00 for your participation in the focus group. If you withdraw from the study prior to its completion, you will receive $10.00 per half hour of your participation.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher, Lynne Brock, at lbbrock@ncsu.edu, or 919-815-5839.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. David Kaber, Chair of the NCSU IRB for the Use of Human Subjects in Research Committee, Box 7514, NCSU Campus (919/515-3086) or Mr. Matthew Ronning, Assistant Vice Chancellor, Research Administration, Box 7514, NCSU Campus (919/513-2148)

Consent To Participate
“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time.”
Appendix D: Demographic Questionnaire

DEMOGRAPHIC QUESTIONNAIRE: Teachers with ADHD

Pseudonym: ___________________

*This information is strictly confidential and will be used for research analysis only. All information will be secured, and will be destroyed when research is complete.

1. Age: __________________  
2. Gender: __________________

3. At what age were you first diagnosed with ADHD? __________________

4. How many years have you been a teacher? __________________________

5. What is the highest level of education that you attained? ________________

6. Are you currently under medication to manage the symptoms of ADHD? ____

7. If you are on medication for ADHD, how many years have you taught while using this medication? ______________________________________________________

8. What grade do you currently teach?

____________________________________________________________________

9. If you have taught other grades, what grades have you taught and how long for each?

____________________________________________________________________

10. If you are a middle school or high school teacher, what are your subject area(s)?

____________________________________________________________________

11. Have you ever disclosed the fact that you have ADHD to other teachers or co-workers?

☐ Yes
☐ No
13. Have you ever disclosed the fact that you have ADHD to your principal or other supervisory personnel?

☐ Yes
☐ No

14. Have you ever disclosed the fact that you have ADHD to your students?

☐ Yes
☐ No

15. Have you ever disclosed the fact that you have ADHD to your students’ parents?

☐ Yes
☐ No
Appendix E: Focus Group Questions and Introduction—Teachers with ADHD

FOCUS GROUP QUESTIONS—TEACHERS WITH ADHD

Welcome and Overview: Welcome to our session this afternoon (this evening). Thank you for taking the time to join our discussion of teachers with ADHD. My name is Lynne Brock and I am a doctoral student at NC State University. I am also a teacher of introductory education courses at Louisburg College, and I have ADHD. In addition, I have taught regular and special education in elementary schools in the area. I want to find out more about how teachers with ADHD manage their teaching responsibilities. You are here because you are all K-12 teachers with ADHD. There are no right or wrong answers but rather differing points of view. Please feel free to share your point of view even if it differs from what others have said.

Ground Rules: Before we begin, let me share some ground rules.

1. This is strictly a research project.
2. Your discussion will remain confidential. Please respect the confidentiality of others and refer to them only by the name they’ve chosen to place on their nametag. Please don’t discuss others’ statements outside of this focus group.
3. Please speak up, and only one person should talk at a time.
4. I am digitally recording the session because I don’t want to miss any of your comments.
5. We will all use the names on your nametags that you have chosen.
6. Please state your name on your nametag before you answer a question for your first few responses so that I will learn individual voices for transcription and analysis purposes.
7. Please keep in mind that I am just as interested in negative comments as positive comments, so remember that as you respond.
8. Our session will last no more than two hours.
9. I will show you cards with the questions on them one at a time to help us concentrate on the questions.
10. Let’s find out some more about each other by answer the following question (see opening question).

Opening Question:

- Tell us one thing you enjoy doing.
Introductory Questions:

1. What are some of the reasons you became a teacher?
2. When you hear the words ‘effective teacher’, what teacher traits come to mind?
3. How do you describe ADHD?

Transition Question:

1. How do you typically prepare for teaching your class or classes?

Key Questions:

1. Describe any tools you use that pertain to your diagnosis of ADHD.
2. What strategies do you use in preparing for class to manage your teaching responsibilities?
3. What strategies do you use while you are in class to manage your teaching responsibilities?
4. What strategies do you use after class (either at school or at home) to manage your teaching responsibilities?
5. Describe past support that you received that helps you as a teacher with ADHD.
6. Describe current support that you are receiving that helps you as a teacher with ADHD.
7. 

Ending Questions (Will cut some questions if time begins to run out):

1. Briefly tell us what has helped you most with your teaching responsibilities.
2. Is there anything that we have not talked about that you wanted to discuss?
3. Now that we’re done, are there any aspects of what we’ve just discussed that stand out as particularly significant? (IF TIME)
Appendix F: Post Focus Group Interview Introduction and Open-Ended Question Template

SEMI-STRUCTURED INTERVIEW QUESTIONS—TEACHERS WITH ADHD

Welcome and Overview: Welcome to our session this afternoon (this evening). Thank you for taking the time to discuss your experience as a teacher with ADHD in more depth. As you recall, my name is Lynne, a doctoral student at NC State University with ADHD. Your story is of great interest to me. There are no right or wrong answers. Please feel free to share your point of view in as much detail as you feel comfortable.

Ground Rules: Before we begin, let me share some ground rules.

1. This is strictly a research project.
2. Your discussion will remain confidential.
3. Please speak up so that I will have a clear recording or your story.
4. I am digitally recording the session because I don’t want to miss any of your comments.
5. Please keep in mind that I am just as interested in negative comments as positive comments, so remember that as you respond.
6. Our session will last no more than 1 1/2 hours, but if we both feel you have more to share to add to what we discussed in the focus group, we will schedule another session, and you will be paid for your time.

Key Questions:

1. Tell me about your early supports that helped you most when you were a student in school.
2. In the focus group, you said ________. Tell me more about your current supports and how they help you with your teaching responsibilities.
3. Tell me more about the strategies that you utilize whether teaching or preparing to teach on a regular basis.
4. Please share your feelings about how ADHD affects your daily life.
5. Tell me about your strengths as a teacher.
6. Tell me about your frustrations, if any, as a teacher with ADHD.
7. Are there any aspects of what we have just discussed that stand out as particularly significant?
Appendix G: Teachers’ Sense of Efficacy Scale

Teachers’ Sense of Efficacy Scale\(^1\) (short form)

<table>
<thead>
<tr>
<th>Teacher Beliefs</th>
<th>Nothing</th>
<th>Very Little</th>
<th>Some Influence</th>
<th>Quite a Bit</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much can you do to control disruptive behavior in the classroom?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>2. How much can you do to motivate students who show low interest in school</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>3. How much can you do to get students to believe they can do well in school</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>4. How much can you do to help your students value learning?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>5. To what extent can you craft good questions for your students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>6. How much can you do to get children to follow classroom rules?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>7. How much can you do to calm a student who is disruptive or noisy?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>8. How well can you establish a classroom management system with each</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>9. How much can you use a variety of assessment strategies?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>10. To what extent can you provide an alternative explanation or example when</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>11. How much can you assist families in helping their children do well in school</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>12. How well can you implement alternative strategies in your classroom?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
</tbody>
</table>
Appendix H: Interview Letter of Consent

North Carolina State University

INFORMED CONSENT FORM for RESEARCH

Title of Study K-12 Teachers with ADHD: Perceptions of Support and Strategies on the Management of Teaching Responsibilities

Principal Investigator: Lynne B. Brock
Faculty Sponsor (if applicable): Susan Osborne, PhD.

What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you being asked to participate in. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

The purpose of this interview is to generate themes of the perceptions of support, strategies and tools that teachers with diagnosed ADHD utilize to fulfill their teaching responsibilities. As ADHD research has advanced, more individuals have been diagnosed with this condition. It is suspected that more of these individuals are now in the teaching field. Thus, the research is important as it proposes to investigate the management tools, strategies, and the degree of support that these teachers use to manage their teaching responsibilities. This information will be used in the principal investigator’s dissertation.

What will happen if you take part in the study?

If you agree to participate in this study, you will be asked to complete a confidential demographic form and participate in an interview with the primary researcher. The interview will last up to, but not longer than, 1 1/2 hours. If we both feel another interview is needed to discuss your views of teaching with ADHD in detail, we will schedule another interview at our mutual convenience. You will also be asked to complete a teacher efficacy scale. The research will take place in an office building with a sign in the lobby containing the heading ‘Interview Session’ followed by directions to the specific room.

Risks

The potential risks of the research may be psychological or social for the teachers involved. To minimize these risks, the following will occur:
• The primary researcher will explain in writing and in person that none of your individual responses will be disclosed to identify you.
• You may choose to fill out the teacher efficacy questionnaire in a private setting if you wish.
• The primary researcher will ask all participants not to discuss identifying information out of the focus group of any participant.
• The location for the focus group is neutral and no identifying information will be placed at the site.
• Audio data will be stored on the researcher’s personal computer, and then erased permanently from the audio recorders. This computer is in a secured location at the researcher’s home. Computer recordings and written transcriptions will be destroyed when the dissertation is complete.

Benefits

It is hoped that you will gain more insight as a teacher with ADHD.

Confidentiality

The information in the study records will be kept strictly confidential. Data will be stored securely in the home office computer of the primary investigator’s home. No reference will be made in oral or written reports which could link you to the study.

Compensation

For participating in this study you will receive $20.00 per hour for your participation. If you withdraw from the study prior to its completion, you will receive $10.00 per half hour of your participation.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher, Lynne Brock, at lbbrock@ncsu.edu, or 919-815-5839.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. David Kaber, Chair of the NCSU IRB for the Use of Human Subjects in Research Committee, Box 7514, NCSU Campus (919/515-3086) or Mr. Matthew Ronning, Assistant Vice Chancellor, Research Administration, Box 7514, NCSU Campus (919/513-2148)

Consent To Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time.”